

**PROCEEDINGS OF  
THE NINTH  
CONFERENCE  
OF  
AUSTRALASIAN  
TRAMWAY MUSEUMS**

**SYDNEY**

**2 - 5 SEPTEMBER 1988**



**EDITED BY  
R.I. MERCHANT**



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**Recorded on Video and Audio Tape by**

**D.M. CAMPBELL**

**Edited by**

**R.I. MERCHANT**

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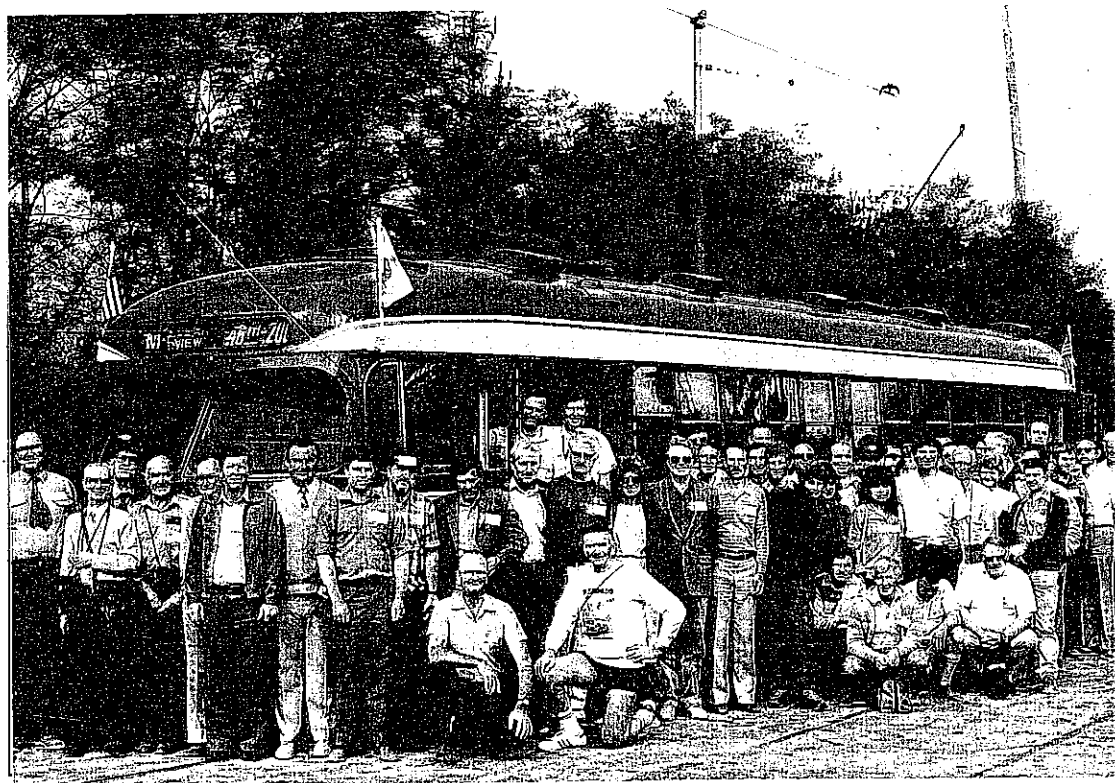
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PROCEEDINGS OF THE NINTH CONFERENCE  
OF  
AUSTRALASIAN TRAMWAY MUSEUMS



*Conference delegates assembled in front of San Francisco double-ended PCC car No.1014 at the Sydney Tramway Museum, Loftus on Sunday, 4th September, 1988. The City and County of San Francisco, through its transportation agency the Municipal Railway of San Francisco, donated 1014 to the Museum as a Bicentennial gift.*



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# PROGRAMME OF PROCEEDINGS

## Friday, 2nd September, 1988

6.00pm to close

Registration and Pre-conference Party,  
Armoury Room, Crest Hotel.

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## Saturday, 3rd September, 1988

Workshop Sessions, Banner Room, Crest Hotel:

Chairman: David Rawlings, General Manager, S.P.E.R.

9.00am - 9.10am

Welcoming Address and Formal Opening of Conference.  
Howard Clark, Deputy Chairman, S.P.E.R. Board of Directors.

9.10am - 9.15am

Housekeeping and Conference Rules.  
David Rawlings.

9.15am - 10.00am

Keynote Address - "Museums and their role in Education."  
Peter Macinnes, Community Services Manager,  
Powerhouse Museum, Sydney.

10.15am - 10.45am

"Promotions and Propaganda: Some Ideas on Public Relations."  
Phil A'Vard, Vice-President,  
Puffing Billy Preservation Society.

10.45am - 11.00am

Morning Tea

11.00am - 11.45am

"The Community Service Order."  
Clive Parker, District Manager, Probation and Parole Service,  
Department of Corrective Services.

11.45am - 12.30pm

"Finance, Where do you get it?"  
Howard Clark, Financial Director, S.P.E.R.

12.30pm - 1.45pm

Lunch in Crest Hotel Restaurant.

1.45pm - 2.30pm

"Timber Restoration and Preservation."

Leslie Stewart, Secretary, W.T.M.

2.30pm - 3.15pm

"Researching Paint Schemes."

Norman Chinn, Paintshop Supervisor, S.P.E.R.

William Denham, Crew Training Manager, S.P.E.R.

3.15pm - 3.30pm

Afternoon Tea.

3.30pm - 4.30pm

"Electrical Supply and Electrical Safety Standards."

Richard Clarke, Chief Engineer, S.P.E.R.

Peter Hallen, Power Supply & Distribution Supervisor, S.P.E.R.

Workshop sessions end.

6.30pm - 7.00pm

Pre-dinner drinks in Armoury Room, Crest Hotel.

7.00pm to Close

The Conference Dinner in Banner Room, Crest Hotel.

Museum Reports.

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### **Sunday, 4th September, 1988**

Travel by Suburban Electric Train to Loftus:

Depart Kings Cross Station	9.29am
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Arrive Loftus Station	10.13am
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Workshop Sessions, Restoration Building, S.P.E.R.

10.45am - 11.15am

"The Tram Museum BUSINESS."

An open forum.

11.15am - 12.00 noon

"Maintenance Seminar."

Bill Parkinson, Workshop Superintendent, S.P.E.R.

12.00 noon - 12.20pm

The Group Photograph - with San Francisco PCC 1014.

12.20pm - 12.30pm

Travel by PCC 1014 to Northern Terminus.

Cross Highway to Bowling Club.

12.30pm - 2.10pm

Lunch at Sutherland Masonic Bowling Club.

2.10pm

Bus tour of former Sutherland to Cronulla steam tram line by S.P.E.R. double deck A.E.C. bus No. 2619.  
Duration about one hour.

2.10pm - 5.00pm

Museum inspection, tram riding and free time.

5.00pm to Close

Supervised tram driving.

6.00pm (approx.)

Barbecue in Restoration Building.

Return to Crest Hotel.

Last Train from Loftus:

Depart Loftus	10.57pm
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Change trains at Mortdale	
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Depart Mortdale	11.12pm
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Arrive Kings Cross	11.43pm
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### **Monday, 5th September, 1988**

10.00am - 12.30pm

C.O.T.M.A. Council - Biannual General Meeting.

Banner Room, Crest Hotel.

Optional - Visit to Powerhouse Museum.

12.30pm - 1.30pm

Lunch in Restaurant, Crest Hotel.

1.30pm to completion

C.O.T.M.A. General Meeting.

Visit to Steam Tram & Railway Co-op Society's museum at Parramatta Park with locomotive 1022 in steam.

Conference ends.

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### **Tuesday, 6th September, 1988**

The S.P.E.R. will be opening its museum at Loftus exclusively for conference participants staying on after the end of the Conference.

The 1990 C.O.T.M.A. Conference will be held in Wellington, New Zealand.

# CONFERENCE PARTICIPANTS

Australian Electric Transport Museum, St Kilda, South Australia

John RADCLIFFE  
Colin SEYMOUR  
Mark SKINNER

Ballarat Tramway Preservation Society, Ballarat, Victoria

Alan BRADLEY  
Richard GILBERT  
Bruce THOMAS

The Bendigo Trust, Bendigo, Victoria

Bill KINGSLEY

Brisbane Tramway Museum Society, Ferny Grove, Queensland

Peter HYDE  
Troy THOMAS  
Robert THOMSON

Melbourne Tramway Preservation Society, Haddon, Victoria

John LAMBERT  
Craig TOOKE

Museum of Transport and Technology, Auckland, New Zealand

Allan CURTIS  
Stuart KNOCK

Newcastle Tramway Museum, Newcastle, New South Wales

Jack NYMAN

Perth Electric Tramway Society, Perth, Western Australia

Kim CHIPPER  
Toni CHIPPER  
Martin GRANT  
Barry KING  
Duncan McVICAR  
Linda McVICAR  
Lindsay RICHARDSON  
Robin RICHARDSON  
John SHAW  
Michael STUKLEY  
Victor SWEETLOVE  
Terry VERNEY

Tramway Historical Society, Christchurch, New Zealand

Bruce DALE  
Larry DAY  
Frank DOHERTY  
Ron GRANT  
Michael KERR  
John SHANKS

Wellington Tramway Museum, Wellington, New Zealand

Peter BERRY  
Trevor BURLING  
Marlene BURLING  
Barry OLLERENSHAW  
Ray SHAND  
Leslie STEWART

Steam Tram and Railway Preservation Society, Parramatta, New South Wales

Frank MILLIER

Tramway Museum Society of Victoria, Bylands, Victoria

Andy HALL  
Keith KINGS  
Len MILLAR  
Keith STODDEN

South Pacific Electric Railway, Loftus, New South Wales

Derek BUTLER  
Don CAMPBELL  
Norm CHINN  
Howard CLARK  
Richard CLARKE  
Tony CODY  
Bob COWING  
Kate COWING  
Tony GRIFFIN  
Dick HALL  
Peter HALLEN  
Dick JONES  
Peter KAHN  
Bob MERCHANT  
Paul McDONALD  
Bill PARKINSON  
Ben PARLE  
David RAWLINGS  
Noel REED

# **WELCOMING ADDRESS**

**Howard R. Clark,  
Financial Director, S.P.E.R. Co-op. Society Ltd.**

On behalf of the organising committee, I would like to extend a warm welcome to all the delegates, especially those that have travelled far, in particular those from New Zealand and the large contingent from Western Australia. All museums are represented, and the large cross section of talent available should make for an interesting conference.

In the year 1988 and for a few years earlier, the time has become a watershed as far as museums are concerned. The Bicentennial year, and the lead up to it, has given us all in the museum movement something tangible to be involved with. There is evidence of this in that the museum at Loftus has drawn big crowds in the last couple of years, a fact that allows us to feel quite a deal of pride in our achievement.

I feel that museums as a whole, perhaps inspired by the Bicentennial, have come of age, and there has been a greater public acceptance of what our museum, and other community museums around the country, have been doing. For us to have this acceptance is a good thing, and we are no longer looked upon as a bunch of nut cases playing trams.

We are in the museum business and have a responsibility to the public at large to present the artefacts and historic exhibits that we have for future generations. We have a right to feel justly proud of our achievements but we have a long way to go still. However, we are heading in the right direction.

The program for the conference is full and diverse, with many talented and knowledgeable speakers. I'm sure the topics will be interesting and thought provoking.

I bid you all a hearty welcome, and now declare the conference open.

# THE TRAMWAY MUSEUM - THE ROUTE AHEAD

## Museums and their Role in Education

Peter Macinnis  
Community Services Manager  
Powerhouse Museum

It was a warm, Sydney summer's morning that day, and Sydney Harbour was packed from shore to shore with flag-covered boats. The boats, in their turn, were all crowded to the very gunwales with festive Sydneysiders, excited holiday-makers, all agog and waiting for their long anticipated Great Day. High above the boats, traffic on the Harbour Bridge had slowed to a standstill as more and more people and vehicles poured, or tried to pour into the choked city. The passengers in the buses and cars, wedged in the traffic jam, sweltered in the heat and fumes, but nobody cared. It was a typical humid Sydney morning, the sort of morning when even the freshest, most crisply-ironed clothes will cling, limp and moist, to any part of you that touches the seat. Yet even the morning's clammy humidity didn't put the celebrators off, for this was a special day.

No, it wasn't Australia Day 1988, it wasn't our recent celebration of the Big Bicentennial Binge. The morning I'm talking about was a full generation earlier, a third of a century ago. It was in February 1954; that a brand-new queen, radiant, we called her then, came to Australia, the first sovereign to grace our shores, and there was no doubt at all in our minds that she *did* grace our shores, simply by stepping onto them. It was a Royalist, even Imperialist age, and republicans kept their heads well down in those days, for this was a time when we still celebrated Queen Victoria's birthday, which we called Empire Day. Realists were soon to change its name to Commonwealth Day, and soon they would scrap it altogether, as the Winds of Change blew cold. But in those days, cracker night and red-white-and-blue patriotism were all rolled up into one.

We kids had no doubt at all about where we stood on these things: where we stood was that we all stood up at the end of the movies, while we listened to a scratchy rendition of "God Save", with even scratchier images flickering across the screen. We might have been strong on patriotism, but not as strong as the cinema owners were on penny-pinching. Only the truly daring rushed out at the end of the movie, moving fast, so as to be out of earshot when the National Anthem started, for if they could still hear the music as they fled, then even the most daring would stop, frozen to the spot by some magical, musical, patriotic spell. Everybody was automatically British in those simple days.

So red, white and blue were everywhere that day, hanging from the light poles, strung around the doors of houses like Christmas decorations, up and down the ten-story skyscrapers that were the best we could do in those days, in the ribbons in girls' hair, and even on the milk bottle tops. And we all thought it right and proper, you see, for Royal fever was everywhere. So the swelterers in the buses suffered happily — it was all worth it, they thought, to be part of this national special day. But while the road passengers suffered on the bridge, there were those who crossed the harbour in comfort. Not in the lovely old steamers chugging beautifully out from Manly, with their open engine rooms, pits of mystery for all small boys, and maybe for small girls too, but I wouldn't know, pits of mystery from which warm air, tasting deliciously of hot oil and hotter brass, gusted up at you as you hung over, watching the pistons. But it wasn't in the Manly ferries. And not in the shuddering vibrating timber launches, the inner harbour ferries from places like Mosman and the Zoo, for these, like the Manly ferries, had all been stopped on account of the harbour being chockers with boats.

To cross the harbour in style that day, you travelled by rail. Not in the sardine-packed, impersonal and snooty North Shore trains, but in trams, on the eastern side of the bridge, where the Cahill Expressway lanes are today. Trams. Nice, cool, open vehicles where you could look out up the cluttered harbour as you

whooshed over the bridge, seeing all the way up to the Heads. And when you got tired of that, you could watch the driver doing whatever it was that drivers did, or you could chatter excitedly at the conductor. If you were ten, you could, and the conductor would put up with you, even indulge you. They're sacking the last of the bus conductors this month, I'm told. They've been replaced by tinny little red machines that whirr and buzz at you when you get it right, and bleat and beep at you if you get it wrong. But in those days, you could still get on a toastrack tram and see human conductors working the footboards. So in spite of the Royal frenzy, there was one small boy, squirming with excitement between his parents, wedged away from the door so he wouldn't fall out, who couldn't care less about the Royal Visit, the Empire, the Commonwealth or the shiny police on their shiny new Triumph motor-bikes, or patriotism. He was riding his first tram.

I was a wartime baby, and grew up in the tram-deprived ghetto that was post-war Manly. Oh, there were signs of where the trams had been, sure enough, like the old tracks that were half-tarred-over and which erupted here and there through the road surface, to lurk in wait to snare my mother's high heels. Then there was the old tram road, snaking and winding its way up out of Manly, heading for the top of the hill, to wander along the ridge, only to dive, snaking and winding again, down the other side to The Spit. But no trams any more. None at all, not around Manly.

Of course, I'd been on trams in the city, but you couldn't really call those *tram rides*, now could you? Not when they kept jerking to a halt and then rushing off again, just like an all stops bus. No chance at all of them shooting through, now was there? So that day in 1954 was my first real tram ride, and I only managed a few more such treats before the trams were banished from our streets by the Transport Philistines, and I forgot them. Well, almost forgot them.

Then two years ago, I went off down to Melbourne to attend an educational conference that was held at the University of Melbourne. There were about two hundred people there, all of them educational researchers of one sort or another. I presented two research papers about a couple of odd bits of statistical trickery that I'd been working on, and the five or so people who'd been my audience then gave **their** papers to the same select little group. Nobody else came near us. You see, nobody else at the conference understood us number-crunching statisticians, and we didn't really want to know about them, because they were sociologists, so there wasn't much left for us to do after we six had talked about each others' papers. Which is why I happened to go wandering down through Carlton to the city.

And I discovered trams! Real trams running along real streets, trams with flags flying bravely from them, trams with surreal Leunig cartoons painted on them, trams that you could ride on for almost nothing. Just buy a two-hour ticket, and away you go. I did: all over Melbourne. I still don't know much about where I went in Melbourne, for I would simply climb aboard a tram, ride it to the end, then ride another one back again, and I hadn't a map, but who cares? I didn't: it was like being reborn, or at least it was like being ten again.

And that's why, a generation after my first tram ride, just a few months ago, I took my children for their first tram ride, down at Loftus. It was worth it, just to see the glow in their eyes, but I suspect that part of the glow that I saw was reflected, having originated in my eyes. A week or two earlier, I'd ventured out to Parramatta Park, which is an hour's drive from where I live, to visit Old Government House. I took my fourteen-year-old son along as company and as navigator, and it was he who discovered that there are trams in Parramatta Park. To cut a long story short, we struck it lucky: It was the third Sunday in the month, and we ended up spending a couple of hours clambering over everything in the sheds and out of them, and learning a great deal more than we ever imagined about light rail services. So what with one thing and another, we made it to Old Government House before it closed, but never did get to Juniper Hall, which had also been on the list for that day, but I didn't mind, and I don't think my son did either.

It's people like me, the ten-year-olds who never grew up, that I suspect are the backbone of your body of customers in the tram museums of Australasia. Most of us enthusiasts are pretty harmless, though everybody in the museum game is wary of the occasional fanatic who sidles up to you, wearing a lopsided leer on his face. I know that steam engine drivers at the Powerhouse are: when a wild-eyed, invariably male individual whispers hoarsely, "I love steam", they invent an emergency to rush off to. but at the same time, we have to



## Museums and their Role in Education

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remember that these enthusiasts, even if they *are* wild-eyed fanatics, are the people who help pay the running costs of your museum.

I think it's fair to ask, though, how often do they come back, these enthusiasts? And, do they bring paying customers with them? And, what use is it to society to give people carnival rides up and down a short length of track? I would like to suggest to you that **any** museum, of **any** sort, if it is going to survive, needs to keep getting in the people, and it won't do that unless it is socially useful. There has to be more value in the place than looking at some old lumps of rusty rolling stock and some mouldy memorabilia.

I'd like to point out that, having mentioned our two Sydney tram establishments, I'm not suggesting that either of those is like that, far from it. I'm simply describing the downward path that any museum can drop into, even a publicly-funded giant like the Powerhouse, if it starts to get complacent. So please don't think that I have any particular museum in mind. I do, actually, but it is in Queensland, and it doesn't have any trams anyhow. Well it's always easier to criticise, especially when you won't let on who you're criticising, than it is to get it right. The sad thing is that many of us only get to the stage where we criticise.

We don't sit down and ask ourselves how we can improve things, so that the criticism no longer applies. Well I'm an educator, rather than a museum expert, and the title I've been given for this talk is "The Tramway Museum - the Route Ahead". It's about time I got down to it. So let's see if I can come up with some ideas that might help you to keep your museum on the best possible route ahead, and not on a downward path. Let's look at being socially useful.

My title at the Powerhouse is Community Services Manager, and I find that title a damned nuisance. People hearing the name think that I must be involved in community service orders, or social services, or public relations, or any one of a dozen other things, none of which is what I really do. But I wouldn't change the name, not for quids. Community Services at the Powerhouse is what we call our Education department. So why don't we call it that? Why not call a spade a spade, and all that? As soon as people hear the word "education", they think of schools and schooling. Most of them do, anyhow, but there must be a few people who have heard of George Bernard Shaw's comment, when he said "My education was interrupted by my schooling". That's how I see education, as something much more than schooling and dealing with schoolkids.

However you look at it, education can, and should be something that goes on right through life. People who may have lived with trams all their lives can still enjoy finding out just why the tram driver turns that funny handle at the front. Or if they know why, they can enjoy sharing their knowledge with others. But it would be a mistake to think that education is only about learning new facts and principles: often it's more a matter of seeing something again, freshly, with more mature eyes, or seeing something from a different viewpoint. Then there's learning to do new things, and learning to care more. That's educational, too, and people do much of it for themselves, if only they're helped along the road to discovery by somebody with a bit of foresight. If you plan it well, the way that people learn is so carefully disguised, that they don't even realise that there's anything *to* learn. They learn, or are taught, by stealth, or at least that's what we set out to do.

Let me give you an example, one that I know well, the Powerhouse's Locomotive No. 1. This, for those who don't know it, is our first ever locomotive to run on a line in New South Wales, complete with three reconstructed carriages, one each of Third Class, Second Class, and First Class. Loco No. 1 sits beside a mock-up railway platform in the Powerhouse, with occasional props scattered around, the odd cage of chooks, a hat-box and so on. There are a few pictures and a few labels to look at, and even a couple of stereo viewers, one high, one low, for tall and short people to look into, with views of the development of the Zig Zag railway. I'll come back to the significance of these in a minute.

If you arrive on the platform at a quiet time, you may think that it's just another train. then you may hear a peewee in the distance, calling "peewee". When the museum first opened, I spent three days looking for that blasted bird, convinced that it was lost somewhere in the building. Then I twigged that the bird's call is actually the start of a sound track, and I relaxed and listened to the sounds that our audio-visual people have built up. first, we have a steam buff's delight of choof and chuffs, and then noises of a train squealing to a stop. That's when the fun starts, for there are other sound tracks as well, representing the sorts of

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conversations that you would hear in each class of carriage in 1863. And when you look into the carriages, you find there are dummies there, dressed in reproduction clothing of the period, and there are display cases, full of the sorts of things that those passengers would commonly have used. The train, and the objects, are put into a context. If you listen to the conversations that take place in the three carriages, you'll also learn about the railway itself, for the Third Class passengers include a fettle and his family, and in the First Class, the passengers include the railway's chief engineer, John Whitton, the man who built the Zig Zag railway. Hence the pictures on the platform.

Now let's ask ourselves for a moment: how would you go about dressing up a tram exhibit like that, putting it in context? What sorts of ideas would you like to present to the public? What would appeal to them, and educate them, and make them want to come back again and bring their friends? Obviously, you'll want to have tram rides. But are you going to leave the ride as just a carnival ride, something that lets your members play at tram drivers, or are you going to do a bit more? At Loftus, I found that you don't buy an entrance ticket at the gate, a conductor sells it to you on the tram. Maybe every tram museum does it that way, I wouldn't know. When you think about it, it's obviously a great idea, for it shows people how a tram conductor worked in the old days. But what else could you present to people, to give the tram ride some historic meaning? You might decide that the most important thing was to show what life was like for the tram crew, and how they carried out their tasks, what they were paid, and how the trams were cared for, but remember, it's John and Mary Public that we're trying to catch. What would they be interested in?

In the museum business, you see, we're all there for the love of it, either as unpaid amateurs, or as underpaid professionals. The public aren't quite like us: they may be interested, but they don't LOVE the museum objects. So they'll be more interested in how their ancestors would have used trams, where they would have gone on the trams, things like that. As most people aren't the descendants of tram crews, they want to know about the ordinary people, the passengers on the trams, and why they caught trams. I know, for example, that people used to go home for lunch in old Sydney, using the horse-buses to get there, and back. I don't know when this practice stopped, or whether it continued into the age of the tram. If I were presenting a display on Sydney's trams, I think that might be a useful thing to follow up on.

But why should we bother? What's in it for us, the museum bods? Our pleasure and amusement aside, ignoring the joy of producing a fine exhibit, what purpose does it all serve? I spoke earlier about knowing, doing and caring. Educators love grand noises, so they call these cognitive, psycho-motor and affective domains, but let's just stick to knowing, doing and caring. The main thing for museums is a matter of winning hearts and minds, passing on values that we hold, sharing those values with others.

Now whether you're talking environmental education or museum education, the same general aim is there. so I'm going to share with you a few tricks of the trade that are used in teaching about pollution and conservation. Environmental educators tell us that there are three things they try to do: getting people to care about the environment, or pollution, or whatever, getting people to do something about it, and getting people to know about it. So long as you get any two of these, they say, then the third will follow fairly automatically.

In the museum game, we have to get into the values area, to make people care about preserving our history. You don't need to teach people about the value of ripping down beautiful things, wrecking and starting again: they seem to learn that for themselves, without any help. We have to teach them to care. Getting people to learn and enjoy is usually easier, and if they enjoy themselves, the action will follow. So we need to teach them some facts, as painlessly as possible, and have them enjoy themselves. Then they'll feel the need to DO something about supporting the sorts of things that we care about. They'll be hooked.

But first you have to get the folks in there, to make them roll up to your doors. To find out what makes them come, we need some evaluation, at least at a simple level. Ask people what they liked, what they hated, and what they'd like to see more of, and be prepared to take it all with a grain of salt, for the public are good at contradicting themselves and each other. So then it's back to common-sense. The main thing that brings people in is a regular service: people need to know that you'll be there every Sunday, or every school holidays, or whatever. And, of course, if you've promised a service, you need to be sure that it happens, come what may. This is how you get people to return, or send their friends.

## Museums and their Role in Education

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Publicity and advertising are important, but they can be horribly expensive, and they may not even work. Here are a few ideas that may help you to get some free plugs. There are kids' shows on TV that are forever crying out for stories, and TV chat shows that can always use a short segment on what it's like to be a tram driver, and most newspaper columnists welcome the odd yarn, as long as it's entertaining. Ghost stories are good: we have two ghosts in our museums, one of them a paid staff member, if the truth be known. I must say our auditors reacted rather strangely when I told them about a special budget to pay the phantom at the Hyde Park Barracks. I'm sure they thought I was up to something. I was up to something, of course, but not fiddling the books. Our Ghost is a chap who wanders around in convict garb, talking to people about what his life was like. The journo's just love him as a filler for a quiet day.

The other ghost, by the way, was invented by our PR people, I thought, and he is said to work on some of our steam engines after hours. I thought they invented him, but the head of PR asked me recently, in front of a visiting journalist, if there really was a ghost. Now I know a good chance when I see one, so of course I said yes, and I embroidered the yarn with details of how it was thought to be a worker in the old Power House, who had been dreadfully mangled in the machinery, although I assured them that he seemed friendly enough. She looked at me rather oddly, and rushed off, taking the journo with her. Now she tells people that I'm cracking up and seeing things. Ah well, somebody had to pay for the free plug we got in a well-known paper. I don't mind. So media publicity is there to be had: all you need is a somebody who can tell outrageous lies with a straight face. But you can also chase after word-of-mouth advertising as well: It's just about free, and people believe it.

You can do your own word-of-mouth advertising by infiltration. As example, we have all forms of tram traction in our collection at the Powerhouse, although there's no electric tram on display, and our trams are stationary. Like many museums, we use volunteers to talk to people. So if you're part of a Sydney group, your members would be welcome there, and we're delighted to have you sell your own museum as well. We display the leaflets from Loftus, but they tend to be wasted, because kids take leaflets, but rarely read them. As I said, word of mouth is cheap, and it tends to reach those who are most receptive as well.

There are groups of senior citizens all over the place, who would be delighted to have a visitor come and talk to them about what your museum offers. You'll need a few slides and a few leaflets, but it pays off very well indeed. Next thing, you'll get a bus-load of senior cits, and most of them will be grandparents, and these days, many will be minding the kids at the next school holidays... You can see how it can all grow. Then there are the kids themselves. Schools are a good starting-point, if you can get them there on school visits. Schoolkids can be hard to take, but if they enjoy themselves, they'll be back again, too.

You have to talk to people, but remember the old adage: if you don't strike oil in five minutes, stop boring. Well, I've gone for more than four times that, so I'll stop, too, but I'd like to leave you with a note of warning about the loony enthusiast, one of them in particular. You may well know this character, so I'll mention no names, especially as he's a close relative of mine. If you know him, you will also know that he eats, lives, talks and dreams trams, trams and more trams. Nothing but bloody trams, either real ones or models. So in an attempt to widen his horizons, I suggested to him that he take up gardening.

"But I live in a flat", he said.

"No problem", I said. "I'll get you some of those Japanese miniature plants."

He didn't look too fussed about the whole thing, but he agreed to give it a try, and for a while, he bored the family with talk about gravel, kinds of pot, pruning, watering, moss, and the possibility of working with Australian native plants.

Then suddenly he reverted to talking about trams again. So I went round to see what he was up to. As I walked up the path, I noticed that his garbage bin was overflowing with tiny dead plants. It didn't look good, but then I realised there were no pots in the bin, and my hopes rose again.

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The door was ajar, so I walked in, and there he was, seated at a table covered in those cute little dishes that the Japanese grow their plants in. But there were no plants, just model trams, in all the pots. One thing was quite clear: I was beholding a backslider.

"And just what are you doing?" I demanded.

He turned and beamed at me. "My boy", he said, "I think that I now have the world's biggest collection of Bonsai trams."

Amid laughter and applause, Peter Macinnis asked if there were any questions...

**Don Campbell (SPER):** When you mount your displays down at the Powerhouse and you have model people with clothes on, where do you get your models from? It seems to me the only ones available are fashion dummies and they just don't seem to look right.

**Peter Macinnis:** Unfortunately I cannot answer that question as I am not involved in mounting the displays, I am an educational person. They do, however, look very realistic. The reason why they are in grey is that although the dress is typical of the period it is not in the right material for that period.

**John Radcliffe (AETM):** I asked them the same question when I was there yesterday. They called tenders for six dummies and received replies from six suppliers but came to the conclusion that Australian companies cannot make them to the standard required and they would have to be imported from Britain. They eventually found one manufacturer, craftsman may be a better word, who supplied the dummies you see on the railway train and they cost about a quarter of what was expected had they been imported from Britain.

**Chairman:** Any other questions?

**John Radcliffe:** I get the impression that you have been so busy running the Powerhouse that you have not done any survey of the visitors up until now, although I may be wrong. Are you planning anything in that regard?

**Peter Macinnis:** One thing you have to realise is, we are a public service organisation and we are still putting on staff. The person who would be doing that job has yet to be hired. We have been gathering a fair amount of data in the meantime, but we do need somebody to analyse it. So we do have some information on what is going on. We are more concerned, however, with the long term. Up until now, our museum has been, to a certain extent at least, something of a novelty that people come to because you want to be able to say you have seen it. It is now settling down to a regular audience, and the sort of things we'll find out are a lot of people are coming back for the second or third visit, we are anticipating our millionth visitor tomorrow by the way, but that will not be a million whole people, it is more like 700,000 because there is a very large repeat rate. But now it is starting to settle down to a regular visitation pattern. Earlier, it would not have been such a good idea. We have some information on group patterns, we know more about our school packages, if anyone comes through with an organised group we have more information about them. Basically, we have been running like hell just to stay in one spot.

**Howard Clark (SPER):** You mentioned return visits; that interests me as well. The other thing you mentioned was the periodic themes and changing of exhibits. Can you give any sort of rule on that in a tramway museum sense? It is one of the problems I see that we have in that we have a display hall where we exhibit certain things but need to have a theme or something that can be changed periodically so there would be an opportunity for people to know that there is at least one section that would be changing....

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**Peter Macinnis:** We are talking about Loftus here, so we will take Loftus as an instance as many of you will know, and the rest of you will know fairly soon. I would have thought, and this is very much a personal reaction, they are packed a little bit too close together. You have space there, and you are trying to make the best possible use you can of it. There is always this temptation to cram in as many as possible, so you are forced to go up one alleyway and come down the other. A little bit more room would have been better. It's little things like that which makes the visitor happier.

At the time of my visit there was not a lot of interpretation. There was one vehicle there, the counterweight from Balmain, I think it was, which had no signage around anywhere to tell you what it was. It could have been some interesting thing to do with trackwork, a small coffin car or what, or a piece of armoured something to break up the strikers in the general strike in 1918. It was difficult to work out what it could be, and people who are not used to transport museums need to know what they are. So certainly something like that is needed there.

The trouble is you then go overboard and say "We'll cover every wall with signage" which would take a visitor three days to read. You need to have a happy medium where you have some information about each object. The themes you would have to work out for yourselves. You might concentrate on the way that people used the trams or how the tramway system developed, or something like that, and then work from there.

Certainly at the Powerhouse we have approximately 20% of the mass of our material on show at any one time. We have some 750,000 objects, by the way, and only 9,000 on show, but we have a lot of big ones so it is about 20% of the mass. We are looking at changing over every seven years and we will still be going in 35 years time. By that time we will be displaying to another generation and can start all over again.

It is just a matter of finding your own themes. If you can get school groups, for example, you may need to talk to a couple of history teachers to find out how it would relate to the history syllabus, or how you can relate it to the industrial arts syllabus in some way so that people would want to come down and see it as a group like that, and try and rope a few of the teachers into developing some sorts of work sheets.

Now, work sheets for kids are not a problem, you can start developing these for school groups. For most people, a work sheet is a list of twenty questions to answer facts. 'What year was the so-and-so tramway opened?' That is another thing you ought to do: 'Why do you think there was need for a counterweight on the Darling Street Wharf line?' Maybe they don't need to write down an answer now. They can go away and find the counterweight, see what it was, see if there is any signage around it, think about it and discuss it afterwards.

That is the sort of thing you need to work out. That is what will get the schools coming back again and again as they will feel that it is teaching the kids much more than just learning facts. My fourteen-year-old son went for his geography exam yesterday and because it required quite a bit of interpretive material he said "I went and studied for that exam and learned all the facts and they didn't have a question about facts". Now that was a good teacher. He wasn't asking kids about facts, he was asking them to show they could use facts when given to them.

**Question:** Is it appropriate to mix signage with your take-away material?

**Peter Macinnis:** I think it is very appropriate to mix them because there are a lot of things that people really want to have to take away with them. They also go a lot further. If a person is interested enough to take away a Loftus leaflet from the Powerhouse, they are interested enough to go in the first place so there is a good chance they will talk about it.

Keep in mind, with kids there is a lot of 'show and tell'. One of the reasons why I get to so many places is that I am working at the moment on a book which has the working title 'Any Kids Guide to Sydney', it is a sort of counter culture, if you like, tourist guide. All of the nice things you can do which are basically fairly free. So while I am researching this, I keep taking the kids off to things to gauge their reactions. That's how I got to Loftus, that's how I got to Parramatta Park and so many other places. I take the kids for their reactions

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and they take all the leaflets to school for 'show and tell'. They take that particular leaflet back and talk about it.

I know for a fact that we have generated some custom for a number of those because parents have said "Hey, tell us more about this thing that so-and-so was talking about at school, we'd like to take...." My six-year-old is the main one who starts most of this off for you. It is a network that is around; you may not recognise the issue created by this free advertising but it is certainly worth having. So, a few leaflets they can take back, a nice picture of a tram, 'Come back once again to Loftus', a small model of a tram which is made out of cardboard which they got from the Easter Show. They take that along to school and "This is what I got, this is what we rode in, one of these, we rode up and down the track all day and had a marvellous time". It's great, word-of-mouth sales, except for the cost of Easter show model trams. Your take-away stuff is very important to help your museum be recognised.

**Michael Kerr (THS):** One of the things I noticed at the Powerhouse yesterday was that you have got a sign that you can't take photographs unless you ask permission and although there is a shop, the shop doesn't cater for most of the displays you have out in the foyers.

**Peter Macinnis:** The situation with photographs is interesting. Most people taking photographs in a museum find themselves in low lighting conditions. We have those low light conditions so we don't damage organic materials, including the paints. So they solve this problem by instant flash light. Now flash light contains ultraviolet light which really rips the guts out of anything organic, whether it be wood or cloth or paint or whatever, it destroys it. And that is the reason for the ban on photography.

In the longer term there will probably be collections of slides on sale but they aren't there at the moment. You can take photographs, you can use a tripod, you can use a fast film but you can't use a flash.

You can't photograph things that are not ours. If we have things that are on loan we can't give you permission to photograph that. So if you are interested, fill out a form saying I would like to take photographs, you are told these two things and explained why and you are free to go.

In the long term you will given a large fluorescent label which goes on you shirt saying you are a cameraman. Flash is definitely a no-no. If the press want to come in and take a photo, we have to put up with that but it makes it difficult to tell the general public not to use a flash, it is not allowed, and the press are there. The other thing is, we use security cameras and if a flash goes off up the barrel of a security camera when it is operating, under certain circumstances you can blow the tube and at \$800 a time it is another reason for not wanting flashes in there.

As there were no further questions, the Chairman thanked Peter Macinnis for his contribution to the Conference and declared the first session closed.

# **PROMOTION AND PROPAGANDA**

## **Some Ideas on Public Relations**

**P.D. A'Vard**  
**Secretary, Puffing Billy Preservation Society**  
**Deputy Chairman, Emerald Tourist Railway Board**

I was a little unsure of what I should speak about today, however I make my living at the theatre, and public relations is one of the main things I'm on about these days.

Now, sitting in the lines of your volunteers at your various museums, there is a treasure trove of talent, and it is amazing just what we can do. However, we are somewhat locked into a tradition, that is to look upon our railway or tramway in terms of our hobby alone, and the Hell with everyone else. I have detected this attitude all along the line because the most important people to us we tend to ignore.

The most important people we have are not our members, they are the people who turn up each week with money in their hands, who pay the fares to allow us to perpetuate the hobby we wish to pursue.

Preservation has gone through several stages. We all started not knowing where we wanted to go. When we started off we all had a dream. I wanted to preserve a railway, you wanted to preserve a tramway or tramcar. After years of effort, we opened the thing up, got something to go, then yelled to the public "Look, we have something going, come and use it". The public did and they got onto it. They came for one reason, nostalgia. Nostalgia for an old steam train, nostalgia for an old tram. That was 25 years ago. The people who come in today are not interested in nostalgia, they come to buy what we are selling, and what we sell is entertainment.

Entertainment is the means of making people happy, giving them a good time. These days there are many forms of good times available to people. Cast your mind back 25 years, just what could you do on a Sunday? Now there are countless activities that occur on a Sunday, and these distractions are our competition. Not only do we compete with the football or the pubs or the pictures, we now have to compete with other people that got into our field, and often people are doing it commercially.

Now if you were to take yourself out of Sydney on a Sunday and, say, visit Old Sydney Town where their total commitment is to recreate 18th Century Sydney Town. Being a commercial operation, have a look at what they are presenting, have a look at their product. If they did it the way some of our museums did it, if their staff decided to ignore the customers and lounge about, talking amongst themselves, while the customer walks by, ignored, perhaps ready to buy something, you could be sure that they would be dismissed in quick time. They would not be concentrating on the essential essence as to what is there. And the essence there is giving the customer a good time and making the customer want to come back. This comes down to what is public relations. I'm afraid to say that in my experience with most of our voluntary organisations. This is the attitude that predominates.

Why is this so? I suppose most of us go to our museum because it is our hobby, it is our form of recreation, we go there to be with our mates and it's much nicer to talk to your mate who you have not seen for the past three weeks. Meanwhile, the customer with spending money in his pocket walks past, puts his money back in his pocket because no one asked him to buy something. The customer goes away with the impression that it was not a bad place, they had quite a collection of old bits and pieces, but would have loved to have someone tell him about the stuff.

So I would like to suggest to you that the most important people we have are those people with money in their hands, and while we are at the museum, on duty, we should forget our own social intercourse, have that after 5.00pm over a beer, and concentrate like mad on that essential person, the customer. Give them a good

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time. Men come onto your property and they are keen to see everything. They want to see behind the scenes. Do any of you open your workshop and run conducted tours? Now that's a glorious saleable item. It may be a bit of an untidy place with a few blokes painting, but most of the men that come onto your site and dead keen to look under a tram, particularly if there is a bloke there, screwing up a nut who will take the time to tell the visitor why he is screwing it up. Man will stand for ages just watching this. It's another way of talking to people, of giving them a good time.

I saw a lovely example of this applied PR on a railway in England called the Dart Valley Railway. Some of you may have heard of it or visited it. At Buckfastleigh, you pay your money to get inside the gate and spend the day wandering about inside. All the volunteers have their own pet projects going on about the place, and they are working on them for themselves. Now there is a path connecting all these projects, and the volunteers are instructed that if a visitor stops and asks a question, they must down tools and have a conversation with the visitor. It is one of the conditions that is applied when members take on a task. It's perhaps a slightly different situation there as people are mainly working on their own engines, and the Society only provides the space and workshop facilities. However, this interaction with the visitor is a condition when engines are restored at the Dart Valley Railway. Incidentally, they also managed to make between £25,000 and £30,000 a year just collecting money from people coming through their gate.

As well as selling a good time, we are also trying to make our customer come back. Have a look at how your tramway rates with your competitors, how do you want your tramway to be seen. We now must make a point here about growing up, and we as preservers must grow. Peter Macinnis from the Powerhouse explained that he has the benefit of a big institution that is subsidised, and has the advantage of paying people to do the things that volunteers find unpalatable. How many of you fellows really want to turn up on a weekday and make a bunch of disinterested school kids happy. I feel we must look at a volunteer enterprises and ask ourselves the question, how can we take our show much further? Have we any more time we can give? I think we are all full of ideas, but can we find the time to do them and can we find the expertise.

Maybe as part of this PR exercise it could be worth our while to spend some money and bring in someone who can help us. Most of us are caught up being the operators and not being the promoters. To have someone unconnected look us over may be a way to help us enhance our operations. Am I touching a nerve there? Perhaps I'm being provocative but the case is, we are there for our enterprises and our enterprises must grow.

We no longer have nostalgia to rely on, we have to take our enterprises out into the real world and fight our competitors. We must also do some work on how our tramway is perceived by the customer. Who is our audience, who are we reaching? Have you ever surveyed your visitors, or do you just open the gates on Sunday and see who shows up. Of course, who is prepared to go around with a pen and paper for six weeks asking people questions? That is the problem, that type of activity is boring in the extreme, and you are continually thinking about the fun you are missing out on not being able to take proper part in your hobby. But it must be done.

How much money do you spend each year on advertising? How can you people to come to your activity if they don't know about it. Don't be frightened about putting money up front because you should budget about 15% to 20% of your income towards advertising costs. But if you do advertise, you must monitor how well the money is being spent. If you spend \$4,000 on advertising, you can be sure that you will bury \$2,000 of it. No one will tell you which \$2,000 you buried, but the essential thing to try and work out is where best to send your advertising money, and how effective the result is. Here is a lesson. If you place an ad in the paper on Friday, ask everyone on Sunday how they found out about the place. You might find that you buried that money.

The secret is to work out where to spend your advertising dollar and when. For example, I would not spend a cent in Winter. There is too much competition for the place known as the fireside. I would not spend too much over the Christmas and holiday season, because they will come anyway. Perhaps place a few ads to tantalise. However, your normal PR and word of mouth will get them in. The right time to spend is when you are running at about 75% capacity because your money is more effectively spent trying to raise the 75% to 95% rather than trying to raise 20% capacity and bringing it up to 25%.



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Now to effectively advertise, it would be worth your while to consider finding a good publicist. Pay them a retainer of \$300 or \$400 a month to handle the advertising and to make sure that there is a press release about you in the papers every week to let people know what you are doing. Now if you cannot do this yourself, it's worth slipping a retainer to some publicity orientated woman to do this for you. What ever happens on your tramway, day by day, is of interest to someone, particularly your local paper. Every week there is something that has happened. You might have raised some money, a new tram may have rolled out of the shed, a member has bought a new tram, your annual financial statement may have come out. A press release to your local paper will get you plenty of copy and it does two things for you. Firstly, it spreads around the district that you are there and secondly it makes the locals aware that you are an asset.

Consider extending your hours of operation. At Puffing Billy we made a loss last year, and we succeeded in turning it around, and how we did this was by throwing conservatism to the winds and opening for seven day operation. It is astonishing how many people are out on the roads Monday to Friday looking for a good time. We started off running on a Thursday, I notice the S.P.E.R. is starting to do this, because we thought that would be the best day for the bus companies, then extended this to Tuesday and Thursdays and last year further extended to daily operation. On analysis we found that we only operated an extra 80 trains in the year. That year we had a loss, the first financial loss for a long time. We analysed the thing and found that we had a rainy day every weekend of the whole year. But when we looked at our weekday figures, we realised that if we had not been running seven days a week, our losses would have been 200% greater.

When I started off seven day a week operation, I concentrated on parties, and parties are fickle. Sometimes they find the bus too expensive to get to your attraction. Slowly we found the pattern of school activities changed and we started losing our school parties. What started to build up were the adult parties, the "Bussies" and now we end up with no less than three parties a day, plus some school groups and up to 300 blow-ins. It will probably get to the point where we will have to run a second train just to handle the blow-ins. Now these people are running around your city, looking for a good time, and you should be running seven days a week to grab them. If you cannot get volunteers to man your trams, why not try staffing the things with people who wish to pick up a few dollars during the day. You may end up paying out \$50 or \$100 to pay them, but you could be bringing in \$200 to \$300 through your door, including the lolly sales.

Advance sales, especially with groups, is a good money earner. People are becoming used to buying tickets in advance and it is now easy to do. Take the example of someone who buys tickets in advance, and on the booked day it snows. You can still run your tram and you have got their money. Even when the weather is fine, the customer who has paid his money will come, but you then get a chance to sell them an ice cream or a postcard. So give some thought to that. Not only can he get his ticket in advance direct from you or through an agent like Bass, travel agents could also sell your tickets. Now travel agents are into selling tickets in advance. They may take 10% off the top and put it in their pockets, but you do not have to sell the ticket, they have sold it for you. Remember also the travel agent does not get a piece of your ice cream or souvenir sales. Do not be frightened to let a piece go to someone else.

Now take the bus party. Thirty people get off and go about having a good time. What happens to the driver? You must look after him. The Talylyn Railway in Wales has a separate little room for bus drivers. They all know they can get a meal and a good cup of tea and they know they will be looked after. The bus company also knows it is on a good thing because they are getting a 20% commission off the top as well. They submit the fares they collected, less the 20%. It might not be the full fare but at least you did not have to sell the ticket. So always look after the bus driver, he will bring someone back to you. It is another form of PR.

Now another question. What will our customers pay? I have this dreadful fear, and I guess it stems back to the conservatism of the volunteer, I think we are under-pricing our product. Now we all throw up our arms and say "What about the struggling family man?". Well, the poor family man, if he does not spend it with you, he will probably spend it at the pub. Now that family man, if he does exist, is not going to come to your enterprise because he cannot afford the railway fare to get there, so forget about him.

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I think we are underselling ourselves. I believe you are looking at a form of entertainment and we should be charging a price commensurate with what we are offering. I tried in the theatre years ago to increase patronage by lowering the price. The result I got at the box office was "that was cheap, what's wrong with it". There is a funny sort of inverted snobbery we have in ourselves. None of us really likes shopping at Woolworths, do we? You would rather shop somewhere else and pay a few cents extra because it has a 'bit of tone'. You like to be seen shopping in the right places. It's the same thing with us.

I reckon we are all underpriced for the product we have. Think hard about that one because, if you do put your prices up, you will have to provide that extra service to justify the increase. Forget about meeting your mates, forget about discussing whether to paint the W2 pink or white, you are there to serve the customer. You are there to bring in the dollars to pay for the pink or white paint. Have your social intercourse after the business is over.

Another thing to think about is this. Very often we think we are only selling one thing, that is a tram ride. Now when you go to Old Sydney Town and you are not tied up with an activity, what do you want? You want amenities, somewhere to sit and rest, get a meal or a cool drink, a clean toilet and perhaps a souvenir or some memento to take away. These things are something other than your principal attraction. You will take note of these amenities, then see the attraction. Now have a look at your own place, because it does not matter who goes to see your attraction, it does not matter how good your attraction is, when the customer walks out your gate, they will judge you on two things, the quality of your food and the cleanliness of your toilets. The tram ride of the train ride are secondary in the mind of the customer. The lasting impression is how he was treated as a human being while he was there. What was the amenity, was there a smile on the face of the person that met him, were they able to answer his questions and were they willing to spend time with him. These are the important things.

What we must be doing in this hobby is carrying on the glorious pastime of preserving those relics. We have it written down in our mission statement that we are there to keep these things for posterity. It does not say we are there to be tram drivers of track layers or painters. Those are just the peripherals to allow us to keep these things for future generations.

The days of volunteerism are passing. We should therefore be gearing our operations for the next step, to become more professional and use our volunteers to support that professionalism. Once you have competition of the standard we are now seeing, take for example Old Sydney Town, if we are not careful they will overtake us. They take in the big dollar and spend the big dollar. We take in the little dollar and we don't have much to spend.

Well, I've magged on, has anybody got anything to throw back at me?

**Tony Griffin (SPER):** What is Puffing Billy's commercial attitude to competitors in other areas, such as the other tourist railways? Is it an attitude of 'we'll assist you if you'll assist us' or is it a case of all or nothing? I understand there is activity at Geelong and also some east of Melbourne. I don't have all details. With competitors in, say, a 200 mile radius of Melbourne would your attitude be to assist them or to be completely separate?

**Phil A'Vard:** There is room for all, room for all. Puffing Billy only carries about 185,000 people a year. That is a tiny proportion of what Melbourne's, Victoria's, population is. There is room for all of them. If it came down to it, it would be survival of the fittest. We help those other organisations in terms of labour and equipment, stuff like that. In terms of selling your product, each has their own technique. There is no joint marketing plan across them, it might be a question of scale in that case.

We got tied up with the Australian heritage parks organisation, which is worthy of your consideration because they are becoming, in two senses, a marketing organisation jointly right across the nation and also a very useful buying organisation in terms of souvenirs and similar products. This is how we can help the other

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smaller groups. If they want to get postcards, instead of them buying thousands of postcards we arrange with them to get one of our run of twelve. So we print eleven postcards which we pay for and we send them the other one so they get them without the heavy outlay in that case.

Getting together and selling yourselves is obviously a good idea. Take Wales for example. You've all heard of the Great Little Trains of Wales. That is a consortium of five narrow gauge railway companies that came together and set themselves up as a group marketing lobby. Now, it's not a bad idea if the various tramway groups got together for the same thing. That's something you can settle yourselves. Get together and produce your own joint brochures, buy your own newspaper space as a group. It doesn't quite answer your question but if they need help, they can come to us and we will give it to them. The amount of technical assistance that goes out the door is quite solid.

**Tony Griffin:** If they want help in an area which commercially could disadvantage you, what would your attitude be?

**Phil A'Vard:** I don't see how they could disadvantage us in our commercial area. Most of them are a long way away from us.

**Tony Griffin:** Most are physically far enough away that they are tapping a different market?

**Phil A'Vard:** Yes, take the boys out at Mornington. Their market is the tourist that visits that area, is encouraged to visit that area by the continual promotion that goes on in that area. That essentially is their market. They are not taking away Melbourne's market. Our surveys show that Puffing Billy is very likely parasitic on the eastern suburbs of Melbourne so they are not touching us at all.

**Tony Griffin:** If the other group was tapping the same market what, then, would your attitude be?

**Phil A'Vard:** That is a little different, as my commercial attitude is survival of the fittest, basically. But my heart says how can we help these guys. My way, this is Phil A'Vard speaking and not Puffing Billy when I say this, would be to give them every help I possibly can, knowing the row they have got to hoe. I can't speak for the management.

**Michael Kerr (THS):** When I visited Puffing Billy about four or five years ago, you had five engines in steam. Now you have three. Is that one of the results of seven days a week operation in the sense of wear and tear on equipment? We are running seven days a week and we're finding tremendous problems maintaining track, maintaining vehicles, keeping them on the track seven days a week. Do you have the same problem and can you give us any help, other than full time paid crews.

**Phil A'Vard:** The minute you start to raise your operating days per year, your costs are going to go up, but your income is also going to go up, so it is worthwhile doing. That is the decision we took. You do reach a level of maintenance on the darned things where they are pretty right. As you put greater demands on them, you compensate by putting capital into that particular part and you hold them there so your operating costs do level off and your income goes up. It is a decision we took on that basis. We looked at it, we thought we'd try it for twelve months then evaluate the situation. We found that income went up enormously and the result was quite satisfying.

We came to the conclusion, after some costing, that if we could run the train and it only had eighty people on it, that was sufficient to pay off the overheads, the cost of running that train, and every seat above that was that much off the overheads. We have something that you haven't. We have the fixed cost of twenty staff, so every dollar over the cost of the train is a dollar off the cost of that staff.

**Michael Kerr:** What you also appear to be doing is reducing the amount of running traffic or the amount of running vehicles at any one particular time. Is that so? [Yes, that is so.] So your maintenance or upkeep becomes limited to a lesser number of vehicles including steam engines. But what maintenance and restoration you are doing is pretty intensive.

## Promotion and Propaganda

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**Phil A'Vard:** One of the beauties of our computer ticketing situation is that you can adjust your loading to suit the traffic on the day. You can take three cars off and put them in the siding and not burn that much coal and not wear so many carriages out. Which is exactly what the railways are doing with their interstate and intrastate trains. Ffestiniog have done that. They have a control room directly above their offices which has a monitor connected to their ticket selling machine and the train controller up there can see instantly how many passengers he's got and can adjust the train load accordingly.

**Bill Kingsley (BT):** You were talking about under pricing ourselves. Now, two of our museums in Victoria, and you would be familiar with both, rather than exist at a single site, operate as street tramways, and they are Ballarat and Bendigo. What we often find, especially in Bendigo, is people getting on the tram and immediately comparing us with the prices on trams in Melbourne. They have had a Travelcard or a Neighbourhood ticket in Melbourne and expect our prices to be the same. We can't match that, we're not government subsidised, but we have to lift our prices into the tourist bracket and often get this comment in return.

**Phil A'Vard:** Do you tell them they are riding a tourist tram? [Yes, always.] We faced up to this quite some time ago with Puffing Billy because people used to ride on a train. They'd jump up and down - 'How much to ride on a train?!' - and our comment was that you are being entertained, how much do you pay at the pictures? We had to ride that storm. It was a tough one to take and will be a tough one for you to take. You may lose a few customers but you will get them back if you keep in mind what they want; let them stand beside the driver, give them a little bit more than they get on the trams in Melbourne. I know your problem, it's a tough one, but you will wear it.

Well, gentlemen, I've been given the wind-up sign. I didn't think I would get this far. Thank you for your attention.

The session closed and delegates adjourned for morning tea.

# THE COMMUNITY SERVICE ORDER

**Clive Parker**  
**District Manager, Probation and Parole Service**  
**Department of Corrective Services, N.S.W.**

I have not prepared a formal paper, but will talk for about twenty minutes after which you can ask questions on the aspects of the work which interest you. I will talk about certain aspects of the work and the reasons why, and if you wish you can ask me some questions.

I have made a list of the aspects and these aspects are:

- when the community service order system started in New South Wales,
- the concept of the scheme,
- why the Tramway Museum was chosen as an agency,
- the approximate number of offenders referred to the the Tramway Museum and, perhaps, the percentage of success,
- reference to the skilled workers we have placed and to steering the offenders towards rehabilitation and community work, and hopefully to your organisation.

Don't shriek in horror as the offenders we refer to you are only minor offenders. I was only saying during the morning tea break that with the advent of the fine defaulters now, we are getting people not on leash. These are fine defaulters under the Community Service scheme and are only minor offenders.

The scheme commenced operating in New South Wales in 1979. The government of the day was anxious to reduce the prison population; that was the major reason for it. The original scheme was a pilot scheme and I was fortunate enough to be involved in that pilot scheme, not as an offender of course, and I was the Officer in Charge at Newtown at that time. We had the scheme operating at the Newtown and Sydney office at the time, this was the only one in the Sydney area. We also had Goulburn and Gosford, so the government was obviously very wary about how the scheme would work and they ran the pilot scheme for about a year before the scheme was extended through the whole of the state.

The magistrates and judges charging offenders with community service orders had to check to see whether they lived in those areas. There was a little bit of cheating by the judiciary at the time as they were so keen on the idea that they had offenders change their address to live in those areas. It certainly did not take long to kick off and it proved very popular with the judiciary.

The concept of the scheme is an alternative to imprisonment. The original idea was that the judiciary had to decide whether they really intended to sent the person to imprisonment, and if they were intent on sending a person to imprisonment then that person would not be considered for community service orders. There is a wider notion among the judiciary now, not all, but certainly the majority of the judiciary, that alternative to imprisonment is something that you could be imprisoned for. That is, any offence for which you could be imprisoned is an alternative to imprisonment. So it has taken on a much wider view and as a consequence the the offences have got a lot less offensive. That is, they are not so serious.

We do refer people with quite serious offences and I made mention of some with quite minor offences, but there are some who are out on some quite serious crimes, not necessarily in connection with that particular order but they may have a history of quite serious crimes. There is nothing you have to worry about as it is a very tightly run scheme. The person you would usually see, certainly in the Sutherland area there is a lady named Joy Toll, is what we call a Central Supervisor, whose responsibility is to check and see that the people

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are working. Behind the scheme there is a community service officer, that is a probation officer, who is really organising it and seeing that it is maintained properly. I insist that offenders be properly assessed and not just by the ordinary probation officer. Sexual offenders, drug offenders, violent offenders and alcohol-related offenders can not be referred to you unless they are assessed completely by the Community Service Officer. When we do refer these people to you we say to you that they have this type of history. We cannot tell you, of course, their exact history as under the policy we can not do that.

We would like to refer a particular person to you and we would say that they have a pretty bad history of, say, sexual offences, so we would tell you to be careful where you placed that person. We use the skill of the community service organiser before we refer anyone to you, and you would not get very many of those offenders. But in your circumstances, it might be a person who is known to be an exhibitionist. We would say to you he has a history of exhibitionism as we would not want that person placed in a position where he would be flashing in front of the trams and that sort of thing. [Laughter.] We might have a thief who is prone to take people's purses so I think we would need to be careful there.

But generally speaking, these people work very well, and if I may digress a bit, I mentioned earlier I have been adviser to the Parramatta citizens group. They are a group of prisoners who are in gaol, prisoners who would say they were in gaol and that sort of thing, and they would be able to come out and talk to people like yourselves. These prisoners come out of the security system with only a very small escort and some people were a bit nervous about there being only a couple of escorts. The meat of all this was if they escaped they would go back to prison and have to face the other inmates. They would be called the people who killed the golden goose so you don't break rules in prison. What happens here is the prisoners know that the authorities are letting some people out without a tight leash and there is the possibility of others being allowed out.

Any time you are not sure of anybody, if somebody is referred to you and you are not sure and want that person moved, then it is no problem at all to move that person to another organisation. We find your organisation is very good because it provides good solid manual work. There are positions there for skilled workers when we can provide them for you, not that we are able to provide too many for you, but it is a good alternative to imprisonment. Most of them appreciate that; they are getting the alternative rather than going to prison.

**Howard Clark (SPER):** We had one, if I may expand on what you just said, when we had a C.E.P. grant for construction of our track, we had one fellow in particular who decided to take his holidays from his employer. Instead of just coming on Saturdays, he worked out about four weeks by working with us every day on the track gang.

**Clive Parker:** That is so. They do that. That's the sort of thing where the organiser involved with the person may have arranged a break in their community service order. They may have had to complete a certain amount of work in their apprenticeship so we give him a break to finish that apprenticeship off. To get their hours up, the organiser will ask him whether he can be placed there for his holidays and it works out quite well. Most of them are quite comfortable there.

I think that the success rate now is quite high, whereas in the earlier part of the programme we had a lower success rate due to being referred these unstable people with a pretty bad record. But now, of course, we have a proper appreciation of these things. We now get a lot of people from the community who have been charged with PCA. They drive up in their cars, of course, and if caught driving whilst serving sentence for PCA they could lose their licences.

Why was the Tramway Museum chosen? Quite frankly, I don't know as I wasn't the officer at Sutherland at the time and I can only guess that it was seen that it would be an ideal organisation. You provide a good group of people, a good group of organisers. There are always quite a few at the organisation. I believe that you are a well organised agency so therefore have someone there to make sure these people are working properly. At the same time we also want them to have some satisfaction in their work, so in choosing the community service work we look for work which will satisfy them too. I always write a letter to them when they finish up and congratulate them on doing their part in the community and also try to suggest to them that

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it would be a positive experience for them working as volunteers, the true volunteers who are working for nothing, seeing that they get enjoyment in the work they are doing and hopefully they can get satisfaction from life itself, not necessarily working for the Tramway Museum but doing something else. I am hoping that some would, after doing 'voluntary' work with you, will want to be part of your organisation.

How many people have passed through the Tramway Museum? When we went through the books the other day we found that 64 people had gone through successfully. That's more than 64, much more than 64, have gone through successfully but sometimes we have had to move people, not because they were going bad with you, but because some other project needed their skill, but certainly 64 people did their complete hours with you successfully. I don't know the failure rate, but I don't think there were very many. I think at one stage we had silly people, they had been referred to us from another office as a matter of fact, who did a bit of urinating on the station or something like that. We moved them straight away. But they are very rare; hopefully anyway.

How do we place people? There is a fair deal of thought goes into the placement of people we place. We have quite a number of agencies and we have people working for St. Vincent de Paul, people working in the convents, with the Salvation Army and all those sorts of organisations. We are trying to place those people with a particular skill which will benefit an organisation, with that organisation and they will get some sort of satisfaction and hopefully help you people.

We try to direct serial offenders towards some kind of constructive leisure pursuit. Once again, we are trying to refer people to you not only for your assistance but for their own assistance, in that they may find that working for you is a worthwhile leisure pursuit and may join your organisation.

I don't know whether there is anything else you would want me to say. I could easily talk for more than half an hour about the scheme and I feel that the scheme is the best scheme I can think of in correction. Obviously there are people you can't place in the scheme because they have to go to gaol, but I still think it is the best scheme I have been involved with since 1964, and there is no better scheme for rehabilitation. Sometimes you may say a person would have been better under normal probation supervision as he would have regular counselling, but 90% of the offenders come through better with an organisation like yours in community service work. It provides just the thing we need for rehabilitation, they maintain contact with the community, it does not cost the community much to do that, to put people in gaol costs an enormous amount of money and they actually learn better skills for when they come out of gaol, skills for the things they should **not** be doing. Hopefully, when they work with your organisation, they pick up skills which are constructive. At the same time, it is doing something for organisations like yourselves who are always short of money, and the government is not prepared to pay much money out to help you people. This is one way they are helping, in they are providing people for you that will assist you with your scheme and save you money.

The final point, which I will not go at length into much detail, is the fine defaulters. Fine defaulters are just people who have not paid their fines. Now, instead of going to gaol, because of the gaol overpopulation situation, the Courts are referring those people to us to put them to community service work. At this stage we are tending to use those people more in groups. Now I think there are people at Richmond who are using groups and we move them from one project to another. When one project is completed we move them on somewhere else. There is no reason why we couldn't use those people in a normal organisation, in fact there are about five where we have already done that and placed them individually with an organisation like yourselves. There have been a couple already and they may have been doing only twelve hours work as against up to three hundred hours in normal community service work. That is a lot of hours and the three hundred hours must be completed in one year.

Is there anything else I can help you with? Does anyone want to ask me some questions?

**Jack Nyman (NTM):** We have been using people from a Periodic Detention Centre who are weekend detainees. They are a different kettle of fish from those you have been talking about. I'm told we can't use community service people as well. Is that true?

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**Clive Parker:** I don't know why you couldn't do that. We don't like using the two of them together, but we can do so. It is up to the District Manager. I've helped surf clubs out and they have been using weekend detainees there. But they are under a different scheme and the district officers might like to keep them separated. I don't see any reason why you can't do that.

**Jack Nyman:** We use the weekend detainees for mowing grass, digging sleeper holes and so forth but I get the impression that they are not capable of the motivation to do finer work, which is what you have been talking about. I'm interested in getting people who are more concerned with restoration than simply doing the donkey work.

**Clive Parker:** Quite frankly, I can't see why they can't put them together. The only thing is that people like to make sure that the crims are not infused, that sometimes detainees are going to pollute the workers. But I know myself you can arrange with a big organisation, in one part the custodial officers can handle the weekend detainees and we can handle the community service workers. I can't see why they can't be together. You can trust people to go out to work in custody and you can trust people to do community service work, but it might be a bit different with detainees.

**Jack Nyman:** With the weekend detainees, there is also a warder who also goes with them and he can be pretty tough at times. The other fellows are not under direct supervision.

**Keith Stodden (TMSV):** Just a word or two, perhaps, about age profiles, about marital status profiles and the types of skills that there are among them.

**Clive Parker:** Once again, they are broad based and all ages. Skills? I cannot say this for sure, but there do not seem to be too many skilled tradesmen and this may be because the PCA is being used a lot by the courts. PCA is the Prescribed Concentration of Alcohol offences, they were drunk, the old DUI (Driving under the Influence of Alcohol). There is a saying that PCA is a white collar crime. I don't know if that is the case, but we do get a lot of PCA people referred to the community service work.

**Keith Stodden:** Are they mainly single, marrieds...?

**Clive Parker:** No, just a normal cross-section of the community.

**Mark Skinner (AETM):** The South Australian Government runs a similar sort of scheme. The main difference is, we get a supervisor if we take more than eight people. We do find that one particular problem is people tend to get through more work than we have money to provide materials. That's number one. The second thing is that you talk about the rehabilitaiton aspect of it, yet the type of work we get them to do is donkey work. Not so much that is what we like to see them do, but you can soak up a lot of labour mowing lawns and laying sleepers. It doesn't cost you very much but it is still necessary to do. Do you see any place for an agency such as yourselves putting money into an educational rehabilitation mode, if you like. For instance, purchasing gallons of paint, provided these guys used it instead of ourselves. Is that sort of money available now, or will it in the foreseeable future?

The other question is, in terms of our own plan, there are technological advances available such as those braces they put on to keep people at home, which would presumably be cheaper than have them go out at the weekend and having to be supervised. Does this mean that the C.S.O. schemes will last for, perhaps, another four or five years until these other cheaper schemes come in?

**Clive Parker:** Well, the first one, I think that will be a development. I think with the advent of fine defaulters, there will be a scheme whereby we will be providing money for lawn mowers. At this stage we don't do that. Nor for the weekend detainees do we do that at this stage. They will start to realise, they are very similar anyway, weekend detainees have two stages, in one stage they stay in prison and the other stage they meet at a certain place. I don't see why we have to separate these people.



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The other question was about the braces. If you are looking at the micro-economics of it, I wonder if that is a saving. If you study the people in the community doing work for the community, then I think there is a greater saving. It must be cheaper than the braces. We have been having problems with that and I don't see the braces taking over from the community services work. The present government is very much committed to community correction. This might surprise some people, but the commitment to community service is very strong.

**Andrew Hall (TMSV):** Do you know whether this scheme operates in Victoria?

**Clive Parker:** Oh, yes it does, yes. The scheme, as far as I know, is taken from the Tasmanian scheme which was called 'Weekend Work'. They only worked on Saturday and they found it so successful they brought it in everywhere. The only thing is it is not transferable. If a person is on probation we can transfer his record to another State. We cannot transfer his community service work. I don't know why. It is just a problem. We can solve most other problems. Maybe the Act needs to be amended.

**Howard Clark (SPER):** You have mentioned the economics of it, in relation to the braces, but there is another aspect to it, emphasising the benefit to the community. If people are forced to stay at home, they are doing nothing towards their own rehabilitation in the community in the wider sense. They are stuck there and are more likely, perhaps, to be insular and not be more aware of the outside world. I would have thought your office would be discouraging that form and emphasising the community service.

**Clive Parker:** Oh, I think they would be. The economics and macro-economics will be considered as well as their rehabilitation and leisure pursuits. You don't realise how much it costs to put a person into prison. In a gaol situation the costs to the community are greatly magnified. The economics of it can be multiplied about five times.

**John Radcliffe (AETM):** Do you find different attitudes among different groups of people. For example, are the C.S.Os more motivated, say, than the fine defaulters. The fine defaulters are pissed off with society, so instead of having paid their fine say 'bugger it' and don't really want to do anything either. There is also the weekend detention people. Do you get different levels of motivation and attitude in those different categories of crime?

**Clive Parker:** It's probably a bit early to say at this stage. I think that could be a factor. When fine defaulters first came to us they did have that attitude but then when they go off and do the work they have a different attitude. We had people working for the Sydney Tram Museum and they were quite pleased. Then we moved them on to one of the schools breaking rocks and they really enjoyed themselves. [Laughter.] They had a lot of rocks to move and they enjoyed it. They were working as a team and we've moved them on to somewhere else now. That's the attitude we thought we would encourage and encounter, certainly when they first came into the office. So far the fine defaulters are very difficult for me to give you a definitive statement on because it hasn't been going long enough for us to really say. It has been going since just before Christmas but there were so many arrears in work that some of the courts just didn't process it. I know in my area, the Sutherland area, the Sutherland Court did, and we seemed to have a disproportionate number of fine defaulters. We wondered why Sutherland should cop all this but it was only because the court officers there did process them and they were a bit slower at other places.

**Norm Chinn (SPER):** We did note the difference in the attitude between our normal C.S.O. workers and the fine defaulters, on the first batch that we got, but as the day wore on the attitude began to mellow. When they first turned up they really had a chip on their shoulder. It did wear off as the day went on and they realised that we weren't getting paid, which rather surprised them, and they did slowly change, but there was a distinct difference in their attitude to the work. In reference to a remark someone made earlier about tradesmen, we do have a reasonably good number of tradesmen turn up at our venture. At the moment I think we have five different tradesmen there working which is extremely helpful.

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**Clive Parker:** When we get tradesmen we refer them to people like yourselves. At the moment the Scouts are after some bricklayers, so we have been holding off some of the fine defaulters, deferring them until we get another bunch and then sending them down there. But when they're just sorting clothes, we wouldn't send tradesmen down there. When there's a pool, the mix is just normal, but you made the point that you can use a tradesman so we would send them to you.

**Bob Merchant (SPER):** One of the reasons it has been successful at Loftus is that they work with our members. We don't make any differentiation between our members and the C.S.O. workers, a point that they seem to appreciate. We turn up at weekends and see a few new faces and assume they are our workers, we don't ask questions, and if they do the job then we are quite happy. In fact we have had people there whom we would have been quite happy to have signed up as members. To give some idea of the success of the project, we had on chap who came back to see how one job had been completed, a job which he had been working on. He showed enough interest to come back and see how it had been going. Another chap came back after his service was finished to complete the job which he had been working on. I understand they're firsts, I don't think that has happened anywhere else. We have found this source of labour very, very useful, augmenting our rather thin workforce at times, and the fact that they are dealing with people who are keen on what they are doing and not being paid is something they have not struck before. Once they get used to the idea and find they are accepted by us, we have no problems at all. It is working very well.

**Clive Parker:** Just on that point, I did refer one person to you who was a very lonely person, and I asked the community service organiser could you have them work under your management and find some interesting work to help him with his leisure pursuits. You did that for us and he is going quite well now. It is better than sending him to a psychiatrist.

**Len Millar (TMSV):** Could we hear from some of the S.P.E.R. organisers or works managers on whether there has been any hassles of any sort, control, or what have you....

**Howard Clark:** I recall when we first had them they were regarded as a bit of an experiment and we didn't quite know exactly how to deal with them either, so there was a bit of tension or apprehension on both sides. 'Well, they're the weekend crims, so we'll put them over there together.' What tended to happen was that some of them liked to go round the back of the shed and smoke a few cigarettes instead of working with us and I think what we did initially was simply to keep them in a gang together. We then realised that it was better to assign them to different projects and get them more involved with our own members in different things, so one was helping with some carpentry in one area while another was helping with something else and doing other things. Since we've done that there has been a general spread among our general workforce and it has been much more successful since we have been doing that.

**Clive Parker:** That's the sort of thing we encourage.

**Bill Parkinson (SPER):** I had this experience with one person who was assigned to help me with our American tramcar. He said, "I can't be here all day, I have to go at 1 o'clock, so let's go." I couldn't keep up with him, he was so fascinated with the project because it was so different. I would suggest we have a break, but he kept saying, "No, no, let's keep going, I want to get this thing done", and he was late leaving.

**Clive Parker:** Some of these people are very skilled people and it's a pity they spend their skills on something else. When I was involved with the Parramatta citizens group one fellow said "In the last twenty-five years I have done twenty-two years in gaol. I could have been just walking around watering the roads and could have made a thousand dollars in that time." They realise that it is very difficult to come out and start a constructive life. Of course this facility has been there for many years but with this sort of organisation I would hope that the judiciary is taking the newer idea of alternative to imprisonment, not necessarily saying we are going to send them to gaol, but just that this sentence carries a gaol sentence for that offence, and that we should consider the alternative. Before, they would have been put through the system.

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**Don Campbell (SPER):** Can I ask whether New Zealand has any experience with this sort of business? Anybody from New Zealand care to comment?

**Les Stewart (WTM):** There is a periodic detention scheme which sounds more like the weekend work schemes that we have been hearing about. At Wellington we have never used the PD people, although we have often talked about it. At MOTAT, various sections have used the PD scheme, the railway section have used them....

**Ron Grant (THS):** Kettle Park (Dunedin Model Engineering Society) at Otago had this going. Generally, they come in a gang with a 'screw' of their own and it has worked reasonably well, but by and large it doesn't seem to have caught on to the extent that obviously you folk have used it. Perhaps our work doesn't lend itself to it and the general New Zealand attitude is they like a project of their own to do. There would be no question of, like SPER does here, of mixing folk in with your own gangs. Because we can't mix, because we haven't straight projects, it isn't so attractive.

**Trevor Burling (WTM):** I think one of the things we have got to do in New Zealand is to educate the museums on how to use these people, like you people are obviously doing, so I say all strength to what you're doing. We can take a leaf out of that book.

**Clive Parker:** It's surprising that New Zealand hasn't done it, they are usually at the forefront of corrective services....

**Trevor Burling:** We have tended to go towards what they call the P.E.P. schemes - that's the unemployed persons on government schemes, they were more comfortable and easier to work with - and gave naughty boys' clubs away in favour of that, but we haven't got the other one now so we are looking back at the P.E.P. schemes again.

**Les Stewart:** It probably reflects what Phil A'Vard was saying this morning about the cynicism of our management structures of our museums. We are a little scary about these sort of people and won't let them out of our sight.

**Clive Parker:** It wasn't very easy for us when we first started. That was the pilot scheme, and I can tell you it was very difficult to place people. Organisations like yourselves were very, very reluctant to take them and they could see them all being rapists, murderers and that sort.

It was very difficult. The organisers of today have got it very easy compared to when we started the scheme at Newtown; it was very hard going. Some of the judges were very imbued by it and insisted on putting them, and we insisted that they were not suitable. It was really hard going, but now it is so much easier. When we put a person on a community service order now we expect them to succeed, we don't expect to fail. Originally we didn't expect them to succeed. It is just a matter of educating the public, really. The more the public see them doing the work, such as on film, we have a film today which covers the whole probation, the easier it becomes. Part of that film covers community service work and the stars in it are people like Norm Chinn and these fellows, there is the Tramway Museum and the Red Cross. The fellows themselves didn't mind, but didn't want their faces shown too much on camera. They didn't mind being seen there and the more people realise that the fellows are normal people working in the community, the more they will use them.

In the United States of America there are states using community agencies much more for the correctional services. They are responsible for that. I personally think that's the way to go, because you must have people in the community to be happy with the people you are to rehabilitate, and the people have got to be part of that community. At the same time you have got to have control in a government centre.

**John Radcliffe:** Do you have any examples of security problems insofar as they have got a good eyeful of what's involved in something like a tramway museum and they realise there is a good range of tools which

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could be useful for other professions and they wander back after hours and help themselves. Do you ever get those sorts of problems?

**Clive Parker:** We did have one problem at one of our places, where a probation officer or someone like that misread what we are entitled to tell the agencies and one C.S.O. crossed with me over what we could tell the agency, that we had no right to tell the agency. We don't have to tell them exactly, but we have to tell them the type of offence. We nearly had a disaster in another area where they were not told the person was a sex offender and problems arose out of that. Similarly, we wouldn't sent down to you offenders involved with selling scrap metal as we wouldn't want to see all your tracks taken up over night.

**Mark Skinner:** I would just like to expand on what John just touched on. First, on the positive side of things, we have had a number of offenders in Adelaide who are actually from the local area and we tend to try and make it a fairly positive experience for them because they are there all the time and we are not. If they can be made to feel part of that community and if they do see people breaking in, they can ring the police when we're not there. They are, after all, normal members of the community.

The other thing was, as far as losing tools and equipment is concerned, one of our better workers, despite the tattoos and thongs that he wore, has offered to supply us with as many tools as we like [laughter], an offer we have not taken up. I hasten to add that 'high temperature' tools are not our speciality!

On that note, the Chairman thanked Clive Parker for his contribution to the Conference and closed the session.

## FINANCE: WHERE DO YOU GET IT?

**Howard R. Clark,  
Financial Director, S.P.E.R. Co-op Society Ltd**

The subject of this talk has been listed as "Finance, Where do you get it" and perhaps an additional comment could be added, that is "How do you spend it". At the start may I state that my experience in these matters only relates to my dealings with the S.P.E.R., so please bear with me if the topic seems one-sided.

Looking back over S.P.E.R. finances for the two year period 1st April 1986 to 31st March 1988, being the end of the Society's financial year, and coincidentally the timing of the opening of the Museum's new site, the period opened with accumulated funds of \$195,000, which had been gathered over the previous 28 years. At the end of the period two years later, the fund had increased to \$556,000, an increase of \$361,000, a significant growth in a two year period. Investments in fixed assets such as buildings, tramcars, road vehicles and plant had increased over the same period by \$507,000 to \$691,000. Consider the fact that this staggering increase was achieved by a community organisation of 260 members of which only 25% could be considered active.

The increase in funds over the financial period was \$360,965. Breaking down this amount, the money came from several sources. New membership fees accounted for \$74 and members who left and forfeited their shares amounted to \$64, hardly a significant amount. The surplus achieved by operations, that is tram fares, bookshop sales and publishing activities amounted to \$3,893. Members donations provided \$81,957, a significant amount being obtained during the second part of period. Capital grants provided \$274,673 and the museum fund bank account provided interest of \$334, not a significant amount as the money is usually spent as soon as it is received and hardly has a chance to accumulate interest.

Now the amount received in grants of \$274,673 was significant, and perhaps this side of the picture should be looked at in some depth.

The first grant the Museum received was for \$66,673 and was provided by the Community Employment Program. The Scheme called for us to spend a certain amount of our own money to obtain the grant, and using the formula, our contribution was \$19,000. This amount was raised by members donations and loans. The grant was used to lay track and the museum contribution was used mainly to buy new sleepers.

The next grant was valued at \$60,000 and was provided by our local Sutherland Shire Council under the Local Government Bicentennial Initiatives Scheme. Our long-term relationship with Sutherland Council has always been one of cooperation, and this goodwill allowed us to achieve the grant. The money came in two amounts, \$20,000 in 1987 and \$40,000 in 1988. The grant was used for site development and a concrete floor in the display hall area.

The final grant was achieved by application to the State Government Bicentennial Projects scheme, and realised \$150,000 to allow the construction of the restoration building.

So that is the story of where the grants came from. However, knowing "where" the money comes from is only the end result. The question of "how" to obtain the money is the hard part. Many facets are involved in the "how" story, and if success is to be achieved, many important factors will need to be examined closely.

The first factor to consider is to OBTAIN AN UNDERSTANDING of the types of grants and loans available to suit your purpose. This is not easy as there are many obscure programs that could help your cause

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which require quite a deal of ferreting out. Remember, however, that once involved in seeking this information, doors start to open into new areas, and a fuller understanding of the various schemes emerges.

Next, **KEEP UP TO DATE** with any changes and announcements concerning grants that may give an opportunity for you to apply for a grant previously thought not suitable, or conditions that made a grant no longer suitable for your requirements.

It is important to **KEEP YOUR ACTIVITIES VISIBLE** to the right people. The people supplying grants will need to check that the applicants have a worthy project and an inspection will be made, often unannounced. Good public relations and presentation are essential. As an example, the Loftus museum is held in high esteem by the Department of Corrective Services due to its very successful participation in the Community Service Programme and, with this endorsement by an important government department, it can be used for inter-departmental references.

**DEVELOP RELATIONS WITH LOCAL BODIES** such as local service organisations (Lions Clubs, Rotary), local Council members, Members of Parliament and other bodies. The contacts will only be successful if developed over a long period and assurances of mutual trust are developed.

Keep an eye on possible **OPPORTUNITIES IN THE PRIVATE SECTOR** as many commercial and business organisations may have a need to be visible in one way or another. Seize such opportunities should they present themselves.

It is important to **DISPLAY CONFIDENCE AND COMPETENCE** and demonstrate that we are not a bunch of amateurs. Be able to display the achievements previously completed with grants and with our own resources. Be proud of what you have achieved and demonstrate an ability to fulfil your part of the arrangement.

**KNOW THE RULES WHEN APPLYING** for a grant or loan. Many schemes have fixed rules and requirements. Make sure you understand the rules and your responsibilities under it.

**DEMONSTRATE ACHIEVEMENT** by clearly showing that you can meet your obligations under the rules and have the infrastructure to fulfil your obligations.

**BE PROFESSIONAL** in your application. Good preparation and presentation are essential in getting you to the top of the application heap. Many apply for the limited funds available so a sound application is essential.

**TAKE NOTHING FOR GRANTED** as many apply and few are chosen. Just because you feel that your case is worthy will not get you the goods. Sound presentation and preparation are essential.

**PRESENT SOUND REASONING** in support of your case, again another way to get your application to the top of the pile.

**PATIENCE, PERSISTENCE AND POLITENESS** are essential attitudes for all dealings.

**HAVE A FRIEND IN 'COURT'** or cultivate one. Not everyone can have a friend in the right place. However, have empathy with the people you are dealing with and develop them. If successful, the wheel will turn more easily.

**MAKE YOUR APPROACH TO THE RIGHT LEVEL.** Try and find the person in an organisation with the right motivation and decision making ability.

**LUCK OR A BICENTENARY!** It is felt that the Bicentennial has opened doors to groups such as ourselves, and once opened, the feeling is that the doors will remain open.

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As an example of the application of the above principles, perhaps the story of how San Francisco PCC car 1014 was obtained may serve as an illustration.

The origin of the project started as a light-hearted comment at a S.P.E.R. Board meeting, and after some discussion it was decided that it was worth a try to make some approaches to San Francisco to check the possibility.

Several "how" type questions were discussed. How to get the car from the San Francisco Municipal Railway; how to prepare the car for shipment; how to arrange the shipping to Australia and how to overcome any obstacles, such as Customs requirements.

The strategy used to obtain the car from the San Francisco authorities was to exploit the 'Sydney is the sister city of San Francisco' theme, the fact that Australia was celebrating its Bicentenary, and a general awareness of Australia developing in America following the Paul Hogan promotional activities.

To increase the chances of success, it was felt that some official assistance would be required. After obtaining the necessary addresses, a short letter was sent to the Mayor of the City of San Francisco, explaining the basic essence of our request, and a longer letter with explanations in more depth to the General Manager of the San Francisco Municipal Railway. Several weeks passed and a reply was received from the Mayor indicating her agreement with the plan and offering her assistance to obtain the car. Shortly afterwards, a letter was received from the Muni along similar lines. These positive replies caused worry to everyone because little thought had been applied to the other "how" questions.

I was shortly to visit San Francisco on business. I took time to visit the San Francisco Municipal Railway and met their maintenance superintendent, visited the storage facility to inspect the cars available and selected, with his assistance, double ended car 1014.

An appeal was launched through *Trolley Wire* to obtain donations to bring the car to Australia, and the response was outstanding. In excess of \$10,000 was raised from all states in Australia. Meanwhile, shipping costs were being investigated, and the first seeds of worry started to develop. All indications seemed to indicate that the cost of sea transport would be in excess of \$40,000 and that did not include getting the car to and from the wharf or loading and unloading costs. The project appeared doomed.

Salvation came from details in the *Daily Commercial News*. Three companies operated the shipping service from the west coast of the U.S.A. to Australia. The question then arose; do you seek assistance from all three, or do you concentrate your efforts on one company. Checking further into these companies, it was found that one was generally thought to be unsympathetic, another had just had a takeover and was thought to be in disarray. However, the third company was new to the service, was a solid British-based company, and had been known to handle cargo that could be perceived as having "public relations" potential.

A letter was sent to the General Manager of the Australian office of the ACT shipping line, explaining the situation. Having had no reply after a few weeks, telephone contact was made to the General Manager who directed us to his department that handled matters of this nature. Positive indications were received. It transpired that a ship on the route would have some cargo space to spare at about the time required, and a sponsorship arrangement was reached. Later information has suggested that the shipping company performed quite a deal of intense negotiation to satisfy our requirements.

Moving the car by road from the storage facility to the San Francisco Muni workshop and later across the Bay Bridge to Oakland for loading on the ship presented some problems. Trucking costs were huge. However, after many phone calls, a family trucking company was engaged at a reasonable cost and the car was on its way to Sydney.

A last minute hitch occurred when the car was almost in Sydney; in fact it was at sea between Melbourne and Sydney. The Australian Customs Department took an interest and assessed the duty required to land the car at about \$10,000. This final blow had us visualising the car heading on its way back to America. The

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initial contact with Customs proved to be of no assistance, and in an effort to find a way around the problem, a visit to Customs House connected us to a clerk in the area who proved helpful in the extreme, a case of having a friend in court. The customs man combed the regulations and upon consultation with his superiors discovered that if the car could be proved to be of historical significance, the duty could be waived. A suitable letter was sent explaining that the car fitted the technological gap between the standard cars of Sydney and the modern cars, such as the Z and A class cars operating in Melbourne, and was of a type not known in Australia. This swung the case and the car was landed. At the same time, intercession by our local Federal Member of Parliament took place with the Director of Customs in Canberra, who in turn contacted Sydney Customs to seek some information concerning the matter. He was informed by the friendly customs man that all had been resolved and was congratulated by the Director for his prompt handling of the matter.

Another example concerns a grant made each year by the Minister for the Arts. Application was made for funding to complete the display hall. In following up the application, a member of the Minister's staff visited the museum and was conducted on a tour of inspection. That person was most impressed by the work being done but warned that over 2000 applications had been received for the \$1 million grant funds. It was subsequently learned that an unofficial visit had been made to the museum on an operating day and the lesson to be learned is that it is essential to have the right people in positions where they are likely to encounter the public. The outcome was that we received a grant of \$20,000 which had to be matched dollar for dollar. It was not a massive grant, but pro-rata on the amount available, we did very well.

Our application was well presented and subsequently, we received a message from the Minister himself suggesting that we apply to another government department for a further grant, advising us of the way to apply and guaranteeing his personal support. This application was unsuccessful. However, it was interesting to know that our application attracted the attention of the Minister. The success was due to the impression of viability we presented in all dealing with the department concerned.

We applied on another occasion to the Heritage Council for a grant to restore the ex-Railway Square waiting shed and several other significant items. When examining the application guidelines, it was noted that grants were only available for suitable structures in their original locations. As this building was to be re-erected at the museum, a case was put to treat the building as suitable, because its original purpose as a tramway shed no longer existed. Although our application did not strictly meet the guidelines, we felt we had a case for applying, and that our application was being looked upon as an experiment. An important factor which assisted our case was that we were able to prove our interest in the heritage value of the Railway Square waiting shed many years previously by our action of saving the structure in 1972 when it was to be demolished, and transporting it to Loftus for future re-erection. This may have been the reason for the alteration of the guidelines. To support the application we also had to demonstrate what items of a heritage nature we had restored in the past, present a sound bibliography on the items under discussion, and demonstrate our ability to meet our part of the financial arrangement as the grant was to be on a dollar for dollar basis. Our application, we felt, broke new ground in heritage project finances and we ended up receiving \$20,000 which was the amount asked for. Another important agreed condition was to allow us to use the grant to cover work performed in the restoration from the inception of the project rather than work commenced after a certain date. This allowed us to cover all costs incurred to date on the restoration and include them in the total package.

Another important requirement for a heritage grant application concerns the question of disposal of the restored item should the Society wind-up its affairs. Fortunately our articles of association cover such an eventuality, and these state that our assets will be kept intact and passed to another organisation with similar aims to ourselves. This may serve as a note of caution to other organisations, that they should check their articles or constitution and make sure that this item is covered as it may be an obstacle to further negotiations.

Now, just to show that we do not win every time, I propose to conclude with a few "you can't win them all" stories. We have been fortunate with many applications for assistance, but for every success story, one can expect a number of failures. To keep things in perspective, it is appropriate to mention some matters that have not met with success.



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Following up a matter of compensation due to our move from the old to the new site, suggested by the Minister for the Arts, achieved no result despite the support of the Minister.

In an appeal for donations towards the PCC project, letters were sent to 54 private companies with American parentage or affiliations. Not one cent was raised, and the letters from the 15 or so that took the trouble to reply could have been all written by the same author.

An appeal was made to a large charitable organisation to assist with a heritage project. This organisation had previously made a grant to the Maritime Museum. However, no assistance was forthcoming.

An application was made to the state Minister for the Arts for further assistance with the display hall costs. This was refused, and there appears to be co-ordination between various bodies. It was pointed out to us that we had also applied for a grant with another government body for the same purpose.

An appeal was made to the N.S.W. Bicentennial Council to have their grant for the restoration building indexed. It was found that the \$150,000 grant in 1984 was not sufficient to erect the same building in 1988. This was refused.

The refusal to have the restoration building grant indexed was a great disappointment, as the building was partially completed and still required about \$65,000 to bring it to the lock-up stage. In the end analysis, all community organisations such as ourselves must still rely on the commitment and goodwill of our own membership for their ongoing existence and welfare. The \$65,000 shortfall was eventually obtained by using members loans which had been allocated for the display hall. To make up the shortage to the display hall fund, bank loans were arranged for a total of \$70,000. The bank loans were obtained on the strength of board member guarantees. The directors of our organisation have stuck their necks out for the sum of \$10,000 each. This amount still allowed us only to build the framework and footings. Fortunately we received a loan of \$30,000 from a member to allow the roof to be completed.

It will be left to the forum of this meeting to discuss the way to raise money for the completion of the building. The additional cost is \$100,000 and the "how" challenge remains with us. I will leave that for you to ponder upon.

Thank you.

**Dr. John Radcliffe (AETM)** made some additional comments:

Being involved in an organisation that actually makes grants, I would like to add some comments to Howard's excellent presentation. He did highlight all the issues that are important, and what is more, he has shown that you can achieve, and I offer my congratulations to Howard and the S.P.E.R. Board for their success.

Howard referred to making political and community contacts, and while this is an excellent practice, remember that the political contacts should be political with a small 'p'. Politicians are frequently highly involved with their work that covers many facets, so be warned, don't hitch your star to a particular politician or political party. Also don't try and play-off a politician against the Public Service. Care must be taken to play the game carefully, and you must be quite straight in your dealings with both parties. Both sides will become unfriendly if either feels they have not been dealt with correctly.

The Public Service will be very concerned to see that its money goes to an organisation that is financially successful and sets out to achieve its original objective. Performance in doing the job and administration of grants is most important. Many "points" can be gained by successful use of the resources provided.

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Beware of "over-kill" in your submissions. Many submissions are received that have excellent presentation. However they contain so much information and detail that it is difficult to ascertain what the submission is actually asking for. When a grant is announced, many submissions are received, and it is usually the job of an office clerk to summarise each submission and present the selection committee with a resumé of each offering, advising the name of the organisation applying, their aims under the circumstances, and a short statement concerning the viability of the project. It is from this list that the committee forms its short-list.

Working on these committees, one finds a high proportion of poorly presented and prepared submissions, so the ones that are competent get a lot of attention. What you start with is fairly important.

Be aware also that the people making recommendations to the Minister will have ways of checking the applicants out, either by personal knowledge, consulting people who have experienced the organisation applying or by a personal visit. It is important to always put on your best face in public, because you don't know who is looking you over.

Remember also that many of the departments making grants have a close cooperation with each other and frequently consult when applications are received. A good performance with one department can frequently serve as a recommendation with another department. Public servants do have sympathy with the aims of competent organisations, and can give a great deal of guidance and encouragement.

Thank you.

The Chairman asked for questions. There being none, the session was closed and delegates adjourned for lunch in the hotel's restaurant.

# TIMBER RESTORATION IN TRAMCARS

**Leslie Stewart**  
**Secretary**  
**Wellington Tramway Museum**

At the Auckland Conference, four years ago, I presented a paper entitled "Woodwork — Restoration and Research". In terms of the restoration content of that paper, the greatest emphasis was given to the re-finishing of interior wooden panelling, so in this paper I wish to concentrate on the structural side of the wooden tram body, trying to give a few handy hints, spending some time looking at timber selection, and then to examine conflicts that we as restorers face when it comes to preserving historical accuracy in the face of numerous pressures, including that of being transport operators.

Once the decision has been made to restore a tram and the era to which it will be restored has been established, where do you start? My preferred method of attack is to break the job into a number of areas, and in most trams there will be about six distinct areas that can be worked on independently of the rest.

- i) No. 1 (A) end
- ii) No. 2 (B) end
- iii) Left hand side
- iv) Right hand side
- v) Roof
- vi) Main floor

For a number of reasons, but primarily to give greater focus to the work output of members, it pays to work on only one of these areas at once unless the work force is such that it is possible to work on a number of areas at any one time. The order in which each area is attempted will very much depend on the tram itself and the degree to which each area requires restoration. For instance, if the main floor and its sub-timbers are full of rot, it is logical that this should be the first area that is attacked so that the remaining restoration takes place on a sound foundation. If the work force can be split to work on more than one area at a time, only work on one side or one end at a time to leave the other side or end as a guide or a pattern, and in this respect work on the worst side or end first.

Having selected the area to be worked on, open it right up. Remove all panels, windows, fittings, etc., inside and out, leaving only the bare frame. It is only at this point that the full extent of the restoration required can be established. To attack each area piece-meal, say the bottom of one corner, then the top, followed by the next corner in the same order, is usually a very inefficient process. Tramcars are renowned for being "cans of worms" and if you know up front what is involved in the entire process, the job can be planned accordingly.

One of the key decisions or, if you like, dilemmas when planning the work flow is whether to replace or to patch. This largely has to be left to the people on the job to decide but your own museum's policy may influence that decision. The one thing to remember is that if patching has to be done on a large scale, the job will often be more time consuming than if a straight-out replacement was undertaken. It is at this point that we strike our first conflict, because if we patch, we keep much of the original tram but if we replace, we lose that originality and may start asking at which point does a restoration job become a replica.

What are some of the key aspects that should be weighed up when considering whether to replace or to patch?

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- i) How much rot is there? If it is significant, replace it.
- ii) Are there any splits or fractures and if so where and how bad?
- iii) What is the basic shape of the part like? Has it been twisted or bent? If so, replacement will be necessary. In trams with curved sides, the pillars are susceptible to developing greater curvature if the body has been twisted or is sagging prior to restoration.
- iv) How complex is the part? Obviously the greater complexity of the piece the more difficult reproduction will be, but more importantly, the more difficult and time consuming matching will be.
- v) Will the structural strength be affected by patching? While modern epoxy glues make a joint parallel to the grain stronger than the surrounding timber, the type of joint employed often weakens the structure. Take, for instance, the commonly used step joint. If you only have one step, the resistance to bending and ultimately breaking is reduced to almost half because at the end grain the joint is not particularly strong. The strength increases, of course, with the number of steps, but this then makes the entire job more complex and time consuming.

Irrespective of whether a particular part is patched or replaced, the other key consideration is that of timber selection, and the restorer once again comes into conflict with his 'museum' objectives. In a pure restoration sense, there is no alternative — replace like with like. At this point I am bound to hear all those museum treasurers out there screaming in agony at the mere thought of spending all the hard-earned cash on a few measly lengths of some fine expensive timber. Well, if that is the sort of reaction you would get from your museum executive, I suggest you ask them whether your organisation is a museum or not. However, there are circumstances where the selection of alternative timbers is quite valid, but it will still result in some heavy expenditure.

Availability and expense will normally be the two key determinants as to the use of the original type of timber. However, the guideline that I generally apply is that if it is seen and is varnished, such as interior panelling, the original type of timber should be used. If the work is hidden by other interior or exterior panelling and/or is painted, then a suitable alternative is in order. Where an item is quite large and parts of it are seen and varnished while other parts are hidden or painted, such as in many corner pillars, then an alternative timber may be used if a piece of the original type timber is laminated into the section that is seen.

If replacement timber is necessary and it is decided to look at alternatives, what are the properties and characteristics that should be looked for?

### 1. Strength

Where a structural element is involved, strength is of prime importance and most people would be correct in selecting a hardwood. However, watch your terminology because hardwood has two different meanings. When silviculturists in the northern hemisphere were running round classifying all their trees, they defined a softwood as any tree that had a needle leaf and propagated by means of a cone, while a hardwood has a broad green leaf and is often deciduous. While these relative classifications have some relevance in the northern hemisphere, they are unsatisfactory and confusing when classifying timbers from the southern hemisphere and tropical regions. For example Balsa, one of the softest and lightest timbers in the world, is technically a hardwood.

Luckily for us, the timber industry has developed a much more scientific method, in terms of physical properties, of classifying timber strength. New Zealand and Australia both use the same system, a seven point scale with S1 being the strongest to S7 the weakest. Timbers are classified into one of these seven categories according to a matrix of five different physical properties: basic density, modulus of rupture, modulus of elasticity, maximum crushing strength, and maximum sheer strength. Let us have a look at each of these in turn, for an understanding of these properties will help the decision as to what timber is best for a particular job.

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### i) Basic Density

Density is probably the easiest of all these properties to understand and is the measure of the relative weight of each timber, that is, the weight per unit volume of green timber at 0% moisture content. Density is expressed in kg/m<sup>3</sup>.

### ii) Modulus of Rupture

Sometimes referred to as the modulus of bending strength, modulus of rupture is a direct measurement of the strength of wood in bending. It is in fact the maximum compressive or tensile stress in the fibres at the exact point and time of fracture and is usually expressed in megapascals (1 million pascals).

### iii) Modulus of Elasticity

This is a measure of the stiffness or rigidity of wood and, for example, in the case of a beam, it measures its resistance to deflection and is usually expressed in megapascals.

### iv) Maximum Crushing Strength

Known also as compression parallel to the grain, it is a measure of the maximum stress sustained by the timber under a load slowly applied parallel to the grain. It indicates the relative suitability of timber for columns and is usually expressed in either megapascals or gigapascals (1 thousand million pascals).

### v) Shear

This is a measure of the ability of the timber to resist slipping of one part upon another and is normally expressed in megapascals.

## 2. Durability

Another important piece of information that should be known when selecting timber is its durability. Knowing the durability of a particular timber allows an informed decision to be made about its life expectancy or the type of treatment it should receive. It would be senseless to spend hours restoring a tram with a timber that has a short life expectancy unless it was given appropriate treatment.

New Zealand and Australia have once again adopted the same durability classifications. A four-step classification system is used to describe the durability of sound untreated heartwood based on its resistance to wood-destroying fungi, borer and insect attack.

Class 1: Very Durable	Suitable for long term use in structures exposed to the weather, and in contact with the ground.
Class 2: Durable	Suitable for use in the ground and for unprotected exterior use under normal conditions.
Class 3: Moderately Durable	Suitable for protected exterior work and for interior use. Not suitable for use in contact with the ground.
Class 4: Non-Durable	Not suitable for exterior use unless treated with preservative.

It must be stressed that these classifications are relative and the life expectancy will vary with the hostility of the environment and the end-use conditions. I personally believe that the best way to ensure maximum life expectancy is to treat all timbers with a preservative and paint them with a suitable primer.

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Please also note that these classifications apply only to heartwood; all sapwood should be regarded as non-durable.

### 3. Other Qualities

Apart from strength and durability, there are other factors to consider such as a timber's working qualities. Does it machine well to a smooth surface or does it tear? for the sort of work we are involved in, machining qualities are important. Obviously in decorative panel work you cannot afford to have tears and nicks in the finished surface but, equally, in unseen structural items good machining qualities are important because of the accuracy to which we work.

Colour is also very important when considering replacement timber for varnished areas. However, a word of warning, many of the darker timbers, particularly those with a reddish hue such as mahogany, tend to bleach with prolonged exposure to the sun. Therefore it is important to match to a sample that has been freshly cut. This can be done by taking a piece of the original timber and planing off a portion of the surface (preferably on the back if you want to re-use that piece).

Consider also such things as a timber's stability, ie: its tendency to warp and twist before and after seasoning, and select only clears, i.e. those pieces of timber free from defects such as knots, shakes, splits, etc., which will only weaken the structure.

### Where can this information be obtained?

First try your local timber merchant, who should have the appropriate reference material at his disposal if he is any good. In Wellington (N.Z.), we deal with the firm of J.L. Lennard Ltd which produces a set of handy information leaflets on each timber they deal in. These leaflets describe briefly the availability of a particular timber, its physical and mechanical properties, and its uses.

There are also a number of reference books available in libraries or for sale in bookshops. A handy little volume I have found extremely useful is called *Imported Timbers in New Zealand* by Stuart C. Scott. Like the leaflets published by Lennards, it briefly details, for each of the major types of imported timbers in New Zealand, their origin, characteristics, durability, strength, seasoning, working qualities and uses.

For assistance of a general or specific nature, the timber industry federations of our respective countries would be a useful source.

Everything we have been discussing up until now has been in preparation for the actual restoration work and, depending on the size of the area being worked on, will take a few hundred manhours, but it will be worth it in the long run. The key to good preparation work is the careful dismantling of parts, careful taking of notes along the way, careful labelling of parts for later use, and good careful research. Look out all the old photographs and any plans you may have. they will all help put the jigsaw back together later.

Equally, care is required during the actual repair process. The first step is to carefully remove the item to be worked on from the frame, be it a pillar, sill rail, cant rail or whatever. Remove the entire side frame if necessary. Regardless of whether the part is to be replaced or patched, it is much easier to work with it on the bench rather than a few metres above the floor.

Much time can be saved if patterns are made of all duplicated parts such as pillars. Rather than marking out each new piece by measurement, a pattern enables all parts to be marked out exactly the same and quickly, with the time-consuming measurement process required only once for the pattern. If plans are available, it helps to make the pattern from the plans and then check it against an original part. For permanency, use thin plywood for patterns.

Where there are numerous parts the same, much time can be saved if the work of cutting the basic shape from a given pattern is contracted out to a reputable joiner. This leaves your members free to do the final

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shaping of joints and reassembly work. The size of your budget will determine just how much work can be speeded up in this manner. However, joinery costs for very basic shaping such as thicknessing and planing are quite modest and even if this is the only work contracted out, considerable time can be saved.

Apart from the strength of the timber itself, the other factor that determines the overall strength of the structure is the way in which the individual pieces of timber are assembled. Remember that the frame is an engineering structure and therefore should not be modified without reference to an engineer. Just as each piece of timber is a component of that structure, so is each joint and they should all be tight. If there are loose joints anywhere, remedial work should be undertaken.

I have devoted much time today examining issues relating to the repair of a tram body's basic structural frame. However, without its' cladding it would be a very draughty affair. The cladding itself, in most cases, adds to the strength of the frame, not so much from supporting weight, but from adding a degree of stiffness or bracing to the body. This is less so in tongue-and-groove sided bodies which are normally diagonally braced internally to compensate, but on wooden panelled bodies the panels are very often the only form of diagonal bracing and it is therefore important to assess the ability of existing panels to continue to do their job.

Before the days of plywoods, the side panels were a single panel of timber between 8 and 10mm thick. By the time we come to restore a tram, these panels have usually begun to split if they have not already begun to rot. Unless a split is repaired by gluing and supported by a piece glued to the back of the panel along the entire split, it will continue to widen under the stress of movements in the frame. Accordingly, it is often preferable to replace the entire panel with a sheet of marine ply or several sheets of ply laminated together in the case of curved sides. Because of the nature of plywood construction, it is resistant to splitting and therefore will last much longer.

Another useful use for today's modern plywoods is in replacement floors. A few sheets of ply are much easier to handle than several lengths of tongue-and-groove flooring with the added difficulty of cramming them together in a confined space. A plywood floor will also add rigidity to the entire tram chassis.

Earlier, I spoke about some of the conflicts that we, as restorers, have to grapple with when trying to preserve historical correctness and at the same time cope with the pressures of finances, availability of materials, the skills of members, etc. I would like to finish by examining this aspect in a little more detail and ask the question "How far should the 'pure original' be allowed to be changed when restoring a tram?"

Mr A.D. Bacon, in delivering a paper to the Tramway and Light Railway Society (UK) in 1982, rationalised some of the alterations made to trams at the National Tramway Museum at Crich with:

"It is not, as a museum, content simply to restore tram-cars to their original state: it is a living enterprise affecting changes which in all probability the former operators would themselves have adopted had they continued to run the cars concerned. This is a far cry from the essentially passive attitude found in traditional museum circles, but it is in my view one which is every bit as worthwhile and infinitely more interesting."

A very interesting observation indeed. It is only fair to point out that this comment was made after describing how some design faults in the mechanical and electrical systems of a couple of trams were corrected, but I think it is useful to examine whether or not such a statement provides us with a guideline.

There are varying degrees of change. At the simplest level, there is change associated with the differences in materials that technological change has given us. For instance, one would have to be mad not to replace old plywood glued with a water soluble glue with a modern marine ply.

At the other end of the scale there is a major structural change. Let us imagine a tram in one of our collections which we find in our operations to be very slow to load and unload due to a narrow doorway. It is probably quite conceivable that if the original promoters had continued to operate the tram, the doorway

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would have been widened to speed up loading and unloading. After all, they made quite major alterations to the bodies of most trams to reflect changing social conditions or public expectations. Sliding doors were fitted, open sections walled in, etc. but should we, as museums, charged with preserving an item of a past age, be allowed to make such a change in the outward appearance of the tram?

This is an extreme example of a possible deviation from the 'pure original', and I do not believe that any of us here today would sanction such a change on any of the trams in our care. However, those of us undertaking tram body restoration make changes to the 'pure original' through the use of different materials and, if we are not accurate in copying the original, have the ability to change the outward appearance of the tram. We also have to consider those little modifications which are made from time to time, such as adding rear vision mirrors or sun visors for safety reasons when originally there were none. How far are we prepared to allow these changes to go and for what reasons? In my view, Mr Bacon's comments are a useful starting point but need to be fleshed out so that our museum responsibilities are taken into account.

All our museums pride themselves on their excellent safety records and, to ensure they remain that way, each museum has in place a series of controls aimed at protecting members of the general public in their care. We all have operating rules, operators are trained before being let loose on the public, and in some museums statutory regulations apply to the licensing of both drivers and trams. But what of those other important items in a museum's care, the trams themselves?

To finish, I would just like to pose this one question: What checks and balances should our museums have to ensure the 'safety' of our trams from undesirable changes to their original form?

**Chairman:** Would someone care to comment on that last question? Would anyone like to ask Les any question on the replacement timber and construction?

**John Radcliffe (AETM):** In relation to that last question, it would be interesting to know how many people have made various changes because of statutory rules.

**Les Stewart:** I am sure most museums have added rear view mirrors and sunvisors and whatnot, things of that nature to their trams.

**John Radcliffe:** What do you do, for example, for fibreglass? Do you use it?

**Les Stewart:** Personally, no. I prefer, in terms of fibre-glassing, not to use it unless it is purely to patch a panel on a service tram prior to restoration. In a restoration job, if a panel had rusted through or wood had rotted, I say to replace that metal panel with a sheet of galvanised steel panel to add a greater life expectancy or in the case of a wooden panel, replace it. I wouldn't go and use fibreglass to patch an existing panel in a restoration job.

**John Radcliffe:** What about a roof?

**Les Stewart:** A roof? I have had some disquiet, but I would be willing to listen to the experiences of other museums in using fibreglass on roofs. Because of the possible movement in a roof, particularly one of timber slats as the base structure, the slats and the fibreglass would move independently and the fibreglass would possibly crack.

**Trevor Burling (WTM):** I think you have got to consider the difference between the two materials. The wood is one kind which is fibrous and the fibreglass is a modern technology, it's an epoxy of some sort and you would get an incompatibility. Only for a patchup, fine, but for final work, I would not be too keen on that.



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**Les Stewart:** At least canvas will stretch and move to some degree while fibreglass, although it is flexible, tends to be more rigid than canvas. I understand Sydney used fibreglass quite extensively on their roofs. Maybe someone would be prepared to comment....

**Ben Parle (SPER):** Only one car, 1497. You will see it tomorrow. It was one of the reasons why we got the car, wasn't it?

**Norm Chinn (SPER):** Yes, it is the only fibreglass-roofed tram Sydney had and, to the best of my knowledge, the fibreglass is still 100% intact. No movement, no cracks, and we've certainly stomped all over it like fairy elephants.

**Peter Hyde (BTMS):** I can add something to that. When we inherited our trams from the City Council, a number had fibreglass roofs and a number had canvas ones. The fibreglass roofs have all disintegrated by now while the canvas ones are still going strong.

**Trevor Burling:** Another comment there, too. Earlier on, Leslie mentioned the shear strength of wood and think of a place typical of a tram, perhaps one of the places would be a deeply waisted pillar where you have straight grain here and a bent shape [demonstrating with hand] with another straight grain here. You could get into a shear situation here with downward pressure there. That is one of the places where you would have to be careful about selecting woods.

**Len Millar (TMSV):** One place you have to check out is for a bumper....

**Trevor Burling:** Yes, the front portion of the tram.

**Bill Parkinson (SPER):** We have fibreglassed the gutters on the corridor cars, but they have very rigid framed bodies, there is no movement. The canvas is brought down over the top of the fibreglass and then it is painted with the canvas preservative to maintain a uniform finish. It protects the fibreglass. Most problems you get with fibreglass are from ultraviolet light which will destroy the polyester which makes up the resin. If you protect it under a layer of paint you don't get any problems. But you must use it in situations where you've got no sheer-back, otherwise you will have problems.

**John Radcliffe:** The S.T.A. are fibreglassing all the roofs of the H cars, they have done the first two. The first one they did sat outside without use for eighteen months and if it can survive that process....

**Les Stewart:** It would be interesting to see their trams after a number of years.

**Len Millar:** Speaking about roofs, the Met and ourselves agonise over what we should be doing to some of our roofs because some of our cars have had to sit out in the open for lack of storage space. We have all heard that story before. The distillation of our thinking is that we don't go to the Envelon the Met keeps on trying or keeps persisting with but go to a water soluble, thick plastic paint. It gives with the body movement and allows water to escape which may be sealed in, whereas Envelon will trap the water and potentially cause rot. We find that the plastic paint is most forgiving. It will fill any cracks in the paint on the top of the canvas and it's working well.

In response to your last question, the TMSV has a defacto policy in that any safety measure the Met applies to a tram we would be most loath to take off. One example comes immediately to mind; the line breaker and air compressor wiring tied in after the runaway at Riversdale a few years back. I can imagine what would be done to us in a court of law if we had an accident and the opposition was able to demonstrate we had taken off safety measures.

**John Radcliffe:** The opposite end to that is if you should add safety measures. In that case, we have two Brussels trucks equipped for airbrakes and the trams weren't airbraked when they entered traffic.

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**Les Stewart:** That's right. That's one problem area with which many museums are faced, particularly with their older cars. They never had air brakes in service and when it comes to restoration, do you or do you not put air brakes on them. If so, how do you put them on in such a way as not to detract from the appearance of the tram.

**Ron Grant (THS):** I think Crich has taken this approach to an extreme. I don't know whether they have done it yet, with "John Bull" the steam tram, they do not wish to run it in traffic without effective brakes and of course it only had the good old 'armstrong' brake or the reverse lever in the earlier period. With the Kitson at Christchurch, we prefer it to stay as an ordinary steam brake as the yard at the moment and it's quite an event. She gets her 'blood-test' and passes it, so we cross our fingers.

**Dick Hall (SPER):** I was talking to the gentleman, who was out from Crich a fortnight ago, at Parramatta Park and he said it was originally built with Eames non-automatic vacuum brake.

**Mark Skinner (AETM):** I'll just get back to this roofing business as we have done a bit of research on it. We have actually used a product called *Dynol* which is different to the canvas, malthoid or fibreglass. It is actually a loosely woven fabric bonded to the roof timbers using a slow setting epoxy resin. The same resin also serves as a waterproof adhesive, and with the addition of talcum powder you can use it as a filler for wood and metal. The use of this particular material was suggested by a guy we had in as a contract carpenter. He was a T.A.F.E. lecturer in carpentry and also a member of the Pichi Richi Railway at Quorn. They have used some of it there on some of their carriages and, I guess, we are hoping that it will be a superior product. One of the points is, to draw some of the strands of this conversation together, if it is painted over and you can't tell the difference between that and the original, then you are getting pretty close to there not being an argument. Same thing with the floors. You talked about using a laminated timber instead of tongue and groove construction, you can also use particle board in the same situation for the same reason again. Once it is covered over with either malthoid or slats, you can't see it....

**Les Stewart:** When the finished product looks much the same or exactly the same as the original, go with the new technology. I wouldn't use chipboard for flooring, as such, because it is not as strong as plywood, not as strong and waterproof as the old T and G timbers. In the case of roofs, I'm always a bit reticent about roofs. I'm never quite sure which way to go as there are so many options available. No one operator seems to have come up with the perfect answer as every operator is picking up different products and different methods of doing it. If there was one sure and tried method, everyone would be starting to use it.

**Mark Skinner:** I would like to make a comment on that. We had a team of about five guys and it took about half a day to do it once the roof had been cleaned down.

**Alan Curtis (MOTAT):** Can I just make a couple of comments there. They relate back to a conversation I had with another chap I know by the name of Stewart who has some connection with yourself. Firstly, many museums are running more as operating tramway systems while others are developing more as tramway preservation organisations. There is a wide greyness in that line and I don't want to make any judgement on it; every museum runs their own particular show. There are two things we can do to answer your question, or to make it easier to answer that question as to whether you should repair or replace. One of those is to say there should be with every restoration very extensive documentation which explains what happened all through the preservation exercise so that we can say at some stage this floor used to be tongue and grooved, now it is plywood, etc. The other thing is to take the opportunity, especially where the technology has changed dramatically, to preserve some part of the old, and I mean preserve, not restore, but preserve in some sort of display area. An example here, and it is going to be faced by everybody who has a steam tram in time, is that boilers will need to be replaced. It is less and less likely that steam tram boilers which were riveted will be replaced with riveted boilers. They are more likely to be replaced with welded boilers so it is very important to keep a part of, at least a part of, the original riveted boiler so you can put that aside and say this is how it was made.

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I would like to see, if I can make the suggestion, at the Wellington Conference in two years time, a workshop or discussion on the documenting of restoration projects.

**Les Stewart:** That is a very good point. Many of us are keen to get on with the job of repairing the tram or restoring it and don't like, or haven't got the time more like it, to spend time documenting what actually would have taken place. Talking about rivets, I was rather disappointed when I visited the Powerhouse Museum the other day to find they had replaced the saddle tank on the steam tram with a welded saddle tank, there were no rivets. The layout and presentation of the whole display was excellent but I felt that here was an exhibit that hadn't been restored to as it would have been in those days. Even if they had used false rivets, it would have been better than no rivets.

**Howard Clark (SPER):** It is interesting that the Hunter Valley Training Company went through that little exercise with our Balmain counterweight [dummy]. The steel top on the old one was rather rusted out. They decided, rather than trying to patch it to fix it, it was better to start again and build a complete new steel canopy on the top and they actually used false rivets on the welded shell. Externally it still looks like the original riveted construction. They were very concerned about that and they were particularly careful to keep it looking the same.

**Les Stewart:** We are all faced with operating trams in a public situation so how far do we go with originality. It is an issue we should all be facing, I believe, and setting up some sort of guideline within our organisation to ensure the restorers don't go off and do something that is not original or, for that matter, the operators don't take over to say, "Why don't we do this to make it easier for us," and change the whole appearance of the tram.

**John Radcliffe:** The extreme example of that fact is the H cars where the S.T.A. has replaced a lot of the wooden window frames and a lot of the doors with fibreglass painted with woodgrain and replaced all the steel sides with fibreglass, replaced all the steel beading with mouldings of fibreglass and in fact the whole technology of the tram in many ways is considerably different, but the appearance is ultimately still the same.

**Les Stewart:** The S.T.A. doesn't claim to be a museum does it?

**John Radcliffe:** No, but it might be well described as that.

**Stuart Knock (MOTAT):** Just a general query here on restoring trams. If you are restoring a tram, is it worth while restoring it back to its original class. For example, the Victorian W2 back to a W1 or W, or even the L class dropcentre section, which is similar to the W2, back to its four-door arrangement. Is this a well worthwhile exercise to do in restoration?

**Les Stewart:** This comes in to your initial decision when you decide to restore a tram you must make a decision as to what period you are going to restore it. Most trams had a mixture, a variety of changes during their life so you might decide that as you have, say, two W2s, you might decide to keep one in the condition in which it came off the road and restore the other one back to the W or W1 configuration. That's fine. It is part of the initial decision you make when you decide to restore a tram, what period you are restoring at present.

**John Radcliffe:** Of course, you have to decide how many variations are worth representing as the average customer is not going to give a stuff about it.

**Trevor Burling:** Some museums have the luxury of having several examples of a particular type of tram so you can make those decisions. We can put this one in this era, or whatever. We are lucky in that respect because we have four we can look at in this way, with our Fiducias. They don't change much, of course. We might have one car and another museum has a similar one, sometimes the museums have got together and and say, well look, we'll preserve one of this era and another of another era. Then you have got that coverage of the varieties.

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**Les Stewart:** The important thing to make is, when you select the period to which you are going to restore to, that you actually restore the series in such a way that there is quite a visible difference to the visiting members of the public. Just because one tram might have had a different type of handrail to another, doesn't mean to say you keep two of those and put one type of handrail on one and another type on the other, because if you did that you would probably end up having to keep thirty trams to represent a whole class of tram. The classic example is the Wellington double saloon, which is New Zealand's largest class of tramcar. It had four distinct periods, which were all distinctly different in appearance. The original form came out with an open centre and no doors on the motorman's platforms. They then went to a stage where they enclosed the motorman's platforms as the next step. The next step after that was a change to the whole front. They streamlined the destination area and the whole front of the line. The final form was a streamlined front with motorman's doors plus doors in the centre. You thus have four distinct steps in that tram's life and they all looked different to the public although they are all the one class of tram.

If you take the original open sided tram with no motorman's doors and you put a different type of handrail on one, you could say it is a different type of tram. But to Joe and Mary Public it is the same type of tram because they don't notice the different handrails.

**Alan Curtis:** We have a delightful example at MOTAT where we have one tram which depicts two types of construction depending on whether you are watching it coming towards you or going away. The two ends are quite different.

**Frank Millier (ST&RPS):** We only have only got one tram motor which is nearly one hundred years old and it has gone through a lot of different variations. We decided we were going to restore it to its last form when it was most efficient.

As there were no further questions or discussion, the Chairman thanked Les Stewart and declared the session closed.

# RESEARCHING PAINT SCHEMES

**Norm Chinn,**  
**Paintshop Supervisor, S.P.E.R.**  
**and**  
**Bill Denham,**  
**Crew Training Officer, S.P.E.R.**

**Norm Chinn:** I guess I should start by saying that as a small child my father took me to that pandora's box, the Museum of Applied Arts and Sciences, and my first excursion into colours was the Cobb & Co. coach which they had partially restored in the whim of the period, with one half painted bright red and the other half in the original colours, which was very contrasting. One was mud and the other was vivid pillar box red, as it was known in those days. Now, this rather intrigued me because I had no idea that vehicles were painted in such vivid colours other than fire engines and P.M.G. vans. So I made enquiries, even as a young fellow, and the answer I got was, "Yes, that was about right". It really didn't satisfy me but there wasn't much I could do about it at that stage.

Now, my next excursion was the steam tram motor No. 1A which for many, many years resided in a passageway just off Broadway in the Technical College. This tram was painted in a rather unusual colour scheme. It was a very, very darkish brown with red lining which was contrary to what old-timers had related to me as being the colour for the car. So once again I was intrigued by the choice of colours by the people who had painted it.

It wasn't until the formation of the tramway museum that the choice of colours, or the investigation into them, came my way because I was the person fortunate enough to have selected the vehicles the museum got originally and I did so with a view to having a variation of different colour schemes, hoping that we could put the one or two or three colours that the trams were painted, onto the various vehicles according to the period they were built. However, it wasn't until many years later that we discovered the number of colour schemes was far in excess of what we all thought up until the 'seventies, and the number of vehicles required to cover those variations in schemes was huge. Fortunately for the S.P.E.R., we do have sufficient vehicles to cover all the basic colour schemes that the Sydney trams were painted in.

Now the next step, of course, is to ascertain just what these colours were, because up until the 'seventies it was always quoted in generalisations. Oh yes, they were chocolate and cream, that was green and cream, brown, or red or whatever the colours were without a great reference to any accuracy. This, of course, left a lot to be desired and it was not until the advent of our new museum that finances and the necessity to do the job properly came our way to enable us to research the colours. What happened in the last twelve months I will leave to my companion Bill Denham to outline. What we discovered rendered all previous notions redundant. What we originally thought was the case, was not. The reasons for the variations in the schemes on the Sydney trams are very complex and hopefully you will find it of interest.

**Bill Denham:** As Norm mentioned, the car colour schemes until a few months ago were generally listed in four areas. I apologise to the steam tram people because our research does not go back very far beyond about 1899 at the moment so most of this relates to the electric cars. It could have been said that up to then, in 1899 they were mostly varnished timberwork. To 1916 they were chocolate and cream; to 1934 they were olive, fawn and grey, and to 1961 they were cream and green. But that is only part of the story. With a fleet, which at times numbered 1400, there were obviously going to be variations. With a fleet dispersed in sixteen divisions there were going to be local variations.

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My uncle was a coachpainter on the tramways in Sydney and unfortunately I did not record permanently a lot of his statements but now they fit in. Such as being soundly told off by the Depotmaster to "take that bloody thing back and paint it properly." The result was an R class car had arrived at the front of the shed from the back of the shed to go into service. Instead of painting it claret colour around the bottom, they had painted it black. The Depotmaster was, of course, from the old school and a tram had to be painted green with red around the bottom and so the car went back. I found out quite a long time later that the correct paint hadn't arrived from Randwick and they wanted the tram, so they painted it in the best colour they could find. That, of course, is another part of this colour story.

The thing I found most fascinating in all of this was that the answer to many of the questions which we posed was there before us. The only thing we had to do was interpret colours from black and white photographs. The Sydney tramway system is blessed with an enormous amount of archival material which is gradually coming to us, as letters to various departments of the tramways and in an enormous collection of photographs, both official and unofficial. It is interesting to note now that Norm and I nearly 'go round the bend' each time a batch of photos turns up because we now find that half of them will confirm what we have just spent hours trying to determine and the other half will be photos that we have seen, looked at, poured over for months and years — and there is the answer right before us!

We are very lucky in that the Department of Tramways in Sydney kept records, sometimes for ninety years. However, the last piece of information I received was a letter dated September 1940 which answered one of our questions. We had always considered there was a lack of information about the cable trams — the cable trams went in 1905 — and the steam trams. There was a lot of interesting material missing from the steam tram picture; to all intents and purposes the steam trams had gone by 1920. This letter which turned up was one of these sad stories. It was a letter sent from the Chief Librarian at the State Library stating that, no, the tons of old documents stored in the tramways stores were of no historical value and should be scrapped to help the 1940 war effort. When we check back through that, we discover that all the cable tram documents and all those important steam tram documents went to help the war effort. As Norm pointed out, as we sat in the corner wiping a few tears, eight years later — only eight years later — he was on the scene to try and retrieve a lot of this information, so we missed out on the records of a very important part of the Sydney tramways by eight years.

Getting back to the colour schemes. Norm started this off a few years ago in earnest. Up until then if a tram had been in the 1910 period scheme it would be chocolate and cream. What was chocolate and what was cream? You looked at the current paint colour charts of the time and if you chose Burgers paint you got deep chocolate and if you preferred Dulux paint you got a light chocolate. They were all chocolate. We have now discovered, much to our — first of all — horror and later, pleasure, that there were numerous colours for chocolate just the same as there were numerous greens and creams. The department, funnily enough, always chose the one we had forgotten. This has been borne out by the recent discovery of a set of samples of cream and greens at the workshops, which are currently being demolished, that had been put away and forgotten since 1937. We laid them out on the table and as the members walked passed we said, "These were the colours on the trams, which one do you think is the right one?" Well, everybody chose the green-green, because there was a green-green, a grey-green, a yellow-green and a blue-green. If I am able to show these to you at Loftus later on, you will understand what I mean. In fact it was the blue-green, the least likely colour, which was the official tram colour. Further investigation has shown that over the years the colours changed until by the time the buses were finally painted in cream and green, which to all intents and purposes were the 1934 tram colours, the green had gone to almost a bright green-green. The same thing happened with the creams. Everybody chose the deep cream. In fact it was a dirty, washed out, almost off-white, cream that was originally used on the trams.

This is important, I suppose, to Norm and myself as we have spent a lot of time on it. But the concept should be important to anybody who restores a tram or a bus or train or whatever, to try and achieve a colour which matches the colour for the period to which you are going to restore the vehicle. Norm sat down with his thousands of photos and he went through them and made a chart of the different classes and different colours. When he got up to colour scheme number thirteen we decided to call a halt on it because that was nine more than the official list from the official tramway historians. We looked at it again and part of the

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problem is not the colours themselves but dating the photographs, so there you go off at a tangent to find out how to date photos accurately, sometimes to a matter of months unless the photo is specifically dated. Even then you can get into strife and I have had a blazing row with one of the Sydney museums which has a picture of Wolli Creek, which I know was circa 1921, captioned 'Edgecliffe 1903.' They eventually pulled the photo off the wall and showed me where somebody had pencilled on the back of it 'Edgecliffe 1903.' The fact that I could prove beyond the shadow of a doubt that what they were looking at was the war memorial at Wolli Creek didn't matter. The detail on the back of the photo was taken in preference, so I just let the matter go.

The other thing we discovered, quite by luck I suppose, was a set of colour charts from Randwick. These are not the colour charts you obtain from your paint shop when you are going to paint your house. These were metal plates that had been painted with the colours which were being supplied by the various manufacturers and were noted with the colour number, the departmental colour number, which answered an enormous number of questions because sometime around about the 'twenties (they obviously had colour-blind people in the paint shop) they numbered the paints, No.1, No.2, No.3, No.4, which was alright if you knew what No.1 was, or knew what No.2 and No.3 and No.4 were. We also had documents, beautifully drawn and noted documents, telling us to put No.3 on the cant rail of a certain car, but we weren't really sure what No.3 was. This set of colour panels turned up and answered a lot of the questions. It also explained to us why one of our members, who had recently overseen the painting of the L/P car, was definite that the L/P car was painted in the right colours. They were, however, the colours he remembered and unfortunately his colour memory was a little bit off. Or so we thought, but weren't prepared to argue with him. However, when we opened up this colour chart we discovered there are two olives, there are two No.3 olives. There is a No.4 light olive and there is a No.10 olive. It was discovered, of course, that the various paint manufacturers were producing different colours, we are not quite sure why, but they did. That answered some of the questions, maybe the person's memory wasn't quite as defective as we first thought. It was also very interesting because for the first time in our history the colours were related to something which was not somebody's memory. They were related to an old British Standard colour chart. This is the only way that you can relate to colours accurately. I know what red is, I know what light red is and I know what dark red is. But everybody here, if they were given the thousand reds that are in the British colour chart would be able to pick a completely different set.

Our examination of the photographs was tainted by the fact that a photo must be an original print, it can't be the nineteenth copy from a badly reproduced copy from somewhere else. It must be an original print before you can actually begin to assess what the colours are. Despite the fact that they are black and white, the colours do have various densities on a black and white picture. Another thing which you have to be careful of is the actual period the photo was taken. Over the period of the Sydney tramways from about 1885 onwards the nature of the films changed. You have the problem that, having determined that claret looks like a certain grey intensity on one film, you find it changing on another film.

All of these problems we faced; we gradually got some order into our assessments, then a sudden thought struck us. We had been sitting in a tram shed looking at trams, talking about the photos and the colours and overlooked the fact that tramway operators didn't scrape the trams back to bare timber or bare metal over the whole of the surface. Unfortunately for us in Sydney certain items like destination boxes and handrails were taken off the trams in the early days and painted at the bench before being replaced. However, we discovered we had most of the paint schemes sitting there in front of us. As the photos disclosed things we hadn't seen before, so did the trams. Our first major effort was the D class car. Up to about twelve months ago there was no reference to the colour schemes on any of the service stock in Sydney. There were photos, including one well known photo of a ballast motor in the works yard. It had a light and dark apron. That was assumed to be an aberration of the builders and it was generally assumed that all ballast motors were green or grey. However, we looked at the D car. This car had had a fair amount of work done on it. It means that to find the colours you must scrape back very carefully the panel to bare material and check in the corners where two panels come together at right angles. You can have a corner where a paint chip might be obtained. This is where modern technology comes in. The paint manufacturers will, and have in fact done this for us, sliced these chips down and analysed the colours layer by layer. The D car went ahead with a lot of questions unanswered. It emerged from the paintshop sporting a cream and a dark green, for which we were

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universally condemned as being too dark. Five weeks ago we discovered a letter in the New South Wales Archives which was made available to us and explained why the D car was in fact, in 1934, painted a deeper green than the regular passenger cars.

We left the D car and went along to the C class car. The first big question there was what colour scheme to use. The next question was what colours were in the colour scheme. Once again we went through the exercise of scraping back and looking at photos. The one thing which had escaped everybody was that all the early photos of the C cars showed the trucks to be light and with the early film used, red often did not show up at all, it showed up as a light colour. We couldn't quite see the trucks being red although they were a light colour. We discovered by another one of our huge strokes of good fortune that they were shop grey. Now, what shop grey? When we finally found the colour chips we discovered there was a No.1 colour which was a light grey. If you take light grey out and you get some normal soil and you mix it up with a bit of water and you splash it on the light grey, you can't see it. So, there we had an answer. The early trucks, as late as 1930, were painted in a light grey or a fawn so they would not show the dirt thrown up from the road. This has since been confirmed by observation. We looked at the car again. What colour should it be? We came to the conclusion that it was going to be buff and brown. Seven browns later we now are of the opinion that the C cars at that period, 1910, could have been painted in a combination of the buff and the brown that it shows. There were about 75 of them still in service and it is possible that several colour schemes were on the cars based on various mixes of paint. As we finished painting the car, one thing looked wrong: that was the little bumper on the front. The car itself had a red line, which we had been able to identify, around at floor level so we had painted the bumper red. In fact further evidence came to hand which led to examination that it should have been a very dark green, which was one of Sydney's corporate tramway colours found from 1880 to whenever... around about 1940, when they must have last used a dark brunswick green on the trams. We painted the bumper dark brunswick green and the tram looked right. That's one of the critical things. The Sydney tramway painters, the people who developed the Sydney tramway paint schemes, were obviously not idiots and once they had done the job right, the results looked right.

The next step came when Pascol, who make the heritage range of paints for buildings, were queried about mixing paints and helping out with the development of paints. The result has been that Pascol has now developed their range of TW paints, not Trolley Wire paints but tramway colours, which are numbered at the moment from 1 to 19. If we want to paint a tram in Sydney cream and green we just order TW9 and TW10, which are the old tramway 9 and 10 paints, and these colours are matched against the tramway colours and against the British colour chart. No doubt other organisations could approach Pascol or a local paint manufacturer and come up with the same sort of answers. It is also interesting to note that there is a tram body at North Sydney which is painted in the correct cream and green because I was partially involved in an exercise there and they asked me what were the correct colours and the tram outside the Big Bear is the first one to be painted in the correct colours.

Then Pascol helped, and Pascol helped beyond the call of duty. They provided us with twenty-two samples of paint. Now the normal sample that you pay for is in a tin of about that size [indicating the water glass on the rostrum]. When they arrived and were off-loaded from the truck they were THAT size. We now have enough paint of every official Sydney tramway colour scheme to paint the whole fleet.

The next exercise, of course, was to check on the various colour schemes that we had. One of our exercises has been, in fact, to carefully analyse the colours. This was done on the prison car; we found that the 1909 colour scheme was still there on the tram so we restored a section of it, about six feet wide and the full height of the tram, to the colours that were there. Norm managed to take some fairly good colour photos of it and we finished off the colours back to the olive, fawn and grey. We now have a record in reasonable colour and notated with all the colours that were used. It shows what the tram would have looked like in 1909. We also did the same thing with the R class cars. There is a distinct break in the information between the time the tramways decided to paint the cars in the new colour scheme and the first R car was delivered. We know that it was painted in odd colours which appear to have been developed from the older colours the tramways had in stock. We also know that changes were made to the three green colours, to cream and green you would see on it today. Norm investigated that the tram has panelling on it which the paint scheme tends to ignore if you look at it closely. So he painted a panel of the car in what would have been the logical colour scheme — in



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fact it is the colour scheme which appears on No.1 trolley bus — and the result was that the tram looked completely unbalanced. When you put the black line below all the moulding - the black line should have gone between the mouldings - the car is balanced and colourful.

At the moment we have gone to the trouble of compiling all this information, insofar as it has gone, in a book which will be made available to members of this gathering. It is by no means complete, but at least it gives the local people a chance to restore and paint New South Wales tramcars in their correct colour schemes. Perhaps it will give interstate people an idea of how to go about researching their colours, too. We also suggest you contact Pascol to find out what they can do for you as well. The matter of actually painting a car follows the accepted practices of painting. We use the old tramway idea of patching, repairing, colour coats and final coats. We know the recipes for paint and for colours back to early 1900 now from our marvellous Archives material and from the Randwick paint shops. We have discussed whether a tram should be painted in matt paints and gradually built up with varnish and decided it was not practical. A point was raised about our running a tramway system. Well, our present concept is to paint the cars so they look presentable to the public; to restore and paint the cars as they would have come from a major overhaul. There is no real value, as far as we are concerned, in restoring a car back to its condition as it was delivered as it would only bring a tremendous amount of heartache when you see the first dirty footmark on the bottom step. The trams as they appear at Loftus are presented to the public as they would have seen them on the road and generally as they would have appeared just out of the workshops after overhaul. We don't use the old paints, we use new paints which give us a chance to have the gloss without all the problems and work involved. The modern paints are more serviceable and a lot more weather-resistant than the old paints. If we had the time and the money there is no doubt we would go back to the old methods.

As Norm has pointed out, we have enough cars in our fleet to relate to each of the colour schemes mentioned in this book. I might add that the last pages of this draft copy were printed yesterday so it is fairly up to date. However, I refused point-blank at the very last minute to introduce yet another colour scheme, mainly because we do not yet know too much about it. It does seem now that had blue not been such a bad colour in 1926, the Sydney tramways would have gone to a two-tone blue colour scheme. The thing we are trying to find out is, were the Tramways smart enough to charge Grace Bros. for painting two trams in an experimental blue colour scheme to find out if it worked, or whether Grace Bros. were astute enough to know there were two trams painted experimental blue sitting in the workshops and hire them for a sales promotion. Had the blue not failed, of course, we might have had blue and white or blue and light blue trams. Another interesting thing which came up is why Newcastle did not change to cream and green. We have now discovered the probable reason. It seems that Newcastle didn't have enough painters to paint the whole fleet before it would have been scrapped and the Tramways had a horror of running coupled sets of different coloured cars. This is borne out by the fact that Rockdale couldn't have its trams painted cream and green until four L/P cars were released from other services and painted and sent over to provide enough L/Ps to run coupled sets of cream and green cars.

A final comment. You will be able to see some of the trams that have been painted when you visit Loftus tomorrow. Now for some questions, which I am going to ask Norm to answer for you.

**Len Millar (TMSV):** Could you describe the chip technique again, and have you tried using a fine paper and going down through the various layers of paint and wet it to get some sort of indication...

**Norm Chinn:** Yes, we have rubbed the paint back with a fine paper and that gives you a good indication. What it really does is tell you if it is black, or white, or pink, or blue. What it doesn't do, of course, is tell you what shade it is because you are not too sure what the painters did to it when they put the other coats on top of it. Whether they flattened it or not, you don't know, and that can alter the depth of the colour. But where it helps is, if it is, say, a blue and you have a chart of all the blues then you are able to determine which blue was used in this particular case. In our case the numbered charts we found were very, very helpful because there is something like five greens. If you back-rubbed with sand paper, then giving a rub with a licked

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finger is often good enough to get a colour indication from a colour chart. You can get your paint mixed and, sure enough, if you put a bit on and cut it a little before it is dry you'll get a good comparison. As far as the chips are concerned, I'll be honest and say I have no idea what technical services are involved. They simply take them away, cut them and they tell you what they came up with.

**Len Millar:** What size chip is required?

**Norm Chinn:** Oh, about the size of an old threepenny bit [or one cent piece] is good enough, so long as it is reasonably solid and not crumbly.

**Len Millar:** Do they ask that it not be from some exposed surface?

**Norm Chinn:** It's a case of getting a chip from wherever you can. In the case of the Sydney cars — I'm not familiar with anybody else's vehicles — on the side panels the paint usually dripped or ran and over a period of years you got a build-up of a quarter of an inch or so. You cut those off with a razor blade and they would give you a beautiful pyramid of colour. That seems to be all they require. The case was simplified for Pascol as the tramways used British standard colours. It turns out what happened was, being a government department, all the various government department paints were purchased from England from Robert Ingram Clarke and Company, so they were brought in by a central buying body, probably the Government Stores Department, and distributed out to the various government departments, the Public Works Department, the Railways, Tramways and so on. They all got the same colour that they asked for, the only variation being that the tramways had a greater range of colours than any other government department. Pascol discovered that the colours we supplied to them and asked them to verify were virtually identical to the colours the Public Works Department were supplied with for Parliament House, The Mint and the Barracks buildings which they have just finished restoring. So we concluded that all government departments used the same paint.

**Howard Clark (SPER):** A question I have relates to the various shades of green. When you rub it back or take a sample, how are you able to take into account that they may have been on the car for say five years and have faded, compared with something which might be just out of workshops. The colour variations might be very minor.

**Norm Chinn:** The only guide you get there is, as Bill has pointed out, the Sydney greens fall into four categories, grey, green, blue and yellow. As they fade they tend to become more of that particular colour. If you look at our O car 1111 tomorrow, you will find it is almost blue, because it was painted in the blue-green shade. When you look at the four wood panels you are able to reasonably identify which one of the four greens they used.

**Mark Skinner (AETM):** Have you looked at the various sorts of varnishes, as obviously there are different types of varnish you can use too. They don't fade, they do the opposite.

**Norm Chinn:** I think the obvious answer to that is no, we haven't gone into the varnishes. Pascol make what they call a varnish restorer. It is a one coat gloss colour restorer and at this stage, because of the lack of personnel and the restriction on finances, we have concentrated on external colour restoration accuracy. Internal work simply gets varnished as close as we can to the current scheme, the existing scheme on the car. We have not yet been able to strip down and revarnish the inside of the car. I think they did the L/P but I did not work on that one and I am honestly not sure of what they did. I think they varnished it back against the bare timber but what varnish they used and how accurate I couldn't say.

**Ben Parle (SPER):** They used Estapol, Norm.

**Norm Chinn:** I don't know, as I didn't work on the car.

**Mark Skinner:** Estapol is very commonly used, but when these things were being done, there were quite a number of different shades of varnish which were available, different grades of varnish.

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**Norm Chinn:** Well, the department do supply, and we do have the four shades of varnish that they used, or the four or five which are on our colour chart, but for the sake of convenience and speed at the moment we just selected the colour closest to what the tram had been painted in, which means that they are all glazed in the 1934 to 1961 colour, not the previous four different ones. For all I know, they may have been the same colour all the way through.

**John Radcliffe (AETM):** Whilst you commented on the use of British Standard colours, you would probably have to recognise that some tramway systems, including Adelaide, mixed their own. Their mixtures in fact are various mixtures of red over whatever to make a tuscan red and they were then tested in the test room, but it is quite clear that in fact what is the standard differed all over the place at the time and when you work through the layers of paint on the Adelaide trams you can see a progression of colour from 1909, which was a sort of a red brown orangey type of tuscan, through to the maroon colour of the 1940s. In that circumstance you are really presented with a further complicating factor.

**Norm Chinn:** I guess we were a little bit misleading there. The department, the government or the department, used the British Standard colours as their base, but they then had all their own paints mixed accordingly. Those are the ones they did not directly import. That is why they had the numbers. If they had asked for No.7 which was signal red, they may have mixed it or they may have bought it in premixed. If they mixed it, then they had a strict formula which the workshops had to follow. We do have a copy of all the various pigments which went into the different paints, but this allows for why you can have two trams on the street ostensibly painted in the same colours but there are two variations, one was home mixed and the other was premixed by the company. There is no way of knowing which cars in what period they did because the vehicle records show they were intermixed over the years.

**John Radcliffe:** You also have not commented on research into the actual provision of monograms and changes of numbering style. They didn't change much in Sydney but they changed considerably in Adelaide. Certainly Max Fenner has found a lot when rubbing down. We also make enlargements to full size of photographs to show the various styles of titivation or whatever, particularly on our No.1 car where it was very obvious. They took time to get it almost right and you also discovered in the process the fact that they may never have had the whole fleet painted in one consistent colour scheme.

**Norm Chinn:** The same applied in Sydney. Once you go through this book you'll find out that they actually painted the trams in Sydney in a standard set of colours but the pattern varied according to the body shape of the car. It wasn't until 1933 when the corridor cars came in that they decided on a universal colour scheme. They picked a colour scheme that suited the corridor cars and ignored the rest of the fleet. The dictate was that the black line should be three feet six and seven eighths inches from rail level irrespective of the body shape. So on the older cars you have this black line which galloped madly across panels and through things, it was quite ridiculous. Up until then, or up until 1916, the various types of trams, although they were painted in the chocolate and cream scheme, were panelled, and varied according to the type of tram. They all looked quite attractive. They discontinued that in the 'thirties. As far as the lining is concerned, all the lining was originally, of course, in gold leaf and for obvious reasons we have had to use gold paint. The other lines are accurately measured because fortunately we found them all when we rubbed the cars back. On the contracts which the department let out to the various manufacturers, they specified the colour, the shape, the size of the line and where they shall appear. All we had to do was take their measurements, go to the car and you can't possibly go wrong. It was very helpful.

**John Radcliffe:** What would it mean to you if you go to gold leaf eventually, if you could afford it? The effect is a lot better.

**Norm Chinn:** Obviously, that would be a decision for future museum painters. Right now our aim is to get as many of our cars looking attractive as we can. For cost and time we use gold paint. Obviously gold leaf would be better. I think you will find that the gold lines and numbers on our cars don't look too bad. To be more accurate, we have plastic numbers.

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**Bill Denham:** The occasional use of crests. In answer to that question, they'd all gone by 1905 and our story only begins in 1899. We have another volume or two or three to follow this one. The last electric cars with crests, with the cable cars, lost them in 1904/1905 when it became necessary to move the numbers from the bottom panels to the upper panels when they put the class letter of the car on the vehicle. The rest of the external presentation, apart from the gold and buff and dark red lining, was standardised with the numbers. The cars did not carry departmental crests or any information like some other cars did. We have researched it partially; the answer is they used a standard number form from 1905 until 1961 and changed only from gold leaf edged in black to gold enamel edged in black to gold transfers edged in black.

**Norm Chinn:** Just one more point on crests. You will notice the crest on our C car tomorrow; the Museum of Applied Arts and Sciences had them made when they had their two cars done. They had the Selex Decal people make some for them and they had an extra set made for us which is how we came to get some. They are, as far as we can ascertain, an accurate copy of the original.

**Les Stewart (WTM):** We have recently gone into some research for attempting Dulux to mix up some paints for the official Wellington colours of red and cream, according to past records they might hold. All we had to go by essentially were the names of the paints, being Transport Ivory, Bandorillo Red and Carnation Red. Dulux were most reluctant to go and mix up paints outside their standard colour range and brushing enamel range. However, we were lucky in that they had spraying enamel in those colours still as part of their standard range. So we had access to those three colours as spraying enamel. They told us we could reduce the spraying enamel to a brushing consistency by adding linseed oil to 5% by volume. That method was used to paint all our trams in the original colours — using spraying enamel paint which has been diluted 5% with linseed oil.

**Norm Chinn:** We had the same trouble with Dulux here. Naturally, the Department used Dulux in the past twenty-odd years and obviously we approached them as the thing to do, but they were totally uninterested, refused to co-operate and couldn't care less. Now, that has applied up until about four or five months ago because Pascol have won the contract for all the state government restoration work and, being the Bicentennial year, there has been quite a bit of it. Dulux have suddenly realised they are missing out on a bonanza because everybody wants it, so now they're running round saying "we'll make the colours for you, we'll make the colours for you," so I had great pleasure in telling them what to do with their colours.

**Voices:** So you should...! Serve them right...! Heads will roll...!

The Chairman brought the session to a close and the delegates adjourned for afternoon tea.

Draft copies of the publication *New South Wales Tramcar Colour Schemes — A Survey* by N.L. Chinn and W.M. Denham were issued to all delegates attending this session.

# **ELECTRICAL SUPPLY AND ELECTRICAL SAFETY STANDARDS**

**Richard Clarke**  
**Chief Engineer, S.P.E.R.**  
**with**  
**Peter Hallen**  
**Power Supply and Distribution Supervisor, S.P.E.R.**  
**and**  
**Craig Tooke**  
**Rolling Stock Superintendent, M.T.P.A.**

**Richard Clarke:** Gentlemen, this afternoon I would like to talk about the electricity supply and safety standards. There are two components, the electricity supply and how do you get it, and secondly how you make it safe. I'll talk about the electrical supply first and will be assisted by my colleagues for the second part of the talk.

Firstly, the electrical supply is the most important thing that sets a tramway museum apart from just about all other vehicle preservation organisations. The rails the trams run on and the electrical supply are the things that bring us together as a group. It would be very difficult for us, as individuals, to construct all the elements of an electric tramway. It is groups such as ourselves that are brought together to amalgamate the rails and the power supply. It is quite a different activity to that of restoring a vinatage car or such like things. We got together as a group because we needed each other to help lay the rails and erect the overhead wire.

The museums in Australia and New Zealand have all addressed the matter of rail and overhead and all were able to get the track down well in advance of the overhead wire. We are now all operating electric tramways, that is, those that are meant to operate as such, and I acknowledge the members from the Parramatta Park steam tramway.

The provision of a power supply was originally a daunting task. Those that saw the original tramway in operation remember massive, ornate brick buildings with very heavy and very costly components inside, and in the early days of the tramway preservation movement, most members thought that this was the only way to go, and at the time it was. Many museums almost broke their financial backs by going out and purchasing ex-tramway power supply equipment. The position now has changed in that now power supply equipment can be obtained quite cheaply and with quite different characteristics than the equipment used by the old tramway systems which closed down over 25 years ago. The philosophy in applying the new equipment can also be quite different too.

Each museum has overcome the problems of applying a power supply and each museum has come up with an almost unique solution which suited their particular application. Problems such as the local mains supply situation, second-hand equipment obtainable locally and the willingness of members to put it together have all been overcome. So what we now have is a interesting mixture of power supply arrangements at our museums around Australia and New Zealand. I personally am always fascinated when I visit other museums to see how the same problems have been overcome in different ways.

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As I mentioned earlier, tram museum power supplies can be different to those of the previous tramway system operator. We, as museums, are running much smaller systems and with not the same need for absolute reliability that would be required for a heavy city street. Never the less, we expect our systems to operate every day, and be sufficiently reliable to be able to please our visitors.

Those who operate major tramway systems talk proudly about their 10,000 amp capacity supplies. I remember a supply at Darlinghurst that had a 10,000 amp ammeter. Supplies of that size are in no way needed for tram museum use. As a guide, the average tramcar circuit breaker is set for between 400 and 500 amps, and that was the capacity of the supply that people tried to aim for. That size of supply equates in Sydney to a four-motor P class tramcar really packed, 80 people seated, 120 standing, a crush load of about 200 people, leaving Circular Quay and rounding the sharp 1 in 50 bend and going up the 1 in 15 grade.

Now most of us would like to operate that way, but most of our operations do not require a power supply so big. From our early experience at the old National Park site, 100 amps is enough to run a tramcar. If you are lucky enough to have a power supply bigger than that, it certainly gives you more flexibility, but may also give you more problems. However, when starting off with new equipment or reconditioned second-hand equipment, a 100 amp power supply should be sufficient.

Now for a simple rule of thumb, those who have access to a 415 volt mains supply, one amp of direct current requires just a whisker under one amp of each of the three phases of alternating current. So it is a very simple calculation, you do not have to convert from ac to dc, they are both the same. That allows you to advise the local authority the type of supply you require.

As I mentioned previously, everyone has probably overcome the initial hurdles so there is probably not much need to dwell on that any further. However, the world is progressing and the public in general and legislators are requiring greater safety standards than was required many years ago and we need to address this matter. The safety of electrical supplies ensures that we are providing electrical plant and methods of operation which are satisfactory and comply with the requirements that the authorities and legislators now think we should be providing.

I would like to go into the protection of the power supply and bring up some points and also note the differences in philosophy concerning different sized power supplies. First of all, let us talk about the characteristics of a tramway power supply. They are quite different from those of an ordinary alternating current distribution system such as you might find in a house, factory or a commercial facility.

Like the people who speak about cubic inches in motor cars, there is nothing like a lot of amps to make a tram go. Trams love amps and amps equals drawbar pull, tractive effort, acceleration and generally the force to drive the tram along. Without amps a tram may not be able to operate.

Voltage is rather different. Those who have been brought up with alternating current networks, and that would be the average electric supply authority employee or an electrician in a factory, all of these people have been brought up knowing that stability of voltage is very important. That belief goes back to basically two things, alternating current used for domestic lighting and television sets. Both of these items are particularly susceptible to voltage fluctuations, and can provide poor performance if the voltage changes. With trams, voltage does not matter at all. As long as there is enough power to keep the circuit breaker closed, the tram will go, almost regardless of the voltage. So dc systems for tramways, and particularly for tramway museums where money is short, can cope with quite a high voltage drop. One could cope with a drop of 20 to 25% and still operate quite satisfactorily. In an ac distribution system, the rules speak about a 5% drop maximum. However most people aim for a drop of not more than 3%. So that is the scene on how the power supplies are different, and why if you get an electrician who is an expert on factory installations, he or she might well get it wrong and end up costing you quite a deal of money.

With that as an introduction, let's speak about protection. Protection serves two purposes, to prevent the current overheating and the fire hazard that could result, and to protect against electric shock. I'll deal initially about protection to prevent damage.

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It is a fairly simple process and philosophy to design the system so that at no time the current gets to a level dangerous enough as to cause overheating and failure of the cables. However, there are different approaches to the solution, dependant on the size of your system.

For a semi-conductor rectifier, and I believe most of us have semi-conductor or mercury arc rectifiers, for anything other than a rotating machine rectifier, the current on the dc side immediately reflects back onto the ac side. So if cables are sized correctly, protection on the ac side can more than give adequate protection, and there is no need for any other protection on the system. If, however, there are large rotary converters with a lot of mass or a remote generator set with brushes, dc protection is necessary to cut off the current before damage is done to the brush gear or before additional energy is taken out from the spinning mass of the converter or generator set.

Now, why do I say that ac protection is important and cheap? Well, it's upstream, so it protects everything. It's also very cheap to obtain and it's modern. dc protection is not readily available and is twenty to thirty times the cost of ac protection. So for a small operation, if the size of the wire is correct, ac equipment will give total protection of the system.

Now I'll tell you the checks you have to do for this. A fault can occur right alongside the substation, and that's obviously the worst case. You have to check that the protection is adequate to cover a fault at this location. Again, I'll reinforce that tramway systems have a lot of voltage drop, so at the far end of the system, the amount of current which flows through a fault can be much lower. One has to make sure that if a fault occurs at the far end of the system, the protection equipment at the substation must be able to detect this fault and turn the current off in time. If one designs and checks a system appropriately, one can use ac protection equipment to protect the feeder.

Protection of the rectifiers is another subject. Silicon rectifiers have become so cheap these days that they are cheaper than the fuses people used to buy to protect them. Right now it is cheaper to buy a second set of rectifiers, put them in the substation, and not particularly have a fuse on each diode. Again, diodes can be obtained over-size quite cheaply so that protection for the feeder and the transformer will also protect the diodes.

So much for the electrical protection of the system, and perhaps I might point out that if you are using a very large power supply, some of these points may need modification. With a large power supply, one may need extra protection, especially if there is rotating machinery there. In general, however, the previously mentioned is all the protection you will need.

Now let us discuss safety of the overhead wire. By its nature, a tramway system cannot be protected from someone touching the overhead wire. It's just not designed that way and there is no feasible way of turning it off. So overhead wire has to be designed and installed so that it cannot be touched. There are fairly well set out guidelines, setting out minimum heights of trolley wire to ensure that the public don't touch. There are a few other tricks, for example in Sydney, we use wooden poles outside the depot area. A number of other museums use metal poles and metal brackets. One should be very careful with metal poles and brackets, and ensure that these are kept quite a distance away from the overhead trolley wire so that inadvertent contact by maintenance staff is reduced. If you cannot keep the wires and the structures apart, it means that maintenance of the overhead wires using live wire techniques will not be possible. But if the trolley wire and the metal can be kept apart, then live overhead line maintenance techniques are possible.

I'll let Peter and Craig talk about harmonics and safety rules in particular, but I'll make some introductory remarks about safety.

These days safety is achieved by safety systems, a system which is able to cover contingencies, cover the vagaries of people. We know that everyone does not behave perfectly every time, and every safety system put in place must be robust enough and have enough depth that it is able to allow for the unexpected behaviour of people. Now, many years ago there were proscriptive rules by government and major authorities which set out, step by step, what you had to do. If you did that you would be safe, and if you did not, it was your fault if

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you got hurt. The position is changing. The old style of rules are being superceded by new rules which allow for the fact that people will have lapses of memory, and will not perceive dangers that they should be aware of. So as well as having a set of rules, the designer of a system has to think about what contingencies might occur, and has to incorporate into the design, right from the beginning, a safety factor for the person who may act irresponsibly. That is perhaps the greatest challenge. To recognise how tramway systems were designed in the past, see their foibles, and then design new systems to operate them safely, and operate them in such a way that they can tolerate a few indiscretions from both the public and museum members.

I now ask Peter to talk about harmonics and then ask Craig Tooke to talk about the rules and why the rules were introduced in Victoria.

**Peter Hallen:** One of the main differences between a tram museum and a tramway system is that under the old system, the tramway authorities were their own supply authority. They got their power from their own systems and as a result were self-regulating. We, as tramway museums, must get our power from a local electrical authority with the result that we have to abide by their rules such as you would expect for an installation in a factory or a private house. Any application of electricity, be it ac or dc, has to abide by the rules of that authority. You cannot expect to build a standard tramway substation, stick it in your museum, and expect it to abide by the authority's rules. There are certain regulations that you must follow.

Firstly, the wiring rules must be followed. Every electrician in Australia has a copy of the standards handbook and must follow it for the design of any form of electrical installation, including tramway museums. These rules cover transformers that contain oil, drainage rules, etc. We must abide by all the requirements set out in these rules. So when you design your substation and design the equipment you must use, you must follow the rules. It would be nice to copy a 1930s tramway substation but it may not comply with the current requirements from the supply authority, hence you may be picked up on that.

Another situation that a number of museums do not understand is that, with the move to solid state rectifiers, there is a thing called harmonics. By operating an ac to dc conversion system, you can actually cause a disturbance in the ac line which can cause problems such as flickering of domestic lighting and the subsequent effect on the eyesight in the households within your local area. There is a standard in New South Wales which is in effect a limitation on the harmonics in the system. So when you decide to install or upgrade to a rectifier unit, you must have close contact with your supply authority to enable them to approve and sort out what you need in the way of equipment, otherwise you could be in for having to rectify the problem or up for a greater expense to avoid having the problem. You must be aware of these problems and many electricians are not. This again means that it is essential to contact your authority and negotiate with them and become aware of the problems before spending your money. This is especially important if you decide to upgrade your system. Your small system may be quite satisfactory. However, should you decide to upgrade or change something, you could be altering the effect you have on the system.

Each supply authority may also have their own specific service rules which may effect you. Each may present different applications to the same situation, and it would be difficult to say which museums have specific rules against another. Here in Sydney, at Loftus we are on the edge of a large suburban area with a large distribution system, while a situation such as at Bylands, which is away from the city and hence a large supply, because of the different situations, the authorities will impose different rules. So every museum has its own particular problems with supply and the methods of application by the authorities.

Another of the rules covered by the standard is the one called the overhead line workers regulations. In New South Wales there are specific regulations for working on overhead wires and lines, covering mainly overhead street wires and this is why you have licensed linesmen in this State. Despite the fact that the rules exempt traction supplies, and we as a museum can seek exemption under the rules, the exemption is mainly put there for the benefit of the railways who have their own rules and practices. It is a good set of regulations to base your own working practices on because again, if we are basing our methods on old tramway practices, we must try to translate that into modern methods. These regulations provide a basis for the safety rules and how we look at these problems.



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I'll now hand over to Craig Tooke from Haddon who has a short paper to deliver on electrical safety.

**Craig Tooke:** I would like at this stage to introduce a paper entitled "We can bury our heads in the sand only for so long."

Perhaps it is due to ignorance, perhaps it is due to lack of knowledge, or is it because we believe that an electrical accident could never happen.

Why is it that tramway museums have never taken matters of electrical safety seriously and only given them token priority. With the impending completion of the electrification project at the Haddon site of the Melbourne Tramcar Preservation Association, thought was given to the matter of electrical operation safety and it was decided a set of electrical operational safety rules were needed.

On what basis were the rules formulated? Having reached a decision that there was a need for the electrical operations rules, on what basis should such rules be drafted? Our Association was in the fortunate position in having two members who carried on their occupations in the power distribution field: Noel Gipps, who was employed as the Operator-in-Charge of the State Electricity Commission of Victoria's terminal station at Richmond, and myself, who is a Power Control Officer with the Melbourne Metropolitan Transport Authority, employed at Carlton. Mr. Gipps has recently retired from the service of the S.E.C.

These two members' combined talents were put together and the drafting commenced. Valuable assistance was supplied by Mr Tony Cunningham, Electrical Operations Superintendent, M.T.A. Tram and Bus Division, and Mr A. Tooke, Substation Maintenance and Construction Engineer, Metrolink. The result of these combined efforts resulted in the production of the Electrical Operations Rules booklet.

What is the need for electrical operations rules and will they ever be used? When we drafted these rules we firstly thought, can they be practical and can they be applied to museum tramway operations?

A rather interesting incident came to light recently. As mentioned earlier in this paper, I am employed with the M.T.A. and was on duty when the incident occurred. In April this year, a rather serious electrical accident took place in Gilbert Road, West Preston involving the tramway electric traction power supply. Extensive damage was caused by the Preston City Council electrical supply wires coming into contact with the tramway overhead trolley wire. The result was massive damage and a large insurance pay-out. Thankfully nobody was injured.

Now how does this incident effect weekend tramway museum operations and why the need for electrical safety rules. In response to the incident mentioned earlier, a letter from the Coroner's Court to the M.T.A. stated in part "I would also be pleased if you could detail to me what safety features are incorporated in the electrical system when domestic power and tramway power lines are crossed during operation." Could you imagine the situation where your museum had a electrical accident take place, due to the negligence of an unsuspecting member who, for example, decided he knew what he was doing working near the trolley wire and was badly burned or killed as a result of coming into contact with the trolley wire. After all, he was only going to paint the pole or work on the roof of a tram and should have known that the trolley wire was alive with 600 volts. Did he realise the danger? It is too late to ask these questions after the incident has taken place.

Along comes a letter from the Coroner's Court, similar to the one received by the M.T.A., and the question is asked: "What safety rules were in place when working near live equipment?" What will your reply be? "Our museum does not have any." Where will all other museums stand as a result?

Of course, you say, electrical accidents will not happen at tramway museums. Without going into details or placing individual blame, a number of accidents have taken place and thankfully none have had fatal results. As a matter of fact, when the rules of the Melbourne Tramcar Preservation Association were being formulated, a serious electrical accident occurred in Victoria where a person received serious burns to the hands.

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What can C.O.T.M.A. do to help this situation? What is urgently needed is a set of electrical operations rules to be in place, agreed to and abided by all museums within Australasia. C.O.T.M.A. is the ideal body to produce these rules. While every state in Australia and New Zealand has regulations in force for the installation of electrical equipment, I know of no regulations regarding the operation of tramway traction systems.

While an attempt has been made to interest other Victorian museums in the development of a common set of electrical operations rules, sadly the response from some museums has been "we cannot see the use of such rules" or "we do not think this applies in our situation" or worse still, no reply at all. I do not intend for one minute to imply that the electrical rules of the M.T.P.A. are the be all and end all, and are applicable in total to every museum. However, I believe they are a basis of a common set of rules for all museums to abide by. I would strongly suggest that a committee be formed to look into the issue of drafting a set of common electrical operations rules and their implementation throughout the tramway museum movement. Consideration must also be given to how such rules could be enforced by C.O.T.M.A. and the penalties for breaching any such rules. It would be a complete waste of time should such rules be formulated and not policed. I am sure that those museums who abided by such rules would not want to be penalised as the result of irresponsible actions of other museums.

Should we decide that such rules are unnecessary, which I believe they are not, I am sure that should an accident take place, the electrical authorities and the coroner would not hesitate to impose strict and possibly unworkable regulations. The choice is up to us. Either we make the rules and cover ourselves or let others make the rules for us. I know which option I would choose.

As I said at the commencement of this paper, perhaps it is due to ignorance, perhaps it is due to a lack of knowledge or is it because we believe an electrical accident will never happen. Like playing Russian roulette or burying our heads in the sand, sooner or later our luck is going to run out. Thanks for your attention.

**Richard Clarke:** If the other members of the panel could come forward, perhaps David Rawlings could moderate the discussion and any questions....

**David Rawlings (Chairman):** Before we have any questions, John Radcliffe would like to make a few comments on C.O.T.M.A.'s work on this subject.

**John Radcliffe:** I might point out that what Craig has described has, in fact, had the backing of C.O.T.M.A. in so far as some months ago our attention was drawn to the need of this and there were discussions between Tony Smith, who was then assistant executive officer, Bill Kingsley, myself and correspondence with Lindsay Richardson and Dave Hinman, who are the two C.O.T.M.A. committee members. We advised them that Tony would arrange for the convening of a working group in the State of Victoria, involving the museums in that state to address the need for operational rules. It was our belief at the time that if we did not establish a code of practice, which might well not have a basis in law but which was accepted by C.O.T.M.A. museums, there was the risk that we might have something more distasteful imposed upon us later. I think what has come out of what Craig has said, is there appears to have not been as much participation by the Victorian museums in that process as he might have wished for. But it is with the background of that action taken by the elected C.O.T.M.A. group that we are now in the position that Craig described.

**Ron Grant (WTM):** I think that I have a part answer to my concern, thanks to John, but I have felt very concerned about this, but if we had rules as outlined in this paper it would be very helpful, if only for us to take back to our own organisations to nub over. I can fully subscribe to C.O.T.M.A. going into this but, seriously, at the same time we should seriously look at our own operations right from now.

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**Craig Tooke:** I have a couple of spare copies with me, but did not have time to run off copies for everyone. If any museum would like one and I am unable to supply a copy today, I will see that they are sent a copy of what we have done.

**Ron Grant:** Would you reserve one for Christchurch, please.

**John Radcliffe:** If I could take the process a bit further, I believe that we should move towards the process where the individual C.O.T.M.A. museums do look at the draft set of rules which has been prepared, with perhaps less input from some of the Victorian museums than we might have preferred, with the intention that we might, at the formal meeting on Monday, agree that individual component museums would examine that set of draft rules with the intention of their ultimate adoption as a code of practice. At the rate in which we conduct our business around here that process might take two years, but it is not impossible if we got our backsides organised. In fact it could be done out of session.

**Tony Griffin (SPER):** Mr. Chairman, I speak as a delegate who has had professional responsibility for the protection and operation of a large high voltage power system and a large 1500 volt electric railway system. I would like to speak on a few points raised by Peter Hallen. Firstly the wiring rules AS3000 are revised every five years while the design of railway and tramway substations are in a process of evolution. Things started back in the year dot, things have developed and are still developing. What is now current in the 1986 edition is likely to be changed in the 1991 edition. Nothing is static, everything is still changing, so you build to the current requirements and when you rebuild you do something different.

Regarding harmonics, there is a problem with reflection back into the AC distribution system. However, I suspect that when the museum starts to operate for distances over a mile, there is going to be a problem with telephone interference. This can be solved by the installation of a wave filter on the DC side, housed in a grey box about so big.

In terms of voltage drop, Mr Clarke said 25%, I go one step further and say 50%.

**Richard Clarke:** That would mean about 300 volts for our museums. I understand the railways' voltage drops to 1000.

**Tony Griffin:** We go down to 750 volts, thank you.

I must take a point with Mr Clarke when he said that safety is achieved by the safety system which is designed to cover contingencies of the habits of people. Earlier he said that the fault to your substation must be adequately covered. He did not state how. Is it in design contingencies? He also said that a remote fault current is much lower, which is true, and he went on to say that the protection must see the fault and turn it off in time, but how long?

One of the problems in designing any form of a dc traction system is that there are two constraints. If you beef your fault level up at the substation, you have rupture capacity problems. The same thing happens in ac railways, only worse. You need, at the substation source, a high-speed dc breaker which will clear the fault; which has adequate rupture capacity. The thing that is most frequently not recognised is the distant fault condition.

Protection for a traction system is usually designed so that protection is set-up to see the minimum fault condition. There is usually no over current protection in the form of thermal protection. Usually you rely on the thermal mass of the conductors to get you over the short-term peaks. You do not put protection on as you would for an ac system.

Having spent a few years with these responsibilities, and having spent a couple of months travelling around the world talking to manufacturers of railway electrical equipment, and to the people operating various traction systems, some rules have come out of it. With protection, no tramway, electric railway or light railway

anywhere in the world will contemplate blind spots in their protection systems. In other words, they will not permit a situation where a fault would never be protected.

Next, all faults must be cleared in less than one second. With close-up faults, it is possible to achieve a clearing time of 15 milliseconds, 15 thousandths of a second, which is something you never hear of in an ac system. The rupturing capacity of the switch gear always must not exceed the fault level at the point of installation of the system, except that, with the rolling stock switch gear technology of the 'twenties through to the 'seventies and 'eighties, the line breakers on the vehicles are relatively slow. We are talking about 150 milliseconds to clear a short circuit on the vehicle itself. They typically have a rupturing capacity of about 5000 amps for railway type applications. Taking my experiences on the Illawarra line as an example, the minimum fault current which would not be seen by a substation breaker is in the order of about 15,000 amps. We have now changed the switch gear on the trains to withstand that sort of fault level. In the old system, the substation circuit breaker cleared that fault before the line switches had a chance to open, so therefore they opened on no current, hence no problem.

All of our tramcar equipment is slow gear. To protect it, it has a rupturing capacity of 1500 amps and we need a circuit breaker with a rupturing capacity of at least the fault level of the system, preferably a bit more, in the substation, on the output side of the rectifier, before it goes out to the overhead wiring. Second-hand switch gear to do this job is usually available at around \$100 each and is the sort of gear that will clear 50,000 amps in 15 milliseconds.

Another point to be raised is the fact that one of the reasons for clearing the fault in the minimum possible time is to minimise the damage at the point of the fault. The damage can be a fire on the vehicle, it can be fires on the track or in the grass around the track. It can be caused by the flashing you get from the pantograph and overhead wiring when the fault occurred on the vehicle. It starts a fire. Where does it go? To adjacent properties. It has always been the strategy of dc traction systems to clear the fault before it has reached the maximum perspective current to minimise that damage, and high speed breakers, available second-hand, can do the job.

The last point. For 107 square millimetre hard-drawn copper contact wire, the energy input, which is recognised as the maximum that would be tolerated before the wire would burn through with a fault current, is 1000 amps squared seconds, which in terms of, say, 1000 amps would give you one second to clear it. Thank you.

**Richard Clarke:** Tony and I have had long discussions on this matter. I think I can say we have enjoyed these discussions. I will start by acknowledging that Tony is a highly qualified electrical engineer and he thinks these matters through very carefully. The Sydney Tramway Museum takes his views and looks at them quite seriously and, if anything, Tony makes sure that the Sydney Tramway Museum is honest.

Now, in answering your comments, I must state that there is always a cost and a benefit for safety, and yes, all things are possible. It is just a question as to whether things are practicable, desirable or appropriate at the particular time or circumstance.

We would love to put in high-speed dc circuit breakers everywhere, with a rate of rise protection, maybe with a micro-computer which has worked out the characteristics of the line. Remember, donations to the tramway museum are tax deductible!

Now to go back and put a few things in perspective, Tony would like a 15 millisecond interrupting time on dc. So would I. Presently close-up faults, according to the chart supplied by the manufacturer, are cleared in times approaching 30 to 35 milliseconds, and for distant faults, the experience and the calculations show, provided that it is a solid fault, the distant fault has been tested and cleared very fast.

**Howard Clark (SPER):** The question of self-regulation interests me, and as a chartered accountant, we are always advocating self-regulation as well. I think in any professional body, such as a tramway museum, self-regulation is preferable rather than having a regulating body impose rules upon us. The question I pose is

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this: If we produce the rules, who will examine them in regard to quality control? My main worry is legal concerns. Suppose we produce a set of rules to govern ourselves, and these are challenged at some time. How do we cover ourselves if someone says, for example, we have left something out. Would there be a claim for negligence because of the omission?

**Richard Clarke:** Perhaps I could answer part of that. Government is changing and I work for a major government organisation involved in safety matters. We are getting out of writing safety rules as fast as we can, and getting industry to write their own. A set of rules should be prepared using the best advice you can get, not only seeking advice from the suppliers of the services, but also seeking advice from the users as well. Any set of rules put forward in this manner should achieve a consensus.

**Craig Tooke:** My views are similar to Richard's. I feel that any rules formulated should be submitted to the local supply authority for an opinion, and any challenge thrown up should be investigated.

Another point is that most of our museums, with one or two exceptions, use medium voltage supplies. That is, supplies under 650 volts. With high voltage operations, the supply authorities insist that the substation be manned by authorised operators, trained in switching. The safety rules that apply to high voltage operations should also apply to medium voltage installations as well.

Another interesting sideline is that in the past two years on the Melbourne tramway system, there have been three people killed as a result of 600 volt shocks, and five others injured as a result of coming into contact with 600 volts.

## **SATURDAY EVENING, 3rd SEPTEMBER, 1988**

Conference delegates and their families and friends gathered at 6.30pm in the Armoury Room of the Crest Hotel for pre-dinner drinks.

At 7.00pm the party adjourned to the Banner Room for the Conference Dinner.

The Dinner was followed by the customary Museum Events, or "Brag" Session, where each Museum presented a verbal account, colour slide or film screening, or video presentation of events and progress at their respective museums since the Conference in Adelaide in 1986.

Between the various screenings, a number of surprise presentations were made:

- Norm Chinn presented to the Tramway Historical Society two Dunedin tramcar destination blinds which were accepted with great pleasure by the Society's official delegate, Michael Kerr.
- The S.P.E.R. presented to Troy Thomas, as delegate for the Brisbane Tramway Museum Society, a tram stop marker from Kingsford Smith Drive, Hamilton. This tram stop was the only one of its kind in Brisbane and received newspaper coverage when first erected. It was obtained after the closure of the Brisbane tramway system in 1969.
- Bob Merchant presented Lindsay Richardson, as delegate for the Perth Electric Tramway Society, with two tramcar destination rolls purchased from the M.T.T. in Perth after the closure of the Perth system in 1958. Bob requested that they be used in one of the Perth bogie cars after restoration of one of these cars by the P.E.T.S., a request readily agreed to.

## **SUNDAY, 4th SEPTEMBER, 1988**

After a leisurely breakfast in the Crest Hotel's restaurant, Conference delegates moved out to catch the 9.29am suburban electric double-deck train from nearby Kings Cross Station for the 44 minute journey to Loftus. The Sydney Tramway Museum's new site is adjacent to Loftus railway station and the main entrance is just a hundred metres down Pitt Street. Early visitors were already riding the trams as it was a normal museum operating day.

Delegates were directed into the museum's new workshop building for two morning workshop sessions. The workshop building was constructed as a Bicentennial project and had been officially opened with the Museum on 19th March 1988.

# WORKSHOP SESSIONS

## in the Workshop

### 1. THE MUSEUM BUSINESS

**David Rawlings (SPER)**, acting as chairman, opened proceedings. He welcomed the delegates and in his opening address made the point that he detected that museums seemed to be moving away from being a hobby to developing into a small business. To survive, David said, we had to be aware of this factor and educate our members to the fact that for the hobby to prosper, a sound business plan was required. In asking for reactions, David asked that a number of museums make comments on the feelings of their members and the effect on their organisations, seeking comments from museums who operated in various environments, those that were part of a museum complex, those that operated on former operational tramways and those established in unconnected sites. He stated that the meeting would be interested in hearing how the various groups operate and their philosophy towards operating the museum as a business.

**Michael Kerr (THS)** spoke on the situation at Ferrymead. Michael stated that the tramway group was one of seventeen organisations operating in the Ferrymead complex. The groups covered a wide variety of activity such as fire engine groups, farm machinery, historic buildings, etc. The tramway group is part of the overall Ferrymead complex. Michael explained the organisational structure. The complex as a whole is controlled by a Trust Board which is elected. There is a Management Committee which consists of 50% Trust Board members and 50% Membership Council members and this committee does the day to day decision making. There is also a Membership Council where any member of any Ferrymead society can make an input. Michael explained that it was a complex arrangement and it is quite involved, but it did allow the grassroots member an opportunity to have a voice in the operation of the museum. However, he explained, actual policy and financial decisions were made at a higher level.

With regard to the feelings of the members of the tramway group to the concept of the museum as a whole, Michael explained that because the tramway was the largest group in the complex and the oldest, they had one of the most difficult jobs of the lot. Most of the members are volunteers yet they are required to provide a seven-day-a-week service. To achieve this objective, the Trust employs a tram driver to operate a tram Mondays to Fridays and Society members operate the site on weekends. This has all sorts of complex problems, especially when it came to maintenance of track and vehicles. As a Society, the tramway group does not employ anyone, the only employees are employed by the Trust itself, filling such positions as director, secretary, tram driver, ticket sellers, etc. There are some tensions between the paid staff and the volunteers regarding the overall administration. The multi-strata administration nature of the management structure had some good things about it, but there are also tensions. Michael explained that the main areas of contention arise when volunteers feel they want to do certain things or feel certain things should happen. There are also problems with communication where, with such a complex administration structure, getting information back to the membership is a problem. Members who attend the site regularly generally get the picture, however, providing information for the member who can attend only occasionally presented problems. Many methods have been tried to keep people up to date, none of which were totally satisfactory.

There are also frustrations within the Society because the employed tram driver is answerable only to the Trust Board and not to the Society. The Society had also been trying to get some agreement with the Trust Board over the provision of tramcars and maintenance, so far without success.

As for the question of the members regarding their participation in Society activities as a hobby or a business, Michael felt that the majority still considered it a hobby. He stated that there were a number of members who had had exposure to the administrative side of the operation and who could see the broader concepts. He further stated that it was difficult for those who attend the Society only once a month or once a fortnight, and whose interest is only trams and not the site as a whole, to appreciate the marketing and

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financial considerations, and the decision making, when all they were interested in is running trams and enjoying themselves. There were members who attended every weekend and on Monday night working bees but they only spent their time working on one facet of the complex. There were some who are enthusiastic about the workings of the whole complex, but others are not, being interested only in trams. That was their right but it does make for tensions in other ways.

David Rawlings thanked Michael and asked for further comments.

**Lindsay Richardson (PETS)** rose and thanked David for the opportunity to speak. Lindsay stated that the museum in Perth sat rather in between the situation Michael Kerr had just described as the Ferrymead experience. He stated that the goal in Perth was to enjoy the tramway hobby yet develop a very commercial arm. The development direction of the museum had changed greatly since the museum was first conceived, and the changes had been forced upon them. When the opportunity arose to move to Whiteman Park, the invitation came from the State Planning Commission, a powerful government body. They had ideas about how a tramway should develop, and like Topsy, tended to grow in concept. They had to be fairly flexible in their aims, and it did create some conflicts within the membership as to how they could fit in the hobby aspect with what was to be a tourist tramway. Happily, Lindsay stated, they had achieved that aim. However, the cost they had suffered is in the restoration work, which by necessity had been very slow. The first consideration was to achieve the goal that was set for them, and that was to provide a tourist tramway with a passenger-carrying capacity within the park zone, committed to Saturday, Sunday and public holiday operation. Having come to grips with that, the museum now found itself in a position of sitting between a viable commercial operation, generating good traffic receipts, yet still acquiring Western Australian tramcar bodies. The ten year plan was that they would be able to enjoy the fruits of their labour later for the expenditure being made now.

David thanked Lindsay and asked for any further contributions.

**Colin Seymour (AETM)** stated that the museum in Adelaide now had some of its members thinking in terms of a tourist tramway. Colin stated that it was a follow-on from the members' hobby, originally set up as a tramway museum by volunteers, without government assistance. He stated that in fifteen years of operation, they had learned a lot and were now benefiting from the experience gained. While the museum still only operated on weekends, there were now sufficient retired members available who could open the museum for charter groups. While the original concept was for Sunday operations only, they were now looking at the commercial gains to be made by operating during the week. This was to be explored further.

Colin stated that the museum was lucky in that it could muster a fleet of thirteen tramcars and, as weekend operations generally require four to five cars in operation, they had a certain degree of flexibility. If seven-day-a-week operation occurred, the wear and tear on the cars would be heavier. There could also be conflict over decisions to fully restore a car to authentic standards or restore only to the extent to allow the car to be used in tourist service. Adelaide dropcentre car 264 was cited as an example, where this car was being used as a workhorse and was sufficiently authentic to satisfy the public, and also have a fully restored and authentic example available for inspection. The main thrust was to have workhorse cars and a parallel line of authentic cars.

**John Radcliffe (AETM)** spoke on the concept of creating a commercial museum and handing it over to a group of volunteers to run. The History Trust of South Australia consisted of a series of museums, each with a different theme. The Trust was created by the government as a result of the lobbying of a group of historians. There was the National Motor Museum which was currently being put before the Commonwealth Government in the hope that recognition would bring some financial assistance, similar to the results achieved by the Maritime Museum in Sydney. There was a degree of volunteer input with the museum, but the fact remained that the average motor enthusiast would own his own car, restore it and keep that asset for his own purposes.

John stated that, in the case of the maritime museum at Port Adelaide, there were several collections of marine artefacts throughout South Australia which were grouped together in one site by the Trust. Several old warehouses in the Port Adelaide area were obtained and, using C.E.P. grants to fit out the areas, the museums



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were opened. The Trust employed a volunteer organiser who was to attract volunteers and had proved to be very successful. Much work had been done by the volunteers for what is in essence a government museum.

The second model John spoke about concerned the railway museum. This had been located at Mile End, an industrial suburb that was not a tourist area. The museum had its engines under very little cover and had spent the past twenty years painting their engines on a circular basis. The History Trust decided to obtain a Bicentennial grant to relocate the railway museum and, after considerable searching, it was decided to set-up the museum at Port Adelaide, quite near the maritime museum. The Trust had supervised the project and employed the President of the Mile End museum as the principal employee. They then started negotiations to get the Mile End museum to change its constitution and agree to move to Port Adelaide. The thing that attracted them was the under-cover location of the new site. Organisationally, the railway museum would be a commercial operation, run in essence by the Mile End group. There would be government nominees on their board of management and the revenue they generate must be sufficient to pay employees to run it during the week; the volunteers run it on weekends. This could be a high risk enterprise as far as the History Trust is concerned and the Mile End people may have some problems as well. Consider the fact that they had let their enterprise fall into the hands of the government and had lost their independence, while on the other hand, they had received a new facility over which they still had some control. In effect, the History Trust was capitalising a volunteer operation in the hope that it could continue to operate basically on a volunteer management system. The Trust hoped that it would eventually be out of it again, except for having a couple of representatives on the management committee.

David thanked Colin and John and asked for further comments.

**Leslie Stewart (WTM)** addressed the forum. Leslie stated that he had given much thought to this question of the museum business and how it could be managed. He stated that he had doubts that a group that had grown out of an enthusiast preservation group, and the management structure that ran that sort of organisation, was actually capable of extending that into the commercial world. Leslie raised the point that perhaps a solution may be to supplement our organisations with people from outside, such as nominees from organisations like the History Trust, to gain that other input. Using his experiences at Wellington, Leslie made the personal observation that their organisation lacked people with skills in the entrepreneurial and public relations side of the business, and in the business of getting out to raise the money and do the future planning. He stated that we needed to be able to extend ourselves to bring these skills into play if we were really going to run our museums as businesses.

He felt that the majority of the members in most of our museums still regard it as a hobby only. There were only a few who had been involved in the administration work who recognised the business elements that go make up what we do in our spare time. Leslie stated that most of us do not have the time to put in to explore all the avenues required to make the museums function as successful businesses, as growing enterprises. He felt that somehow the democratic centralised decision-making process of an enthusiast group was not entirely appropriate to a museum business and there needed to be some other way to achieve the aim. Just what that process was, Leslie was not exactly sure, and suggested that the subject needed to be examined in some depth. Leslie concluded with the question, how do we adapt our museums' structures to become more commercially orientated.

**Trevor Burling (WTM)** mentioned that the evolution of our museum movement found its nucleus amongst the ground-level members, the ones who conceived the idea way back. Our museums had gone through several evolutionary changes. Some groups had progressed further forward than others and we could all learn from this. Trevor stated, however, that we must not lose sight of a number of basic factors and the main one was the feelings of the ground-level member. He stated that if we alienated them, we may as well give it away. Being in the business of entertaining tourists, we certainly needed to manage our businesses along those lines, but mentioned that we should always be aware of the ordinary member because if they feel alienated and go away, the museum will crumble and go away. They are just the same as the person who walks into your workshop and enquires as to what you are doing, as part of our entrepreneurial outlook, we include these people and talk about what we are doing. It is this ongoing dialogue which helps our people to look forward to extending the museum to attract further people.

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David thanked Leslie and Trevor and in his concluding remarks suggested that this discussion may be useful as a topic for the next conference. It could be useful as we all seemed to be going through some form of transition and there were many views one way and another. He again thanked the speakers and concluded the session.

## 2. MAINTENANCE

**David Rawlings** introduced Bill Parkinson as chairman for the session on Maintenance, by stating that Bill would not be talking about Whitworth threads and 3/8th taps but would cover the ways of maintenance, those things we need to do to keep the whole show going to get those people through the door.

**Bill Parkinson (SPER)** said that maintenance was very important and something we could all learn from each other. He was hoping to gain from feedback on the experience of the other museums present. He stressed the importance of having a professional attitude towards the ongoing problems of maintaining old equipment. How important did they think maintenance was? Was it a necessary evil? Was it something they enjoyed doing....

**Michael Kerr (THS)** said it was something that could not be let go. It would blow your capital right out if you did not carry out regular maintenance.

**Bill Parkinson** said the company he works for considered maintenance a necessary evil and they placed him, as the professional, in the same boat as the museum would here. The company did not make sufficient funds available for maintenance and the museum didn't have any money, so it was much the same sort of thing. Maintenance was not being carried out when it should be. You had to have a maintenance programme, as you had to be sure the reliability of the cars is going to be maintained. The S.P.E.R. only had three operable cars available at the moment, possibly four, as capital works had taken precedence over maintenance during the last twelve months. The museum had few facilities available at the present time, although delegates could see what would be available in the months to come. The workshop building was to be for major restoration work and the day-to-day running maintenance would be carried out in the running shed which was to be equipped with a pit to facilitate this work. Did anyone have views on this? Was it a good idea to have both functions separate or should they be lumped together?

**Tony Griffin (SPER)** thought that the functions should be segregated.

**Bill Parkinson** replied that it was a good idea up to a point but you ended up with a certain amount of duplication of facilities. It depended on the size of your museum, the number of cars you had and what you intended to do with them.

**John Radcliffe (AETM)** responded that it was not so much a matter of separating functions but keeping bodywork separate from mechanical work.

**Bill Parkinson** said that the Loftus workshop building would have body work being carried out side by side with mechanical and electrical work. This was dictated by site availability, and the museum had to make the best use of the space it had.

Another major problem was the talents of the people we have. Where could we learn these skills today? He was fortunate in working on diesel-electric locomotives which have DC traction motors and had gained his skills through his employment. Has anyone had problems in knowing what to do, when to do it and how often it should be done?

**Richard Gilbert (BTPS)** said that the advantage we had, as museums, was that we were dealing with vehicles which were around eighty years old and that basically the technology was simple, it amounted to just

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brute force! If you had cars like the technically advanced Z and A cars in Melbourne, you needed a degree to be able to maintain them. In a museum situation, it was like an apprenticeship. You got involved with those doing the work and they taught you what to do and how to do it. It was simply carriage building, simple mechanical work and basic bogie construction. That was how those in Ballarat learned the trade. When he first became involved with the trams in Ballarat he wasn't even a tramway enthusiast, he was, like others, a railway enthusiast who wanted to do something about saving the trams in Ballarat, and didn't know all the technical data pertaining to them.

**Bill Parkinson** responded that, generally, it boiled down to basic common sense and that they [in Ballarat] were lucky to be living in a state where trams still run. There were people still around who would be able to pass on this sort of expertise to them.

**Don Campbell (SPER)** said the inhibiting factor, as a non-tradesman amateur, was that while he understood the principle, he was not skilled in the use of tools, with the result that if he undertake a job, he did not carry it out with the speed with which the craftsman would do it. This could lead to the situation where the tools would be taken from you and the work carried out more quickly by somebody else. This left you with the feeling that you could not do this and a reluctance to take on that sort of work again. What this boiled down to was, does the tradesman-type person have the time to suffer fools like us who are keen to hold spanners and do this sort of work, but are inhibited by the fact that we do not really know what we are doing, yet with a little bit of guidance we could probably do it.

Several voices confirmed they understood that scenario only too well.

**Bill Kingsley (BT)** said that they had an interesting situation in Bendigo where the maintenance is done professionally. They had two people working full time, Bruce Amour, a very competent mechanical person, and a good apprentice working with Bruce. When Bruce came to them three years ago to replace the person before, there was nobody to tell Bruce how to look after trams. So Bruce adapted what he knew in the automotive and other fields and he learned very slowly. He is doing a slow but very, very good job.

Bendigo suddenly had a small influx of volunteers from other museums, particularly from the Diamond Valley Railway down in Melbourne. These volunteers were not only keen on driving trams but were keen on getting under trams. This was quite unusual as up until then Bendigo had two groups, the people maintaining trams, and the volunteers and others driving trams. Now the tasks were overlapping and it was working really well. Bruce and the apprentice appreciated the volunteers getting under the trams and they were learning from the volunteers. The professionals and the volunteers were sharing their experiences and it could work. In Bendigo it was working very well.

**Bill Parkinson** continued by saying that we needed to plan our maintenance schedules and time-saving procedures were paramount. Time was our enemy. At Loftus it was virtually one day a week, and a normal week's work would normally take us seven weeks to complete, which was a long time. We should be able to plan what we were doing and how we went about it to make it more efficient. He thought that this came with experience. We might first do it one way but find out later that it could have been done another way, which would have been quicker. We learned from this experience. Those who have been in this business longer than others have probably had time to pick up these tricks. Bendigo was lucky in that they had professionals, and took over a complete system with a fully equipped depot. But the groups who were just starting did not have much in the way of equipment. How did they get on? How did they do these things? Were they prepared to spent money on facilities? This tied in with efficiency and what maintenance was all about.

If we needed something, do we say that it is a bit expensive and look at it to see if it can be done another way, which might take a lot longer. Because of that we have lost time and are running behind schedule. So should we spend some money and buy that extra bit of equipment which would make the job much easier?

**Tony Griffin** asked what dollar value do we put on the completion of that task? What is the value if the task is delayed by not buying the equipment?

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**Don Campbell** asked whether we actually had a dollar value for the work we carry out or whether our productivity was more a time factor than a dollar factor.

**Tony Griffin** responded with: Was it a case of doing it at all, or a case of delaying the task. If the task is not done what is the dollar value, and if it is delayed what is the dollar value?

**Bill Parkinson** asked if Tony was relating the task to a business type enterprise.

**Frank Doherty (THS)** said that we had to think of our commitment and the museum's commitment, if we were a seven-day operation and whether we had two cars or ten cars to operate that service....

**Phil A'Vard (PBPS)** put a dollar value on something we did not think about. Why not put a dollar value on volunteer time? It was our most precious asset. It should not be squandered on unproductive areas. If we spent five dollars on finding the extra bit of gear, we could make the volunteer do more for us.

**John Radcliffe** agreed by saying the same applied to the laying of a concrete floor. When we all started, we all grubbed around in the dirt and life was not easy when you had to work under those conditions.

**Andrew Hall (TMSV)** said he would be interested in when a museum should install a pit. At Bylands they had to grovel around under the cars to adjust brakes and so on. What depth should a pit be? He thought the pit at Ballarat was too deep and the Tramways Board's were now too shallow. What length, what depth....

**Don Campbell** commented that what we had to decide was, should the pit be Don Campbell size or Andrew Hall size....

**Bill Parkinson** remarked that the pit to be built in the Loftus running shed was to be a multi-purpose pit to cater not only for the trams but also for the museum's buses, tower wagons and other vehicles. The pit, in traditional terms, will be about 75 feet long and be bottle-shaped to accommodate the road vehicles at one end.

**Phil A'Vard** suggested that perhaps a pit was ancient technology. Would not hydraulic jacks, which could lift the tram to whatever height was wanted, be more suitable? Puffing Billy had about 30 carriages and have developed the technique whereby they looked at them once every twelve months. They lift the cars and turn the bogies upside down to work on them, working on them hands down instead of hands up, rather than having a bloke on his back under the things. Certainly they did not have motors in them, but it is much easier to work hands down.

**Bill Parkinson** said it depended on whether the truck was to come out. A motorised truck is a more challenging and more difficult item to work on.

**Phil A'Vard** retorted that it was more challenging to get work productivity from ancient technology.

**Don Campbell** asked if there was a better way of doing this work.

**Bill Parkinson** replied that there was. Ideally, you could spend a million dollars on hydraulic lifts that can take the car up and you can walk around under it like they do in Adelaide [at the STA's Glengowrie Depot].

**Mark Skinner (AETM)** said that generally we knew how to maintain things twice as well as we can afford to actually do it and this showed the importance of the commercial side of the activity. Unless we could make ourselves commercially successful, we would continue to grub around on dirt floors and use improper tools for the job because we could not afford to have the proper stuff to do the job. It was important to ensure that both the commercial and maintenance arms of the museum worked in harmony, or at least didn't get in each other's way with petty jealousies or rivalries, or over some fiddly technical point. In some organisations, that happened.

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**Jack Nyman (MTM)** said he was at the planning stage of what to do and asked how much was the Loftus pit going to cost? (about \$17,000) and was it worthwhile sending stuff out rather than acquiring the machinery and doing it yourself? He realised it was expensive but it took a very long time to do it yourself. If you sent work out to, say, Comsteel or the Hunter Valley Training Company, it might be cheaper in the long run to spend the money, go into debt and have your vehicles back in service rather than trying to mess about doing it yourself. His mob tended to think it was better to send it out so they were not looking at buying heavy machinery; there was not all that much around to get and what little there is gets snapped up by others. He thought this was the better way to go.

**Bill Parkinson** said that Jack had raised a good point and he had planned to raise that matter later. We needed to ask ourselves what was our cut-off point? What do we think is not worthwhile doing ourselves, and could be better done by somebody else a lot quicker but for a price. We could acquire items like wheel lathes and retyring equipment but how often would we use it. We at Loftus have a space problem so we would not be installing gas rings and so on for retyring wheels and although we owned a wheel lathe, it was more likely to be used as an exhibit due to the space required to set it up properly.

**Jack Nyman** said that he had two sets of three feet six inch gauge railway wheelsets and he wanted them converted to standard gauge and turned to tramway flanges. The quote from Hunter Valley Training Company was \$1070 for two axles, Comsteel quoted \$1100 plus 25%, another place out at Cardiff quoted \$1370. These prices staggered him but was it worthwhile if it meant bums on seats, people drinking cups of coffee, etc, to spend that sort of money and use our volunteers to do something else.

**John Radcliffe** said that this was surely a matter of economics and the skills available. At St Kilda they could restore a tram for about \$25,000 to \$30,000, say, and the S.T.A. do the same thing. They take just as long to do the job for a cost of \$25,000 using paid labour. It is a matter of simple economics as to which way you did it.

**Bill Parkinson** said there had to be a cut-off point....

**Ron Grant (THS)** responded by saying that surely the cut-off point depended on the job you were doing, what it was worth to you, what time you'd got, the necessity as far as time goes. If it was straight maintenance and you were down to one car while still running seven days a week, then it would be worthwhile getting some work put out to enable you to keep going. But if you had several cars and you were restoring them, taking your own time, then what did it matter if it took five years as long as the skill and enthusiasm to do it was there. The situation you are in becomes a choice situation. You take stock of what your necessities are, what money you have and what you are going to do.

**Trevor Burling (THS)** said from time to time opportunities arose, like the wheel lathe which Ferrymead had got. It was offered to them and you didn't say 'no thank you, we are not into machinery'. You took it, and if the W.T.M. wanted some wheels turned down, send them down there. You could probably specialise in doing that for other museums.

**Bill Parkinson** agreed that if you have a particular area that might be in need for what you are doing, it might be advantageous to acquire this equipment if it is available at a reasonable price and if you have the room to be able to use it. He said that S.P.E.R. planned to put a lathe in the workshop behind where the delegates were seated. It is quite large and it was obtained at a very good price. It is quite a modern piece of equipment and came with everything, so they would be crazy to give it up. It would enable them to do many little jobs as they are needed, without the necessity to shop around for the best price from some engineering place to get it done for them.

**Trevor Burling** commented that they were probably the only museum with a lathe that size and this could generate work for other museums.

**Bill Parkinson** responded that there was a benefit in that. S.P.E.R. could build bogies here if it wanted to,

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as a case in point, but it was more advantageous to contract the work out. It had contracted the Hunter Valley Training Company to build a pair of O class tramcar trucks. The museum had some equipment, wheel and axle sets and a certain amount of ironmongery, but found it more expedient to have the work done for them. It did not have to worry about it and they get back a basic truck which it would be able to complete, such as fitting motors. The Hunter Valley people rebuilt the counterweight dummy which was now on display. It was a job they asked for, a job they were very interested in doing.

Bill also mentioned overhead fittings, of which the museum had a fair number of patterns from the Sydney system. This work was also contracted out. Although they had some original fittings, more were needed and an offer at a reasonable price was accepted to cast a quantity of new fittings. The patterns were on hand, and they are the big cost. If they had not been available, it would have been a different matter.

Bill also raised the question of safe work practices and using the right equipment when doing maintenance work. It was important to realise that the job should be done the right way. This type of work was an industrial situation whether we liked it or not. In New South Wales, various safety acts apply and regulations must be observed. For example, with electric welding....

**Frank Doherty** mentioned face masks and safety screens, and museums should abide by the regulations applicable to their state.

**Bill Parkinson** said that it also covered the correct use of the equipment. All the safety measures in the world wouldn't help if you didn't know how to use the equipment properly. If you were not able use it properly, you might as well not have it.

**John Radcliffe** said you can get into arguments as to judgements of what was right and proper in these sorts of organisations. You tended to have a lot of experts, self-appointed, and it was often difficult to resolve their conflicting viewpoints without a lot of yelling and screaming, and even that didn't necessarily make for a profound judgement.

**Bill Parkinson** cited the case of a welder working on the museum's scissors crossover. He used the correct face mask, etc., but wore shorts and thongs and ended up with a bad case of 'sunburn'. You had to know how to work safely, not only for your own safety but also the safety of the people working around you. It all boiled down to having an industrial attitude to what you are going to do.

A New Zealand delegate said what each museum needed was the equivalent of a safety officer.

**Trevor Burling** said that when we talk of safety we probably needed to be more specific and recognise that some of the problems were job skills problems. Some of those skills were using the right equipment, using the right gear, and our museums have to be responsible and say you will do it properly. It should be a policy decision. Safety on its own is not separate, it is part of the whole concept.

**Frank Doherty** suggested that perhaps museums needed to be advised or lectured by a safety officer. Another point raised was the need to display around machinery at our museums safety posters about safety glasses, ear muffs, and so on. Many of us in our jobs, even if we didn't work in an industrial situation, had these around us. They have wire grills around machines and we should have them, too. We had to be seen to be working in a safe situation.

**Phil A'Vard** rose and said he was going to open a can of worms and probably frighten the daylight out of all of us. At the moment we cannot get any type of decent insurance coverage for a volunteer working in a situation like this. We could get him a personal accident coverage which might give his widow \$10,000 or so if he got killed and might give him \$10,000 a year if he was maimed. That was nowhere near a Work Care or a worker's compensation type claim. "Now I will frighten the hell out of you. We believe that a volunteer has exactly the same kind of squeeze upon the volunteer management or upon the organisation as does an employee. Our legal officers at Puffing Billy have got this to the point where they believe that this is

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absolutely so. Just think what would happen if a man injured himself industrially and decided to put that to the test. He would wipe everyone of us out of existence because there is no coverage for it. That, one day, will be tested. Believe it or not, the American disease is coming into Australia left, right and centre. Who can I sue, and for how much? That means that the duty of care, on us as managers of the organisation, is exactly the same as if we were employing these guys. It involves safety officers, it involves safety gear, it involves careful supervision. We're really in an awful spot, fellas."

**John Radcliffe** said where we should be heading was towards the New Zealand accident compensation scheme. He didn't know how well it was going.

**Ron Grant** replied that it covered the areas that Phil mentioned but the scheme itself is in financial difficulties. Just exactly which way it would go was of interest to all of us. In the meantime, the three New Zealand museums were covered in that situation.

**John Radcliffe** continued, and said it seemed the end point of this was community attitudes, and the museums are a community. He had a fair bit to do with farmers who by tradition have been very blasé about any matter of safety. You will find half the rural population are as deaf as a post because they have been driving tractors in the middle of the night for twenty or thirty years. The current generation of farmers is aware of this and they do wear ear muffs. You would find that any farmer under the age of thirty-five in fact does wear an ear muff. You can change community attitudes, even in communities which are not tightly oriented communities. It behoves us to ensure that our community attitudes are the best we can make them.

**Voice:** My sixteen-year-old son is far more conscious of ear muffs and eye protection than some of our forty-five-year-old volunteers, and when you approach those forty-five-year-old volunteers they tend to push you away and say "forget it".

**John Radcliffe** remarked that you could change that in time.

**Bill Parkinson** raised one last point with the hope of receiving some feedback. What would be the chances of producing an all-inclusive maintenance manual consisting of input from everybody for the use of all of us. Most of us here have common cars, those green things from down south. Most of us have got one somewhere or other, and most trams are much the same anyway. Having a uniform system of maintenance or a reference manual for any sort of car that might be of interest to other museums. Maybe in years to come we might have an exchange of cars and it would be nice to know that if your car went somewhere, the material for maintaining it was also there.

**Tony Griffin** remarked there were particular differences between various cars which would not be adequately covered by a common manual. Each car type should have its own manual.

**Frank Doherty** suggested supplements to cover such items as different truck types. A general overhaul manual covering, say, brake rigging with separate sections on air brakes, hand brakes, rheostatic brakes, or whatever.

**John Radcliffe** reminded the gathering that most of this material was available if you could get your hands on it. There had been a lot of work done on this and Don Currey did this for Seashore back in 1962. The Association of Railway Museums reproduced the New Orleans training notes four or five years ago; the notes themselves were done in the thirties. There has been a great deal of material put out by Brill and other people, handbooks of one sort and another, and much of this had been available from transit authorities when they cleaned out their shelves from time to time, and he suspected that between the lot of us, we would have a lot of this information. It would be a very big administrative effort to actually put it together and the people down in the pits trying to fix things also haven't got the time to cope with that administrative function.

**Bill Parkinson** said it was something that would be a long term project. Some would be able to make use of such information while others might have no use for it at all.

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**Craig Tooke** told the gathering he served his apprenticeship at Preston Workshops and the M.T.A. did have a set of maintenance instructions for the maintenance of all its trams. They were in the process of releasing an updated set which included instructions for maintaining the Z and A class trams. He did have the set he was issued with and could make copies if anyone was interested.

A voice asked how many pages it ran to.

**Craig Tooke** replied there were five sections, about sixty pages in all. It described, for instance, how to overhaul a controller, how to set the segments....

**Bill Kingsley** said it would be possible for C.O.T.M.A. to take a master copy from Craig's set and make copies available for any museum which wanted one. They in turn could copy it for their maintenance people.

**Tony Griffin** raised the point that the Melbourne manual was targeted for the commercial requirements of the M.T.A. and for the climate in Melbourne. We could not necessarily transpose those procedures from Melbourne to Brisbane, to Perth, to Adelaide or to Tasmania.

At this juncture, a number of delegates reminded Tony that it was a start, a step in the right direction.

**Tony Griffin** continued. He said all we could extract from the procedures were the general concepts....

Tony tried to continue, but was drowned out in the comments and general discussion his remarks brought forth.

**Andrew Hall** managed to get a few words in. He said that the S.E.C. maximum traction trams, the former M.M.T.B. ones, were an operating mystery to him at first and Bob Prentice researched the whole lot, from brake rigging to controllers and trucks. Much of the information came from a former S.E.C. depot foreman and they now had a thick folder of information on the S.E.C. maximum traction cars.

**Bill Parkinson** agreed that the information gathered was ideal for those who had S.E.C. cars. But for those who had, for instance, Brisbane cars, the manual as proposed would be invaluable.

**John Radcliffe** remarked that this appeared to be leading to a lot of euphoria for the generation of a manual through C.O.T.M.A. but he had to remind delegates that the performance and participation of member organisations in projects of this nature in the past had not been very good. We had set up, for example, formalised accident reporting and he asked the co-ordinators of that reporting how many museums over the last five years had advised any accidents they'd had.

**David Rawlings** replied there had been no reports received.

**John Radcliffe** continued by saying that we had to be quite clear about whether we follow up the proposal at all seriously. We got very enthused at these meetings, supporting each other and so on, but when we went home we tended to go very much back to our set ways, to our own little dunghills. Back in those dunghills are people whose vision wasn't broad enough to come to a conference like this, so if we were to move to this, it would need to be a firm commitment. He said we were capable of getting things done and mentioned the co-operation of various organisations to get outstanding conference proceedings completed, even after eight years in one instance. He reminded delegates that persistence would be necessary to get the job done and that should be borne in mind with any decision we were to make.

**Jack Nyman** requested that a start be made by having Craig Tooke's manual duplicated for those who would like a copy. That would be a start in the right direction as it would cover the W cars from Melbourne.

**Craig Tooke** asked whether they would like copies of the new manual to be released and thought it would be quite comprehensive.



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**Ron Grant** thought this was a matter of each museum stating what they had available for what, and circulating copies for museums to copy at their own expense what they wanted.

**John Radcliffe** thought that was a reasonable approach although even getting museums to do that wouldn't be easy. He mentioned attempts to obtain from each museum a listing of their trams, a seemingly easy task, but even that proved to be difficult to organise. He thought it would be reasonable to get the Executive to ask each museum to provide a list of what maintenance references they had. It might just be the International Correspondence course one, which was quite useful in some ways, or Brill manuals, or local M.T.A. or S.E.C. material, or whatever. But if we did that, we must be prepared to really do it when we got home.

**Michael Kerr** thought that was rather like putting the cart before the horse. He would much rather see the material Craig had, being distributed from this venue. He knew that Christchurch had very little to go on and the overhaul of controllers was entirely trial and error. It had been going on like that for over twenty years. He had not been aware there was a controller overhaul manual and stressed that such material was of inestimable value to those who had no information at all. He wanted the material distributed now rather than have to wait for lists to be circulated. Ferrymead had a crying need for information such as that right now as they had absolutely nothing to work from.

**Craig Tooke** suggested that what was needed was a co-ordinator to push the museums to provide the information needed.

**Richard Gilbert** suggested that we stick to the tried and true method of information dissemination and use the Executive Officer's memoranda to advise museums what was available, just like the Railways do in the Railway Weekly Notice.

**John Radcliffe** covered the various points and suggested that details such as who had what, if it could be made available, cost, and so on be listed. All that information could be found out, could be circulated and we could order what we wanted. All we had to do was decide what we wanted, and just as importantly what we didn't want. He knew that Michael wanted everything but a manual on overhauling a Sunbeam trolley bus might not be much use to us, either in terms of maintaining a trolley bus or giving you the text for the day, or whatever. He could provide a big list of stuff but we would need to pick out what was useful to us.

**Ron Grant** asked if it would not be possible to put together a 'shadow' list of what was available before the general meeting tomorrow. He thought that most museums would have some idea of what they had available.

**John Radcliffe** replied that it might be possible to do that.

**David Rawlings** closed the session by reminding delegates that lunch was the next item on the agenda and it was being served at the Sutherland Masonic Bowling Club opposite the northern terminus of the museum's tramline.

### AFTERNOON ACTIVITIES

At noon, all delegates and friends gathered for a group photograph next to San Francisco PCC car 1014 which had been brought from the depot and parked in Tramway Avenue adjacent to the Sutherland-Lakewood Picnic Area. After the group photograph had been taken, the party adjourned for a leisurely lunch at the Sutherland Masonic Bowling Club, located across the highway from the northern terminus of the museum tram line. PCC car 1014 conveyed the C.O.T.M.A. party to the luncheon venue, and S.P.E.R. member Laurie Gordon acted as flagman at the Pitt Street and Army Depot level crossings to enable a non-stop run to be made at speed. This was the first time the PCC car had operated with passengers other than members of the S.P.E.R. and it ran very smoothly with its full load. It was the first time a 70 to 75 km/h non-stop run had been made along the full length of the museum's line and the ride was quite exhilarating.

After lunch, delegates and friends returned to the museum by regular service tram for inspection of the museum's facilities and display hall. An optional tour of about an hour's duration, covering the Sutherland Shire's historic sites and the route of the former Sutherland to Cronulla steam tramway, was undertaken in the Museum's AEC double decker bus No. 2619 for friends and families.

Tram riding, photography, inspections and socialising filled the afternoon. At 5.00pm, when the last of the Museum's visitors had departed, supervised tram driving was undertaken by delegates, using a number of cars including PCC 1014.

A barbecued evening meal was partaken in the workshop building, after which the riding and driving of trams continued until shortly before the last train from Loftus at 10.57pm. Delegates who caught this train had to change at Mortdale and arrived at Kings Cross at 11.43pm.

**THE  
EIGHTH  
GENERAL MEETING  
OF THE  
COUNCIL  
OF  
AUSTRALASIAN  
TRAMWAY MUSEUMS**

**HELD IN THE  
BANNER ROOM  
CREST HOTEL  
KINGS CROSS**

**5TH SEPTEMBER 1988**

**COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA  
EIGHTH GENERAL MEETING - SYDNEY - SEPTEMBER 1988  
AGENDA**

PRESENT	Recognise Delegates
APOLOGIES	
MINUTES	of 7th General Meeting, Adelaide, 1986.
BUSINESS ARISING FROM MINUTES	Patterns (Allan Bradley to comment) Proceedings 1980 and 1984, also 1986 Controllers N.Z. Tram and Trolleybus Affiliation Statement of Understanding with M.T.A. Incorporation, Rules, Statement of Purpose Sales Tax Other?
REPORTS TO MEETING	Chairman (speak on written report) Executive Officer (speak on written report) Financial (determine fees to 1989 and 1990) Tramway Topics Trolley Wire
GENERAL BUSINESS	Tramcar Questionnaire I.A.T.M. Questionnaire Rockhampton (invite to membership?) Electrical Safety Rules Brill 21E Trucks Distribution from Bylands B van Uniforms Other?
ELECTIONS	Chairman Executive Officer Assistant Executive Officer Australian Executive Member New Zealand Executive Member Treasurer Auditor
NEXT CONFERENCES	1990 Wellington, 1992 Perth, 1994 Bendigo?
THANKS TO HOSTS	S.P.E.R.

**MINUTES OF THE EIGHTH GENERAL MEETING OF THE  
COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA  
HELD IN THE BANNER ROOM AT THE  
CREST HOTEL, 111 DARLINGHURST ROAD, KINGS CROSS  
N.S.W., AUSTRALIA ON MONDAY, 5 SEPTEMBER 1988**

The meeting was declared open by the Chairman, Dr John Radcliffe, at 9.40am.

**PRESENT:**

Delegates:- Colin Seymour (AETM), Richard Gilbert (BTPS), Troy Thomas (BTMS), Bill Kingsley (BT), Alan Curtis (MOTAT), Craig Tooke (MTPA), Jack Nyman (NTM), Lindsay Richardson (PETS), David Rawlings (SPER), Rev. Michael Kerr (THS), Andrew Hall (TMSV), Leslie Stewart (WTM).

**APOLOGIES:**

Apologies were received from the Steam Tram and Railway Preservation Society, Tasmanian Transport Museum Society, David Hinman (THS), Anthony Smith (MTPA), Frank Millier (STRPS), Trevor Triplow (AETM) and Reg Francis (PETS).

**OBSERVERS:**

A motion for the admission of the 29 observers present from the various affiliated Societies was moved by Richard Gilbert and seconded by Jack Nyman. Carried.

**MINUTES OF THE PREVIOUS GENERAL MEETING:**

It was moved by Colin Seymour, seconded by David Rawlings that the minutes of the Seventh General Meeting (Adelaide 1986) be accepted and confirmed as a true and accurate record of that meeting. Carried.

**BUSINESS ARISING FROM THE MINUTES:**

**Outstanding Conference Proceedings:**

Outstanding proceedings from the previous Brisbane (1980), Auckland (1984) and Adelaide (1986) Conferences have now been received and are being, or have been distributed. The Chairman thanked the Societies concerned for attention to this matter.

The Executive Officer requested that a copy of the 1982 Melbourne Conference proceedings be supplied for the National Library in Canberra. Andrew Hall to attend to this matter.

**Controllers:**

THS advised that controllers are still not available from Lisbon, Portugal, as the tramcars in that city are still in use. Michael Kerr added that Mr Paul Class indicated that it may still be possible for him to obtain controllers through his contacts.

**New Zealand Trams and Trolley Buses:**

Michael Kerr advised that THS has been unable to obtain any response from Dunedin in regard to Dunedin No.1, despite repeated representations. However, this car is now under shelter.

## Eighth General Meeting

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Leslie Stewart advised that the situation in regard to the Wellington trolley bus is being monitored and that the Omnibus Preservation Group of New Zealand has been in contact with the vehicle's owners. No further action on this matter is proposed at this stage.

### **Affiliation:**

The matter of affiliation between COTMA and the New Zealand Rail Federation - Tramway Section was discussed but Michael Kerr advised that it was felt that there was no advantage to be obtained from such affiliation. No further action in regard to this matter is proposed.

### **Statement of Understanding with M.T.A. of Victoria:**

Bill Kingsley reported that this matter has now been resolved with the MTA and that the arrangement is operating satisfactorily.

The present method of tendering for surplus tramcars adopted by the MTA is functioning to the advantage of COTMA members, as tramcars are not necessarily allocated to the highest tenderer and preference is being given to groups which intend to continue operating the car, or cars, concerned.

The Tramway Museum Society of Victoria is the Society which the MTA officially recognises for the preservation of historic Melbourne tramcars and first preference is given to the TMSV but liaison between the COTMA Executive Officer and Andrew Hall of the TMSV ensures that other COTMA affiliated museums are given consideration.

### **Incorporation:**

The Chairman outlined the reasons for the need for incorporation of the Council of Tramway Museums of Australasia.

The Committee appointed to prepare the Rules for the incorporation of COTMA consists of Anthony Sell (Secretary), Richard Gilbert, Lindsay Richardson, Craig Tooke, Leslie Stewart and David Hinman.

A draft of the proposed Rules has been prepared and circulated to all affiliated Societies and comments have been invited.

Andrew Hall advised that he had obtained legal opinion from elsewhere indicating that the suggested incorporation may be in contravention of Victorian laws.

Troy Thomas advised that he is a practicing solicitor and that he felt that the incorporation of COTMA may disenfranchise those Societies which are registered in states other than Victoria.

The Chairman replied that COTMA is principally based in Victoria and that incorporation is advisable for the protection of the COTMA Executive. Mr Sell is to proceed with the matter.

It was moved by Alan Curtis and Craig Tooke that the matter be proceeded with.

Alan Curtis, speaking for the proposal, stated that incorporation would be a good thing for the organisation.

Leslie Stewart supported Mr Curtis' views but considered that the draft Rules do not include a statement of purpose or intent and this is required as a separate Rule.

The motion was carried by a majority of 10 to 2, with Messrs Hall and Thomas voting against the motion.

## Eighth General Meeting

Andrew Hall expressed doubts on the formulation of the document. Further discussion ensued and it was resolved that the matter of the distribution of COTMA assets should be further investigated and resolved.

Discussion then commenced on the following items contained in the draft Rules of Incorporation:-

**[3] Membership:**

The Chairman noted that any group described in Rule 3 (9) is entitled to membership but felt that clarification of "Definition of a Museum" is necessary.

**[4] Honorary Life Membership:**

The Chairman advised that this clause should be deleted as it is not relevant.

**[5] Meetings:**

The Chairman referred to the fact that an Annual General Meeting is required to be held to meet legal requirements and suggested that Societies from interstate and New Zealand appoint a Victorian delegate to represent them at such meetings, in view of the obvious problems of attending these meetings personally.

**[5] (3) Notice of Time of Meeting:**

The Chairman referred to the stipulation that notice of time of meetings is to be circulated by air mail or by facsimile (fax) only. A telephone message is not acceptable as this does not provide a record of sending or receipt of a message.

**[5] (4) (f) Equality of Votes:**

Discussed and accepted without alteration.

**[5] (4) (g) Elections:**

It was agreed that the election of Office Bearers should be by show of hands. Leslie Stewart then suggested that the Rule should provide for election by show of hands unless a motion seeking a secret ballot for the specific purpose has been received and carried. It was agreed that this alteration should be incorporated in the Rule.

**[6] Executive Committee:**

**[6] (1) Number on Committee:**

The number of persons on the Executive Committee as provided for in the draft was acceptable. The Executive Officer stressed the need for the Secretariat to help lighten the workload.

**[7] Election and appointment of Officers:**

Discussed and accepted without alteration.

**[8] Sub-Committees:**

Discussed and accepted without alteration.

**[9] Minutes:**

Accepted without alteration. The Executive Officer stated that it has now been decided that the Secretary of the Museum hosting each Conference in future is to arrange the recording of the Minutes, so as to relieve the Executive Officer of this responsibility and enable him to devote his full attention to the meeting.

**[10] Accounts and Audit:**

**(4) End of Financial Year:**

The Chairman commented that the 31st March was the most suitable date for the end of the financial year, as the COTMA accounts are compiled in a voluntary capacity and this then avoided the rush which occurs on 30th June, as adopted by most organisations.

## Eighth General Meeting

### **[10] (5) Examination of Accounts:**

It was agreed that this be amended to provide for the accounts to be examined by one or more properly qualified accountants or auditors.

### **[11] Regulations:**

Matter was discussed but no alterations required.

The remaining Rules 12, 13 and 14 required no alteration and it was resolved that the draft rules should be sent back to Mr Sell for revision and to be retyped and reissued to all affiliated Museums. Moved Allan Curtis, seconded Jack Nyman.

The Executive Officer agreed to write a Rule dealing with the Statement of Purpose or Intent, for inclusion in the next draft of the Rules circulated to all Museums.

### **Patterns:**

The Executive Officer advised that no response had been received from affiliated Societies in regard to this matter to date.

Alan Bradley (BTPS) advised that to date, 46 pages of plans, etc., had been received from the State Electricity Commission of Victoria, including eight and a half pages of plans of truck parts, including Brill 21E and 22E trucks, and these are now available.

Copies may be obtained from Allan Bradley or the Secretary, BTPS, Richard Gilbert, PO Box 632, Ballarat.

The Executive Officer thanked Allan Bradley for his assistance to the Museums in this matter and urged them to respond by forwarding lists of plans and drawings which they hold to Allan Bradley as had been requested at the previous General Meeting.

### **Sales Tax Exemption:**

No replies have been received from affiliated Societies in regard to this matter. However, it had been ascertained that all affiliated Societies pay sales tax.

Exemptions apply to railway groups but there is no provision for this to be extended to tramway groups.

Peter Hyde (BTMS) advised that formal application had been made by the Brisbane Tramway Museum Society in this regard but after extensive correspondence no satisfactory result was obtained.

It was decided to not pursue this matter further.

## **REPORTS:**

### **Chairman's Report:**

A written report from the chairman was circulated to all delegates.

The Chairman commented that 14 museums are now affiliated with COTMA and he extended his thanks to the Executive Officer, Bill Kingsley for his efforts during the past two years and also to David Hinman and Lindsay Richardson for the assistance which they have given to the Executive Officer.



## Eighth General Meeting

Six COTMA Memoranda were sent during the past year but the Chairman commented that these were not being circulated within the various museums by their recipients, or promptly responded to on some occasions.

He added that negotiations with the Metropolitan Transit Authority of Victoria (MTA) have been very fruitful to date and that the changes in the manner of disposal of surplus or redundant tramcars and other equipment had occurred as a result of a Victorian Government decision.

The Chairman also commented on the transfer of the Sydney Tramway Museum from the Royal National Park to its new site at Loftus and added that he had been impressed by what he had seen during the COTMA group visit to the new Museum the previous day.

He also conveyed his thanks to the Sydney Tramway Museum (SPER) for the hospitality extended to Conference participants.

On the matter of safety, the Chairman commented on a recent accident at a museum at Wheaton, Maryland, in the United States of America and the reaction by authorities to that incident.

A brief account was given about the accident and its causes and the Chairman stressed the fact that this highlights the need for COTMA affiliated societies to pay particular attention to the safety aspect in all their operations and activities.

It was moved by Leslie Stewart and seconded by David Rawlings that the Chairman's report be received. Carried.

The Chairman's report appears on page 93 of these Proceedings.

### **Executive Officer's Report:**

In delivering the Executive Officer's Report, Bill Kingsley highlighted the need for all COTMA members to recognise the real purpose of the organisation as not only being a means for negotiating with the MTA but as a way of unifying the entire Tramway Museum movement by inter-Society co-operation and liaison.

The Executive Officer thanked all societies and individuals for their co-operation during the past two years.

He also reinforced the Chairman's remarks on the failure of the delegates to communicate some of the information contained in COTMA Memoranda to their Museum's members.

There was also a lack of response to his requests for a list of tramcars by some Societies, despite repeated requests in some instances.

He also remarked upon the level of co-operation by the MTA with COTMA on the occasion of the recent tram trip on 8/8/88, using SW5 No. 888, in part on route 88, and the possibility of future tours being operated.

The acceptance of the Executive Officer's report was moved by Allan Curtis and seconded by Colin Seymour. Carried.

The Executive Officer's report appears on page 97 of these Proceedings. A list of tasks carried out by the Executive Officer on behalf of COTMA follows his report.

## Eighth General Meeting

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### **Financial Report:**

The Financial Report was previously sent to all affiliated Societies and the Chairman made mention of the fact that there was a deficit of \$9.00 for the last financial year, leaving a working capital of \$1936.00.

It was moved by David Rawlings and seconded by Lindsay Richardson that the Financial Report be received. Carried.

### **Tramway Topics Report:**

Leslie Stewart presented a report on *Tramway Topics*, the journal of the New Zealand Tramway Museums, which highlighted the various problems faced with production and quality of the magazine but mentioned that these had been largely overcome.

Mr Stewart's report appears in its entirety on page 100 of these Proceedings.

### **Trolley Wire Report:**

Robert Merchant, Editor of *Trolley Wire*, the journal of the Australian Tramway Museums, presented his report, which made mention of the transition of publication of this magazine from bimonthly to quarterly and highlighted the resultant improvements to the magazine, such as full colour covers and an increased number of pages. He also made mention of the fact there had been several new contributors of major articles for the magazine, thus giving a more even coverage of the various Australian tramway systems and easing the burden of *Trolley Wire's* most prolific contributor of feature articles, Ken McCarthy.

The opportunity was taken to thank all contributors for thier past efforts.

The *Trolley Wire* report appears in its entirety on page 102 of these Proceedings.

Lindsay Richardson congratulated Bob Merchant on the manner in which *Trolley Wire* is prepared and the Chairman also offered his congratulations to Les Stewart and others concerned in the publication of *Tramway Topics* and gave recognition to the amount of work entailed in producing these magazines to a continual high standard.

### **COTMA FEES:**

The Chairman raised the matter of determination of the COTMA fees for 1989 and 1990 and it was proposed by Craig Tooke that the minimum fee per Museum should be set at \$100.00.

Andrew Hall, in opposing this recommendation, stated that the TMSV does not have sufficient spare funds to contribute such an amount in view of his Society's current expansion commitments.

Jack Nyman stated that he considered Craig Tooke's proposal quite acceptable, in view of the benefits which were obtainable through membership of COTMA.

David Rawlings stated that SPER would support Craig Tooke's proposal.

Leslie Stewart said he considered Craig Tooke's proposal could not be justified, as the \$100.00 minimum fee was felt to be rather excessive and suggested instead that a levy be placed on Societies based on their usage of COTMA.

Michael Kerr enquired as to whether COTMA is meeting the cost of servicing the Museums.

## Eighth General Meeting

Bill Kingsley stated that he felt that a single set payment should exist, as membership fees based on the number of members of a Society were now irrelevant.

Troy Thomas advised that the BTMS, with only 75 members, pays only the minimum rate and that any increase in fees could result in the need to increase that Society's membership fees.

Keith Kings (TMSV) added that any increase in the minimum fee would adversely affect those Societies with only a small membership.

It was then moved by Jack Nyman and seconded by Andrew Hall that a flat fee of \$60.00 per annum should apply to all Museums. Carried.

Richard Gilbert stated that the BTPS supports the existing system of calculating fees but with a slight increase to raise additional funds and suggested that a working party should be set up to investigate any alteration to the present system.

A motion to this effect was moved by Richard Gilbert and seconded by David Rawlings. Carried by a majority of eight for and four against.

It was then moved by Richard Gilbert and seconded by Andrew Hall that a working party be set up. Carried.

It was determined that the Working Party would include Bill Kingsley, Carolyn Dean and Richard Gilbert.

### **GENERAL BUSINESS:**

#### **Tramcar Questionnaire:**

The Executive Officer reported that in response to his questionnaire, it had been established that there was a total of 252 tramcars in combined COTMA Societies' collections, consisting of 111 currently operable tramcars, 118 to be operable in the near future, 13 static and 10 retained only for parts. These totals include 41 former MTA tramcars.

Full details of the disposition of these tramcars appear in the table on page 104 of these Proceedings.

#### **I.A.T.M. Questionnaire:**

The Chairman requested all Societies to complete and return the IATM questionnaire as soon as possible.

#### **Rockhampton:**

The proposal to invite the Rockhampton Purrey steam tram group to join COTMA was raised by the Chairman and discussion ensued.

Letters had been sent to this group by both SPER and BTMS, the former being an invitation to participate in the COTMA Conference, to which no reply was received.

Direct contact with the group by the BTMS indicated that they were still very busy with the Purrey steam tram project.

## Eighth General Meeting

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It was decided that the Executive Officer and Troy Thomas (BTMS) would proceed with negotiations with the Rockhampton group.

### **Electrical Safety Review:**

Craig Tooke requested the opinions of the various affiliated Societies as to whether this matter, as discussed during the Conference Workshops should be pursued further and it was agreed by all delegates that this would be desirable.

Mr Tooke then suggested that each Society should select a representative to make comments and/or recommendations and report to him.

Jack Nyman commented that the Newcastle/Maitland Tramway Museum had received advice from the Shortland County Council, the Maitland area electricity authority, to the effect that the guidelines for proposed Electrical Safety standards conform to laid-down rules and the S.C.C. recommended their acceptance and adoption.

David Rawlings stated that SPER also supports the concept of standard rules and that SPER would report back to the Executive Officer on the matter.

Anthony Griffin (SPER) was given permission to speak on this matter and he commented that there was no reference made in the proposed rules in regard to high voltage electrical equipment, particularly in regard to direct current traction and he suggested that this be included in the rules.

Bill Kingsley, Craig Tooke and Ian Cooke will review all replies received in regard to the proposed rules.

A motion for the adoption of standard Electrical Safety Rules was moved by Colin Seymour and seconded by David Rawlings.

Mark Skinner (AETM) suggested that the matter be referred to the Australian Standards Association and it was agreed that SPER would consult the Standards Association.

The motion was then carried.

### **Brill 21E Trucks:**

Lindsay Richardson suggested that all societies requiring Brill 21E trucks should join in the bulk manufacture of these items, as they are required by practically all museums.

Jack Nyman stated that the Hunter Valley Training Company at Matland was prepared to manufacture tramcar trucks but that some difficulty was experienced in obtaining suitable 33 inch wheels.

Peter Hyde (BTMS) advised that 21E truck side frames had recently been satisfactorily manufactured locally for the BTMS.

Leslie Stewart requested that consideration should also be given to the manufacture of Brill 22E trucks.

Andrew Hall suggested that the Bendigo Trust may be able to assist in this matter.

## Eighth General Meeting

### **Distribution from Bylands:**

Keith Kings stated that many items had accumulated at Bylands on behalf of several Societies, these being mainly tramcar parts and uniforms, and requested that the Societies concerned supply him with the name of a Melbourne agent and contact person for despatch and transport and to arrange packing of the items for transport.

Space occupied by the items concerned was required at Bylands for the expected influx of further spare parts from the MTA for the Societies in the near future.

The Chairman requested that the organisations concerned contact Keith Kings in regard to their own items on hand at Bylands at the conclusion of the meeting.

Andrew Hall commented that many items such as compressors and various trucks, etc., have been in storage awaiting collection for three years or more and confirmed the need to clean up the area at Bylands.

The Executive Officer advised that a V/Line 'B' van, on site at Wallan, may be obtained for \$400.00 plus craneage and transport, an approximate total of \$1,000.00, for storage of many items of spare parts at Bylands.

Funds are available for its acquisition but this would severely drain COTMA finances.

Lindsay Richardson offered to advance funds from PETS to assist with the purchase of the van and Andrew Hall offered to advance funds from TMSV to assist with transport.

It was moved by Colin Seymour and seconded by David Rawlings that the van be purchased and transported to Bylands. Carried.

### **Uniforms:**

The Executive Officer reminded all Museums of the vast collection of brown/yellow MMTB uniforms held at Bylands for which lists and prices have been circulated.

He invited and encouraged the sale of these to Museums and individuals through Keith Kings.

### **Instruction Manuals:**

The Executive Officer is to send a form to all Societies requesting details of any Instruction Manuals which they hold.

Moved by Richard Gilbert, seconded by Andrew Hall. Carried.

### **Ballarat No. 32:**

The Ballarat Tramway Preservation Society requested that expressions of interest from Societies in regard to the purchase of the body of Ballarat single truck car No. 32 be directed to the Secretary, Richard Gilbert.

The Executive Officer requested that any other surplus tramcars held by other Societies be referred to and advertised by COTMA.

## Eighth General Meeting

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### **Tender Procedures — MTA:**

Lindsay Richardson reported that trucks received by PETS with their SW2 car No. 426 were in a most unsatisfactory condition and it has since been established that the trucks supplied had previously been used under the rerailing car and were not those which belonged to No. 426.

Information was received by PETS that representations by the Newcastle Tramway Museum to personnel at Preston Workshops had resulted in the trucks from SW2 426 being sent to NTM.

Jack Nyman replied that he had no knowledge of this matter and was unaware that the exchange had taken place.

Informal representations have already been made to the MTA Workshops in regard to this matter, which will be kept under review by the Executive Officer.

### **Reciprocal Travel:**

Richard Jones (SPER) outlined a proposal for a reciprocal travel agreement to be formally introduced between all operating museums affiliated with COTMA, in line with the agreement already in force between SPER and Parramatta Park (STRPS), TMSV, PTPS and PETS.

On production of a current membership card, or other proof of current financial membership of one of the affiliated COTMA Museums, free travel would be granted at any other Tramway Museum.

Michael Kerr and Allan Curtis advised that their tramways were part of a combined museum complex; such a scheme would not work satisfactorily as far as their own Museums were concerned but that if advance notice is given of a proposed visit by a member, or members to their tramways, arrangements similar to that proposed can be made.

However, all Australian Museums indicated that they were in favour of the proposal.

### **Combined COTMA Calendar:**

Richard Jones outlined a proposal for a combined COTMA Societies calendar to be printed annually, as at present there are a number of railway calendars available but nothing for the tramway enthusiast.

It was suggested that such a calendar would feature one photograph each month, depicting a tramcar from one of the participating museums, preferably when in service on its home system.

Michael Kerr stated that the market for calendars was both limited and saturated, this view being supported by Robert Merchant (SPER).

It was therefore decided not to proceed with the suggestion.

### **Visit by Mr J.H. Price:**

The Chairman advised of a forthcoming visit to Australia by the wellknown British tramway enthusiast, historian and author, Mr J.H. Price and requested all museums to extend their hospitality to him.

The Chairman suggested that, as the time was 1.00pm, that the meeting be adjourned for lunch.

## Eighth General Meeting

After lunch, many of the observers travelled by train to Parramatta where the Steam Tram & Railway Preservation Society had especially opened their Museum in Parramatta Park for the benefit of COTMA visitors.

The Conference General Meeting resumed at 1.45pm.

### **ELECTION OF OFFICE BEARERS:**

The outgoing Chairman, Dr John Radcliffe, asked David Rawlings to take the chair for this portion of the meeting.

Dr John Radcliffe (AETM) was nominated for the position of Chairman by Andrew Hall and seconded by Richard Gilbert. There being no other nominations received, Dr Radcliffe was declared elected.

Bill Kingsley (BT) was nominated for the position of Executive Officer by Colin Seymour and seconded by Allan Curtis. There being no other nominations received, Mr Kingsley was declared elected.

Bill Kingsley advised that Keith Kings (TMSV) had indicated that he would be willing to act as Spare Parts and Uniforms Officer and there was then no need to have an Assistant Executive Officer.

Lindsay Richardson (PETS) was nominated for the position of Australian Executive Member by Andrew Hall and seconded by Richard Gilbert. There being no other nominations received, Mr Richardson was declared elected.

David Hinman (THS) was nominated for the position of New Zealand Executive Member by Michael Kerr and seconded by Leslie Stewart. There being no other nominations received, Mr Hinman was declared elected.

Ms Carolyn Dean (BTPS) was nominated for the position of Treasurer by Jack Nyman and seconded by Colin Seymour. There being no further nominations received, Ms Dean was declared elected.

Mr Robert Paroissien was nominated for the position of Auditor by Lindsay Richardson and seconded by David Rawlings. There being no further nominations received, Mr Paroissien was declared elected.

### **NEXT CONFERENCE;**

The 1990 COTMA Conference is to be held in Wellington, New Zealand and Leslie Stewart indicated that the Queen's Birthday weekend at the beginning of June was under consideration as the most suitable time for all concerned, as the period is clear of school holidays and is the cheapest time for air travel from Australia.

Further discussion of the date and possible venue for the Conference ensued and it was agreed that the date was suitable to all who would be likely to be attending.

The location/venue is to be decided, being either in the Wellington City area, or on a main transport route. This matter is to be circulated to all COTMA Societies to enable a final decision to be made.

## Eighth General Meeting

Some suggestions were offered on possible subjects for workshop topics and further suggestions were invited, to be submitted to the Wellington Tramway Museum, either directly or via the Executive Officer.

Some interest was shown in a possible co-ordinated group tour by Australian museum delegates, visiting Christchurch and Auckland. Richard Gilbert indicated that he may be able to assist.

The 1992 Conference will be held in Perth and hosted by PETS, possibly late May or early June.

Rev. Michael Kerr commented on the perpetual problem of insufficient time allocated to the official Meeting and the timing of same. The length of the meeting generally exceeds the time allocated.

It was suggested that the General Meeting at the next Conference should be staged over a period of the number of days of the Conference, for approximately two hours per day.

### **CLOSURE:**

There being no further business to discuss, the Chairman extended thanks on behalf of all who attended the Conference to SPER and specifically to Don Campbell, Richard Jones, Peter Kahn, Robert Merchant and David Rawlings for their efforts in organising the Conference.

Craig Tooke moved a vote of thanks to the Chairman and Executive Officer for their efforts during the past two years.

Bill Kingsley also proposed a vote of thanks to Allen Harnwell, the outgoing Treasurer for his time and effort.

Dr Radcliffe then proposed a vote of thanks to Anthony Smith, the previous Assistant Executive Officer, for the amount of time which he spent negotiating for and transporting spare parts from Preston to Bylands and for his assistance to Mr Kingsley.

Andrew Hall also proposed a vote of thanks, to be confirmed by an official letter from the Executive Officer, to Mr Les Jeans of the MTA Preston Workshops for his great assistance to COTMA.

The meeting closed at 2.50pm.



# COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA

## CHAIRMAN'S REPORT 1988

It is a pleasure to present to you the Eighth Report of the Council of Tramway Museums of Australasia at our Ninth Australasian Tramway Museums Conference.

### Previous Meeting

The previous meeting of the Council of Tramway Museums of Australasia was held in Adelaide on 29th September 1986.

### Membership

Membership currently stands at 14 organisations with the Newcastle Tramway Museum having been admitted as a formal member at the last meeting of the Council.

### Office Bearers

At the last meeting of the council, Mr Bill Kingsley was elected as Executive Officer in place of Mr Keith Kings who was not available for re-election. Mr Tony Smith was elected as Assistant Executive Officer but has recently advised that he is no longer able to continue that role as a result of other personal commitments he has recently undertaken. As Mr Smith has carried out a great deal of work during the past two years, particularly in relation to the acquisition of spare parts and their conveyance to Bylands, I would especially like to pay tribute for the help we have received from him during that period. I know that Bill Kingsley has been particularly impressed by the extent of the increase in COTMA business since the period when he was its original Executive Officer in its early days in the late 1970s. Mr David Hinman and Mr Lindsay Richardson were elected as committee members during the last meeting and have participated in policy discussions since that time.

### Communications

Six Memoranda were issued during 1986-88. Although this was three less than has been the custom in recent two year periods, the reduced number was more than made up for by content. The majority of items in the memoranda dealt with the availability of surplus equipment from the Metropolitan Transit Authority of Victoria but other specific issues were also addressed. COTMA office bearers have continued to visit constituent museums in the past two years. Executive Officer Bill Kingsley has travelled widely throughout Australia and visited all museums except ST&RPS. I had the opportunity of visiting museums in Christchurch, Sydney, Hobart, Adelaide and Perth. Meetings were also held on a number of occasions with senior officers of the Metropolitan Transit Authority of Victoria including Mr Kevin Shea as Managing Director and Mr Allan Nolan who is now Preston Workshops Manager.

### Equipment

Constituent museums have continued to share cars and equipment becoming available from the MTA. During the past two years, the remaining W2 type trams have been withdrawn from traffic in Melbourne and in a change of policy, the MTA has advertised these for sale by tender. The Chairman and Executive Officer met with Mr Kevin Shea to discuss the new tendering arrangements and were given an undertaking that due consideration would be given to tenders from museums that were seeking vehicles for historical purposes. The Chairman also discussed this matter with Mr Paul Class, a principal North American buyer, when recently in Oregon. Mr Class gave an assurance that he did not seek to compete with Australian

## Chairman's Report

and New Zealand museums who wished to acquire surplus Melbourne cars for their collections. Indeed this has not happened, although a considerable number of W2 type trams have found their way to North America in recent years.

At the same time, a significant quantity of spare parts previously needed to service the W2 type cars have also been declared redundant, and the COTMA Executive has acquired much of this material and through the courtesy of the Tramway Museum Society of Victoria, has been able to take it to storage at Bylands. Not all of this equipment is satisfactorily stored at that site and a major task must be undertaken to initiate distribution of sought items among the various museums. This will involve a considerable amount of work as indeed taking the items to Bylands involved in the first place. I would express appreciation to those who have helped secure these parts for use by constituent museums.

At the last conference, museums were invited to lodge a deposit of \$200 each to help with capitalising COTMA to allow spare part acquisitions to be made at short notice. A number of museums subsequently arranged such contributions and appreciation is expressed for this support.

### Statement of Understanding

The draft "Statement of Understanding" which was placed before delegates at the last meeting of the Council and accepted, was formally agreed between the Council and the Metropolitan Transit Authority of Victoria following the conference. Copies of the "Statement of Understanding" were distributed to all museums in December 1986. The principles laid down therein have ensured a satisfactory and equitable relationship between constituent museums and the MTA since that time and I believe the "Statement of Understanding" has been an effective document to guide our mutual relationships.

### Constitution

A draft Constitution was prepared by Mr Tony Sell during the period since the last conference as requested, and has been circulated among the COTMA Executive for comment. A revised draft will be available for the 1988 meeting.

### Code of Electrical Operating Practice

Following an accident at a constituent museum, the Assistant Executive Officer, Mr Tony Smith convened a working group of Victorian museums to develop a Code of Electrical Operating Practice for adoption by constituent museums. A first draft has already been reviewed and again, this is an item which should be available for further discussion at the 1988 Conference.

### Transport Heritage Developments

A number of museums received further financial assistance for projects in the period 1986-88. A grant of \$25,000 from the Australian Bicentennial Authority was contributed towards the restoration of Sydney steam motor 103A owned by the Steam Tram and Railway Preservation Society and this work is being carried out at Thirlmere. The Australian Electric Transport Museum received an initial grant of \$24,000, and a supplementary grant of \$4000 for the restoration of Adelaide C type single truck combination car number 186, which is now nearing completion. A major grant from the Authority has also allowed the South Pacific Electric Railway to construct a new workshop facility at Loftus. A further contribution of \$20,000 available on a dollar for dollar matching basis has been provided by the New South Wales Department of Arts towards the second stage display building which is to be constructed also at Loftus.

The Tramway Museum Society of Victoria has received support in the form of restoration works on a number of its vehicles during the past two years, the most significant being the complete restoration of Melbourne W2 class number 427 into the W1 form in which it was originally built. In that form, it was for some time operating a tourist service to St Kilda Beach, Melbourne. The MTA is also restoring a number of

## Chairman's Report

other vehicles in its own collection to earlier historic forms, and negotiations have also been held during the year for the further development of historic tramway operation and museum displays within Melbourne itself.

NSW Railways KA tramcar number 778, restored by apprentices of the State Rail Authority of New South Wales at their Training College, Chullora, was returned to the ST&RPS on 30 April 1987. The same workshops have also restored Kogarah trolley bus number 19 for SPER.

Other interesting developments over the past two years have included the completion of the restoration of Dunedin car number 11 ("Spiff"), and the erection of a new traction substation for the Tramway Historical Society at Ferrymead. The appearance of the village has also been greatly enhanced by sealing of the majority of the streets. In March 1987, the Lord Mayor of Brisbane opened a small track extension for the Brisbane Tramway Museum Society. In Adelaide, F1 type tramcar 264, which was restored with a South Australian Jubilee 150 Board grant, operated 6,402 km on the Glenelg tramway in December 1986 and January 1987, and has since returned to operate on the St Kilda tramway. Geelong and Bendigo Birney car number 11 was formally launched into service with the Bendigo Trust on 12 December 1986.

### Operations

The electric tramway operated at Whiteman Park by the Perth Electric Tramway Society, was officially opened on 21 November 1986.

The long awaited dream of the South Pacific Electric Railway to transfer its operations from National Park to its Loftus site was achieved when the Loftus-Sutherland tramway was formally opened on 19 March 1988. Regrettably the significance of the day was unfortunately eclipsed by the holding of a state election which reduced the extent of the publicity which might have been otherwise obtained. This Society, which after many years, finally has been able to terminate its National Park operations, now faces the daunting task of transferring its remaining vehicles and facilities from its old site to the new one. A further interesting development at Loftus was the acquisition of a PCC car from the Municipal Railway of San Francisco, the first time that an historic car has been transferred from overseas to an Australian museum.

### Museum of Australia

In my last report, I indicated that the Director of the Museum of Australia, Dr Don McMichael was contemplating the installation of a tramway as part of the National Museum of Australia complex. I indicated that the project was then under close financial review and in the intervening two year period, the position has yet to be clarified. At this stage, the Museum's officers are installed in a small set of buildings on the shores of Lake Burley-Griffin awaiting advice on the future of their project. The impression created is of some kind of a latter day "Cargo Cult".

Regular museum tramway operations have continued throughout the two years under review in Perth, Adelaide, Ballarat, Bendigo, Bylands, Sydney (National Park/Loftus and Parramatta Park), Brisbane, Auckland, Christchurch and Wellington. No significant traffic accidents were recorded on COTMA Museums in the two year period. However, a significant accident was recorded on a museum in the United States at Wheaton, Maryland, where 18 passengers were injured in a head-on collision on a single track line. As COTMA Chairman, I had the opportunity of inspecting the site of this accident and of the cars involved during a recent visit to North America and received considerable co-operation from the operating group when enquiring about the circumstances of the matter. In what appears otherwise to be a well operated museum, it would seem that operator error may well have been the cause of this incident. Fortunately the injuries received by the passengers were quite minor although the operator of one car received a broken leg.

### Operating Urban Tramway systems

The two remaining public tramway systems have maintained their positions in their respective cities. Although in Melbourne, route 77 (Prahran) has ceased to operate, the new light rail lines to St Kilda and Port Melbourne over the rights of way of the former electric railways were instituted in late 1987. New

## Chairman's Report

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rigid tramcars have continued to be built in Melbourne and following some delays in favour of the Hong Kong project, articulated cars are now beginning to appear. Adelaide's venerable H type cars moved to a new depot at Glengowrie from 19 October 1986 and their current collection has been changed to pantograph operation, and the remaining track relaid. Refurbishment continues of the 60 year old cars, albeit very slowly with two now having been completed. The old City Depot and its tracks have yet to be removed.

### The Future

Over the past two years, Australia has been undergoing a period of economic adjustment. During that period, visitation to most museums has been reduced. However, the economy is now beginning to turn the corner, and with new initiatives in our respective museums, we should be looking forward to maintaining our positions as a significant contributor to the appreciation of Australia's heritage. In New Zealand, the economic turn around is perhaps more elusive, with the local economy currently in a very flat condition. In both countries, the continued development of museums is very much dependent on the efforts of their own members, and it is likely that external funds may be more difficult to secure in the years ahead than has been the case in recent years. It is important therefore, that we continue to consolidate what we have achieved without letting our ambitions outstrip our resources and abilities.

### Acknowledgments

Mr Allan Harnwell, as has been the case since the inception of COTMA, has continued to serve as Honorary Treasurer and Mr R G Paroissien has continued as Honorary Auditor. I would again recognise the contribution which they have made in providing their services to a body made up of a widely spread group of different organisations.

Bill Kingsley and Tony Smith have brought great skill and enthusiasm to their respective roles during the year and I am sorry that Tony Smith will not be available to continue from 1988 onwards. I would express on your behalf our appreciation to them for carrying out the major part of the work involved in running this organisation.

Again I would like to acknowledge the help received from officers of the various urban transit authorities in Australia and New Zealand. In particular we again recognise the help of staff of the Metropolitan Transit Authority of Victoria, and would personally express my appreciation to its Managing Director, Mr Kevin Shea for the sympathetic help and ready accessibility he has given to the COTMA Executive during the past two years. Finally we must again recognise the efforts of the various individual members of all of our constituent museums who through their enthusiasm and dedication ensure that all of our museums continue to operate successfully and continue to grow to new heights of achievement.

John C Radcliffe OAM  
Chairman

5th September, 1988

# COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA

## EXECUTIVE OFFICER'S REPORT - 1988

COTMA is teamwork. It has been a great inspiration to be part of an enlarged and still growing COTMA team during the last two years. My thanks to John Radcliffe, Tony Smith, Lindsay Richardson and Dave Hinman as the executive team for their great support. However, the team is much larger than that, and I must take this opportunity to mention those who have helped COTMA in very real ways to be more effective. They include Dick Jones from SPER, Warren Doubleday, Richard Gilbert, Carolyn Dean, Peter Winspur, Allan Bradley, John Phillips all from BTPS, Andy Hall, Keith Kings, Tony Sell, Ron Scholden from TMSV, Arthur Ireland, John Withers, Craig Tooke, Noel Gipps from MTPA, and Jack Nyman from MT&M. Add to those our Treasurer Allan Harnwell and Auditor Robert Paroissien. Thanks all, and to any I have forgotten to list, for you have all given of your time, effort and abilities to help your fellow museums. That is what COTMA is all about.

Another great joy has been the tremendous co-operation and assistance given us by the Met (MTA) in Melbourne. the whole basis of our mutual understanding is that the Met and COTMA are together in the business of operating trams in Australasia. To Kevin Shea (Managing Director), Allan Nolan, Les Jean and Keith Allender go our greatest thanks for their magnificent help.

But COTMA is also dependent on you. It can be as useful to you as you wish it to be and it can only be as good as you make it. COTMA is much more than just a supplier of trams and spare parts. It is a great co-operative of like-minded preservationists providing mutual support for each other. I have found that one of COTMA's great tasks is that of putting people with questions in touch with people with answers.

The biggest problem in operating COTMA is that of communication. The Memoranda are our most important means of reaching you. The person to whom the Memoranda are mailed MUST disseminate ALL the information to ALL the relevant people. In many museums this really is not happening. I will rejoice when I start to see Memoranda items reflected in your house journals and newsletters. Remember that You are COTMA's publicity agents. Remember too, that Memoranda are very valuable as a means of advertising between museums.

Talking of advertising, don't forget that COTMA has a bus full of brand new M&MTB uniforms for sale.

COTMA recently ventured into what is, for it, a new field. We organised a tram charter in Melbourne, the Amazing COTMA Bi-centennial Tram Tour. It was resoundingly successful, a lot of fun, and we had outstanding co-operation from the Met.

Congratulations to our Chairman, John Radcliffe, on his receiving the Medal of the Order of Australia for services to the AETM and to the Museums Association of Australia.

In closing, thanks to everybody for your support. You have kept me very busy but it is a great joy to work with you and for you.

Bill Kingsley,  
Executive Officer.

# **COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA**

## **TASKS CARRIED OUT FOR C.O.T.M.A. BY THE EXECUTIVE OFFICER - 1986-1988**

### **TASKS COMPLETED**

Deliver brake buckets and bell cord to BTMS  
Obtain new signatories for bank  
Visit and make arrangements with Waverley Council, Sydney  
Put student James Smith in contact with Robert Green TMSV re project  
Establish procedure for spare parts with Les Jean and Keith Allender MTA  
Establish procedure for rail special work with Allan Nolan MTA  
Establish procedure for obsolete trams with Kevin Shea and Allan Nolan MTA  
Liaise with MTA re disposal of trams  
Visit Lachlan Valley Railway  
Stocklist uniforms at Bylands (with Tony Smith)  
Encourage publication of Proceedings from Adelaide  
Publish Memoranda 45 to 51  
Obtain tower wagon for MPTA  
Obtain Bundy clocks from MTA  
Provide slides for PETS  
Direct THS to PETS re 77E trucks  
Direct TTMS to Tony Smith re W2 trucks  
Direct NTM to BTPS re brake blocks  
Organise Peter Winspur BTPS to assist NTM and PETS with driver training  
Attend official opening at SPER  
Provide details of route 82 retention to PETS  
Obtain drip rail for MTPA  
Encourage further liaison with Rockhampton group by SPER and BTMS  
Liaise with Dick Jones SPER re conference  
Bicentennial tram tour  
Organise THS to visit Preston Workshops  
Direct BTMS to THS for information on 21E trucks  
Arrangements to replace Tony Smith  
Two meetings with Kevin Shea  
Many meetings with Allan Nolan  
Oodles of meetings with Keith Allender  
Fix prices on uniforms with Keith Kings  
Co-ordinate applications and prices for tenders for obsolete trams  
Attend Preston Workshops and Hawthorn Depot re obsolete trams  
Visit all Australian member museums except ST&RPS (sorry chaps)  
Liaise with Carolyn Dean BTPS re crew for THS tram tour  
Direct PETS to Warren Doubleday BTPS re pits  
Obtain beading for MPTA

## **C.O.T.M.A. TASKS - 1986-1988 - Executive Officer**

### **CONTINUOUS TASKS**

Liaison with MTA  
Memoranda  
Items for Trolley Wire  
Liaison with IATM  
Co-ordinating the COTMA team  
Liaison with National Library re Proceedings  
Removing spare parts to Bylands, distribution (Tony Smith, now Keith Kings)  
Updating requirements of museums for MTA obsolete trams

### **TASKS IN HAND**

Corrections/amendments to rules  
Proceedings from BTMS and MOTAT  
Track telephone boxes for MTPA  
Tramcar questionnaire  
Public Liability of Victorian Organisations (Warren Doubleday BTPS)  
Photographs of 31 to PETS (John Phillips BTPS)  
Assistance for San Jose  
Deliver Bundy clocks to BTMS and SPER  
28" wheels for MOTAT  
Electrical rules (Tony Smith)  
Tower wagon for BVT  
Frogs for PETS  
Cable tram trucks from MTA  
Patterns (Allan Bradley BTPS)  
Incorporation  
B van for COTMA store  
Rear-vision mirror (Andy Hall TMSV to MOTAT)  
Sale of uniforms (Keith Kings)

### **TASKS ABORTED BY COTMA**

33" wheels for BTPS and THS  
Liaison with National Federation of Rail Societies N.Z.

### **TASKS ABORTED OTHERWISE**

By SPER re MU equipment via Richard Gilbert  
By SPER re ears, grips and joiners from MTA  
By Waverley Council re electrical equipment via Andy Hall TMSV

### **TASKS PENDING PERHAPS**

Membership by Rockhampton  
Liaison with Tailm Bend tramway  
Liaison with Canberra tramway

# TRAMWAY TOPICS

## REPORT TO THE CONFERENCE

The past two years have been plagued with production difficulties and in particular maintaining the quality of the production while controlling the cost of production.

### Production Costs

For a number of years *Tramway Topics* had been fortunate in receiving favourable rates for plate making and printing. As a result of this, we were fortunate in being able to hold increases in the subscription rate to quite modest levels. In 1981, the subscription rate was \$8.00 and while this has increased to \$13.20 in 1987, New Zealand had been experiencing inflation rates of 15-20% a year over this period. The impact of 10% Goods and Services Tax in 1986 must also be taken into account when assessing this increase.

Early in 1987, the printers responsible for the photograph pages changed hands and the concessional rates were lost. As the subscription rates for 1987 had already been set, we had no option but to absorb the increased costs. Towards the end of 1987, the printers who undertook the photocopying of the text pages also changed hands and costs in this area also rose. It was against this background that we raised subscription rates by 35% for 1988.

### Production Process

Faced with the massive increase in printing charges for the photographic pages, an alternative photographic reproduction process was tried for the January/February 1987 issue. The result did not meet the standards that either our readers or ourselves expected and we resorted to the previous process after seeking quotes from a range of firms.

Throughout 1987, the quality of the photographic pages was variable to say the least, notwithstanding ongoing discussions with the plate makers and the printers. It was a case of each one blaming the other.

The overall production process for *Tramway Topics* has never been that efficient with four parties involved in printing, collation and distribution. This in itself, with three external parties, was not conducive to the overall quality control. With the aim of improving the efficiency and quality control of the overall process and to ensure that we were receiving value for money, in the light of a 35% increase in subscription rates, a full review of the printing process was undertaken. As a result, the entire production process from plate making to stapling is now undertaken by a single printer. This has brought about several other side benefits, all adding to the overall quality. All pages including the text are now printed by offset and the finished magazine is trimmed after stapling.

Although considerable effort had been put into ensuring that the printer selected, N.Z. Government Print, would meet the quality standards demanded, the photographs in the first issue (January/February 1988) were extremely disappointing. However, it would appear that our representations had the desired effect as subsequent issues have met with our readers' and our own approval.

The streamlining of the production process wherein the magazine is collated and stapled by the printers rather than by a team of Wellington Tramway Museum members has been achieved within the costing established for the old process. The trade-off required to achieve this was the switch from metal plates for the photographs to plastic plates, and although the screen may not be as fine, we do not believe this detracts from the overall quality of the magazine, particularly when the improvements are taken into account. Overall, we believe that the quality of production relative to the magazine's price is excellent and we aim to keep it that way.

### Distribution

During the latter half of 1986, the distribution of the magazine was enhanced with the computerisation of the mailing list. This has certainly been appreciated by those whom previously spent many



nights typing or handwriting addresses on envelopes. In early 1987 the use of the database established to produce the mailing list was expanded to enable the invoicing of subscriptions to be automated. This has improved our control over outstanding subscriptions.

With the combined impact of computerisation and the improvements in the production process, the time spent by Wellington Tramway Museum members in producing each issue has been much reduced.

### **Survey**

With the rising costs of production and the changes being introduced, we felt it was appropriate to survey our readership to ensure that *Tramway Topics* satisfied its market and to find out how that market would like to see it develop. The survey form was distributed with the November/December 1987 issue and approximately 14% have been returned.

Although detailed analysis has yet to be undertaken, the majority regard *Tramway Topics* as an above average magazine for its price and would not object to a slightly higher price if further improvements were made to the quality of production. Some of the concerns about production have, in fact, been met with the latest changes. In terms of subject matter, there is a demand coming through for more articles on trolley buses and for greater concentration on New Zealand news.

Once analysis has been carried out, every effort will be made to accommodate the wishes of our readers within constraints of the production budget and the willingness of people to contribute articles.

### **Editorial**

The Editors of *Tramway Topics*, Bruce Maffey and Richard Cannemeyer, continue to enjoy editing the magazine and are extremely grateful to the many contributors of articles and photographs. Without the support of these contributors, Bruce and Richard would find it difficult to maintain the variety and quality of the magazine's content.

Wellington Tramway Museum, as publishers of *Tramway Topics*, expresses its sincere appreciation to Bruce and Richard for their continued good efforts over the past two years. The editorial quality of the magazine continues to be of a very high standard.

We are especially grateful to Bruce and Richard for bearing with us over the past year and a half as we worked through the various production difficulties. We fully appreciate how demoralising it can be to put a tremendous effort into editing the magazine when the end result is somewhat indifferent.

### **The Future**

Control of costs will be an important feature over the coming years and in this respect we note that the N.Z. Government has announced that it intends to sell Government Print as part of its assets sales programme. We cannot be sure, at this time, just what impact this will have.

At present we are reconsidering selling advertising space within the magazine to provide additional revenue. Up until now, Shell Oil have been the only regular advertiser, providing us with nominal income but probably more as a goodwill gesture than for the advertising value. In the past, we have considered increasing the advertising space but have had difficulty in formulating an appropriate sales strategy because of our relatively small specialist circulation over a large geographic area.

Circulation remains static at around 450 (470 printed) and provided this does not substantially reduce, *Tramway Topics* will remain an economic proposition in its present form. Just how we develop the magazine from this point will largely depend on the detailed analysis of the survey.

I.L. Stewart,  
for Wellington Tramway Museum.  
5 September 1988.

# TROLLEY WIRE

## REPORT TO THE CONFERENCE

The two years under review saw a number of changes to *Trolley Wire*. The magazine went from a 32-page bimonthly to a 52-page quarterly publication with four-colour printing on the front and back covers.

Our last all-black-and-white issue was dated December 1986, and it turned out to be a very trouble-plagued issue. Poor reproduction and a number of reversed photographs, including the cover, forced us to reject delivery of the magazine and it was subsequently reprinted. It was finally posted to subscribers with the February 1987 issue, having been held up further by the printing trades annual holidays.

The decision to go to quarterly publication was one not taken lightly. The spectre of a very large increase in postage had much to do with this. Representations to Australia Post on our behalf did not produce the results desired, despite acknowledgment that registered publications such as *Trolley Wire* could possibly be considered for a special postage rate. We did, however, guarantee 48 pages each issue and a full colour cover at least once each year.

The postal increases were not approved at this time, and as the new subscription rate had taken the proposed increase into account, the use of colour on the covers was extended to every issue. Only a fortnight ago, we were advised in writing by Australia Post that new postage rates had been checked with the Prices Surveillance Committee and approved by the Minister. The increased rates will take effect from 1st October 1988. Although not as large as the proposed increase mentioned earlier, it does mean an increase of 10% in the postage rate for *Trolley Wire*.

The quality of reproduction of that first colour cover, which featured Sydney C class car 290 in the new depot at Loftus, was very pleasing since it was taken from a standard Kodacolor 10cm print. 52 pages (48 pages plus covers) has become standard, with the print run being maintained at 1100 copies per issue.

In March 1987, museum correspondents were circularised with the details of our requirements for news, articles and illustrations, together with the closing dates for each issue. It is pleasing to record that these requirements are, in the main, being adhered to, as it does help to maintain on-time production. The efforts of all our correspondents are very much appreciated.

A special 68-page issue was produced for May 1988 to mark the opening of the new Sydney Tramway Museum. Although this issue carried a cover price of \$5.50, it was sent to subscribers at no extra charge, the additional publication costs being met from S.P.E.R. Publishing Department funds.

Rising costs in the printing industry are a continuing concern and forced a price increase from the February 1988 issue. At various times over the past two years, quotes have been obtained in attempts to find a printer who would do the job at a lower cost. In every case the quotes received were higher than the price we are presently being charged. We have since discovered that our printer gives us a sizeable discount on his services. This does mean that there can be some slight delays in printing and we will just have to live with this for the foreseeable future. Good printing tradesmen are not easy to find and in Sydney they can ask for, and get, in excess of \$800 per week before they come through the door. The situation is not helped by the standards we try to maintain. Robert Beath, who printed *Trolley Wire* in Newcastle from 1978 to 1982, said that "rail and tramway groups are the hardest people to print for; they know what they want and expect to get it".

Of particular concern to the editor are the so-called proof-reading errors which appear all too frequently throughout the magazine. In actual fact the vast majority of these typographical errors had been picked up and clearly marked but were not corrected before going to print. We have had a discussion with our printer on this problem and a possible solution has been arrived at. This will require work for your editor but may result in a shorter publishing time and should have a slight cost advantage as well.

The ultimate answer is, of course, full desk-top publishing. Suitable equipment has been examined and priced but is out of the question due to its' high cost at the present time. Prices for this equipment are, however, coming down all the time and the equipment itself is also being refined. Perhaps it will be the solution in the future.

Over the last two years, feature articles have ranged from Ken McCarthy's continuing histories of Newcastle, Manly and the South Australian horse cars to two pages on his memories of the Hobart trams sent in by a Tasmanian subscriber as "it might be of interest to other *Trolley Wire* readers". Steam, horse and electric traction have all been covered in historical articles but it gives the editor much pleasure to devote space to restoration work such as St Kilda 264, Ballarat's 26, Newton Williams' cable grip car and Rockhampton Council's Purrey steam tram.

I recall that a point was raised, or a comment made, at a C.O.T.M.A. Conference some years ago to the effect that, as *Trolley Wire* was produced by a New South Wales organisation, it explained the reason the feature articles were heavily biased towards tramways in the home state. This, of course, is not the case as writers in Melbourne, Adelaide and Brisbane can attest. What it did mean at that time was that Ken McCarthy, who was writing most of the feature articles at that time, was, and still is, a keen researcher and a prolific writer. It also meant that not a great deal of material was being received from interstate. An article every two years from each museum would be very welcome. They do not have to be long or even historic, although long, historic ones are very welcome, too.

At the present time, four articles of varying length are on hand. Luckily, only one of these is time-sensitive, which gives the editor a chance to balance the contents of each issue. All four articles are on Victorian subjects. It is pleasing to note that one of these has been prepared in a very professional manner by a reader who has not submitted material to the magazine before. It may also be noteworthy to know that there are no manuscripts by Ken McCarthy on hand at the present time. No doubt Ken will rectify this state of affairs in due course!

Our Museum News pages are an important part of the magazine and rely heavily on the volunteer efforts of many busy people. These pages are recording the history of the tramway museum movement in Australia and, although the news may be 'old hat' to your museum's members, it is of considerable interest to others around the nation and in at least six overseas countries as well. Whilst I am editor, all museums will continue to be treated to fair and equal coverage. It is up to your correspondents to provide me with the material. If it runs late and misses a deadline, it will be held and published in the following issue together with the latest material received.

*Trolley Wire* is Australia's Tramway Museum Magazine and it is the articles and news received from our correspondents that make it the success it is.

In closing, I would like to take this opportunity to remind you that although *Trolley Wire* is published by the S.P.E.R. Publishing Department, the S.P.E.R. does not control or have any say in what is published. That choice is entirely mine as editor. The editor does not hold a position on the Board of the S.P.E.R. Co-operative Society, nor does the Board appoint the editor to the position. We believe that the voluntary nature of the position assists in maintaining the unbiased and impartial outlook so necessary of the editor of a national magazine.

Thank you.

R.I. Merchant,  
Editor, *Trolley Wire*.  
1 September 1988.

# MUSEUM TRAMCAR SURVEY 1988

L = LOCAL CARS    M = MMTB/MTA CARS    O = OTHER CARS

	OPERATIONAL NOW			OPERATIONAL FUTURE			STATIC EXHIBIT			FOR PARTS ONLY			TOTALS
	L	M	O	L	M	O	L	M	O	L	M	O	
THS Christchurch	7		3	9		7			1	1			28
WTM Wellington	3		1	7		3	2			1			17
MOTAT Auckland	2	1	3	3			2						11
BTMS Brisbane	5			20	1		2			1			27
SPER Sydney	15	1	6	7	1		5			1			36
STRPS Parramatta	4			4									08
MT&M Maitland		4	1	1	5						1		12
TMSV Bylands		10	2		5	7			1		2		27
BTPS Ballarat		9	2	2			1			1			15
BVT Bendigo	8			16	1								25
MTPA Haddon		4			1								6
AETM Adelaide	10	2	2	4						1			19
PETS Perth		5	1	10			1				1		18
TTMS Hobart				3									3
Total Local	63			86			11			6			166
Total MMTB/ MTA		29			7			1			4		41
Total Other			19			25			1				45
Grand Totals		111			118			13					252

## MEMBERS OF THE COUNCIL

<b>AUCKLAND</b>	Museum of Transport & Technology of N.Z. Inc. Tramway Section (Western Springs Tramway) P.O. Box 44-114, Pt Chevalier, Auckland 2, N.Z.
<b>BALLARAT</b>	Ballarat Tramway Preservation Society Ltd P.O. Box 632, Ballarat, Victoria 3350
<b>BENDIGO</b>	The Bendigo Trust (Bendigo Tramways) P.O. Box 333, Bendigo, Victoria 3550
<b>BYLANDS</b>	The Tramway Museum Society of Victoria Inc. P.O. Box 27 Malvern, Victoria 3144
<b>FERNY GROVE</b>	Brisbane Tramway Museum Society P.O. Box 94, Ferny Hills, Queensland 4055
<b>FERRYMEAD</b>	Tramway Historical Society Inc. P.O. Box 1126, Christchurch, New Zealand
<b>GLENORCHY</b>	Tasmanian Transport Museum Society Inc. G.P.O. Box 867J, Hobart, Tasmania 7001
<b>HADDON</b>	Melbourne Tramcar Preservation Association Inc. P.O. Box 324, Prahran, Victoria 3181
<b>LOFTUS</b>	South Pacific Electric Railway Co-operative Society Ltd (Sydney Tramway Museum) P.O. Box 103, Sutherland, New South Wales 2232
<b>PAEKAKARIKI</b>	Wellington Tramway Museum Inc. P.O. Box 2612, Weelington, New Zealand
<b>PARRAMATTA</b>	Steam Tram & Railway Preservation Society Ltd P.O. Box 108, Kogarah, New South Wales 2217
<b>RUTHERFORD</b>	Maitland Tramway Park & Museum Ltd P.O. Box 82, Jesmond, New South Wales 2299
<b>ST KILDA</b>	Australian Electric Transport Museum Inc. G.P.O. Box 2012, Adelaide, South Australia 5001
<b>WHITEMAN PARK</b>	Perth Electric Tramway Society Inc. P.O. Box 257, Mt Lawley, Western Australia 6050
<b>EXECUTIVE</b>	Council of Tramway Museums of Australasia 51 Lenna Street, East Burwood, Victoria 3151

