

RESEARCHING PAINT SCHEMES

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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 Wollli 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 Wollli 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 rememberd 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 maroony 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.