

**CASTLEDARE
MINIATURE RAILWAYS**

W.A. (INC)
www.castledare.com.au

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Castledare Miniature Railway
P.O Box 337
Bentley, WA 6982

Patron: Dr. M. Lekias

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All information on this page ratified by Management Committee on 20th March 2015

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No personal letters will be printed without committee approval

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The Castledare Miniature Railway is sponsored by:

Coal Supplies: The steam locomotives at the Castledare Miniature Railway operate with coal supplied by Premier Coal.

Cover page: Keith (Stork) enjoying a 'cuppa' after a job well done.

Photographer: Les Smith

The President's Bit – AGM Report

Run Days:

Our run days have fluctuated somewhat this year, mostly due to weather, with a couple of runs being washed out with very low numbers recorded. We were fortunate that this was offset by one or two private charters for Christmas parties and the return after many years of school holiday runs, all of which helped balance the books. Looking forward this should mean a positive change to our income, and thus the ability to improve things around the railway.

Membership:

Membership involvement on the whole has been as positive as one could ask. A club such as ours is only as strong as the membership will allow it to be, and on this point, CMR has and continues to succeed. The members continue to pull together when the call goes out and it is this sort of co-operation that has led to the club existing for 52 years this October. We are also fortunate to have amongst our numbers a small group of junior members, who continue to get involved as much as they are able to during public running and also generally happy to get amongst it on a working day with many and varied tasks. Looking to the future, the subject of membership fees was discussed at length at committee meetings, with a general aim in this next 12 months to “value add” to the membership of the railway by various means. High on the list is more social gatherings, be it at the club or elsewhere. As always in an organization such as ours, consideration needs to be given as to how best we can attract and keep new members interested and involved.

Club Finances:

Once again fairly heavy expenditure has been incurred, as well as some weather affected run days. Combined, these issues have made their mark on our finances, however, I believe the auditor's report will show that the overall situation is good. Once again, the committee has continued the philosophy of utilizing contract labour to carry out some of the heavier work around the railway, the prime example being the virtual replacement of the footbridge. My thanks to Roger for his continued work in managing the finances, which this year have included some banking changes to improve our flexibility and to Bob Hutt for again acting as our Auditor.

Locos:

Overall the club owned fleet has this year suffered some setbacks, with City of Canning and Comet Vale both receiving, or in need of, major work. Dependable has carried on well, though hopefully with less demand on it over the winter period, we can look to replace the driver's cab and improve comfort for those operating the loco for long periods. Betsy has had her first ever visit to other club tracks to celebrate her 50th birthday, but otherwise sees limited use as its heritage and seniority afford it such luxury... It should be expected that the fleet in general would require more in depth maintenance as time goes by, with the mechanical age of the equipment coming to the fore. Denis P. Moore now has its new boiler mounted and steam trials have been conducted, will be very interesting to see how the loco performs in service.

Several new locomotives are also under construction within the membership and I look forward to seeing these arrive at the track and being active in passenger hauling for the club. Looking ahead, storage space for locos is again getting to be in short supply and options for how best to manage this will need to be considered by the incoming committee. The storage of locomotives on site at the club is a privilege not a lot of clubs offer and space must be available for those in regular service for the club as a priority.

Media / Advertising:

Cinders and Soot continues to provide a valuable means of communication to the members, however, again it would be great to see more input here from members. The content of a club newsletter relies on contributions from the members. While a few members have provided articles and photos etc, with most members receiving their copy via the web, postage and printing costs are reduced

comparatively, meaning, should the content be available it is feasible to put more into each issue. As of the next issue, we will have a change of Editor for the newsletter and on behalf of the members, I offer my thanks to Trish Stuart for carrying out this role for a number of years. Next issue I believe sees some young blood stepping up, with Harrison Mills taking up the role after a transition issue. I look forward to seeing what Harrison can bring to the role and ask that the members support his efforts with material for inclusion.

The Club's website continues to build as a major form of advertising for us. It is always hard to truly gauge the effect of advertising, however the website and other electronic media remain some of the best and most controllable form of advertising available to the railway. Like Cinders and Soot, it could benefit from contributions from the members, with space available for articles relating to your locos. On similar lines to Cinders and Soot, we have had a changing of the guard with the website, after several years of managing the site Mike Crean has stepped aside to pursue other projects. Luke Prindiville has taken up where Mike left off and has been progressively updating the site. My thanks go to Trish, Mike and Luke for their efforts in publishing, maintaining and updating their respective fields.

Canteen:

The Canteen continues to provide good service to both the members and our patrons. The roster system for staffing continues to work well and my thanks go to the ladies of the club who continue to volunteer for this monthly roster. I would like to suggest that in the next few months this roster could be expanded to include the ticket box, to further spread the load on those concerned.

Future Projects:

Most if not all members have recently received info about the direction I see the club moving towards in the future. Some of these things are already in motion, others I will be asking the incoming committee to support in the coming months to enable work to progress on securing the future of the railway on a number of fronts. As always, I am happy for further discussion on these plans, all I ask is that an open mind is brought to the discussion.

Some Special Thanks:

Firstly, my thanks to the outgoing Committee members, Chris, Ken, Richard & Trish, between them they amass almost 70 years of committee effort in various positions. My sincere thanks on behalf of the club to you all for this input, and I hope this doesn't mean we'll be seeing any less of you. Richard has indicated a willingness to continue his work with annual infrastructure inspections and as our Swan River Trust Liaison and I thank him for this. Throughout the year we also saw Vic Jones, and John Watson step down from Committee duties for personal reasons. My thanks to them also for their many years of service to the committee and club.

As a general thought, I would like the members to keep in mind that each member contributes what they are able to, when and how they are best able to. In many cases they would like to do more, but CMR is a club, a voluntary organization and as such members do often have other commitments away from the railway. As members of a club such as ours, it is important that we support each other's endeavours and help achieve the club's collective and stated goals and aims. Every member can, and should, be proud of what we have achieved so far and should look forward to the future with anticipation. As time marches on we must continue to focus on the future and the long-term needs of both the club and its members in broad terms of the railway as a whole.

Craig Belcher
President, Castledare Miniature Railway

Clubman of the Year: 2014

The original concept for this award was to commend, encourage and thank members generally outside of the committee who have made a valuable contribution to the club. This year the award goes to someone who has done just that. Having been away from the railway for a number of years, Clive Woodward rejoined the fold some time ago and has in that time thrown himself into a number of projects. Including; the renovation of the diesel shed, ongoing refurbishment of the relay room and more recently with the help of others, the reconfiguring of the steam loco water supply circuit, along with religious spot graffiti removal and general housekeeping jobs.

I'm pleased to present this year's award to Clive Woodward.

Life Member – 2015

It's been a number of years since this honour was last bestowed, but the time has come whereby it is felt that a single member has put in the effort and consideration to the club that deserves such acknowledgement.

While already awarded the club's member of the year in previous years, the member in question has continued the good work he has offered in the past, but since retirement, has been present more frequently at the club and been involved in yet more aspects of the railway.

Since joining the railway in the early mid 90's, he has provided many years to the club at a Committee level in various positions on the Committee, including Treasurer, Vice President and President and has been the major force in keeping the grounds tidy and mown, and more-so, has been the person mostly responsible for keeping the club locomotive fleet operational, including 3 or 4 full engine rebuilds, several gear boxes and one or two diffs. Current project is the re-commissioning of Denis P Moore, now finally fitted with its new boiler and after having much work carried out on the cylinders and motion.

With the committee's blessing I am honoured to present Life Membership of Castledare miniature railway to Roger Matthews.

Craig Belcher
President, Castledare Miniature Railway



FROM THE SECRETARY'S DESK

Notes from the last Committee Meeting – these are only a brief summary of some of the items discussed (the minutes are now posted on the breezeway notice board):

Thanks:

Many thanks to Rod Bradley and his team for the infill on the end of the rolling stock shed.

AGM:

Our AGM is on Friday 20th March 2015, 1800 (6pm) at the Echo center Kent Street Wilson. All members are encouraged to attend.

Cleaning Up at the Club:

All members should be aware that the club accumulates waste of all types. Batteries and similar waste should be place beside the rubbish bins in the breezeway for appropriate disposal.

Dual Bridge:

As advised last month, a member has informed me that the Dual Bridge was always known as Renner Bridge, named after our late member Mel Renner (RIP).

I have since received a note on this from David Edwards via Clive Woodward. He has pointed out that the convention adopted by CMR was not to name localities after current or past members, as it would soon be apparent that we would run out of places to name. He also pointed out that to his and his dad's recollection the Dual Bridge was known as Bayou Bridge. As this is an American name, perhaps it would be more Australian to name it Billabong Bridge.

Member's comments are welcome; please address them to the secretary@castledare.com.au

Mike Crean
Secretary

The Best Class of Steam Locomotives Ever Produced

This article has been written to understand just what a steam locomotive could do but still lost the race with the diesel. Some of it was not "their" fault but they were just not thermally efficient. Some readers may disagree and arguments are invited, or at least a discussion.

The subject can be highly parochial depending your ancestry. Steam locomotives reached about 6.5% to 7.5% thermal efficiency and one individual around 15%. Diesel locomotives started at around 18% but now it is into the high 30's or even low 40's. Steam power stations of the 1960's were around 33% and thus electric traction after losses was around 28%. Now modern power generation can be 55% but not in Western Australia. However, Riddles the designer of the British Rail "standards" did say that a steam locomotive was only as good as to how fast it could boil water. The lubrication engineer from the ALCO Schenectady days told the writer "we just learnt how to make a steam locomotive and they went out of fashion". More about this, and Riddles, later. One statement made to me that sticks in the memory bank is that "you do not buy a horse and just keep it in the stable eating, you put it to work!" On this basis let us look at this from the point of view of WORK DONE.

In Western Australia we had the marvelous little W Class, an exceptional boiler of water. The W took 3 to 4 years to run some 75,000 to 80,000 miles and then was overhauled. The lack of decent chemical water treatment scaled the boilers and was the dictating factor. Thus we have about 25,000 miles per year. It is not a great figure due to low speeds over light rail and the WAGR 5 days per week working. In the latter days of the V Class, they were peaking at 36,000 miles per year with the "linked" freight working Bunbury to Albany and return. Tom Donkin worked some of these "turns".

Now to NSW and they place the C-38 on a pedestal and they ran up the miles. The shortest life of the class members was 13 years and she ran 75,000 miles per year. The longest in service ran for 24 years and averaged 62,500 miles per year. These were pretty well the premium engines of Australia. However, their mighty light axle load AD-60 Garratts averaged around 50,000 miles per year which seems a creditable performance before the Rhodesian 15th Class 3'6" gauge machines are considered.

The 15th Class was conceived for Sudan and in 1941 onwards the then Rhodesian Railways were supplied with these beautiful machines of 4-6-4+4-6-4 wheel arrangement. They put in some herculean efforts of nearly 6,000 miles per month for 6 years that included all repairs and in excess of 100,000 miles to wheel turning and 200,000 miles to first overhaul. In the mid 50's they regularly rolled out 10,000 miles per month when on passenger working. They created the world record for narrow gauge distances run. In 1980 to 1983 a number of the 1950 delivered locomotives were rebuilt with roller bearings and two were still shunting at Bulawayo in January of this year. Their regular working was a 1000 mile round trip with two crews. One wonders what the life distance these machines ran and that may be the world record.

Whilst in Africa we can mention the Red Devil 26 Class developed from the wonderful 25 Series by Wardale. This machine was complicated but could develop 15% thermal efficiency. The problem was with the crews in that diesels were coming and with lack of motivation the crews let it revert back to the efficiency of a "standard" locomotive. It now languishes in Cape Town devoid of copper and brass fittings.

For the English, they would point to the A4 record holders of 126mph, a short downhill burst with three coaches. They were slick locomotives but the Pennsy T-1 duplex drive took a large passenger consist along at 120mph for over 20 miles in regular service! This is the record in my thinking. However there was an LMS small 2-6-0 that had a magnificent boiler and Riddles adopted this design for the British Rail "standard" small tender and tank engines. This design of boiler was "just right" and boiled water with ease and produced probably the best ever in terms of pounds of steam per square foot of grate or whatever and these BR machines were christened Mighty Mouse and Mickey Mouse. A Mighty Mouse took over from a 4 cylinder Pacific that failed and from a standing start at the station hoiked the train up grade to crest the apex at a speed higher than what the larger engines of double the tractive effort could achieve, gained lost time but naturally with small driving wheels could not get to the 90mph necessary to not run

late. Riddles came out with the Duke of Gloucester (No 71000) with poppet valve gear for passenger traffic to match the great Duchesses. This machine still with a copper firebox gave indications from the test bed that it was the most thermally efficient steamer to be produced at that time. However, in traffic she just would not steam well and that was it. Many years later during restoration it was found that air inlets to the fire bed were very undersize, as the marking-off boilermaker had misread the drawings. A BR shed foreman did try to run his allocation of 10 x Britannia (70000 Class) 100,000 miles per year each. He fell agonisingly short at 10 years with each having run up just under the magic million mark.

Across in Europe the French had a speed limit on steam locomotives (70mph) and thus the work of the great engineers like De-Caso and Chapelon with valve gears, compounding and feed water heating never got to show their worth. A De-Caso machine has its wheels revolved electrically at Mulhouse today. Chapelon proved with study of the locomotive that its performance could be improved by virtually increasing the hp output by 50%. Porta (and Wardale) continued the work in South America to no avail although some revived rail operations have the modifications in place with small engines.

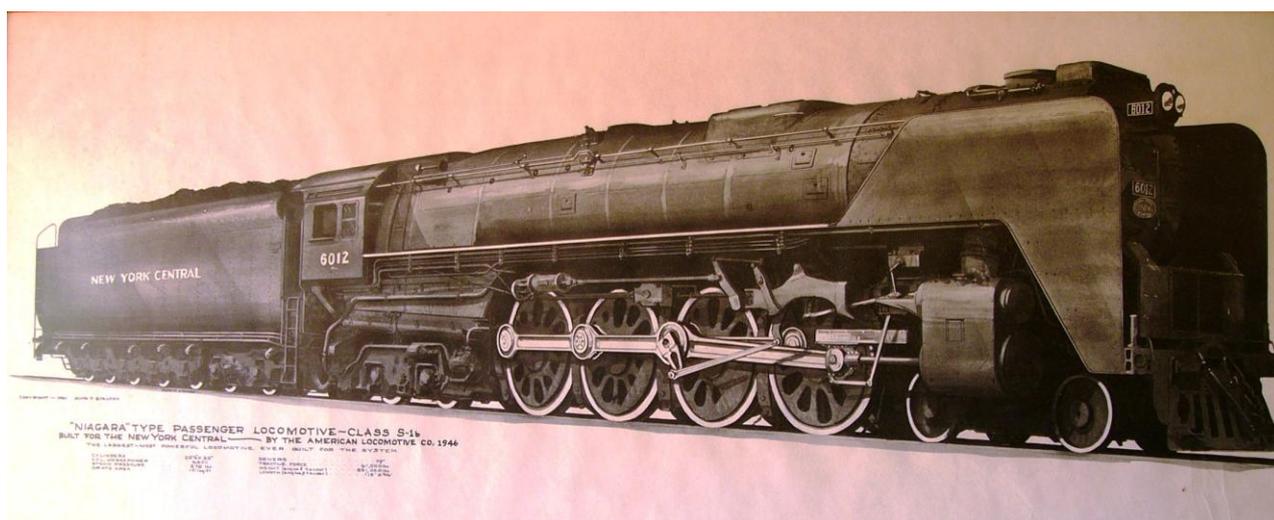
Across to the USA and the railroads fell in love with 4-8-4 wheel arrangement for fast freight and passenger services. Then along came TIMKEN with their sole machine No 1111 to demonstrate roller bearings in the late 30s. This brought about the rebuilding of many locomotives to incorporate all rolling element bearings and often light weight titanium side rods also with roller bearings. To give you some idea of what running was expected, TIMKEN recommended that the water should be drained from the main driving boxes every 4000 miles or seven days. Now 4000 miles in less than seven days indicates that 200,000 miles per year was "on the cards or expected"! This sets a new benchmark. To understand this one must consider that the top US railroads had maintenance practices not seen anywhere else such as lubritoriums for the steamers for a 45 minute trip service and under floor gang milling machines that re-profiled the driving wheels of the eight coupled machines in less than two hours without taking the side rods off. Santa Fe worked their 4-8-4 locomotives with eight wheeled bogies under the massive tenders and oil fuelled, Los Angeles to Chicago unchanged. They had helpers over the Rockies.

Up in Canada the Canadian National built a couple of 4-8-4s for trial. They proved to be under boilered for the heavy fast freights and were relegated to working an overnight passenger train (one each way) and they did this for over 25 years accumulating over 3M miles before bumped by new diesels and after conversion to oil burning went off into freight service. The same boiler was used for the mighty 2-10-4 Selkirks. Hoiking virtually the same passenger consist for 25 years by the same engine is probably a record in its own right.

Back to the USA and the New York Central. In 1946 they ordered from Alco a 4-8-4 based on the successful UP FEF, which according to the late Frank Accord was their most efficient user of steam. Alco termed the nicely proportioned engine their "balanced power" and NYC called them Niagaras. Cut down by 300mm from the FEF to fit the eastern clearances they seemed to have almost no external chimney. The boiler was the largest in diameter that could be incorporated and to reduce weight nickel steel was used for the all welded construction. Aluminium was used for the running boards and the cab. Water scooping was fitted to the tender and coal was topped up half way between New York and Chicago from a coal stage above the mainline. The crew was exchanged at this point on the 960 mile trip that was timed for 16.5 hours. In tests against diesel they proved that they could rollout 270 to 280,000 miles per year. In 1974 the Lab Superintendant of Alco Engines told me "we had just learnt how to make a steamer just as they were going out of fashion". Can't you imagine what it would be like to back this 6500hp machine onto an express just out of New York and to let her go!

And so they did, the greatest of them all, and not one was saved. The South African 25 Class was styled on the Niagaras and some still operate. The top diesel locomotives in the USA run 280,000 miles per year today and the best we can do in Australia is 175,000 but generally lower. The Pennsylvania RR T-1 divided drive 4-4-4-4 may have approached knocking off the Niagaras from their perch but they slipped badly. Tom (Ed) Harley from the PRR said that he was small enough to get in to set the poppet valves but they still had to maintain two engine drives and that adds expense. The words still ring in my ears, "you do not buy a horse and keep it in the stable etc" and although the W was a fine little horse, they never went anywhere to earn their keep.

The finest ALCO ever! NYC NIAGARA.



By Les Smith

March Niana Run Day Stats

G535	11 trips	205 passengers	On traffic 1030	Off traffic 1509
5158 (Black Five)	6 trips	69 passengers	On traffic 1040	Off traffic 1317
153 City of Canning	4 trips	77 passengers	On traffic 1055	Off traffic 1241
153 City of Canning	1 trip	Empty cars		
8694 Elizabeth	7 trips	103 passengers	On traffic 1100	Off traffic 1341
Sumo	9 trips	155 passengers	On traffic 1110	Off traffic 1440
EM44 Black Caviar	1 trip	signals train to Bullfrog & rtn	On traffic 1118	Off traffic 1200
2401 John Millman	7 trips	50 passengers	On traffic 1120	Off traffic 1430
4401 Gulgong	5 trips	57 passengers	On traffic 1325	Off traffic 1510
TOTAL	51 trains	716 passengers		

Fine weather saw reasonable passenger loadings early in the day, which unfortunately dropped off later.

For something different, steam hauled trains did 2 laps (which for statistics counts as 1 trip) of the Fern Road and Short Loop circuit (Stopping Pattern F) running express through Niana while diesels ran a single lap of the Fern Road and Wilson circuit (Stopping Pattern T).

Passengers and crews appeared to enjoy this. Some delays were caused when confusion arose as to whether a steamer was on its first lap or second, but mostly the system ran fairly smoothly. With a couple of small tweaks it should run like clockwork in future. The automatic signals controlling Oak Tree Junction also performed well after some minor attention by the Signals Technicians Mike Crean and John Palm.

Signed
The Thin Controller

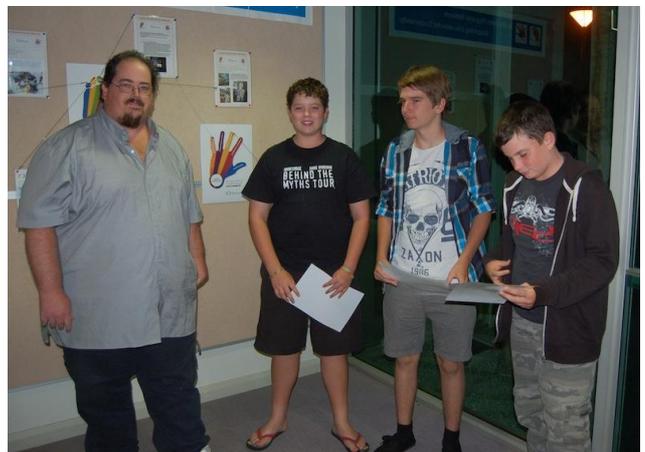
Castledare Gallery
◆◆CMR AGM Highlights◆◆
(Photographer – P. Stuart)



Craig awarding Roger 'Life' membership



Clive receiving the 'Clubman of the year' award



Junior members; Curtis, Dylan and Dion receiving recognition awards

Notice Board

For Sale

7 ¼ inch castings for The Lawley. It is a narrow gauge steam train used in South Africa, built by the Beira Railways.

There are many parts, also the patterns for the parts and some plans. Would suit an experienced builder.

Price for the lot, \$3,000

Contact: Bob Hawrylak
Mobile: 0428 108 164

MESSAGE FROM THE EDITOR

Trish Stuart

After 6 years as editor of Cinders and Soot I am handing over the reins to Harrison Mills, so this is my final edition as editor. I would like to thank all those who have contributed articles and photographs over the years to help make C&S an interesting magazine and I trust you will keep them coming for Harrison.

If you wish to submit an article for inclusion in Cinders and Soot, please note that the closing date is the 15th of each month. **The format should be; Word, Arial font size 10, photographs less than 1MB (.jpg).**

Please send your contributions to Harrison Mills at: steamtrain118@gmail.com

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