



CROSS FLOW

December 2017

Presidents Report

Hi Members,

One more general meeting and one event to go before our Christmas break.

The event will be a touring rally on the 10th of December and will be run by Barry Farnell and Phil Gallagher.

A new competition calendar will be ready for the first event in February 2018.

Concrete pipes have been obtained and have been placed on site at the Bagshot complex for drainage purposes on a section of track and will require a working bee and some heavy digging equipment. No time or date has been set yet for the working bee.

The committee is working on a agenda for the new year and hope to have that finalised by March. This includes track surfacing of our motorsport complex and other areas of our club amenities.

If I don't get to see you at the next meeting or our rally I hope everybody has a Safe and Happy Christmas and New Years break. Thank you one and all for your support this year.

The President



Kevin Symons
BCC

Upcoming Events

7 Dec 2017	General Meeting	BCC Clubrooms Maiden Gully
10 Dec 2017	Treasure Hunt	See inside for details
3 Feb 2017	Presentation Evening	BCC Clubrooms Maiden Gully

Membership fees for the Bendigo Car Club are as follows:

Full Membership Adult \$90.00

Junior Membership \$40.00

Family Membership is One Full Membership plus \$30 for each extra Family

Member

Behind the Screen

Hi Members and welcome to the last month of the year.

An interesting year that it has been once again, too hot for events at the start of the year and too wet for others during the year. The events have all been run and won and we will find out who was lucky enough to win this year's championship at the presentation evening next year.

Presently the Committee has been piecing together a calendar for next year, this will be revealed shortly.

A sad end to the year with the recent passing of long time club member Colin Cameron, on behalf of the Committee and Club Members I would like to offer our condolences to Colin's family. Colin was always quick with a joke and could usually be found not very far away from Max Jackman at events. Although not an active member in the club for a few years, Colin will be missed by the club for the input and help he has offered over the years.

Thank you to the members who turned up at the recent working bee at the Maiden Gully Clubrooms. Although we only had 9 people there, we got a lot done. It was lucky that the working bee was conducted as one of the jobs undertaken was cleaning out of the spouts and gutters. These have been put to good use in the last few weeks with the recent storms and would not have been working very well in their previous blocked state.

As can be seen now the area beside the Clubrooms (formally the Brown's property) is starting to take shape as a residential subdivision. From sitting by ourselves for a great number of years, the clubrooms will soon be in the middle of suburbia! Such is progress.

Don't forget, we have a meeting this Thursday night, the last for the year with no meeting in January. Wishing the Members and their families a Merry Christmas and Happy New Year. Stay safe on the roads and get those cars ready for next year over the Christmas break,

Behind the screen - Craig Hardiman





Annual Treasure Hunt – UPDATE!

This year's very interesting country journey, will involve a pleasant drive through central-ish Victoria, COMPLETELY on good bitumen roads, so bring out your best Sunday cruisers.

The day will commence with check-in at 9.00 am, for a 9.30 am start, from a well-known central-ish location.

This being outside Bendigo Specialist Brake and Clutch, in Stanley St, Deborah Triangle / Quarry Hill. (off Breen St.)

The route will involve collecting some information along the way, (hopefully a lot of stuff that you may not have known about), to a beaut finish destination in Malmsbury, at the Moto Bean Cafe/Restaurant. There is a nice Park & gardens opposite, well suited to a picnic lunch? There are other food options in Malmsbury too.

The route should take about two and a half, to three hours to complete, with the emphasis being a pleasant drive, NOT a time-based competition.

Entry fee for the day will be a very reasonable \$5.00 per car.

Hopefully, we will have a good roll-up, with an indication of likely attendees, (at the Club Meeting, or by Phone prior), would be appreciated, to enable an appropriate number of Route Instructions to be printed.

We look forward to seeing you on Sunday 10th.

Baz and Phill

CARBON NEUTRAL

By Robert Andre

Fibreglass and carbon fibre products are produced by combining materials, hence why often called composites due to their compositions.

The vast majority of fibreglass products are produced by what is called the wet layup technique. This involves laying a cloth of fibre into a mould and applying a wet resin via brushes and/or rollers to bond the fibres together. A coloured resin called gelcoat can be initially applied to the mould which can later be polished or painted over.

Some fibreglass products, particularly the larger commercial items such as pools, tanks and plumbing fixtures are produced using an automated wet layup machine called a chopper gun. This gun automatically cuts spool fed glass fibre threads and blasts it out of a nozzle that is spraying resin. Chopper gun parts are often heavy to gain strength through thickness and the resin to fibre ratio is high to avoid dry spots for quick manufacturing. Premixed resin and fibres can also be injected in to moulds and either chemical or heat cured.

It is common for carbon fibre and Kevlar decorative pieces to be produced using the wet layup technique, often with a high gloss spray finish applied later.

The majority of regular fibreglass products are made using polyester resin. The resin is chemically set by mixing in a small amount of organic peroxide catalyst (MEKP). A controlled amount of heat is generated by the chemical reaction and the resin solidifies. If the product is very thick, or too much catalyst is added or say perhaps a cupful of resin is allowed to cure before dispersing, the heat generated can cause the resin to smoulder. Polyester resin is easy to use and is relatively cheap.

Epoxy resin can also be utilised for wet layup, but it is generally used in more speciality applications such as those requiring higher strength and/or better resistance to heat. Epoxy resin is generally a fair bit more expensive than polyester resin. It is chemically cured by mixing together the two pack solution, similar to two pack paint.

Very high strength carbon fibre and Kevlar (and to a lesser extent fibreglass) products such as formula car tubs, racing bicycle frames and aeronautical parts are manufactured using cloth with specialty epoxy resin pre-impregnated. The raw product is often referred to as 'pre-preg'. Pre-preg has a small amount of catalyst added so it will also cure eventually at room temperature, but generally the product is cured by heating it in an oven or a pressurised oven called an autoclave. Pre-preg is stored in a freezer to prevent it from curing and whilst it

is often shipped at room temperature it has a limited lifespan outside of the freezer.

The main advantages of pre-preg over wet layup is pre-preg has a very minimal, even and controlled amount of resin pre-applied, and the thermo setting of the product allows for a very controlled and precise setting of the crystalline structure of the resin for maximum strength.

Controlled post curing of wet layup polyester and epoxy resin by the use of heat can also improve its strength. A heated spray booth or by being left outside in the sun in summer can help improve strength.

The main benefit of carbon fibre over fibreglass is greater rigidity to weight ratio. It makes for a very strong structure, just ask Mark Webber. Kevlar is not particularly rigid but it has an amazing resistance to shearing, making it a real pain to cut! Carbon and Kevlar are both expensive, a very rough approximate about 4 times the cost of woven glass fibre, though carbon fibre is getting cheaper day by day as the markets grow. Glass fibre is cheap and relatively rigid, but this comes at the cost of weight.

A note of caution: carbon fibre is conductive hence why it is often not used for helicopter rotor blades in the event of a lightning strike (basically they explode!) or for battery box lids etc.

Disclaimer: The author and Bendigo Car Club accept no responsibility for the use of the content in this article. For entertainment purposes only and not intended for any practical purposes. If you need help seek assistance from a professional.

Club Member of the Month

Name: Brad Hall
Occupation: Electrician/Parts and Accessories Manager
Years In BCC: Approximately 10 years
Favourite Venue Raced At: Would be Phillip Island or Eastern Creek, Hot laps at the Thunder dome was a great experience.
Vehicles Of Interest You Own: 3 x WRX, 3 x Excels, 2 x Nascars, 2 x Auscar/Sportsman, 2 x Jetski's, 1 x GoCart and a few motorbikes
Best Motorsport Memory:
Favourite Racing Driver: Jamie Whincup - fast, clean and humble. Valentino Rossi - Fun guy and still fast for an oldie.
Before You Finish Racing You'd Like To: Win more races HaHa, Keep enjoying racing and travel around to new places.
Best Motorsport Achievement: Would have to be, being able to transition from bikes, to karts to cars and do well in each discipline.



Feature Vehicle of the Month

Type of Vehicle: Ford XF Auscar/Sportsman

How Long Have You Had It: 7 years

Any Modifications: Full Rollcage, Engine upgrade, seat, harness, custom dash etc, 302 cleveland

What Events Is It Used For: Now in retirement doing demo laps, sprints and the odd car show.

Best Result: Many poles and wins at the Thunderdome and Adelaide Raceway, held the lap record at Thunderdome over 200kph average speed.

Future Plans: Use it more often, its a fun car to drive

If You Didn't Have This You'd Have: Would love a Supercar or Trophy Truck.



BCC Life Members

1991	Max Jackman *	2002	Harrie Larter
	Bill Atkinson *	2005	John Orr
	Frank Panozzo *	2012	Craig Button
	Frank Coad	2013	Michael Elvey
1996	Rosalie Panozzo	2014	Ken Holt
1998	Lois Jackman		Cheryl Holt
	Phillip Gallagher	2015	Peter Valentine
1999	Laurie Johannesen	2016	Roger Hall
2000	Norm Brown		
2001	Barry Farnell		





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BCC Contact List

The Bendigo Car Club is a multi-disciplined motorsport club that gives its members the opportunity to compete in a wide range of activities. Below is a list of members who can be contacted in regard to specific disciplines of motorsport.

Event Type	Contact
Motorkhana	Brian Shanahan
Khanacross / Autocross	Mick Elvey
Rally	Murray MacKenzie / Tony Moore
Off Road	Craig Button / Jim Coombs / Ken Holt
Bitumen Sprints / Circuit	David Dixon / Roger Hall
Officiating	Peter Valentine / Lesley Smart
Vic Roads Club Permit Scheme	Craig Button, Mick Elvey, Peter Valentine, John Hardiman

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