



GATEWAY

The Official Magazine of the Gippsland Gate Radio & Electronics Club Inc.

July 2013 From The President

My wife Fiona and I will be travelling to the warmer climates of Tahiti and Bora Bora. The current weather forecast is 20° overnight to 30° in the day time. I will not have to worry about scraping the ice off my car in the mornings for a while. There is Amateur radio activity on the island so I think I will throw in the hand held just to listen.

Back to business, and it was very pleasing to see a good turnout of members to the last working bee. Wayne Cooke showed his handyman skills by fitting the air vents into the shack floor. This will greatly assist with air circulation. The radios were given a good work out on all bands and it looks like the log periodic may be in need of some maintenance as it was only tuning up on 10 and 15 metres.

A prototype repeater antenna mocked up by Ian Jackson was tested by Michael Van Den Aker and Rob with their spectrum analyzers to check its performance. We learnt a lot on the day and with lots of information being shared.



Bruno Tonizzo

The highlight of the day was seeing Wayne half way up the tower evicting a possum as he has done many times before in New Zealand. Unfortunately, Graham brown was in the flight path between the tower and the nearby bushes. The possum did an excellent impersonation of a flying fox and Graham looked like he was auditioning for the female part in the shower scene from Psycho as the possum was flying straight towards his face. Luckily, the two did not meet and the possum went off looking for a new home.

See you at the July General Meeting

Bruno VK3BFT

CONTENTS

<i>Around the traps</i>	3
<i>Self healing Micros</i>	4-5
<i>June Minutes</i>	6-7
<i>Antenna Weekend</i>	8-9
<i>Hamfest Setup</i>	10

Event Queue from July 2013

July 19th – Friday Night. **General Meeting at the Guide Hall**
From 2000hrs no talk so we can have an early start for Hamfest

July 20th – Saturday . **GGREC Hamfest**
From 0730hrs for setup

August 2nd – Friday Night. **Prac Night at the Club Shack**
From 1930hrs

August 10th – Saturday. **Working Bee at Club Shack**
From 1000hrs to repair the club antennas

August 16th – Friday Night. **General Meeting at the Guide Hall**
From 2000hrs talk to be announced

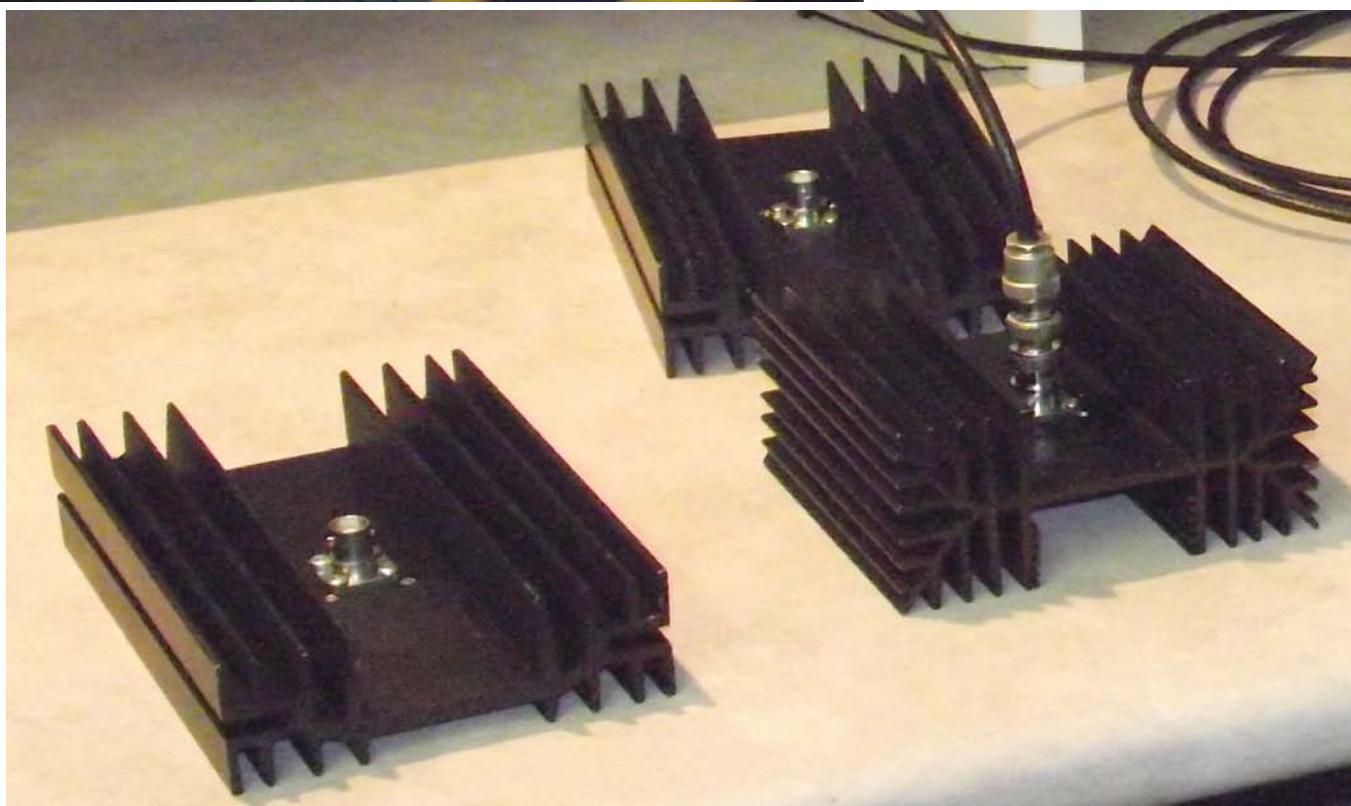
September 6th – Friday Night. **Prac Night at the Club Shack**
From 1930hrs

September 20th – Friday Night. **General Meeting at the Guide Hall**
From 2000hrs talk to be announced

Around the Traps !!



A great prac night with some members constructing 250W dummy loads thanks to Rob [VK3BRS](#) for his time in getting the parts needed to put the kits together.



"The GGREC Mid-year Luncheon proceeded well at the scenic Arthurs Seat Hotel. The venue was excellent and the food was delightful, but regrettably we had chosen one of the few days of the year where the top of the hill was obscured by solid cloud cover for the entire day"



How self healing microchips recover

One of the reasons why robots and artificial intelligence programs even very sophisticated ones - do not qualify as living things is because they lack the capacity for self-repair.

Fry a machine's circuits, and it can do nothing except wait for a human to repair it. A team of researchers at the California Institute of Technology (Caltech) has taken some of the first steps toward making a self-healing machine by creating a computer chip that can learn to heal its own information pathways.

The chip comes from the High-Speed Integrated Circuits laboratory, which specializes in microchip technology. There are thousands of pathways by which information can travel through a microchip, but because each one is very specialized, a single fault traditionally renders the whole system inoperative.

Each chip contains more than 100,000 transistors (the most basic component in a microchip), which don't all function simultaneously. Rather, the researchers burned vast swaths of transistors out of the chip with a laser, then allowed the systems to recalibrate. As long as the blast did not catch any data caches in its crosshairs, the chip could seek out alternate routes and continue to function. With the help of an application-specific integrated-circuit (ASIC) processor on each chip, the system could "learn" which pathways were broken and adjust accordingly.

If a traditional microchip is comparable to an electric circuit (remove one piece and the entire system collapses), this new technology is more similar to a human brain. If one pathway becomes inaccessible, the brain will discover novel ways to relay information. Of course, it is possible to inflict catastrophic damage on a system (be it brain or microchip) from which it cannot recover, but with more than 100,000 methods of delivery, these microchips could prove to be extremely robust.

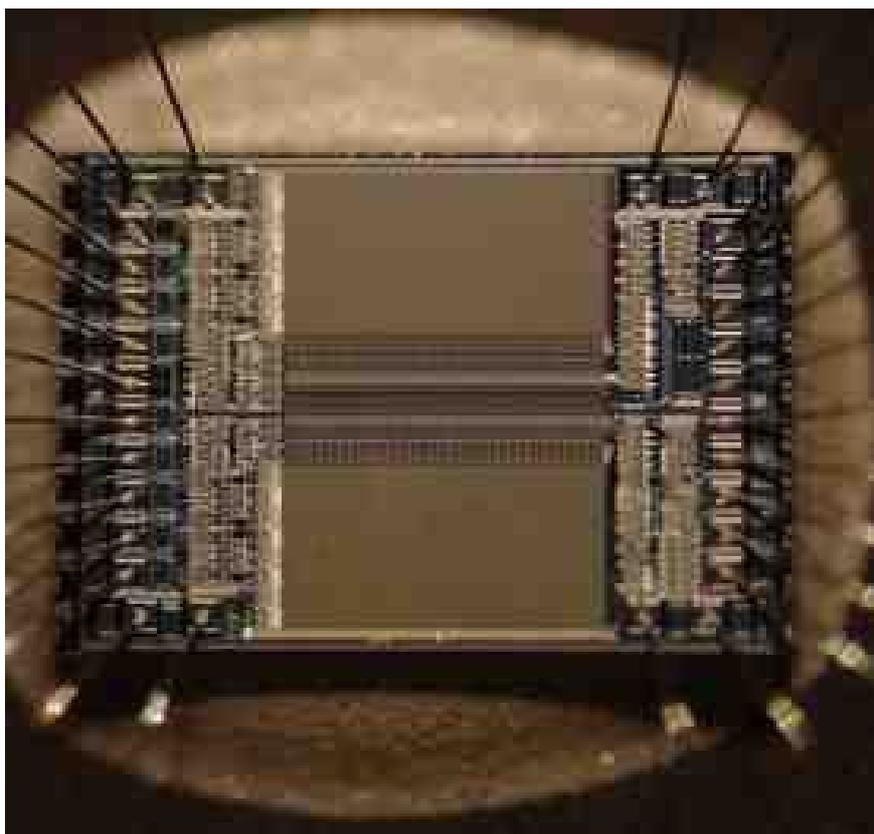
The self-healing chips are an intriguing step in machine evolution, but they do lack one crucial feature of actual living things: the ability to regenerate over time. While the Caltech microchips can withstand extensive damage and figure out ways to work around it, a section fried by lasers will still be fried years later.

Unlike biological tissue, which repairs itself over time, each chip has a limited shelf life. [See also: Bionic Humans: Top 10 Technologies]

Still, the fact that the microchip is not yet completely analogous to living things should not take away from the novelty of the invention or its potential usefulness. Right now, if a microchip in your computer or cell phone burns out, the whole system is essentially out of commission until you can replace the chip, to say nothing of any data you had stored on it. Implementing these devices in consumer tech could save countless hours and dollars in tech support.

"Bringing this type of electronic immune system to integrated-circuit chips opens up a world of possibilities," said Ali Hajimiri, a Caltech engineering professor. "[Microchips] can now both diagnose and fix their own problems without any human intervention, moving one step closer to indestructible circuits."

That's all well and good when a flood leaves your next PC intact, but might be less desirable when the robot armies rise up to take vengeance upon humanity. Hopefully, the former is a likelier option.



Article from www.scientificamerican.com

General Meeting 17th May 2013

Location:	Guide Hall Cranbourne
Start Time:	Meeting commenced at 2005 hrs
Chairperson:	Albert VK3BQO
Minutes taken:	Graeme VK3BXG
Present and Guests:	As per attendance sheet.
Apologies:	As per attendance sheet
New Callsigns:	None

Correspondence in:- (Basically nothing this months due to Australia Post's incompetence).

E-mail newsletter from Rotarua ARC.

Correspondence out:- Letter to Australia Post Complaints diplomatically telling them of their incompetence over the handling of our Post Office box affairs.

Previous general meeting minutes of the May meeting as distributed in Gateways. Albert VK3BQO as an amendment stated that he was not the chairperson as it was stated in Gateways, the chairperson was Bruno VK3BFT.

With the amendment, I, VK3BXG moved accepted, seconded Mark VK3FSWP, all in favour, carried.

(This mistake is only relevant to the magazine, minutes taken at the time were correct).

Treasurers Report, Ian VK3BUF reports Bendigo Investment account \$9,420.11 Bendigo cheque account \$3319.98, Quickbooks balance now at \$2,659.98 being \$660.00 difference due to two unrepresented cheques. Total income for the month was \$895.50. Moved accepted Ian VK3BUF, seconded Russ VK3MWR, all in favour, carried.

Business from the Previous Minutes.

Hamfest Wayne VK3ZWC reports that only 5 tables are now still available. Names of volunteers for help are now being taken and table layouts will need to be published in next month's "Gateways" to help the volunteers. Volunteers need to start at 7.30 am on the day. Other than that all is on schedule.

At the next committee meeting food needs need to be discussed.

Bruno, VK3BFT reported that "Altronics" have donated a soldering station as a door prize and 50 small torches for sundry prizes and from "Rockby" we could also possibly purchase a desoldering station as a prize for the event.

Midyear dinner, Ian VK3BUF reports will be at Arthur's Seat Saturday 29th June and a \$10 deposit is also required tonight from all those who are going.

Working-bee for a 10 am start tomorrow Saturday 22nd will be to set up a guy to straighten the cables looping down from the mast.

Ian VK3BUF wants to have installed the vents into the floor to increase the air flow through the radio room.

All radios are to be checked on all antennas to assess the antennas are working properly.

[New 70 cm repeater](#) Albert [VK3BQO](#) reports that we now have the cabinet, the transmitter and receiver and are now working, experimenting and testing to build a stable antenna system. Four commercial dipoles priced are over \$1,600, so we will build our own.

The controller and interface for it are still to be completed.

I, [VK3BXG](#), report that the mast is finished but power and building repair will still need another month.

Albert [VK3BQO](#) proposed early September as a date to be ready.

[Dummy-Loads](#), Rob [VK3BRS](#) reports will be ready to be assembled next prac-night. They will be \$25 to \$30 each and Doug [VK3KMN](#) will be supplying the heatsinks.

[Beacons update](#) we need to contact Phil [VK3VB](#) to find out the current situation.

[Antenna Weekend](#) in October Ian [VK3BUF](#) advises will be a casual affair and therefore no fee will be required.

New Business

[Problems with Australia Post](#) Ian [VK3BUF](#) reports arose after the redirection fee rose from \$58 per year to over \$500 per year and it made no difference to the fact that we were a non-profit club and not a business. For reasons unknown at this stage the box was cancelled despite the fact it was paid for in full in March and all our mail received has supposedly been "returned to sender".

A letter of our displeasure has been sent to Australia Post Complaints.

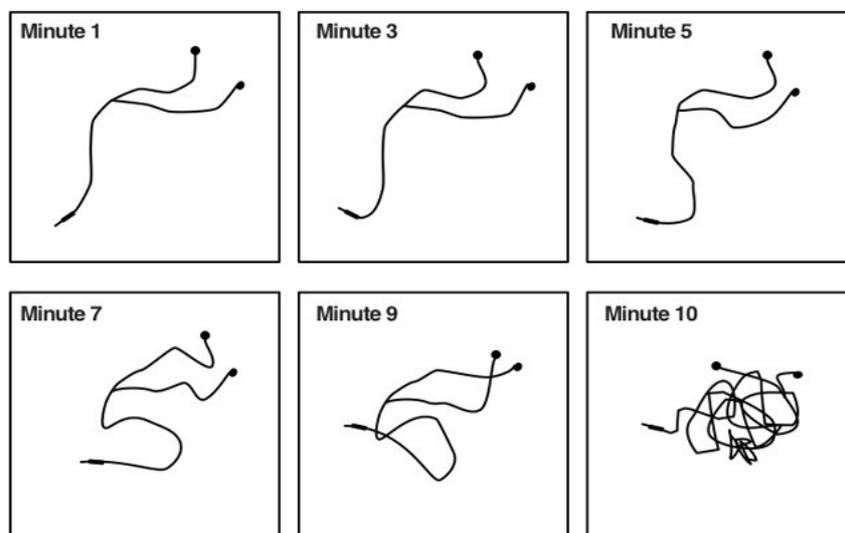
[Long Term Excursions](#) Bruno [VK3BFT](#) inquired as to if anyone had any suggestions to go to for example Dayton USA Hamfest or Gosford Hamfest. Gosford was suggested as more of a possibility.

[Kidney Car Rally](#), Michael [VK3GHM](#) reports he is again going on the rally this year.

[Meeting closed](#) at 9.45 pm

This evening's video presented by Mark [VK3FWSP](#) was of a conducted tour of the International Space Station.

Timelapse of Untouched Pair of Headphones



DOGHOUSEDIARIES

GGREC Antenna Weekend in October

On October 12 and 13 (Saturday & Sunday) GGREC will be conducting an Antenna Field Weekend in Drouin West. This event will have both social and educational aspects. It will be the first of its type ever conducted by our Club.

There are no fees, charges or booking requirements for those who are attending.

Members and guests of members are invited to attend both days to set up antennas, operate and attend short talks on antenna technology on a quiet 3-acre paddock . The format is informal. Those not wanting to set up and operate are welcome to bring a folding chair and refreshments and just enjoy themselves.

Visitors may travel from home on each day, or camp overnight. There is space for tents and caravans at the site. The Club will be hiring a large, walled marquee to provide some common sheltered space. The Club barbeque equipment will also be available for use. A central campfire will be operating for the duration of the event.

Visitors can erect their own tents, shelters and antennas within the large space provided, using their own power sources. No AC mains is available at the main location, but a battery charging shed has power for re-charging battery packs. One of the themes is to encourage preparation and independence when using of Amateur Radio equipment.

The Club callsign of VK3BJA will be active and full-call licensees will be present, so 'F' calls and those studying for their licenses will have the opportunity to operate at full-license power levels.

On each of the two days there will be two one-hour Tutorial sessions where short lectures on different aspects of antennas will be explored.

Saturday, 1:30 to 2:00pm.....A discussion on random length Long Wire antennas
2:00 to 2:30pm.....A talk on portable masts for field use.

Saturday, 3:30 to 4:00pm.....Mapping antenna radiation patterns
4:00 to 4:30pm.....A summary of VHF & UHF antennas

Sunday, 11:00am to 12:00.....A discussion & demo on Mobile antennas

Sunday, 1:00 to 2:00pm.....Using Antenna test equipment

Visitors are encouraged to bring their own field equipment and gadgets to experiment with.

The location is at the QTH of Ian VK3BUF and Dianne VK3JDI on Old Sale Road in Drouin West. This 7 acre property has an access path to a lower 3-acre paddock where most of the action will take place. This includes a half-acre forest area. The event site is approximately 100 metres above sea-level, secure and secluded from view by roads and adjacent properties. Unless extreme weather prevails, most vehicles should have little difficulty in accessing the site.

Basic toilet facilities will be set up near the pavilion, with AC power, water and conventional facilities present at the top of the hill for caravan owners not wishing to setup down the slope.

For those staying late, or staying overnight, there are some fine take-away Chicken, Fish & Chip and Pizza shops in nearby Drouin township that can provide a meal to be brought back to the camp, or cook your own food on the Club barbeque.

More details about this special weekend will be printed in Gateway as the date draws closer.



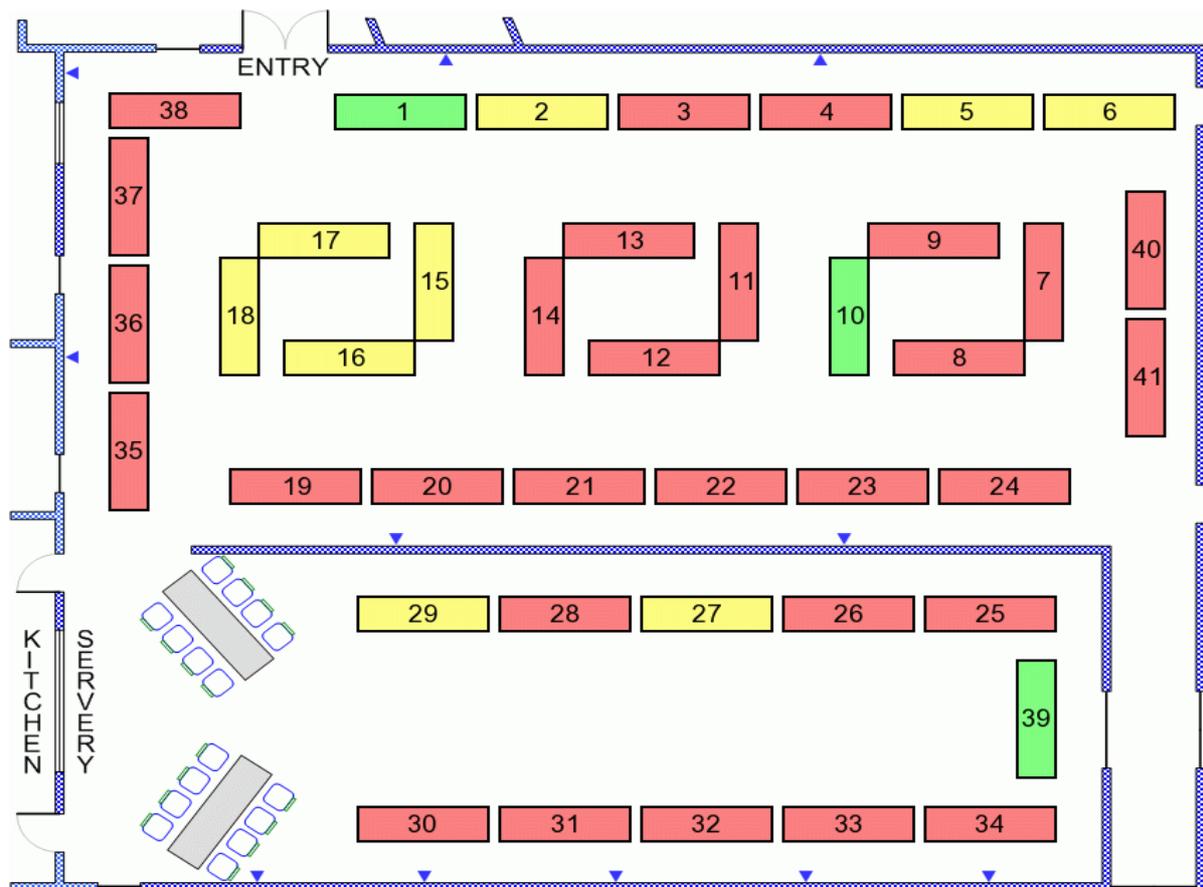
2013 GGREC Hamfest

The Hamfest is this weekend Saturday 20/7/13.

This is main fundraiser for the club & your participation would be greatly appreciated.

- Meet at Cranbourne Hall Saturday morning from 0730hrs to set up for the event
- People required for BBQ cooking & Kitchen duties.
- Door staff & security
- Manning of Club table.
- Reminder to bring your portable radios for interclub comms on the day on 145.450mhz

Below is the layout for the tables, please use it as a reference when setting up



Let's all make this an event to remember & have fun. *Wayne VK3ZWC*



Club Information

Meetings 2000 on third Friday of the month at the Cranbourne Guide Grant Street Cranbourne, Prac nights first Friday in the Peter Pavey Clubrooms Cranbourne 1930 Visitors are always welcome to attend

Office bearers

President	Bruno Tonizzo	VK3BFT	Repeater Officer	Albert Hubbard	VK3BQO
Admin Sec	Graeme Brown	VK3BXG	Web Master	Stephen Harding	VK3EGD
Treasurer	Ian Jackson	VK3BUF	Magazine Editor	Mark Clohesy	VK3FWSP
General 1	Mark Clohesy	VK3FWSP	Property Officer	Bruno Tonizzo	VK3BFT
General 2	Wayne Cooke	VK3ZWC	Secretary	Ian Jackson	VK3BUF

Call in Frequencies, Beacons and Repeaters

- The Club Station **VK3BJA** operates from the Cranbourne Clubrooms.
- 6m Repeater Cockatoo **VK3RDD** : Freq. In **52.575 MHz**, Out **53.575 MHz**
The 6m Repeater requires CTCSS tone access of **91.5 Hz**
- 70cm Repeater Cranbourne **VK3RLP** In **434.475 MHz** Out **439.475 MHz**
The 70cm Repeater requires CTCSS tone access of **123 Hz**
The 70cm Repeater supports Remote Internet access (IRLP) Node **6794**.
 - Simplex VHF - **145.450 MHz FM**
 - Simplex UHF - **438.850 MHz FM**
- **VK3RLP Beacons** **1296.532 MHz** & **2043.532 MHz**

Membership Fee Schedule

Standard Member rate \$40.00 Junior Member rate \$25.00
Pension Member rate \$25.00 Extra Family Member \$20.00

- Fees can be paid by EFT to **BSB 633000** - Account **146016746**.
 - Always identify your EFT payments.
- Membership Fee's Are Due at each April Annual General Meeting.

Magazine Articles to editor@ggrec.org.au or pockets@twistedsouls.com

All other Club correspondence to: secretary@ggrec.org.au
or via Snail Mail : PO Box 1098, Cranbourne 3977

GGREC Web Site & Archive may be viewed at: www.ggrec.org.au
Facebook Page www.facebook.com/GippslandGate

The deadline for magazine items is the Tenth day of each month.
Commercial Advertising is \$10 full A4 Page or \$5 ½ A4 Page per edition

The opinions expressed do not necessarily reflect the official view of GGREC Inc
The Club cannot be held responsible for incorrect information published.