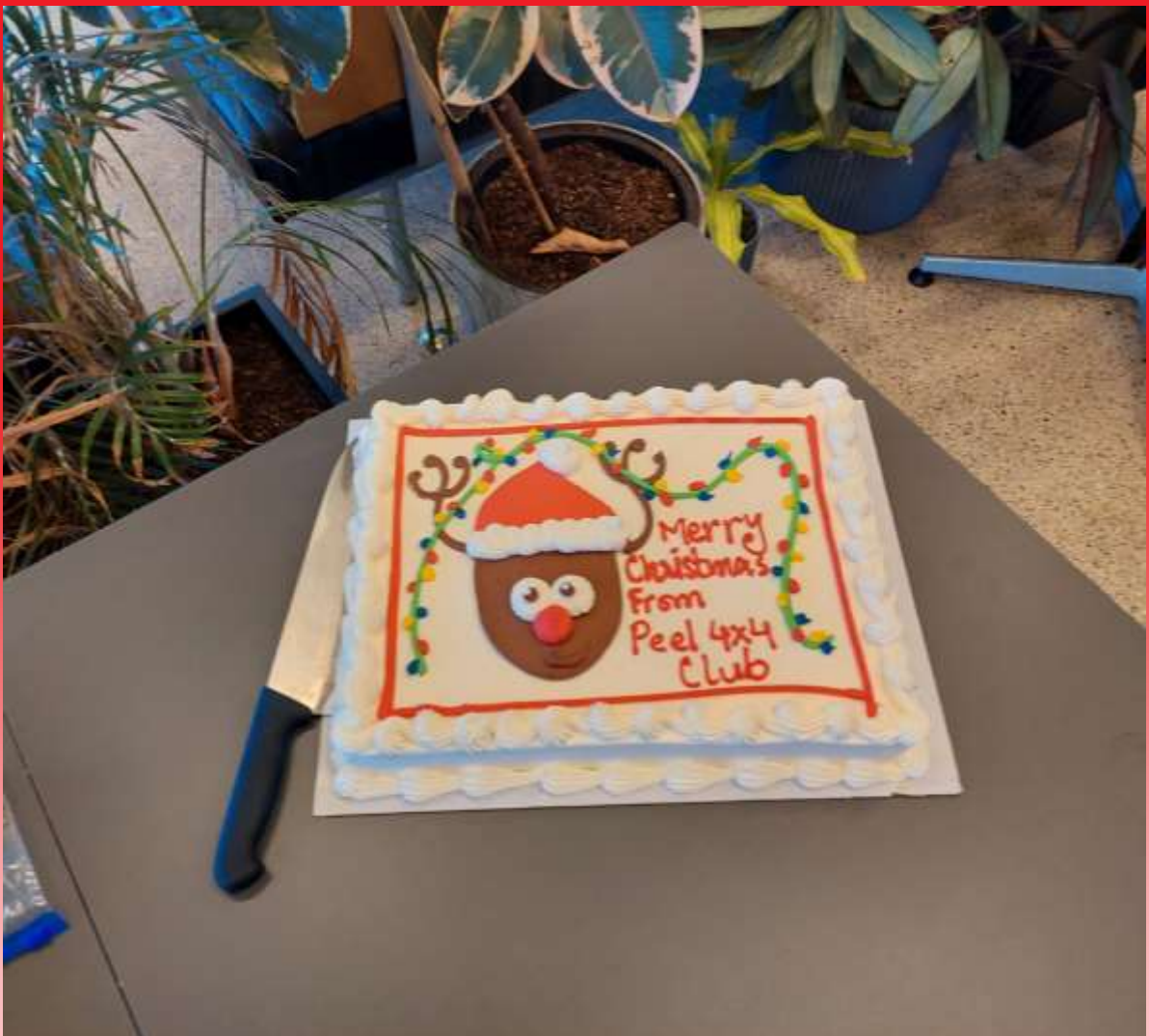




EDITION 283

# JANUARY 2024 MAGAZINE





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# CLUB INFORMATION

## CLUB CONTACT DETAILS

POST OFFICE BOX 8233

WARNBRO WA 6169

<http://peel4x4club.webs.com>

Club Email: [peel4x4club@hotmail.com](mailto:peel4x4club@hotmail.com)

Secretary: [secretarypeel4x4club@outlook.com](mailto:secretarypeel4x4club@outlook.com)

Treasurer: [peel4x4.treasurer@gmail.com](mailto:peel4x4.treasurer@gmail.com)

Magazine Email: [briantanner57@bigpond.com](mailto:briantanner57@bigpond.com)

## NEXT GENERAL MEETING

**7/1/2024**

## GENERAL MEETING MEETING VENUE

**Combined with the Trip Planning Meeting**

**PK Tavern**

Doors open 2.00 pm

Meeting starts 2.30 pm

## NEXT COMMITTEE MEETING

**14/2/24**

## COMMITTEE MEETING VENUE

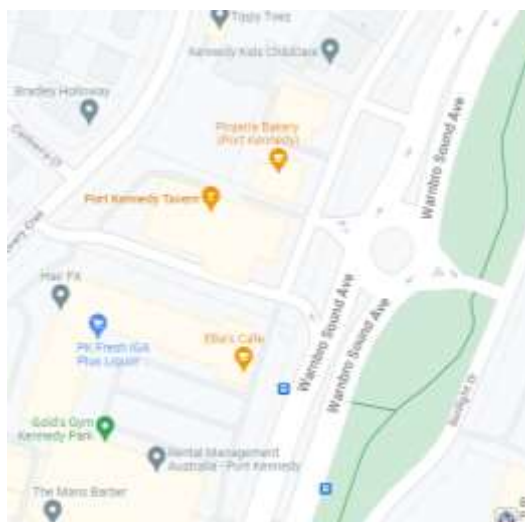
**The Light's home**

## Upcoming trips

Fishing at Preston Beach 27/12/23

Trip planning / general meeting 7/1/24

Surf carnival 14/1/24



Find us on



Facebook  
[peel4x4club](https://www.facebook.com/peel4x4club)



Membership Fees \$130.00 for the first year then \$90.00 per annum. Pro rata fees will be charged depending on your joining date.

# GENERAL STUFF

## PEEL 4X4 CLUB BYLAWS

1. The trip leader will delegate the position of Safety/Recovery officer to another member prior to trip departure.
2. All members and visitors are to follow the Safety Officer's instructions at all times
3. No pets allowed on club trips.
4. Each club member is to be responsible for the safety and whereabouts of their own children.
5. Trip Leader responsibilities and Tail End Charlie role to be read out before each trip.
6. After 2 trips you must have adequate front and rear recovery points fitted to your vehicle and must have a UHF CB radio.
7. Vehicles without adequate front and rear recovery points are limited to scenic/social and easy rated trips.
8. All trips are to be rated scenic/social; easy; medium; hard and extreme. Visitors are not permitted on hard and extreme trip. Membership of the WA4Wd Assoc is required for attendance on hard and extreme trips.
9. Proceeds from fundraising will be used for club purposes.
10. A limit of 15 vehicles per trip will apply. Trip leader has the discretion to increase or decrease this number.
11. First in best-dressed, if in excess of 15 vehicles wish to attend a trip, based on prior confirmation.
12. Club bank account to hold a minimum of \$1000 balance. A portion of this amount may be used to purchase urgent items at the committee's discretion.
13. Whilst every care is taken, no responsibility is accepted.
14. Visitors must attend at least 2 trips, rated easy and/or medium, to qualify for membership. Scenic/social trips will not be counted.

## PEEL 4X4 CODE OF ETHICS

1. Keep to the laws and regulations for 4wd vehicles. They may change from state to state.
2. All vehicles must have either comprehensive or third party fire and theft insurance.
3. Keep the environment clean. Carry your own and, maybe, other people's rubbish home.
4. Obey restrictions on use of public lands. Respect national parks and other conservation areas.
5. Obtain permission before driving on private land. Leave livestock alone and gates as found.
6. Keep your vehicle mechanically sound.
7. Take adequate water, food, fuel and spares on trips. In remote areas travel with another vehicle.
8. Respect our wild life. Stop and look but never disturb or chase animals.
9. Respect other recreationalists rights to peace and solitude in the bush.
10. Obey all fire restrictions. Extinguish your fire before leaving. Don't let your exhaust emit sparks.
11. Help in bushfire emergencies and search and rescue but only if you are properly equipped and able.
12. Support 4WD touring as a responsible and legitimate recreational activity.
13. All members should behave in a socially acceptable manner at all times.

This code is valuable only if you observe it





**Club Shirts etc are now available from**  
**Totally Workwear**  
Mandurah

T Shirts	(with logo and name)
Singlet	(with logo and name)
Hoody (zipped front)	(with logo and name)
Peak Cap	(with logo)
Beanie	(with logo)

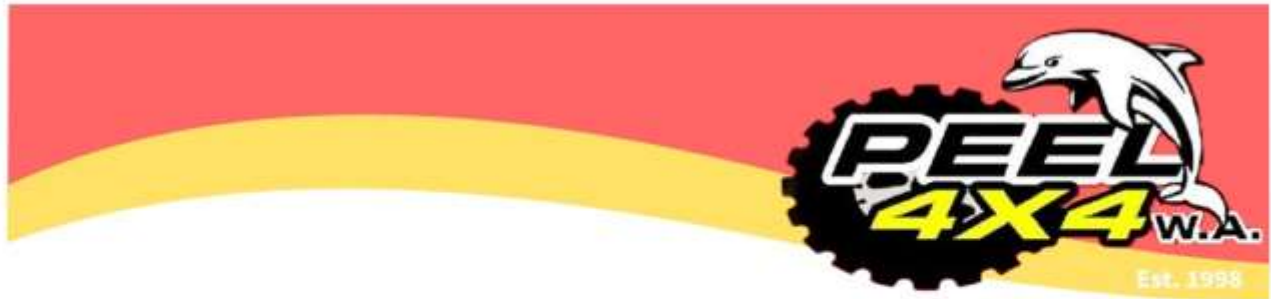
T Shirts are the same as previous ones. If you know your size you can phone Totally Workwear with your order or call into the store and try one on. They have all our details on record.

Please see our Treasurer/Committee Members at the meeting if you have any questions.



## Peel 4x4 Club Property List

1 x Space Case (900L x 390W x 400H)  
4 x 490mm Black Plastic Sand Pegs  
1 x ARB Gazebo  
1 X Wanderer Gazebo  
1 x Heatlie BBQ (880mm x 540mm)  
2 x Peel 4 x 4 Club Retractable Vertical Banners  
2 x Peel 4 x 4 Club Flags with water filled bases.  
1 x Plastic Peel 4 x 4 Club sign (Folding Triangle Core Flute Type )  
1 x 5.33kg Gas Bottle (Empty)  
1 x Wanderer single wall for gazebo  
1 x Wanderer half wall for gazebo  
1 x 60mm diameter collapsible bin  
Gravel & block – with Gary Mayes  
Trophy – Most talked about event of the year (1998 – 2014)  
Trophy – Burnt pot award (2000 – 2014)  
2 x 40 channel Uniden UHF Radios  
1 x musty smelling orange cotton vest  
4 x metal Peel 4 x 4 signs (staked flag design)  
Various large paper & laminated maps  
1 x 2.9 Snatch Strap  
1 x red & Yellow Peel 4 x 4 Club Flad/Banner (1940mm x 970mm)  
2 x heavy Wooden speed check signs  
1 x Tennis net in bad ( no racquets)  
Heaps of old Peel 4 x 4 Club magazines, hard floppy disks, and stuff .....  
Santa Suite



# Containers for Change



After the AGM we made an account to donate the empty recycling containers to the club.

These funds can then be used towards our social functions or other agreed upon purchases for the club as something a little extra.

No obligation, and we understand people collect their own, but if you have any empty bottles or cans laying around please feel free to use the QR code or account





Peel 4 X 4

We are fundraising with  
 Entertainment

**Buy  
online  
today!**



**SCAN ME**



**SHOW YOUR  
SUPPORT**

Every Membership we sell, 20%  
goes directly to our fundraising



A\_1203



# PRESIDENT'S PARABLE

## Presidents Report

Hi Everyone,

Well, we have come to the end of another year, which also saw a great milestone for the Peel 4x4 Club – being the 25 Year Anniversary of when the club was originally formed.

Quite a few trips were held throughout this year, such as:

- the annual Surf Club Carnivals
- the annual Australia Day (this year at Kalgan River)
- assisting Rocky Bay by giving those with special needs a great day out
- Holland Track over Easter
- Peel 4x4 Clubs Trip of the Year at Nungarrin
- a couple of beach trips
- a couple of bush trips
- a couple of fishing trips
- and Briseys World War 2 tunnel trip which was a hit with the members.

We also saw the introduction of a Technical Section at General Meetings, which has had some good interest. If you have something related to 4WDing that you would like more information on; be it snorkels, tyres, lift kits, etc..., by all means bring it up at a meeting, or have it added to the agenda. There's a good chance that if you have questions about a particular topic, others will be too.

On the other hand, if there is a particular topic that you would like to present to the club / members, let's us know in advance, and the floor is yours 😊

With the festive season now in full swing, please keep in mind that the roads will have increased traffic, possibly adding to your travel time.

Make sure to stay patient in the traffic, have rest breaks as you need to, and be aware that double demerit points are now in effect until 7<sup>th</sup> January 2024.

To all members & visitors, along with your families, I wish you all a very Merry Christmas, and a safe & prosperous New Year.

Stay safe out on the tracks (and roads) everyone, and I look forward to seeing you all at the Trip Planning Meeting on Sunday 7<sup>th</sup> January 2024.

# BRISEY'S BULLDUST

The magazine is early this time as I will be a bit busy with our family holiday to Donnelly River holiday village near Manjimup. We have been taking the kids there every few years now for about 15 years and even though they are adults now with their own families everyone looks forward to it. This year is a first for us as we will have 4 generations going with confirmation our great grand daughter will be coming. It's a great spot being an old timber milling town, originally called Wheatly, where the accommodation comprises the original workers cottages and other buildings. There is a range of accommodation from cottages sleeping 4 to 12 people to the Loco Shed we will be staying in sleeping 26 people. All sorts of furry and feathered creatures wander around the village with many of them allowing to be hand fed feed that can be bought from the general store in the centre of town.

I was in Bunnings the other day and am starting to get a bit peeved about their dwindling range. It seems they are now starting to stock only things they want to sell not necessarily what we want to buy. They spent years forcing the competition out by undercutting with cheap Chinese crap now with no competition they are doing what they please. (I'm starting to sound like Rhy no so rant over). On the other hand I saw some cheap recovery boards at the Baldvis store.



Make sure you all stay safe on the roads, keep off the tracks during total fire bans and enjoy family and friends through the holiday season.

Merry Christmas from Julie and Me

# MEETING MURMURS



## GENERAL MEETING OF THE PEEL 4X4 CLUB

### General Meeting Minutes

Date: Wednesday 22<sup>nd</sup> November, 2023

Venue: Secret Harbour Surf Life Saving Club



Meeting start: 7.31pm

Confirmation of sign in. Pizza. Raffle. EFTPOS

#### 1. CONFIRMATION OF ATTENDEES

ATTENDEES & VISITORS per visitor record book.

APOLOGIES / PROXIES: Duane, Max, Winton, Knuddo, Rob and Rina, Mike and Mandy, Glenn

#### 2. CONFIRMATION OF MINUTES FROM PREVIOUS GENERAL MEETING – 25/10/2023

Minutes from October meeting have been accepted and signed by club President, Gary Mayes, with a copy at this meeting for members to read.

No objections as to the accuracy of the minutes.

Meeting Minutes unanimously accepted.

#### 3. BUSINESS FROM THE PREVIOUS MINUTES

- Nil

#### 4. TRIPS SINCE LAST MEETING

- Surf Club Carnival – Saturday 11<sup>th</sup> November – smaller carnival this time, with 3 trailers, attended by club visitors.
- Lancelin – Sunday 19<sup>th</sup> November. 10 cars attended

#### 5. PRESIDENTS REPORT: Gary Mayes

- Last meeting prior to Christmas, with Christmas break up at Birdies Golf Club in Port Kennedy on the 10<sup>th</sup> of December.
- President has requested members to lead a trip if they can. Also reminded members that there are plenty of people who may be available for reccy runs.

**Business for the President:**

Nil

#### 6. SECRETARYS REPORT: Donna Light

**Mail In:** Bank statement passed to treasurer.

**Business for the Secretary:**

Nil



## **GENERAL MEETING OF THE PEEL 4X4 CLUB**

### **General Meeting Minutes**

Date: Wednesday 22<sup>nd</sup> November, 2023

Venue: Secret Harbour Surf Life Saving Club



#### **7. TREASURERS REPORT: Cassie Mayes**

- No queries arised from the previous treasurers report.
- \$6911.01 balance in the bank.
- We now have snake bite kits for each trip bag, which have been reimbursed.
- Raffle prizes have been bought

#### **8. INSURANCE OFFICERS REPORT: Dave Knudsen (Apologies)**

##### **Business for the Insurance Officer:**

- Volunteers & personal accident insurance. Need to use medicare & private health first, then insurance will cover any out of pocket expenses.
- Volunteers not currently covered under insurance policy. May need to look at offering visitors a "Temporary Membership", which may need to be a charged a small fee. To be discussed further at next Committee Meeting.

#### **9. PROPERTY OFFICERS REPORT: Phillip Crewe**

- Nothing to report.

##### **Business for the Property Officer:**

- Nil

#### **10. ENVIRONMENTAL OFFICERS REPORT: Peter Light**

- Peter filled in those attending the meeting of what was happening in the Gin Gin shire, in regards to accessing the beach.

##### **Business for the Environmental Officer:**

- WA4WDA have been contacted by Mandurah Environment and Heritage Group, to see if they would like to be involved. Association thought it would be good for us to represent the association. They have some good activities. Could be good community involvement for the club. Gary Mayes will follow up.





## GENERAL MEETING OF THE PEEL 4X4 CLUB

### General Meeting Minutes

Date: Wednesday 22<sup>nd</sup> November, 2023

Venue: Secret Harbour Surf Life Saving Club



#### **11. DELEGATES REPORT**

- Liz Harding is now Vice President of National 4WD Association. Queensland looking to rejoin. NSW / ACT may be persuaded.
- Still after a WA4WDA PR Officer (ie, Webmaster) if anyone is interested.
- Four Wheel Drive Club of WA are looking to rejoin.
- Looking at getting Kaarakin back from February 2024. To be confirmed at January WA4WDA committee meeting.
- South West Australian Way. Quite a few enquiries. Can download co-ordinates from WA4WDA page. Coming popular after Graham Cahills 4WD24/7 YouTube video.
- Mark Skeels is looking to discuss with 4WD show organisers about having a tourism section at the next show. This will put the WA4WDA tents in with the likes of Ronny Dahl, Graham Cahill, etc...
- WA4WDA have been approved for \$20k of funding. Need to use up to end of financial year, then another \$20k allocated. Will develop guidelines. What do we want?
- Can be used for volunteer work, marketing (website), training, etc... Just need to recognise the DLGSC (Department of Local Government, Sport and Cultural Industries)

#### **12. MAGAZINE EDITORS REPORT: Brian Tanner**

- Last magazine for the year will be this next one. 7<sup>th</sup> January will be the next magazine in the New Year. Deadline for submissions will be New Years Day.
  - Brisey is looking for a trip report and photos for the Lancelin trip if anyone can do one please
- Business for the Magazine Editor:**
- A suggestion was made in regards to a magazine inclusion, being adding recommended restaurants / venues, which aims to support local business.

#### **13. WEBMASTERS REPORT: Cassie Mayes**

- Peel 4x4 are now on top of the google searches, and there is one contact email through the webpage.
- Webs domain was glitching, and not compatible, so a new domain was bought and has been reimbursed by the club.
- Discussion around fees to continue with the web page at upwards of \$400 per year, and perhaps applying for a grant for these fees. – this needs to be paid by January 2024.

**Business for the Webmaster:**

Nil



## **GENERAL MEETING OF THE PEEL 4X4 CLUB**

### **General Meeting Minutes**

Date: Wednesday 22<sup>nd</sup> November, 2023

Venue: Secret Harbour Surf Life Saving Club



#### **14. TRIP COORDINATORS REPORT: Steven Power & Julie Power**

- Christmas Party. Visitors \$15 per adult (18+). Children covered by the club. Children 12 & under receive a gift from the club. Please put names & children's ages on sheet. Anyone becoming a member before end of financial year will have this cost taken off membership.
- Whitegum Farm. Survey from WA4WDA discussed. Need minimum of 50 sites booked for exclusivity. Currently only 15 booked (we have 4 powered sites – 2x still available)
- Preston Beach fishing trip : Wednesday 27<sup>th</sup> December ( Whitehills road id closed until 7<sup>th</sup> January)
- 7<sup>th</sup> January - Trip planning meeting at PK Tavern.
- 14<sup>th</sup> January – Surf Club Carnival. 5.30am start, at Secret Harbour Surf Club
- 24<sup>th</sup> – 28<sup>th</sup> January – Australia Day trip.
- National gathering is the weekend before Anzac Day at Whitegum farm.
- Raffles and Pizza

#### **Business for the Trip Coordinator:**

Nil

#### **15. GENERAL BUSINESS:**

- Gary was asking for suggestions for the National gathering, which included Basic first aid, recovery, tech info, Ozi Expolorer, soft quiz night, bingo, etc, or no organised event.

#### **16. NEXT MEETINGS:**

**GENERAL MEETING** – Sunday 7<sup>th</sup> January 2024. Port Kennedy Tavern Function Room.

2pm until 4pm. Pizza will be provided for all.

**COMMITTEE MEETING** – Wednesday 13<sup>th</sup> December. Steve & Julie Power

**MEETING CLOSURE** 8.48pm

#### **TECHNICAL SEGMENT**

Joining two winch ropes together.

The minutes from this meeting have been verified as true & correct.

Gary Mayes

Peel 4x4 Club Chairperson

Date: 11/12/2023



## **COMMITTEE MEETING OF THE PEEL 4X4 CLUB**

Date: 13<sup>th</sup> December 2023

Venue: Hosted by Steve & Julie Power



### **1. CONFIRMATION OF ATTENDEES**

ATTENDEES & VISITORS – Gary Mayes (GM), Brian tanner, Dave Knudsen, Julie and Steve Power Peter and Donna Light, Phil Crewe

APOLOGIES / PROXIES – Cassie Mayes (CM)

### **2. CONFIRMATION OF MINUTES FROM PREVIOUS COMMITTEE MEETING – 11<sup>th</sup> October 2023**

Minutes from the previous Committee Meeting have been accepted & signed as accurate by the Chairperson – no objections from the Committee.

### **3. MATTERS ARISING FROM THE PREVIOUS COMMITTEE MINUTES**

- GM to update Trip Bag forms – completed.
- GM to order 3x Snake Bite Kits & liaise with Laura Murray – Snake Bite kits have been ordered and included in all trip kits. Message left with Laura Murray, awaiting a reply.
- CM to get costs & details for keeping the website going. Committee to make a decision next Committee Meeting. It was agreed that the best way to move forward was the recommendation from Cassie as she has put the research in and is moving forward with the best interests of the club.

### **4. PRESIDENTS REPORT:**

GM thanked the Committee members for their help so far this year. Explained there are 3 more committee meetings until the next Financial Year. Wished everyone a happy and safe Holiday Period. July is to be the next re – election for committee seats, and GM will update the position forms, etc for the next committee meeting.

**Business for the President:** To update position forms etc for the next committee meeting

### **5. SECRETARYS REPORT:**

**Mail In:** Bank statement that was forwarded to GM, and also the Agenda for the delegates meeting, which GM already had.

**Business for the Secretary:** Nil

**6. TREASURERS REPORT:** Club financials attached, with a closing bank balance of \$ 6320.98, after Christmas break up had been paid. Still a couple of re imbursments to come out, which will be reflected in the next treasurers report. – One childrens gift was donated to the K Mart wishing tree, as we had a no show to the Christmas party.

**Business for the Treasurer:** Nil





## **COMMITTEE MEETING OF THE PEEL 4X4 CLUB**

Date: 13<sup>th</sup> December 2023

Venue: Hosted by Steve & Julie Power



### **7. INSURANCE OFFICERS REPORT: Nil to report**

Recapped the information regarding visitors not being covered by the Association insurance, and talked about a small fee to be charged in order to fulfil associations requirements. GM to find out what other clubs are doing.

A few suggestions were as follows:

- A temporary membership of \$5 for the duration of the trip that is deducted if they decide to join the club.
- A gold coin fee for club trip that is deducted if they decide to join the club.
- A casual membership fee

There was also a suggestion that when we are on trips the trip leader should make it formal when the trip is finished for insurance purposes.

**Business for the Insurance Officer: Nil**

### **8. PROPERTY OFFICERS REPORT: Inventory has been completed and been sent to Brisey for submission to the magazine.**

Hand held radios have been tested and are in working order. Hand held radios will be taken on trips in case of a visitor or a club member needing to use one.

**Business for the Property Officer: Nil**

### **9. ENVIRONMENTAL OFFICERS REPORT: Submitted a list of free activities being run by the Mandurah environmental group for the club to have a look through at the next general meeting and see if there is anything we would like to be involved in.**

**Business for the Environmental Officer:** - to contact the Mandurah environmental group and see if they have any use for our services / 4wd's.

### **10. DELEGATES REPORT: Nothing further from the Delegate, until after the meeting on Monday.**

There was a suggestion that we may be able to combine roles in the next Committee elections, as there is a fear that positions may not get filled.

**Business for the Delegate: Nil**

### **11. MAGAZINE EDITORS REPORT:**

Received the updated property report and will publish in the next Magazine. Red book will be updated after the AGM. There will be no Magazine for December, but January's will out before the 2<sup>nd</sup> January. Deadline for the Magazine is 20<sup>th</sup> December.

Restaurant reviews section has seen a couple of suggestions already.

**Business for the Magazine Editor: Nil**





## **COMMITTEE MEETING OF THE PEEL 4X4 CLUB**

Date: 13<sup>th</sup> December 2023

Venue: Hosted by Steve & Julie Power



### **12. WEBMASTERS REPORT:**

There have been 50 flyers printed and approx.. half taken to the 4wd show. It was decided that we should keep the website, as we have been having more traffic since it has been updated. Cassie has found a relatively inexpensive way to roll the web site over and get a 2 year subscription for approx... \$300. Committee decided to let Cassie make the best decision for the club.

**Business for the Webmaster:** Nil

### **13. TRIP COORDINATORS REPORT:**

Preston Beach 27/12/23, with only 1 participant at the moment, so possibility that might not go ahead.

7/1/24 – Trip planning meeting 2pm until 4pm at PK tavern. Pizza will be provided.

14<sup>th</sup> Jan – Surf Club Carnival

24<sup>th</sup> – 28<sup>th</sup> Jan, Australia Day Trip – it was suggested that we should be aware of any total fire bans at this trip, as there is no 4wd ing permitted in the case of a total fire ban.

The Association's gathering at White Gum is the week before Anzac day this year, and Anzac day falls on a week day, so we are looking for something local as a club.

Brisey bought up the possibility of Hyden Progress Society wanting some help for one of our Anzac day trips. Brisey will forward the details to Knuddo for future trip planning .

**Business for the Trip Coordinator:** Nil

### **14. GENERAL BUSINESS:**

- How do we plan to manage insurance requirements for Visitors? GM to find out how other clubs manage this at the next Association meeting
- Pizza. Do we continue this into the New Year? – This was decided to be ongoing.
- Discussion around a gift for Winton, as he is going to be in hospital over Christmas. Dave Knudsen will be organising a small gift from the club and taking it up to him.
- Also a suggestion that we may need to think about how to get some more members in the club as we are ageing and looking to take longer holidays. – Discussion around flyers, social media posts, and being involved in the Mandurah Christmas Pageant next year.
- GM suggested we get involved in the 4wd and camping shows, and have someone man an info table. Also perhaps flyers at BCF etc.
- Suggestion of flyers to be placed on notice boards at local shopping centres to help encourage new members.



**COMMITTEE MEETING OF THE PEEL 4X4 CLUB**

Date: 13<sup>th</sup> December 2023

Venue: Hosted by Steve & Julie Power



**15. NEXT MEETINGS:**

**GENERAL MEETING** – Sunday 7<sup>th</sup> January 2024 @ Port Kennedy Tavern Function Room.

2pm until 4pm. Pizza will be provided for all.

**COMMITTEE MEETING** – Wednesday 14<sup>th</sup> February 2024. Location: Peter and Donna's place.

**16. MEETING CLOSURE 8.28pm.**

The minutes from this meeting have been verified as true & correct.

Gary Mayes

Peel 4x4 Club Chairperson

A handwritten signature in black ink, appearing to read 'Gary Mayes'.

Date: 21/12/2023



★HAPPY★  
BIRTHDAY!

*To any Club Members or their  
family having a birthday in  
February*





# ENLIGHTENING ELUCIDATIONS

From Pat Callinan Mr 4x4

## **ADVICE**

### **Calculating how much solar you actually need: A Guide**

In this guide, we'll run through how to work out exactly how much solar you'll need to be self-sufficient in the power department in your 4X4



If you've seen any of my 12-volt guides over the years, you would have read that there is no such thing as too much solar. That said, I understand that for many of us, roof space and money to spend on solar gear is pretty tight these days, so I thought I'd walk through a couple of examples that lay out exactly how much solar you need for a given application. Now be warned, there will be maths involved here, and everyone's setup and requirements will be different – that's to say the examples we'll work with may be close, but probably won't be exactly the same as what you have or need. Hopefully, this guide will give you a solid grasp of how to work it out so you're heading in the right direction



## **A few constants**

With varying battery technologies and varying qualities of solar panels on the market, we'll use a couple of constants in this article which will help to keep things simple. You may need to increase or lower your own information to suit your own setup, but this will get you moving in the right direction.



**Battery:** For the battery, we'll work on the idea that you've got a single 100Ah Lead Acid (AGM/Gel) deep cycle battery, which allows (about) 50Ah of usable power. Alternatively, a 50Ah lithium battery, with the entire 50Ah usable. Regardless of which you use, the numbers will be the same. If you've got a 100Ah Lithium or a 200Ah battery bank of lead-acid batteries, just double the battery capacity.

**Solar Panels:** For the incoming power, we'll work on the idea that you've not bought eBay brand '100 million giga-watt' panels. Instead, we'll say you've bought decent panels, that have an accurate power rating on them. To help you work out how many watts your panel is actually rated to (and for a bit of trivia), we know that a decent quality panel will be around 18 per cent efficient. We also know that 1 square meter of sunlight (directly overhead) will produce 1000 watts of power. So 180 meter of panel is Get the measur- you'll be able to els are accurate- mind that these with perfect no clouds, mist,

watts per square about spot on. ing tape out and see if your pan- ly rated. Bear in numbers are overhead sun – haze or trees



**Solar Panel watt to amp ratings:** Depending on the panel you choose, different panels will put out different watt and amp ratings. To keep this guide simple, we'll work on the belief that the panels we're using are high quality as above, and offer a 12-volt wattage output – so a 120W panel will output 10amps, and so on.

**Solar Controller:** We're going to ignore this, as most people have a DC-DC Charger (like my Redarc BCDC1240D) with an inbuilt solar controller. Further, to keep it simple, it's just not worth going into MPPT vs. PWM, and the difference it will make; the guide should be able to be used without needing to worry about this too much.

**Power consumers:** This is where it gets fuzzy. Depending on what you're doing and using will depend on how you work this one out. So, with that in mind, let's say we're using my ARB Elements fridge, set to -2°C. At that temp, on your average 30-degree day, we know it'll run at about 50 per cent duty cycle (which means the compressor, on average, will be running 50 per cent of the time to maintain that temp – a little more during the day, and a little less during the night). So we know the fridge will draw around 4-amps when it's cycling and next to nothing when it's not (it just needs to run the display. With this in mind, we know that a 4amp/hour fridge running (cycling) 50 per cent of the time will use 2 amps per hour.

**The short version:**

**Battery bank:** 50Ah (usable)

**Solar panel:** Accurately rated decent quality panels.

**Solar controller:** Will send to battery what the panels generate.

**Consumers:** Fridge – 2 amps per hour. LED strip light 2-metres total, uses 2.5 amps per hour. Phone/tablet charger – 2 amps per hour.

**The equations**

Volts x Amps = Watts

Say, for example, you have a 12v system and you need to replace 75Ah of charge back into your batteries each day. You have 6 hours of sunlight each day. You will need:

$12V \times 75Ah = 900Wh$

$900Wh/6h = 150W$  of solar panels

The examples:

**Example 1** – A fridge, a battery and a solar panel.

To keep it simple, let's work on a simple setup of a fridge, a battery and a solar panel.

**Battery:** 50Ah usable (100Ah lead-acid AGM)

**Consumers:** 12-volt fridge, drawing on average 2 amps/hour

**Solar panel:** 120-watt quality panel.

Over a 24-hour period, the fridge will use 48Ah, which will flatten our battery (we're assuming you've just driven to camp and your auxiliary battery is properly charged to full). Our 120-watt panel will put in a little under 10 amps/hour (while in full direct sun). On average, in the warmer months (read: longer days) we'll get 4 hours of solid sun, and another 4 at around 50 per cent power. So call it 6 hours total of good solid charging sunlight.

So long as we're just using our fridge, every day, that little 120-watt panel should be enough to keep our batteries charged indefinitely. If we have an overcast day we'll run into problems, or shade, or a bunch of other reasons, but that should sort us out.

The only hassle is that we don't just run fridges. We run lights and chargers and stereos and a bunch of other little things that all add up. So always try to go above what you work out you actually need.



**Example 2** – Wes' HiLux.

Let's use my HiLux as an example, which will be a little different to the constants we spoke about before, but stick with me.

**Batteries:** 100Ah usable (Baintech 100Ah slim-line lithium).

**Consumers:** ARB Elements Fridge @ 2 amps/hour, LED Strip light – 2 metres of it @ 2.5 amps/hour, phone charger @ 2 amps/hour, laptop charger 75W @ 240V gives 3.2 amps/hour, camera battery charger 1.5 amps/hour.

**Solar panels:** 320-watt fixed panels on my canopy (2 x 160W panels).

First things first, let's add up my usage over a 24-hour period:

Fridge:  $2A \times 24h = 48Ah$

LED Strip Light:  $2.5A \times 4h = 10Ah$

Phone/Tablet charger:  $2A \times 4h = 8Ah$

Laptop charger:  $3.2A \times 1h = 3.2Ah$

Camera charger:  $1.5A \times 2h = 3Ah$

Total usage over 24 hours: 72.2Ah



### How much power are the solar panels returning?

320-watts at 12-volts gives us 26.6 amps per hour of power. Working on the idea that we get 6 hours of sunlight per day, I should be able to return around 159.6 Ah to my battery, which should keep it fully charged, indefinitely.

Is that overkill though? Well, maybe a little, but not really. If I have a slightly cloudy day I may be down to just 3 hours of solid sunlight, which just covers my usage. Or, if I run my Travel Buddy pie oven, that munches 10 amps an hour (and a roast takes about four hours, right?). Or I may spend the day on the computer writing articles about 12-volt systems for you amazing folks, and use more there. There are many, many variables that you need to take into account; thus the old adage, you can never have too much solar!

Hopefully, this will let you work out for yourself exactly how much solar you need, but always try to be over that number by about 20 per cent or more. Free energy is possibly the greatest thing in the world, and we should all be making the most of it.

Just as a final thought, the legends over at Redarc have a calculator that'll help you work all this out too; head over to <https://www.redarcelectronics.com/au/resources/solar/> t have a look.



## EQUIPMENT

# How to: Regular winch maintenance



Now is a great time to perform some regular winch maintenance to save it from a premature end. With a fair bit of rain about lately it's a good time to sit down and talk about winch maintenance. We're not talking about a full rebuild but a bit of quick maintenance that you should perform every couple of months, especially after a solid bit of rain or if you've done a few creek crossings, or right before a big trip. We'll look at a more thorough strip-down winch service down the track, one that you'll want to do every couple of years, but this is what you need to be doing every other month to keep your winch in tip-top shape.

Simply put, your winch is an electromechanical device that for a lot of folks just sits bolted to the front of their four-wheel drive without a second thought, until it's needed. Chances are, that moment you are up the creek without a paddle or a boat, and you reach for the winch controller, it will let you down.

We need to think of a winch like our four-wheel drives. If you go overseas for months on end, chances are you'll have someone come and start your 4X4, run it around the block, just to re-charge the battery and get the oil moving around the engine, right? The same needs to be done to your winch. The electric motor on the front can and will take in water and moisture (whether from rain, creek crossings or it being humid over the warmer months). That moisture can lead to corrosion rather quickly if not taken care of.

Depending on the brand of winch you've got, your manual may say anything from 'perform winch maintenance every month' to 'the winch is completely sealed and never needs to be maintained'. One of these is right and one is wrong. Case in point, some of the most trusted and most expensive winches in the world absolutely suggest you perform maintenance on them at least bi-monthly.



WARN MAGNUM 12-S I PICKED UP FOR A STEEL AS IT DIDN'T WORK THE FIRST TIME THE BLOKE WENT TO USE IT.





HERE YOU'LL SEE THE COMMUTATOR AND BRUSHES ASSEMBLY, LOOKING MORE CORRODED THAN THEY SHOULD.



RUNNING THE WINCH OUT AT LEAST EVERY OTHER MONTH WILL GET IT NICE AND WARM, AND KEEP IT RUNNING RIGHT



MY INITIAL THOUGHTS ON THE WINCH WERE THAT IT WAS TERMINAL!



HOWEVER, ALL THE BEARINGS AND WORKINGS WERE IN GOOD NICK



THE COMMUTATOR AND BRUSHES NEEDED A GOOD CLEAN UP.





AND I NEEDED TO FIND SOME REPLACEMENT SPRINGS THAT HAD DIED FROM CORROSION.

#### How to perform winch maintenance

Most of the maintenance you want to perform on your winch involves just checking things are how they should be, whereas some of it involves a bit of time and a tree. So let's get into it. First off, you'll want to have a look at your battery terminals where you've connected the winch. Ensure they're tight and free of corrosion. Then you should follow the main power cables to the control box, ensuring that they are not contacting or rubbing on any part of the body or chassis, and that they are well secured. From there, you'll want to ensure that the cables from the control box to the winch motor casing are also clean, corrosion-free and remain tightly connected to the terminals on the winch housing. From there you'll want to engage and disengage the clutch on the gearbox end of the winch, ensuring that it engages and disengages freely and smoothly. Now that we've got the inspection part out of the way, we need to go and run it out and back in again; this is where we need a tree.

Start off by connecting up a tree-trunk protector to a tree, and attaching your winch rope to the protector. The protector isn't absolutely critical as we're not putting too much tension on the rope and tree, but if you've got one on hand, use it. From there, you can either disengage the clutch and slowly reverse your 4X4 back from the tree, letting the rope unspool itself, or leave the clutch engaged, and feed the rope out with the motor.

Once you've unspooled the rope, down to about the last five turns around the drum (usually signified by a change in colour of the rope or wire) re-engage the clutch, and start to spool the rope back on using the winch to pull it back in. What is important here is to do this with tension on the cable/rope. You can do this by either spooling off the rope down a hill, and using gravity to add the tension as you winch back in, or you can lightly nurse the brake or pull the handbrake up a touch to add tension. This achieves two things: first, it will spool your rope on nice and tight, so when you do need to use the winch in anger the rope won't be able to bind or pull through lower levels of rope on the drum and get hung up. The other thing it does is it generates a fair bit of heat which will remove any moisture or water in the motor and winch, and it also lubricates everything in the winch as the drum, gearbox, motor and bearings/bushes turn.

#### What about my new winch?

It's pretty critical that you do some winch maintenance on your brand spanking new winch too. This is for a few good reasons; firstly, the rope and wire on the drum is put there at the factory, and it's done so it looks neat and tidy, but under no tension. So if you go to use it in anger before it's been rewound on under load, you've got a good chance of pulling the top layer of rope down through the lower looser layers and binding up your rope, and also damaging it. The second reason is that you get an understanding of where everything is located, including the control box, hand controller socket, wiring and clutch. You get to put eyes over them, make sure everything is nice and tight and hasn't been mucked up when it was installed, and that everything works as it

should. Plus it's better to have already worked this stuff out when you're sitting on a bit of solid ground than when you're up to your diffs in mud and muck with slop leaking through your door seals.

Hopefully this has given you a bit of an idea on how to go about regular winch maintenance... and make sure you do it every couple of months. A final thought from us is that if you don't do any maintenance, and your winch motor seizes or corrodes beyond repair, you won't get any warranty on it, so your brand spanking 12-month old winch could be a thousand dollar paperweight if you don't look after it!



AND NOW, AFTER GIVING THE WINCH A QUICK REBUILD, I HAVE A FULLY FUNCTIONING WARN WINCH I PICKED UP FOR A STEAL, FROM A BLOKE WHO JUST DIDN'T KNOW HE NEEDED TO SERVICE HIS WINCH.



From Pat Callinan Mr 4x4

## These easy protein pancakes will keep you going all day

JESSICA PALMER

FEBRUARY 14, 2023

Back in season 14 in the '[Casino Loop](#)' episode, Pat showed us how to make his no-flour, gluten-free protein pancakes. After a particularly long day on the tracks where he moved more dirt and rocks than a Kalgoorlie miner, this was a fitting recipe to wake up and start the next day with a big punch of protein.

Pat reckons these protein pancakes will keep you going all day and we think you're gonna love 'em!



### What you'll need to make Pat's protein pancakes

- 3 x eggs
- 2 x ripe bananas
- 1 x tablespoon of peanut butter

#### Optional ingredients for the topping

- Ice-cream
- Dollop cream
- Berries
- Honey
-



## How to make these easy protein pancakes

### **Start with the eggs**

Crack your eggs into a mixing bowl and whisk up a little bit with a fork. There is no need to get fancy with an electric mixer...we are camping after all.

### **Add in the bananas and peanut butter**

Peel your bananas, break them up into small chunks and add them to your egg mixture. Next, grab your peanut butter and using a tablespoon, scoop a dollop into your egg and banana mixture.

### **Mix it all up**

Using the back end of your fork, squish the bananas and peanut butter into the egg mixture. Keep going until you get a batter-like consistency. Wanna know a great tip? Using bananas that are bordering on over-ripe status makes the mashing and mixing process a lot easier.



You're done! See, we told you they were easy. You can eat these protein pancakes as they are, or add some optional extras to make them even tastier. Pat added ice-cream, dollop cream, berries and a drizzle of honey on top.



# EATERY EVALUATION

This new section is for our members reviews of cafes, restaurants and other food establishments. If you have had a great meal somewhere send the details so we can build up a database of good fooderies. Likewise if you had an unpleasant experience let us know so we can avoid the place. I will copy and paste your comments once on this page and enter the details in the spreadsheets below

From Mark Skeels

Best restaurant...ha ha...I'm a brewery boy...here goes a local that is right up there in my best of list...I could also add Boston Brewery in Denmark (where I will be enjoying a meal and drink next week) and then there's Gage Roads in A Shed and Kakka Alley in Jurien Bay and Long Neck near the Causeway and Running With Thieves at South Beach and...well there's a lot more I have visited...this could have people thinking I'm an alcoholic but I seem to find the ambience of a brewery establishment more to my liking than any restaurant.

<https://kingroadbrewery.com/> I have attached the summer menu.

From Brisey

The Lakeside Deli Mandurah Road south of Safety Bay Road (opposite Pike Road). We have had ham and salad rolls here a few times now but have just had their Works Burger the other day and I have to say it is one of the best I have had, tasting just like I remember from my younger days.

Suggested by	Recommended Venues	Meal detail
Mark Skeels	King Road Brewery Boston Brewery in Denmark Gage Roads in A Shed Kakka Alley in Jurien Bay Long Neck near the Causeway Running With Thieves at South Beach	<a href="https://kingroadbrewery.com/">https://kingroadbrewery.com/</a>
Brisey	Lakeside Deli Mandurah Road	Ham and salad rolls Works Burgers

Suggested by	Disappointing Venues	Meal detail



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# TRIPPING OUT

Lancelin

## LANCELIN TRIP – NOV 2023

The day started off with a meeting of approx half the 4x4s at the BP Northbound at Baldivis and set off weaving our way through the Freeway traffic to the second meeting spot at the Ampol Foodary - North Wanneroo, where we met the other half of the group.

We headed off to the Ledge Point turn off, where we met Pete and Donna (who were staying in Lancelin for the weekend).

The start of the tracks was from Ledge Point where we aired down on the Old Ledge Point Rd, we headed off and turned towards the coast with a couple of small challenging dune hills to go over, at the coastal track we turned towards north. We came across a sand dune area with a few Emu's running around and with a large dune bowl, at the top of the dune bowl, Trip Leader Nuddo showed everyone how to go down the dune, we started off with an easy decent first to gain confidence which many enjoyed. Not sure if I need to mention it but pretty sure I saw a white Jeep stuck/bogged at the top of the dune but he seem to unstuck himself easily.

Then Trip Leader Nuddo went to a steeper / longer drop off on the dune bowl and descended down, those who were keen (which was majority of the group) Trip Leader Nuddo helped with instructions on the two-way to drive down the steep section. It was a good challenge, and for some who stepped outside their comfort zone with a few screams on the way down.

After a bit of a play, we headed for Lancelin and stopped on the beach at the Point for lunch.

The kids played in the sheltered waters with a backdrop of Edwards Island.

After lunch we headed to the Lancelin Dunes and had a little play on the dunes, Trip Leader Nuddo lead up a dune and stopped at a knife edge point of a dune. Nuddo and daughter Ashley hopped out to check and the now howling sea breeze had blown Ashleys hat off (Nuddo's PEEL 4X4 HAT). We then reversed off the dune and the group headed around searching for it.

We stopped at a small dune area where we did some sandboarding.

Whilst others were sandboarding, Karl spotted the lost PEEL 4X4 hat on the dune so Ashley and Nuddo climbed up the dune to retrieve it. Karl is my hero.

It was good to have along visitors Tom and Leeanne and a great day with the club members.

Thanks to all for a great day.

Nuddo

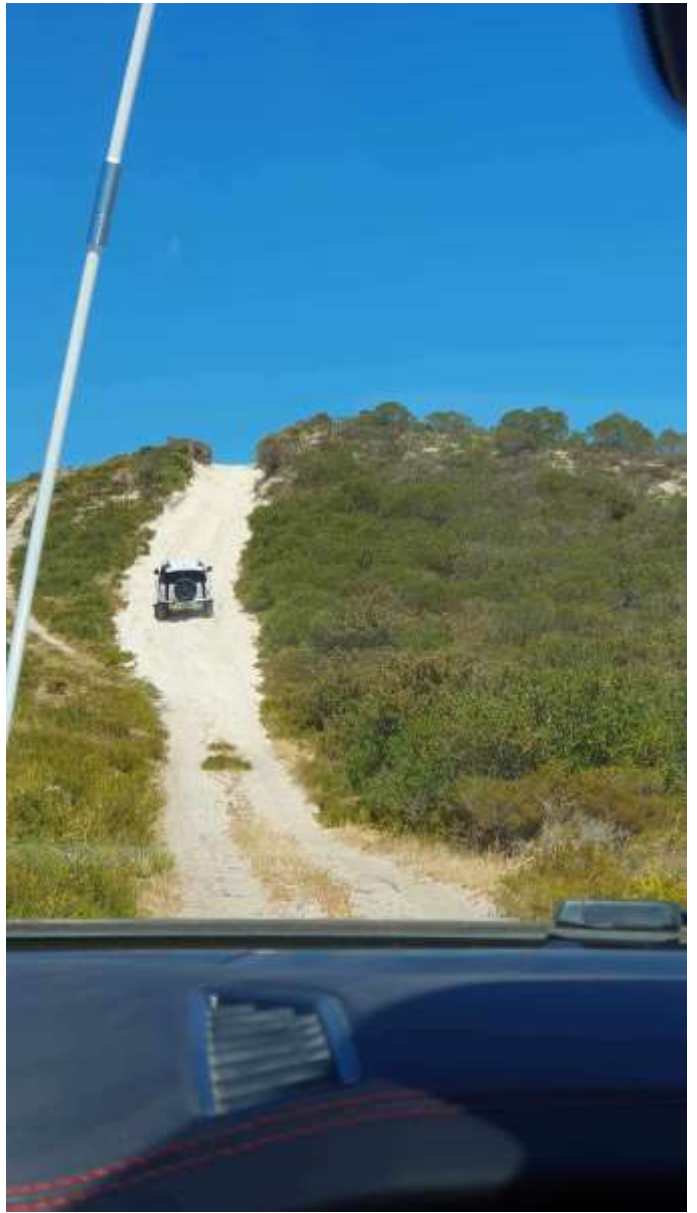








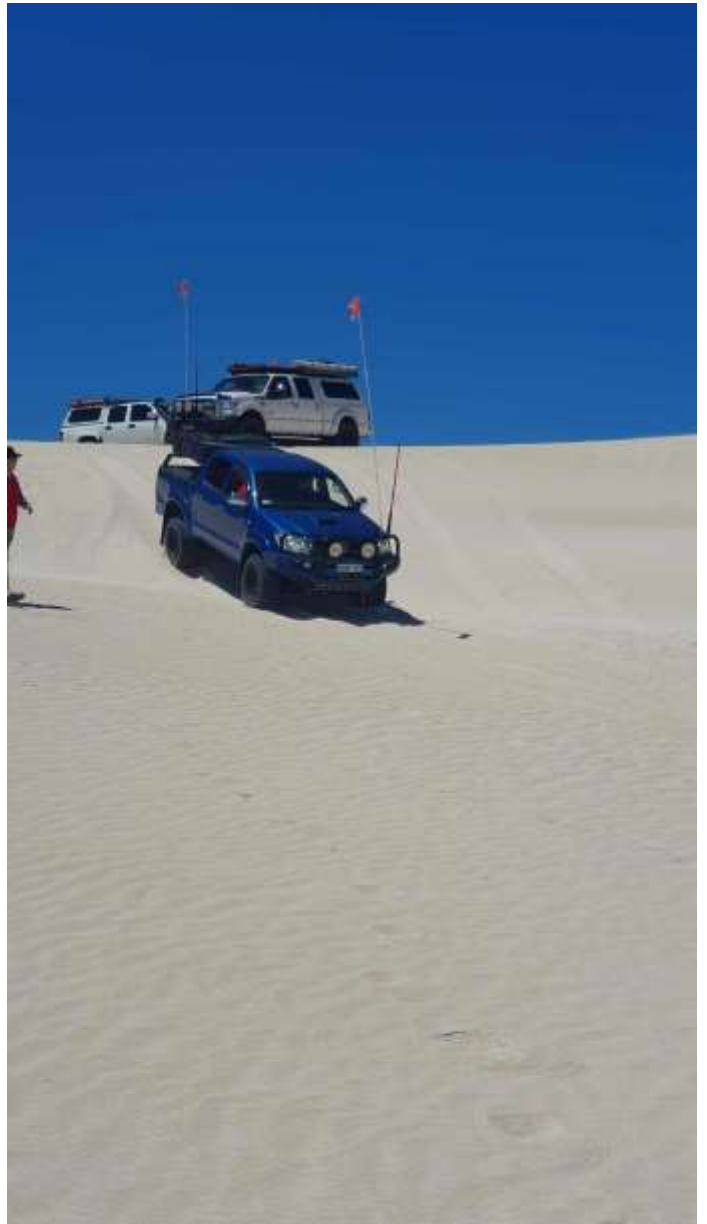


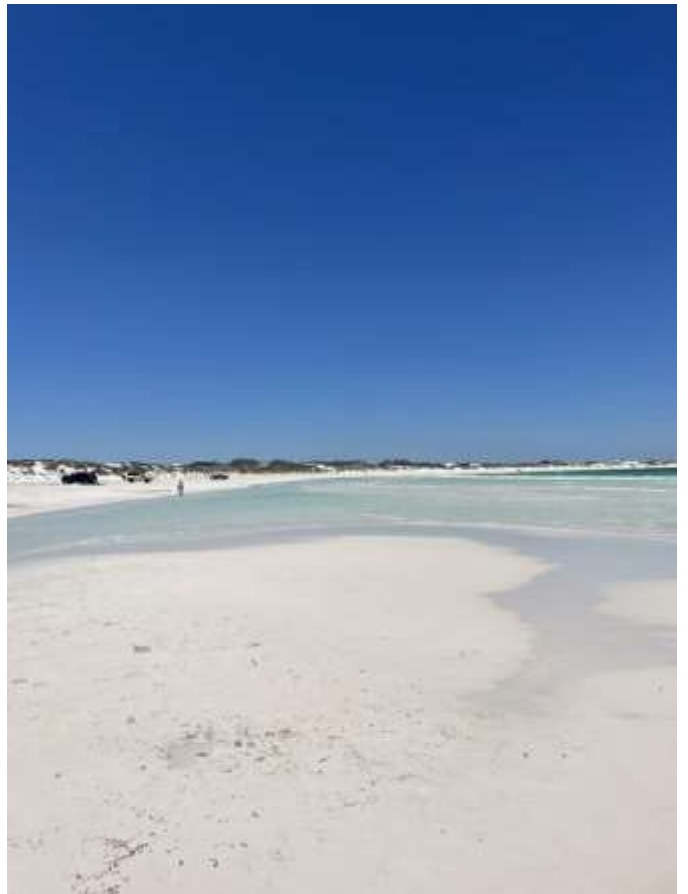














































## Know before you go with Main Roads Travel Map.

**PLAN YOUR TRIP TO AVOID DELAYS.**

Travel map contains live, up to date information on road conditions, closures and other incidents that may impact road use. Main Roads provides this information through its wide network of information sources and local reports to provide the most accurate and informative data possible.



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WESTERN AUSTRALIA

2024 SCHOOL TERM DATES

WA

Semester 1

Term 1      Wed 31 January – Thurs 28 March

**Break      Fri 29 March – Sun 14 April**

Term 2      Mon 15 April – Fri 28 June

**Break      Sat 29 June – Sun 14 July**

Semester 2

Term 3      Mon 15 July – Fri 20 September

**Break      Sat 21 September – Sun 6 October**

Term 4      Mon 7 October – Thu 12 December

NT

2024

^

Term	Start	Finish
Term 1	Tuesday 30 January • for teachers, Monday 29 January	Friday 5 April
Term 2	Monday 15 April	Friday 21 June
Term 3	Tuesday 16 July • for teachers, Monday 15 July	Friday 20 September
Term 4	Monday 7 October	Friday 13 December

Gunbalanya School operate on a flexible school year and separate consultation occurs to determine school term dates.

SA

2024	29 January to 12 April	29 April to 5 July	22 July to 27 September	14 October to 13 December
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**01 23-25 FEB**  
**BATHURST 500**  
 MOUNT PANORAMA, NSW

**02 21-24 MAR**  
**MELBOURNE SUPERSPRINT**  
 FORMULA 1® ROLEX AUSTRALIAN GRAND PRIX  
 ALBERT PARK, VIC

**03 19-21 APR**  
**ITM TAUPŌ SUPER400**  
 TAUPŌ INTERNATIONAL MOTORSPORT PARK, NZ

**04 17-19 MAY**  
**PERTH SUPERSPRINT**  
 CARCO.COM.AU RACEWAY, NEERABUP, WA

**05 14-16 JUN**  
**BETR DARWIN TRIPLE CROWN**  
 HIDDEN VALLEY RACEWAY, NT

**06 5-7 JUL**  
**NTI TOWNSVILLE 500**  
 RED PARK STREET CIRCUIT, QLD

**07 19-21 JUL**  
**BEAUREPAIRES SYDNEY SUPERNIGHT**  
 SYDNEY MOTORSPORT PARK, NSW

**08 16-18 AUG**  
**NED WHISKY TASMANIA SUPERSPRINT**  
 SYMMONS PLAINS RACEWAY, TAS

**09 20-22 SEP**  
**PENRITE OIL SANDOWN 500**  
 SANDOWN RACEWAY, VIC

**10 10-13 OCT**  
**REPCO BATHURST 1000**  
 MOUNT PANORAMA, NSW

**11 25-27 OCT**  
**BOOST MOBILE GOLD COAST 500**  
 SURFERS PARADISE STREET CIRCUIT, QLD

**12 14-17 NOV**  
**VAILO ADELAIDE 500**  
 ADELAIDE STREET CIRCUIT, SA

Event formats and dates are subject to change. Correct at the time of release 11/1/23.  
 Go to Supercars.com for the latest version.

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MAR 21, 2024 AT 7 AM – MAR 24, 2024 AT 3 PM UTC+08

**Perth Caravan & Camping Show 2024 (Official Event)**

Claremont Showground



# TRIP CALENDAR

Trip Name	Preston Beach overnight fishing	
Date	27 <sup>th</sup> December	
Trip Leader	Steve Power	
Trip Rating		
Trip Name	Trip Planning Meeting	
Date	7 <sup>th</sup> January 2024	
Trip Leader		
Trip Rating	Hard as	
Trip Name	Surf Carnival	
Date	14 <sup>th</sup> January	
Trip Leader		
Trip Rating	Medium	
Trip Name	AGM	
Date	27 <sup>th</sup> July 2024	
Trip Leader		
Trip Rating	Extreme	
Trip Name		
Date		
Trip Leader		
Trip Rating		
Trip Name		
Date		
Trip Leader		
Trip Rating		
Trip Name		
Date		
Trip Leader		
Trip Rating		
Trip Name		
Date		
Trip Leader		
Trip Rating		