



AUGUST 2025

NEXT TRIPS

Nuddo's Famous Mystery Trip
Dowerin Field Day
Whitegum Farm
Westonia Wildflowers



Aids to Survival
Testing Fuses
Water Crossings
4WD VERSUS AWD
Camping Stove / BBQ Recipes
AGM Photos
Kennedy Ranges & Mt Augustus Photos

Next Meeting
AUGUST 27/8/25

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CLUB CONTACT DETAILS

POST OFFICE BOX 8233

WARNBRO WA 6169

<https://peel4x4club.com>Club Email: peel4x4club@hotmail.comSecretary: secretarypeel4x4club@outlook.comTreasurer: peel4x4.treasurer@gmail.comMagazine Email: peel4x4magazine@gmail.com

2025—2026 COMMITTEE

President Aaron Crane

Vice President Julie Power

Secretary Gary Mayes

Treasurer Dave Knudsen

Insurance Officer Julie Power

Environmental Officer Duane Buckenara

Trip Coordinator Steven Power

Magazine Editor Brian Tanner

Property Officer Jacob Yardley

Delegate Ray and Sharron Warry

Webmaster Gary Mayes

NEXT GENERAL MEETING

27/8/2025

GENERAL MEETING VENUE

Secret Harbour Surf Lifesaving Club
(Downstairs)

Doors open 7.00 pm

Meeting starts 7.30 pm

NEXT COMMITTEE MEETING

8/10/2025

COMMITTEE MEETING VENUE

Gary's place

Membership Fees \$140.00 for the first year then \$90.00 per annum. Pro rata fees will be charged depending on your joining date.



Tow with Confidence

Find us on

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




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



PEEL 4X4 CLUB TRIP RATINGS



SCENIC / SOCIAL: *Sealed roads & some good unsealed roads or tracks.*

Road tyres are acceptable.

No 4WD experience required.

EASY: *Unsealed roads or tracks. Expect some corrugations.*

Road tyres are acceptable. Little or no 4WD experience required.

Front & rear recovery points at the Trip Leaders discretion.

MEDIUM: *Off road tracks, with some obstacles expected (rocks, ruts, mud, etc...).*

All Terrain tyres are preferred.

Low range may be required, with a snatch strap recovery possible.

Front & rear recovery points are required, along with basic recovery gear.

Tracks may be a little bit scratchy.

HARD: *Steep terrain and / or rutted tracks.*

All terrain tyres are acceptable; however mud tyres are preferred. Road tyres are not acceptable.

Snatch strap and / or winch recovery may be required.

Front & rear recovery points are required, along with basic recovery gear.

A winch & full recovery gear is preferred.

Some scratches to panel should be expected.

EXTREME: *Very steep, deeply rutted tracks or rock hopping will be encountered.*

Mud terrain tyres are essential, with appropriate driver training preferred.

Adequate front & rear recovery points, and full recovery gear required.

Winching will be expected, and a winch is compulsory on all vehicles.

Expect scratches to body work, along with panel damage.

Basic Recovery Gear: Snatch strap, 2x rated shackles, and gloves.

Full Recovery Gear: Snatch strap, rated shackles & gloves, tree trunk protector, winch extension.

PLEASE NOTE

Whilst every attempt will be made to accurately describe & classify all trips, weather & other conditions can alter a trip significantly.

The Trip Leader may alter the trip classification at any time, depending on the prevailing weather conditions.

Please confirm your attendance by contacting the Trip Leader a few days prior to the trip. This also gives them the opportunity to advise you of any last minute changes.

Vehicles without adequate front & rear recovery points are limited to Social / Scenic & Easy rated trips.

Visitors are always welcome on Scenic / Social, Easy & Medium rated trips.



CONVOY PROCEDURES

1. Trip leader is to call a group meeting prior to start and remind members of convoy procedure.
2. Leader is to appoint a tail end Charlie and safety officer for each trip.
3. Observe road rules at all times.
4. Leader to appoint a trip reporter.
5. All drivers are responsible for their passengers at all times.
6. All vehicles are responsible for the following vehicle when turning off the road and at cross roads.
7. Vehicles leaving convoy for any reason wave on the remainder of the convoy and inform the Tail End Charlie of their intentions.
8. Keep a safe distance behind the vehicle in front of you. Drive within braking distance especially when wet.
9. When off road allow the vehicle in front of you to get over the crest of a hill before you attempt to follow. Wait for the all clear.
10. No vehicle is to pass the trip leader unless directed or in an emergency.
11. Drive with headlights on at all times. Daylight run lamps are not sufficient as tail lights are required to be on to aid visibility
12. All cars to maintain position/order in convoy at all times.
13. Collect magnetic numbers at designated point of dispersal.

TAIL END CHARLIE RESPONSIBILITIES

1. Assists trip leader with convoy as directed.
2. Advises when -
 - Convoy is mobile
 - Change in direction is completed
 - Member leaves convoy
3. Stays with a vehicle that may leave the convoy for a short stop. Advises trip leader when mobile again.
4. Closes gates etc if advised by trip leader.
5. Ensures cleanliness of area at all stops before leaving.



TIPS TO BECOMING A TRIP LEADER

1. **A Trip:** If there is somewhere you would like to go and would also like to drag the club along with you, why not approach the trip coordinator or another club member and discuss your ideas. Failing that, choose a trip from the club's varied range of notes and maps available.
2. **What Experience Must I Have?** This depends largely on the grade of trip (scenic/ social, easy. Medium, hard, extreme) and area you wish to conduct you trip in. As a rule of thumb, if you, the trip leader feel confident in your abilities, yet realize your limitations, you're in.
3. **Should I Have An Assistant?** YES. An assistant is invaluable in helping to bridge the gaps in your experience and to help balance the decision making, someone who is experienced in 4WD is a good choice. They would normally fill the position of tail end Charlie, providing backup from the rear.
4. **How To Plan A Smooth Trip:** Your trip will only run as smoothly as you plan it. Your pre trip briefing should include convoy procedures, identify tail end Charlie, safety officer, allocation of magnetic numbers, give brief description of what the group may encounter, (the element of surprise doesn't enhance the element of a good trip) and any safety tips eg use of flag.
5. **Flexibility:** At some stage during your trip, things may go wrong such as running behind time, countless recoveries, trapped or lost. Don't despair, things are never as bad as they seem. Don't be afraid to come forward and consult with the group as they are in it just as much as what you are. Pool your ideas and something always comes of it. Flexibility is the key, never be afraid to change your plan.
6. **How To Get Started:** Formulate your intention on paper - where you want to go, time and date and any special features of land marks you wish to include. See the trip coordinator who can help out with maps and advice or give you the name of someone who has been there before. You may also need to contact relevant authorities', eg DBCA, caravan parks, road conditions and property owners for further information. The trip coordinator will place your trip on the calendar and organize a sheet to go out at the meeting.
7. **What's The Hardest Task?** Giving It A Go!!: con, bribe, coerce or draw straws to pick some unfortunate soul to write up a trip report for the magazine (definitely the hardest part). So when you reflect back on your trip your hearsay adventures and yourself, umpteen grueling hours up to your neck in mud and leeches, grueling hours of gut wrenching recoveries and those dribble sessions around a campfire. A trip report ending in the words, "Good time had by all" is well worth giving trip leader a go.

NOTE - If you have ever been a trip leader, you will know how frustrating it is when people put their name on the trip sheet then don't turn up! If you put your name down to go on a trip make note of it and if you are unable to attend for any reason (or no reason at all) let the trip leader know so they are not waiting for you. Be punctual too as you being late can cause frustration when we have to meet up with other people along the way or set tour times! If you are running late phone the trip leader.



CLUB FEES ARE NOW OVERDUE

**IF YOU HAVE NOT PAID YOUR FEES YET PLEASE PAY BY
THE AUGUST GENERAL MEETING WEDNESDAY 27TH
AUGUST**

**IF YOU ARE NOT PLANNING ON RENEWING YOUR
MEMBERSHIP PLEASE EMAIL THE SECRETARY**

secretarypeel4x4club@outlook.com





WA 4WD ASSOCIATION (Inc.)

322 Mills Road East,
Martin.
W.A. 6110
Tel: 0407 011 552
Web: www.wa4wda.com.au

A.B.N. 59 998 250 705

TAX INVOICE

1st July 2025

Peel 4x4 Club

C/- Email:

cassgazz@bigpond.com;

secretarypeel4x4club@outlook.com

Dear Secretary,

Reference: WA4WDA - Membership Fee's - 1st July 2025 to 30th June 2026

Your membership at 30th June 2025 34 @ \$17.00 \$578.00

GST not applicable

Total amount payable by 31st August 2025

\$578.00

as per the Constitution of the WA4WD Association

Please insert number of members and make payment. A receipt will be provided on request.

The above fee includes affiliation to the National (ANFWDC) and State (WA4WDA) Association's including the National 4WD Insurance Scheme.

Payment of this invoice by electronic bank transfer would be appreciated.

Banking Details:

BSB: 633-000

Account: 205 453 855

Reference: "Club Name"

If you have any queries, don't hesitate to contact me.

Regards,

Robert Baker

Treasurer WA4WDA

treasurer@wa4wda.com.au

CLUB SHIRTS



PILBARA COTTON SHIRT

**AVAILABLE IN
FULL & HALF BUTTON
LONG & SHORT SLEEVE**

\$55 ALL STYLES



RAZOR POLO

**AVAILABLE IN
MENS, LADIES
& KIDS SIZING**

**ADULTS \$40
KIDS \$35**

**ALL PRICES INCLUDE
EMBROIDERY OF CLUB
LOGO**

**NAMES OPTIONAL
EXTRA \$7**

**** ORDERS CAN BE PLACED
THROUGH THE WEBMASTER****

**PEEL4X4.WEBMASTER@GMAIL.COM OR AT
A GENERAL MEETING**



PEEL 4X4 CLUB Property Register



- * 1x Space Case (900L x 390W x 400H)
- * 4x 490mm Black Plastic Sand Pegs
- * 1x ARB Gazebo
- * 1x Wanderer Gazebo
- * 1x Heatlie BBQ (~880mm x 540mm)
- * 1x Plastic Peel 4x4 Club sign (Folding Triangle Core Flute Type)
- * 1x 5.33kg Gas Bottle (Empty)
- * 1x Wanderer single wall for gazebo
- * 1x wanderer half wall for gazebo
- * 1x 600mm diameter collapsible bin
- * Gavel & block (President)
- * Trophy – Most talked about event of the year (1998 – 2014) (Broken)
- * Trophy – Burnt pot award (2000 – 2014)
- * 4x metal Peel 4x4 signs (staked flag design)
- * Various large paper & laminated maps
- * 1x 2.9m Snatch Strap
- * 1x Red & Yellow Peel 4x4 Club Flag / Banner (1940mm x 970mm)
- * 1x Tennis Net in bag (no racquets)
- * Heap of old Peel 4x4 Club magazines, hard floppy disks, and stuff...
- * 1 orange safety vest

- * GME MT610G GPS PLB (with cover)
 UIN = 3EEEEAA4E8AFFBFF
 Batch Expiry = 12/2029
 Serial No. = 2206617244

- * GME MT610G GPS PLB (with cover)
 UIN = 3EEEEAA4E8CFFBFF
 Batch Expiry = 12/2029
 Serial No. = 22066200345

- * GME MT610G GPS PLB (with cover)
 UIN = 3EEEEAA4E78FFBFF
 Batch Expiry = 12/2029
 Serial No. = 2206620806



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

C11064407





Totally & Partially Disabled Veterans of WA (Inc.)
1677 Old Mandurah Road
Baldivis WA 6171
PO BOX 352 Rockingham WA 6168
Secretary: chriselliott388@yahoo.com.au

MEMBERSHIP RENEWAL FORM

I _____
Of _____ Post Code _____

Wish to apply to renew my membership of the **Totally & Partially Disabled Veterans of WA (Inc.)**.
In doing so I accept the Constitution and Rules of the Association of **Totally & Partially Disabled Veterans of WA (Inc.)**

Type of Membership

☐

FULL

(TPI, Partial Disability Pension
Serving or Retired Defence Members
or Members of Allied Forces, Peacekeepers
& Police Force)

☐

ASSOCIATE

Family Member of Full Member

☐

SOCIAL

SERVICE NUMBER

Do you have any criminal convictions?

Yes/No

Applicant Signature

Date

Annual Membership Fee: \$30

Payable by Cheque, in Cash or by EFT to BSB 633000 a/c 130216518

Office Use

Date Received

Membership Office

Purchase an Entertainment Membership and get a FREE UPGRADE
Simply click on the link below:

<https://subscribe.entertainment.com.au/fundraiser/84490n>



We're fundraising with
 Entertainment

Discover more, everyday
with the Entertainment Membership

Bonus Upgrade to
Multi City Membership*

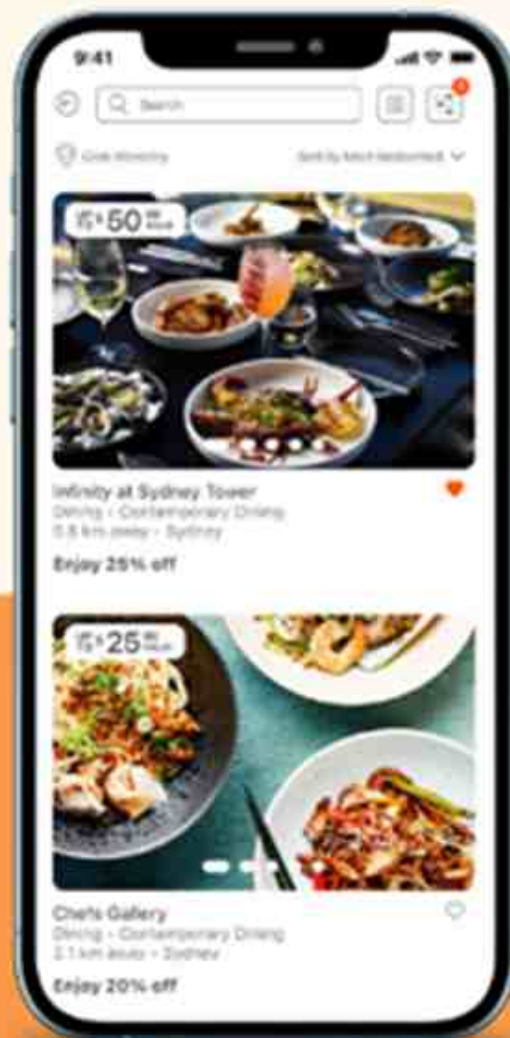
12 months		24 months	
Pay	Save	Pay	Save
\$70	\$50	\$120	\$110
We receive		We receive	
\$14		\$24	

*T&Cs apply.

The savvy
way to give back

Buy today and 20% of the purchase price
goes directly to our fundraising cause.

Support us now





Peel 4 X 4



Fundraising with Entertainment

When you buy an Entertainment Membership this month, you'll get a **FREE upgrade to a Multi City Membership** (valued at \$120!).

That means for just **\$70 (save \$50!)**, you'll score access to up to **50% off dining, activities, shopping, and travel** across Australia, NZ, and Bali.

It's a total win-win:

- ✦ You save big on everyday spending
- ✦ We receive **20% back to support our cause**
- ✦ Together, we'll kickstart our fundraising goals this financial year

With over **\$20,000 in savings** – from groceries at Woolworths, Big W, and Priceline, to fuel at Shell, plus amazing dining deals – you'll make that money back in no time. You might even use those savings to book your next holiday (yep, your Membership can help with that too!).

👉 Click here to buy your Membership - <https://www.entbook.com.au/84490n> or scan the QR code below:



Entertainment Memberships really do help us help each other – you save on the things you love, and we keep supporting our community with the funds raised.



President Report

Hi everybody,

I'll start by thanking everyone for the great turnout at the Annual General Meeting. It was fantastic to see the coming together of club members for an exceptional night out with fabulous food.

For those that have not seen the post on the members page, the Newley selected members are:

President: Aaron Crane

Vice president and insurance officer: Julie Power

Secretary: Gary Mayes

Treasurer: Dave Knudsen

Delegates: Ray Wary and Sharon Wary

Magazine editor: Brian Tanner

Trip coordinator: Steven Power

Webmasters: Gary Mayes and Donna Harford

Property Officer: Jacob Yardley

Environmental Officer: Duane Paul Buckenara

Thank you to those people for taking up these positions.

I am sure your all wanting to know just a little bit about who I am. Keeping things within the interests of the club, I am born and bred in Perth, Western Australia. I was involved in scouting as a kid and went right through to ventures that involved loads of hiking and camping and even a Jamboree. Dad had a shack at Sandy Cape so we spent quite a bit of time there during school holidays. I have had always had a bit of an interest in 4wding and it is nice to be doing it with like minded people.

Stay safe out on the tracks everyone and I'll see you upstairs at the surf club on the 27th August for a 7:30 pm start!



Well how good is it we have a full Committee to strongly steer the club for the next year, well done to the incoming Committee members and thank you very much to the previous Committee members. The AGM venue turned out really great, it certainly has my vote for next year. Apparently anyone can become a member of the TPDVWA so if anyone is interested there is a membership application form elsewhere in the mag.

I just recieved an email from Skeelsy with what I believe is a challenge. Watch out for a huge magazine coming up soon

Our pooch must have smelt something desirable while we were out waking a few weeks ago because she took off like a 4WD doing a typical snatch recovery. Reaching the end of the leash she jolted her back legs really hard resulting in a really loud yelp and limping badly. With no improvement over a couple of hours it was off to the vet to see what damage she had done. Pain killers and anti-inflammation medication was prescribed and back the following day for x rays. Our worst fears were confirmed, another dislocated patella showing up on the x ray needing knee reconstruction surgery. She has had the operation now and well into her recovery and, other than moping around, she is doing well.

Cheers Brisey



**GENERAL MEETING OF THE PEEL 4X4 CLUB****Chairperson Notes**Date: 26th July 2025

Venue: Total & Partially Disable Veterans of Western Australia



Meeting Opened: 5:15pm

Chairperson welcomed all members.

Safety Briefing.

ATTENDEES & VISITORS. As per attendance register.**APOLOGIES / PROXIES.** As per attendance register.

Gary reminded everyone of the prizes that were up for grabs throughout the night, and thanked Chris Jones & Parkside Towbars Rockingham for their generosity with the Major Raffle Prize. Gary also thanked Jacob & Heidi for donating the prizes for the door prize & minor raffles, and ARB for also providing a subsidy for raffle prizes.

2. TRIPS SINCE LAST MEETING

- Gary advised that there were a total of 24 trips of various types in the past 12 months, which was a great effort.

3. CONFIRMATION OF MINUTES FROM PREVIOUS MEETINGS

- Annual General Meeting – 06/07/2024. Greenhills Inn
Chairperson Gary Mayes has accepted & signed the previous minutes. There were no objections as to the accuracy of the minutes, therefore unanimously accepted.
- General Meeting – 25th June 2025. Secret Harbour Surf Life Saving Club
Chairperson Gary Mayes has accepted & signed the previous minutes. There were no objections as to the accuracy of the minutes, therefore unanimously accepted.
- The minutes of tonight's Annual General Meeting will be put forward at the next General Meeting.

BUSINESS FROM THE PREVIOUS MINUTES

- No formal business from the previous minutes.
- Club awards from the previous AGM were read out & discussed.
 - Club Person of the Year: Gary Mayes
 - Most Talked about Trip: Ian Screech (Mellenbye Station Trip)
 - Best Mishap: Chris Jones, for drowning his vehicle on the Holland Track Trip.
 - Club Stirrer of the Year: Duane Buckenara

**ANNUAL GENERAL MEETING OF THE PEEL 4X4 CLUB****Annual General Meeting Minutes**Date: Saturday 26th July, 2025

Venue: Total & Partially Disable Veterans of Western Australia

**PRESIDENTS REPORT (Gary Mayes)**

- Gary thanked Julie Power for organising the venue & night; and to Hugh for the venue recommendation.
- Also thanked members for a great year. Large number of trips, plus several more in the calendar.
- Several new members throughout the year, which was great to see.
- Gary gave individual thanks to each of the committee members:
 - Julie Power for taking on the role of Secretary at the last AGM, and has also been the one organising refreshments for each of our General Meetings; along with co-ordinating events like the Christmas Function, AGM's, and other things that have popped up throughout the last year. Julie also helped in getting our financial records in order.
 - Dave Knudsen for continuing on as Insurance Officer & Deputy Chairperson, despite also having to do shift work. Dave has also initiated getting the club sorted properly with the ABN & Tax File Number, which meant quite a bit of time on the phone to the Government Departments.
 - Cassie Mayes continued on as Treasurer & Webmaster for the first 6 months of the year, before leaving the club, but maintained support from afar, which was appreciated.
 - Brian Tanner stepped up again to continue providing you all with this information packed magazine.
 - Chris Jones for taking on the role of Environmental Officer.
 - Jacob Yardley for taking on the role of Property Officer.
 - Steven Power for continuing the role of Trip Coordinator, ensuring that everyone is kept up to date at meetings on what trips are coming up.
 - Hugh for having a go at the Treasurer position.
 - Mark Skeels for assisting with management of the Facebook pages, and also attending a couple of the Delegate meetings.

A big round of applause was given by all in attendance.

- Gary asked about interest in a club night at ARB Rockingham. There were quite a few interested.
- Gary also advised that he had made contact with Mandurah Boat, Caravan, Camping & 4x4 Show.

Business for the President:

- The possibility of using the TPDVWA facility for General Meetings was discussed. This would cost \$100 per year to become a member.
- Brian asked for update info from all members for the red book.

Gary asked the standing down Committee if there was anything to report.

**ANNUAL GENERAL MEETING OF THE PEEL 4X4 CLUB****Annual General Meeting Minutes**Date: Saturday 26th July, 2025

Venue: Total & Partially Disable Veterans of Western Australia

**TREASURERS REPORT (Gary Mayes)**

- Now have Julie Power & Brian Tanner as full authorisers of the bank account.
- CREDITS: 26/06/2025: \$814.22. Square Pay (Membership Fees, raffle tickets)
27/06/2025: \$14. Entertainment Books.
From 27/06/2025: \$680. Membership Fees & renewals.
- DEBITS: 22/07/2025. \$578 – WA4WDA Membership Fees (\$17/member)
22/07/2025: \$285.67 – Major Raffle Prize
- PENDING: Gary advised that a refund of \$90 would be given to Leon & Judy. Paid membership fees on 2nd June, and 25th June.
- CLOSING BALANCE (26/07/2025): \$6,380.13
- Waiting to hear back from Wally Cerny; Graeme & Lynette Hardy; Dave Philp; Saket; Bianca Toi; Pete Walpole; Karl & Julie. Gary to follow up again after the meeting.
- 37x members. Plus 3x Life Members. Waiting to hear back from 7. No resignations other than Mike & Mandy & Frank & Simone through the year.
Life Members: Steve & Margaret Huredine; Pete Dawes; Rob Baxter
- Business for the Treasurer:**
- No business for the Treasurer.

Gary once again thanked the outgoing Committee, and advised of the process for electing in a new Committee.

A break was announced, so that votes could be counted, and dinner could be served.

Nomination forms were counted by Donna Screech & Julie Power. There was no need to vote, as only one person had nominated / been nominated for each position.

Upon re-commencement of the AGM, Donna Screech read out the names of the new Committee members, and asked if they accepted the position. All new Committee members accepted these positions, which are as follows:

OFFICE BEARERS

- President: Aaron Crane (Also known as Public Officer)
- Vice President: Julie Power
- Secretary: Gary Mayes
- Treasurer: Dave Knudsen

ORDINARY COMMITTEE MEMBERS

- Insurance Officer: Julie Power
- Property Officer: Jacob Yardley
- Environmental Officer: Duane Buckenara
- Delegate: Ray & Sharon Warry
- Magazine Editor: Brian Tanner
- Webmaster: Gary Mayes
- Trip Co-Ordinator: Steven Power

**ANNUAL GENERAL MEETING OF THE PEEL 4X4 CLUB****Annual General Meeting Minutes**Date: Saturday 26th July, 2025

Venue: Total & Partially Disable Veterans of Western Australia



A show of hands was requested as acceptance of the new Committee Members.

Accepted by: 1st Julie Power 2nd Dave Knudsen Carried

A show of hands was not required for vacant positions, as they were all filled.

Club Awards were then read out by Gary Mayes, and handed over by the new Chairperson, Aaron Crane.

- Club Person of the Year: Julie Power
- Most Talked about Trip: Dave Knudsen, for his Lancelin Trip
- Best Mishap: Leon Castle, with a multitude of errors & mishaps on the Australia Day Calcup Hill trip.
- Club Stirrer of the Year: Duane Buckenara

GENERAL BUSINESS

- Major Raffle Winner: Steve & Margaret Huredine.
- Door Prize: Brian Tanner.
- \$100 fuel voucher: Atkinson Family
- Minor Raffle: Various winners of a large number prizes.

- Gary then thanked everyone for attending.

NEXT GENERAL MEETING: Wednesday 27th August 2025. Secret Harbour Surf Life Saving Club.

Doors open at 7:00pm. Meeting starts at 7:30pm.

NEXT COMMITTEE MEETING: Wednesday 13th August 2025. Hosted by Dave & Sarah Knudsen.

Meeting closed at: 8:33pm

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

Gary Mayes

Outgoing Peel 4x4 Club Chairperson

Date: 04/08/2025



HAPPY BIRTHDAY!

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

**AIDS TO SURVIVAL****WAPA TEAM FIELD FIRST AID KIT**

- | | |
|---|---|
| 1 Pkt x 24, Panadol 500mg tablets | 2 Probes splinter, double ended |
| 1 Bandage, conforming 50mm | 1 Bag x 12, Stainless steel safety pins |
| 1 Bandage, conforming 75mm | 1 Pair, Forceps blunt stainless |
| 1 Bandage, crepe heavy | 1 Pack, Dressings assorted shapes plastic |
| 1 Roll, Dressing tape, zinc oxide 25cm x 5m | 1 Dressing, non-adherent 7.5cm x 10cm |
| 4 Swabs antiseptic, Betadine | 1 Eye pad, 7.5cm x 6cm |
| 6 Swabs antiseptic, Alcohol | 1 Antiseptic steri tube 30ml |
| 1 Stingose gel 25g | 1 Burnshield dressing 10cm x 10cm |
| 1 Pair, Scissors surgical 125mm | 1 Digit burn dressing 25mm x 500mm |
| 2 Saline steri tubes 10ml | 1 Medical Box |

Resuscitation Face Mask. Foil Rescue Blanket. Sanitary Napkins. Tampons. Small Plastic Garbage Bags. First Aid Notes. Notebook & Pencil. Disposable Gloves. Tissues. Petroleum Jelly. Insect Repellent [DEET -30%]. Sun-Block [SPF 30+].

WAPA FIELD HEADQUARTERS BASE FIRST AID KIT

- | | |
|---|---|
| 1 Pack Sterile Gauze Swabs | 5 Antiseptic Wipes |
| 1 No.13 Wound Dressing | 1 Tube Insect Bite/Sting Relief Gel |
| 1 No.14 Wound Dressing | 1 Tube Antiseptic Ointment |
| 1 No.15 Wound Dressing | 1 Bottle Antiseptic Solution |
| 1 Roll Band-Aid Adhesive Dressing Strip | 1 Container Antiseptic Powder |
| 1 Pkt Band-Aid Adhesive Dressings | 1 Pkt Paracetamol Tablets |
| 1 Roll Waterproof Adhesive Tape [2.5cm] | 1 Pkt Paracetamol Tablets With Codeine |
| 5 Non Adherent Dressings [10cm] | 1 Bottle Cough Medicine |
| 1 Sterile Combine Dressing Pad | 1 Pkt Medicated Throat Lozenges |
| 2 Elastic Bandage [7.5cm] | 1 Bottle Eye-Stream Irrigation Solution |
| 2 Elastic Bandage [10cm] | 1 Bottle Eye Drops |
| 3 Calico Triangular Bandages | 1 Bottle Ear Drops |
| 3 Sterile Eye Pads | 1 Pkt Antihistamine Tablets |
| 3 Tullegras Sterile Dressings [10cm] | 1 Pkt Anti Diarrhoea Tablets |
| 1 Pkt Butterfly Wound Closures | 1 Pkt Laxative Tablets |
| 1 Pkt Cotton Buds | 1 Pkt Electrolyte Replacement Powder |
| 1 Pkt Cotton Balls | 1 Bottle Oil Of Cloves |
| 1 Pair Scissors | 1 Pkt Antacid Tablets |
| 1 Pair Tweezers | 1 Bottle/Tube Liniment |
| 1 Sterile Needle | 1 Instant Ice Pack |
| 1 Sterile Scalpel Blade | |

Resuscitation Face Mask. Foil Rescue Blanket. Sanitary Napkins. Tampons. Small Plastic Garbage Bags. First Aid Notes. Notebook & Pencil. Large Kidney Dish. Disposable Gloves. Tissues. Safety Pins. Tick Removal Pliers. Insect Extractor Kit. Petroleum Jelly. Insect Repellent [DEET -30%]. Sun-Block [SPF 30+].

Note:

Those responsible for group first aid should have a current relevant first aid qualification. All treatments must be recorded. Personal medication should remain the responsibility of individuals.

**AIDS TO SURVIVAL****ST JOHN AMBULANCE PERSONAL LEISURE KIT (FIRST AID PACK)**

Bandage Conforming 7.5cm	Scissors SS Sharp/Blunt 12.5cm
Tape Hypoallergenic 2.5 x 9cm	Glove Disposable Latex Medium
Triangular Bandage 110 x 110cm	Forceps SS Splinter Pointed
Adhesive Shapes Plastic 25PK	Blanket Emergency Shock
Swabs Gauze 7.5cm 3 PK	Pins Safety 12 PK
Pad Combine 10 x 20cm	Notepad & Pencil
Pad Non Adherent 7.5 x 7.5cm	Guide First Aid Quick Reference
Pad Non Adherent 7.5 x 20cm	Towels Disposable 3PK

RED CROSS HIKING FIRST AID KIT

1 Contents list	2 Non-adhesive dressing 10 x 10cm
1 Adhesive tape, 2.5cm	1 Gloves, disposable
1 Scissors, blunt, sharp stainless steel	1 Pkt tissues, 10
1 Combine dressing, 90 x 200mm	5 Safety pins, 40mm
5 Adhesive dressing strips	1 Splinter forceps
1 Crepe bandage, 7.5cm	1 Normal saline, 30ml
1 Disposable foil blanket	1 Triangular bandage not less than 900mm
1 Eyewash, 30ml	1 Conforming bandage 5cm
1 Gauze bandage, 5cm	1 Wound dressing, No.14
1 Gauze bandage, 7.5cm	1 ARC First Aid Notes
3 Gauze swabs	1 Pencil and notepad
3 Individual plastic bags 150 x 200mm	

A red, water resistant nylon fold out soft pack with zippered inside compartments designed for organisations and individuals involved in outdoor activities

Note:**PERMANGANATE OF POTASH [CONDIES CRYSTALS]**

Condies Crystals [*Purchased from chemists in small amounts*] have multiple uses and a little goes a long way. Used as a fire starter (see page 32), Water purification (see page 26), and as a mild disinfectant on scratches and cuts.

ACTIVITY-SPECIFIC FIRST AID KITS

A wide range of activity-specific first aid kits is available from St John Ambulance, Red Cross and outdoor suppliers to cope with outdoor recreation, adventure events and commercial 4WD and outback touring activities.

Most new first aid kits available today are self-contained, compact and lightweight and include a variety of first aid requirements. Basically there is a comprehensive range of first aid kits available to cope with emergency and first aid situations, which vary in price according to individual needs.



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DEALING WITH DEATH

While it is an accepted fact that only a qualified medical practitioner can certify that a person is dead, and that treatment once started should be continued, there are occasions, particularly in remote areas where the casualty is dead and a decision must be made to start or stop treatment [as the case may be].

Signs of Death

- Fixed dilated pupils, not responding to resuscitation.
- Absence of spontaneous heart beat in spite of prolonged resuscitation.
- Rigor mortis [stiffening of the body] is a late but reliable sign of death.

Note:

Resuscitation should never be stopped when medical aid is imminent.

Dealing with a Dead Body

Whilst this may be an unpleasant topic it is a possibility that should be dealt with properly to avoid further stress among witnesses and address the problem in a manner to satisfy the law and to facilitate the later recovery of the body.

If on foot the group should not attempt to carry the body out with them and for purposes of morale should not split themselves up and have some of the group remain while others go for help. They should leave the body and walk out in a group.

Before doing this you should carry out the following procedure -

1. Get everybody in the group to take careful notes of the circumstances surrounding the death, as statements will be required for the coroner.
2. Wrap the body in a tent or ground sheet and firmly secure it with rocks etc., to protect it from animals and the elements.
3. Mark the spot and the trail out to allow easier location later.
4. On return to civilisation report the matter to the police.
5. Take possession of all valuables found on the deceased, have somebody witness them and give them to the Police when you are able.

Effects of Death on Others-

Watch for signs of shock [witness shock] in the party. At the very least there will be depression and distress that must be handled by the group before it leads to worse manifestations of stress and shock.



Land Navigation

Good map reading and land navigation is an essential requirement for bushwalkers and travellers in the outback. Maps enable users to find their way about the country; allow recognition of features and give the user an understanding of the information given on the map allowing it to be related to the surrounding countryside. Maps also assist in the transmission of information.

MAP READING

Map reading is the extraction of information shown on the map; the relationship of the ground to the map and the map to the ground.

To make full use of a map, it is necessary to give and read grid references, to take bearings and to measure distances. The ability to use or read a map is called 'map craft'.

Reliability of maps

A map is a plan of the ground. Remember however, it is a plan of the ground at a certain date. If it is a long time since the map was produced or revised much may have changed. Towns grow, roads and railways are built and forests grow and are cut down. No map can be taken as being reliable except concerning the main physical features of the land. Even these may change slowly, as coastlines erode and in some places rivers may even change their courses.

Note:

It is very important to note the date the map was produced or revised and to judge its reliability accordingly.

Care of maps

Maps are valuable documents and the supply is never unlimited and they should be treated with care to prevent damage. Most damage to maps occurs when the users open them outdoors or in moving vehicles. There is always the chance of a slight breeze that might catch them and start small tears that can quickly spread.

To prevent tears, maps should be folded in such a way that any part can be referred to without having to be fully opened.

Once a map is folded, leave it folded, the detail at creases is sure to deteriorate but less than if the map was constantly unfolded and folded. Protect the folded map by placing it in a plastic map case when not in use.

Marginal information

Printed around the margin of the map is the information needed when the map is being used. This is referred to as Marginal Information. The type of information and the layout may differ from map to map.



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Marginal Information Contents

On Australian maps a standard layout is adopted which gives the following information -

- **Sheet Name**
This is usually shown on the top centre of the map
- **Map Edition**
Usually located at the top right of the map
- **Sheet Number**
Maps are commonly referred to by sheet number, name and edition
- **Grid Reference Block**
Located at the bottom of the map and explains how to calculate a six figure grid reference
- **Legend Panel**
Located at the bottom of the map and gives a legend of the conventional signs used
- **Sheet History**
Located at the bottom of the map and gives production details
- **Index to Adjoining Sheets**
Located at the bottom the map
- **Magnetic Variation Information**
Located at the bottom of the map and gives the annual magnetic variation
- **Reliability Diagram**
This diagram does not appear on all maps, indicates the reliability of the information shown on a map
- **Representative Fraction**
A method of indicating the scale of the map. Usually located at the top left of the map.
- **Linear Scale**
Usually located at the bottom centre of the map

Conventional signs or legend

The mapmaker tries to show objects on the ground in the clearest possible way. These objects are not shown as they appear because they would be too small to recognise. Instead, simple symbols, referred to as conventional signs are used to indicate the objects. It is important to note that the centre base of the particular sign indicates the position of the object on the map.

Scale

The scale of a map is the relationship of the distance between two points on the map and the distance between the same two points on the ground.

Other types of maps

The information contained in this manual refers mainly to topographical maps. These maps present a complete and accurate picture of the ground by showing as much detail as their scale allows. It may be that accurate topographical maps are not available for a particular area and in this case an alternate map such as a road map, ortho photomap or air photograph will have to be used.



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TERMS USED IN MAP READING

Some terms used in map reading to describe physical features include –

Basin

An area of reasonably level ground surrounded, or nearly surrounded by hills. It can also be the description used to depict the area drained by a river and its tributaries.

Breakaway

A small gully or low cliff line formed by erosion.

Crest

The highest part of a hill or mountain range. Specifically it is that line on a range of hills or mountains from which the ground slopes down in opposite directions.

Escarpment

The steep hillside formed by a sudden drop in the general ground level. This feature usually comes off a plateau.

Gorge

A deep ravine usually with very steep sides.

Knoll

A small knob-like hill.

Plateau

A tableland or generally level elevated region of considerable extent.

Ravine

A long, deep valley worn by a stream.

Re-entrant

A valley or ravine usually located between two spurs running inwards towards the hill or mountain-top.

Ridge

The line along a hill or range of hills or mountains from which the water flows in opposite directions. Sometimes it is described as the crest of a line of hills as it appears along the horizon.

Saddle

A depression between adjacent hill or mountain-tops; also called a col.

Spur

A minor feature generally in the form of a ridge running out from the hill or mountain.

Undulating ground

Ground that rises and falls gently.

Watershed

The line separating the water flowing into two different river systems.



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NAVIGATION ROUTE PLAN

The importance of this document should not be underestimated. It can be in the form of a pre-prepared card or alternatively data written in a notebook.

The route plan expresses the intentions of the individual or group as to where they are going, how long it should take and what to do in the event of an emergency. If in a group it is important that everybody in a group has the same information.

The process of preparing a navigation route plan whereby members of the group are required to sit down and express their ideas and reach conclusions by consensus is an integral part of the teambuilding process. Such information should include -

Group details

Name of the group, the full names of all group members and whether any members of the group have any limiting medical conditions or are taking any medication.

Map details

The map title, edition number and scale should be recorded along with the magnetic variation applicable to the map. A sketch map should be drawn.

Route details

This should include Route numbers and the numbers of legs, which make up each route.

Waypoints

Details of each waypoint or landmark should include not only its position expressed as a six-figure grid reference but also a detailed description of that location.

Distance

The distance to be covered should be expressed in metres over the ground and an estimate of the number of paces required to cover the distance.

Heading

The grid bearing should be determined and the magnetic bearing to be walked should be calculated by applying the magnetic variation for the map to the grid bearing. Both bearings should be recorded.

Description of going

A 'section' of each leg must be drawn and entered in the route plan as a cross-sectional diagram supported by a description of the terrain, density of vegetation and any features that will be encountered.

Estimating journey time

Estimates of journey times should be calculated using Naismith's Rule. This rule is a guide only and can be modified with experience.

Escape routes and safety procedures

Escape routes should be pre-determined and should be entered along with details of any safety instructions.

Any safety instructions should be clear, concise and must be written in language that is clearly understood by members in an emergency.



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WAPA NAVIGATION ROUTE PLAN CARD

Side 1 - Administration Details

SKETCH MAP

DETAILS

Name _____
Date _____
Exercise _____
Map _____
Scale _____

Team Number ____

Team members

1 _____
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____
8 _____
9 _____

Do any team members have limiting medical conditions or disabilities *Yes* *No*

Side 2 - Navigation Information

Route & Leg	From	To	Distance <i>metres & paces</i>	Bearing <i>grid & magnetic</i>	Description Of Going <i>terrain, vegetation, features</i>	Estimated Time <i>minutes</i>	Escape Route & Safety Instructions

ESTIMATING JOURNEY TIME

Allow 1 hour for every 5000 m - easy going
 3000 m - scrambling
 1500 m - rough going

Add 1 hour for every 450 m - ascent
 900 m - descent
 5 hours walking [fatigue]

MAGNETIC VARIATION



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GRID REFERENCES

Superimposed over the entire map are vertical and horizontal lines. These lines are known as grid lines and are numbered at each end. To assist the user when giving grid references these grid lines are defined as eastings and northings.

Eastings

The vertical grid lines that run from bottom to top [or south to north] and divide the map from west to east are commonly known as eastings. They are numbered from west to east.

Northings

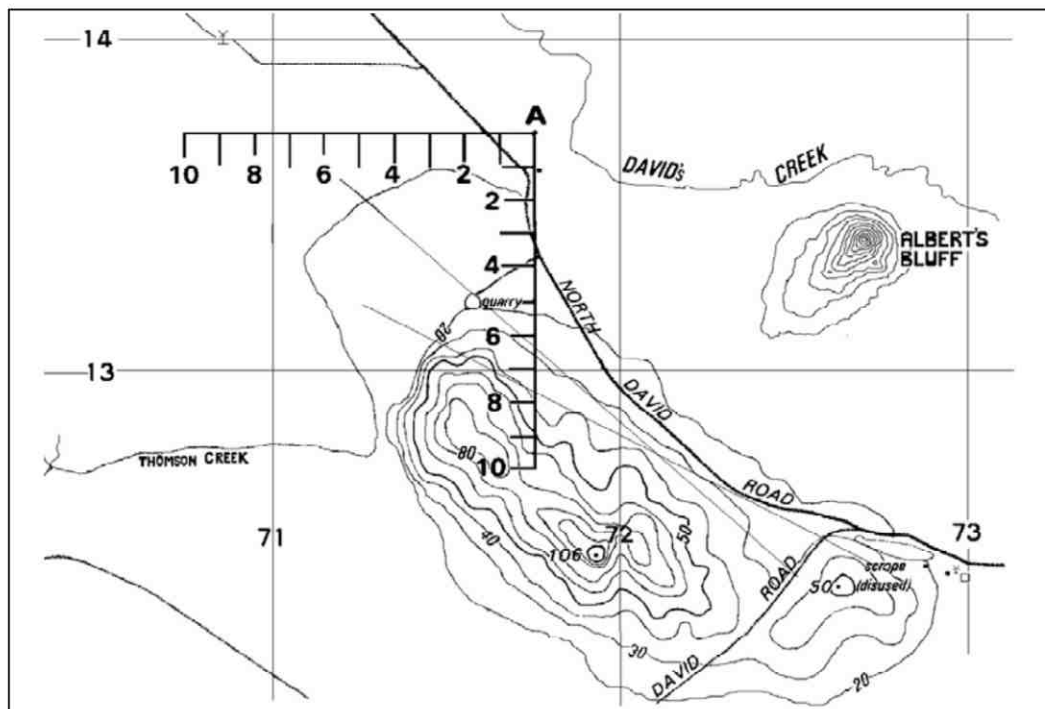
The horizontal grid lines, which run from left to right [or west to east] and divide the map from south to north, are known as northings. They are numbered from south to north.

The squares that are formed where eastings and northings cross are known as grid squares.

Obtaining a 6 Figure Grid Reference

To obtain a 6 Figure Grid Reference of a position on a map with a scale of 1:25,000 or 1:50,000 use the relevant Roamer Scale located on the compass base plate.

Grid references should always begin with the letters GR to show that they are grid references and nothing else.



Six Figure Grid Reference [GR 717139]

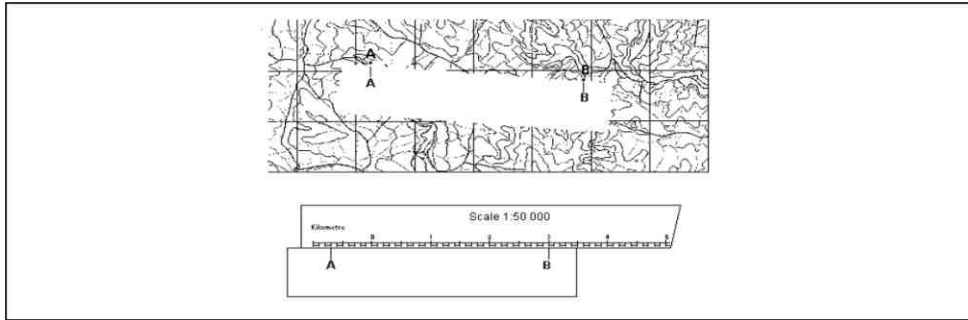


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MEASURING DISTANCES ON A MAP

To measure the distance in a straight line between two points on a map, lay the straight edge of a piece of paper against the two points and mark the distance on the paper.

Next lay the paper along the linear scale and with the right hand mark against one of the primary divisions and the left hand mark against the secondary divisions to the left of the zero point on the scale. The total distance is the distance to the right of zero, plus the distance to the left of zero.



Measuring Distance [3.7 km or 3700 m]

PACING

Counting the number of paces you have taken and converting the number of paces to metres is the most reliable method of measuring distance travelled. Before setting off you will need to work out exactly how many paces you walk per 100m so you can convert your paces to metres. Pacing is done by counting the number of paces that you take and recording them using a pace counter or sheep counter [you can also tie a knot in a piece of cord or transfer a pebble from one pocket to another at each 100 paces]. Some walkers find it easier to count double paces, left foot to left foot, or right foot to right foot and double the total before converting to metres.

Note:

Most people on flat ground average 130 paces per 100 metres.

THE POINTS OF A COMPASS

North, East, South and West are the four cardinal points of the compass. There are, in all, 32 points of the compass, but only sixteen are normally used in map reading. These are the four cardinal points and twelve intermediate points.

The degree system

The points of the compass give an approximate indication of direction only, for greater accuracy the circle is divided into 360 degrees [000 or 360 being the north point].

The four cardinal points of the circle are each 90 degrees and therefore the East, South, West and North points are at 090, 180, 270 and 000/360 degrees respectively.

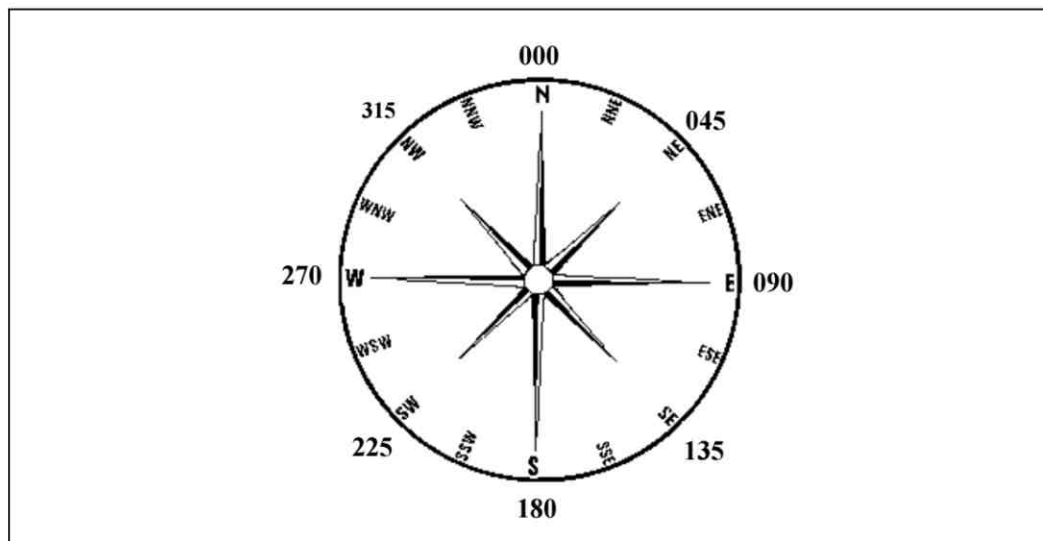
The four quadrants of the circle cover 90 degrees each and therefore the North-East, South-East, South-West and North-West quadrants are located between 000-090, 090-180, 180-270 and 270-000 degrees respectively.

Each degree is subdivided into 60 minutes and each minute into 60 seconds. Degrees are marked $^{\circ}$ minutes ' and seconds ''.

For practical purposes, readings to one degree are generally sufficient.



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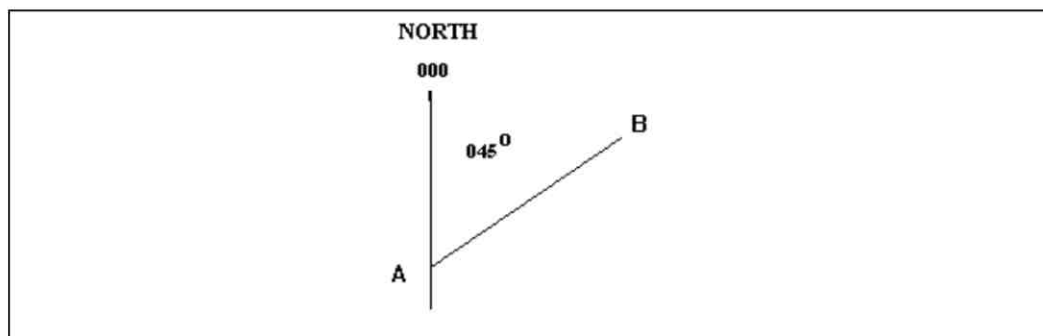
Points Of A Compass

Note:

Some organisations [Australian Army] measure angles in mils; 6,400 mils = 360°.

Bearings

The purpose of a bearing is to give an accurate indication of the direction of one point from another. A bearing is the angle, measured clockwise, that a line makes with a fixed zero line. The zero line is always taken to be north.



Measuring Bearings In Degrees [A - B = 045 degrees]

NORTH POINTS

In map reading, reference is made to three north points and each is detailed below:

True North

The earth spins on an axis that passes through the north and south poles. The North Pole is geographical north, or true north. Lines drawn from the North Pole to the South Pole are true north - south lines. True north is therefore the direction from any point on the earth's surface to the North Pole.

Magnetic North

To say a compass points north is only relatively true because a compass needle does not point to the North Pole. It points to a place in the far north of Canada known as the magnetic pole. The direction a compass needle points is known as magnetic north.



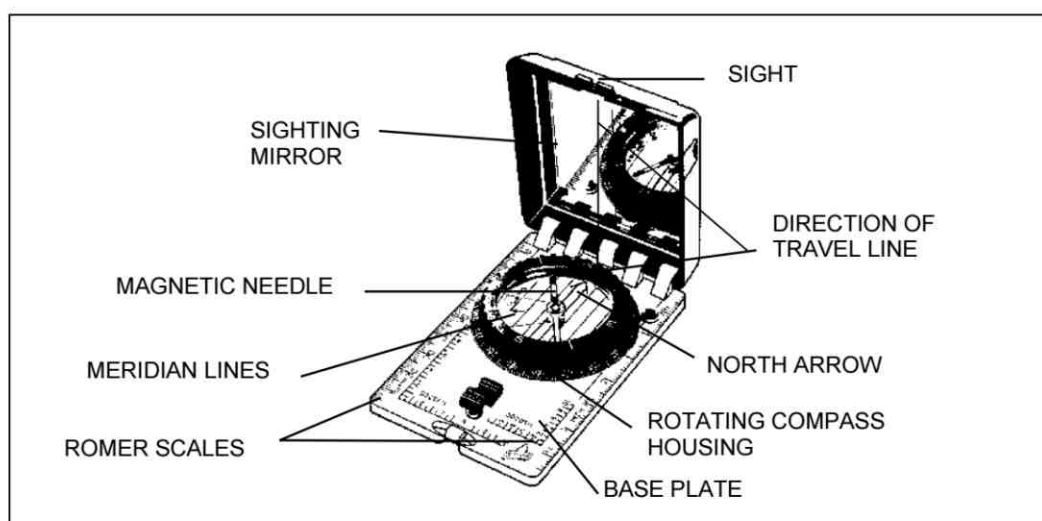
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Grid North

The grid lines on a map do not lie true north and south, except along one standard meridian; elsewhere on the map they make an angle with the true north south line. Since the grid lines are parallel and are drawn on the map it is very convenient to use them for drawing or measuring bearings. The direction of the north-south grid lines [eastings] is therefore known as grid north.

The Orienteering Compass

The orienteering compass was developed in the 1930's and is now used widely throughout the world by armed forces and many other organizations as a general-purpose compass. The most useful and durable of these have a base plate which makes the carrying of a protractor unnecessary. They also come complete with a cover which provides protection and a mirror which makes sighting objects easier as well as doubling as a signal mirror in emergencies.



The Silva 15T Orienteering Compass [with cover and sighting mirror]

Use of the compass

Because of its unique design, the orienteering compass is very simple to use.

To take a grid bearing from a map

The procedure for calculating a grid bearing from a map is as follows –

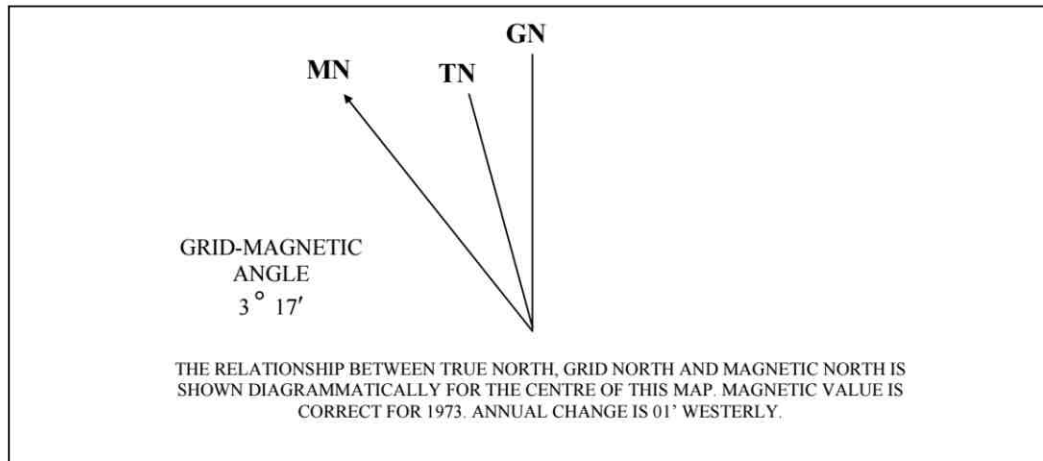
1. Place the long edge of the compass plate along the desired bearing making sure that the direction of travel line on the compass plate points in the direction you wish to travel [if your compass has a sighting mirror at the front remember this coincides with the direction of travel line].
2. Turn the compass housing so that the meridian lines are parallel with the grid lines [eastings] on the map.
3. Read the grid bearing on the housing where the index line intersects it.



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MAGNETIC VARIATION

The angle between the magnetic north line and the grid north line plus the annual change is known as magnetic variation or the grid-magnetic angle. The position of the magnetic pole is not fixed, it moves slightly from year to year. As a consequence, the direction of magnetic north, and therefore the magnetic variation also changes by a small amount each year. Though this change is not constant it can be forecast with sufficient accuracy over a number of years and details of the annual change are given in the marginal information as illustrated in the diagram.



Example of magnetic variation diagram

Lines joining places with equal magnetic variation are known as isogonals. They do not themselves point in the direction of magnetic north. It might be expected that isogonals would follow a regular pattern but the earth's magnetic field at any point is affected by the land and mountain masses and the presence of metallic ores. Therefore, the isogonals are pulled out of shape and follow no regular pattern.

Adjusting grid bearings for variation

When the compass is used with a map or in conjunction with map bearings, an adjustment should be made to allow for the variation. This is especially important if there is considerable variation in your area or if accuracy is important. With one turn of the dial you can make the proper allowance of any variation. You must do this every time you wish to apply a variation to a bearing.

Find out the amount of variation in your area and then simply turn the dial as per the following rule-

- **From grid to magnetic**

If the variation works out to be west, then you will need to leave the compass on the map and turn the dial west the required number of degrees.

If the variation is east then turn the dial east.

- **From magnetic to grid**

Simply reverse the step.



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CONTOURS

The usual way of showing the shape of the ground on modern maps is by contour lines. Contour lines make no attempt to give any visual illusion of relief and it is the failure to recognise this that causes difficulty to some people, in understanding them. The idea of a contour is very simple. It is an imaginary line drawn on a map, joining all places of equal height above sea level.

Height of Contours

On the map each contour is drawn at a specific height above sea level and the vertical distance between each is the same. The difference in height between contours is called the Vertical Interval and is shown in the marginal information on the map.

It is from the height and spacing of the contours that the shape of the ground is deduced and if necessary it can be calculated accurately. Some contour lines have the height above sea level printed at intervals along their length.

Another simple starting point in determining the general topography of an area is to use the flow of streams in conjunction with contours.

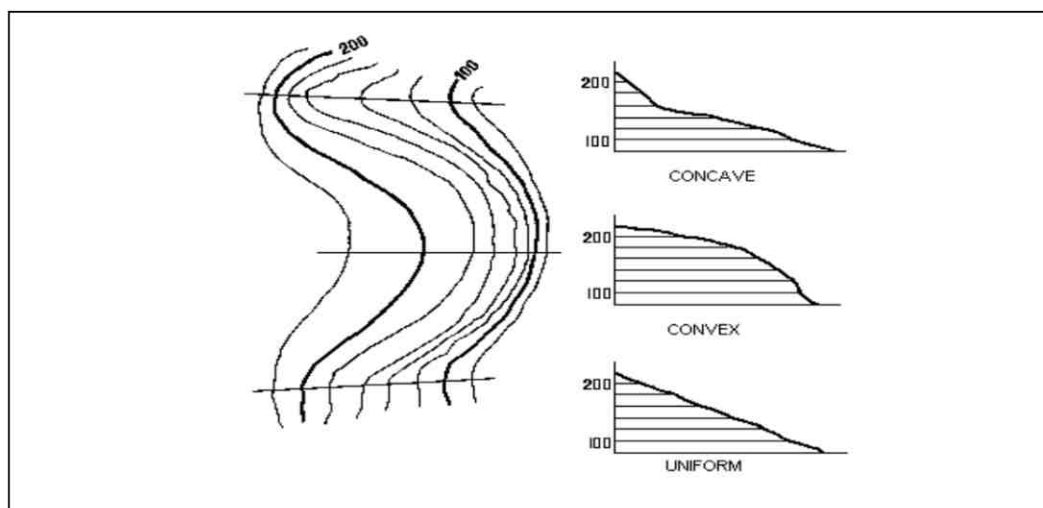
Contour Patterns

Each topographical feature such as a spur or a knoll is represented by its own particular contour pattern.

Important Points

The most important points to remember about contour patterns are –

- Contour lines close together indicate steep slopes
- Contour lines far apart indicate gentle slopes
- Evenly spaced contour lines indicate uniform slopes
- When the spacing of contour lines, reading from high to low, decreases, the slope is convex
- When the spacing of contour lines, reading from high to low, increases, the slope is concave



Contour Patterns

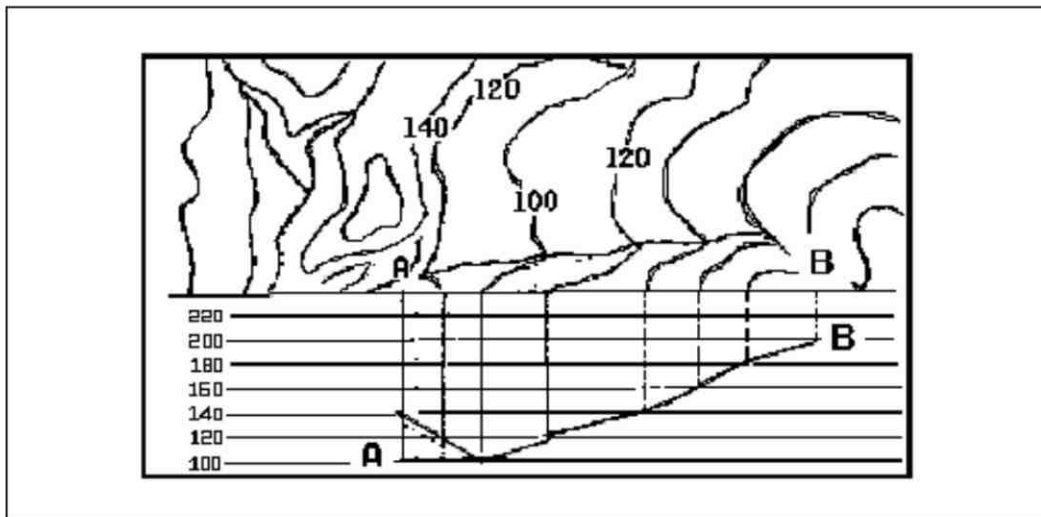


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DRAWING A SECTION

To draw a section between two points on a map lay the edge of a piece of paper between the two points, mark it at these two points and again where the contours on the map cut this edge. Parallel to the edge of the paper draw lines representing heights of contours from highest to lowest on the route to be followed.

From each mark you have made on the edge of the paper drop a line to the corresponding height line and join these points to complete a section.



Drawing A Section

PREDICTING WALKING TIME

The following method known as “**Naismith's Rule**” is a general rule for calculating trip times for an average walker with a medium weight pack.

- Allow 1 Hour for every -
5000 m Easy Going, 3000 m Scrambling or 1500 m Rough Going
- Add 1 Hour for every -
450 m Ascent, 900 m Descent and for every 5 Hours walking to cope with fatigue

SETTING THE COMPASS TO WALK ON A MAGNETIC BEARING

The following procedure should be followed when setting the compass to walk on a magnetic bearing -

1. Set the magnetic bearing on the compass by rotating the compass housing until the required bearing is in line with the index line on the compass plate.
2. Holding the compass flat in the palm of the hand turn around until the red end of the compass needle points to the north mark on the compass housing and is parallel to the meridian lines.
3. The direction arrow now points along the required magnetic bearing.



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TO TAKE A MAGNETIC BEARING

The procedure for taking magnetic bearings to an object is detailed below –

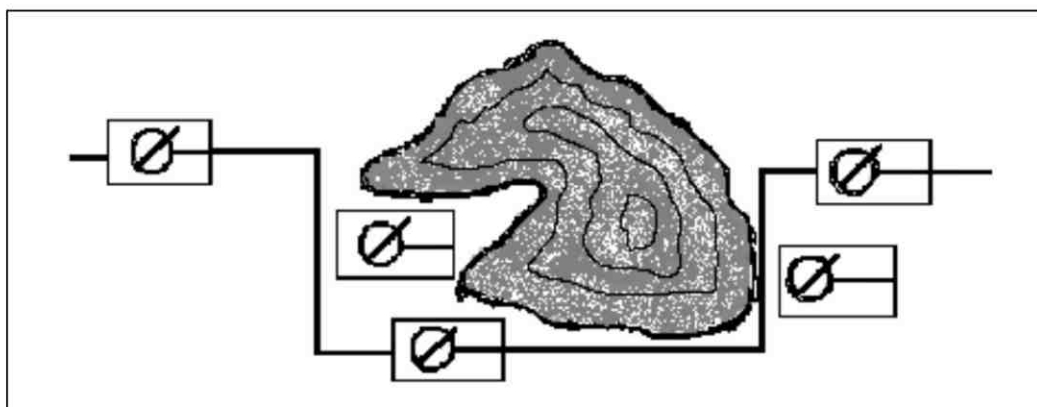
1. Hold the compass with the direction arrow pointing to the object.
2. Rotate the compass housing until the red arrow of the meridian lines is directly beneath the red [north] end of the compass needle.
3. Read the magnetic bearing on the housing where the index line intersects it.

BACK BEARINGS

Unlike most other types of compasses there is no requirement to calculate back bearings with the orienteering compass. Simply turn around to face approximately the direction travelled along and reverse the compass so that the direction arrow is towards the user. Orient the compass by turning the whole body until the red end of the compass needle points to the north point on the housing and travel in the direction in which the rear of the compass plate faces.

ALTERING DIRECTION TO AVOID AN OBSTACLE

There may be occasions when it will be necessary to alter the direction of travel to avoid a major obstacle. This is best done by travelling around the obstacle using a series of right angles. With the orienteering compass this can be done without any alterations to the original compass setting simply by taking advantage of the right angles of the compass plate.



Altering direction using the base plate of a compass

COMPASS ERRORS

When using a magnetic compass, the user should be aware of the two main causes of variation in compass readings:

Individual Compass Error

Each compass has its individual variation that is it does not point exactly to magnetic north, the compass needle itself may not be quite true with the markings on the card and slight divergences may be caused in other ways.

The error may be negligible or comparatively large and therefore it is important to have compasses checked regularly. Any known error should be noted on the compass and when readings are taken allowance must be made for the individual variation.



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Local Magnetic Attraction

Local magnetic attraction is due to the presence of any iron ore nearby. The compass is a delicate instrument and quite small quantities of iron have a surprisingly large effect on its behaviour.

A wristwatch or steel framed spectacles will affect the compass reading.

Take the precaution of seeing that all iron or steel objects are at a safe distance before using the compass. Small articles will be safe in a trouser pocket but larger articles should be placed two or three metres away.

Note:

Remember to keep away from power lines, wire fences, vehicles and railway lines when using a magnetic compass.

COMPASS RESECTIONS

The following procedure can be used to fix your position when you can recognise features on the ground and on the map but are unable to fix your exact map position.

1. Select 2 or 3 prominent, widely spaced features that you can recognise on the map and on the ground.
2. Using the compass, take a magnetic bearing to the first feature.
3. Convert the magnetic bearing to a grid bearing.
4. Convert the grid bearing to a back bearing and plot this bearing with a thin line from the feature on the map.

Carry out the above procedure until you have plotted the back bearings on the map from each of the features you have selected, your position is that point where the back bearings intersect.

Should they form a small triangle then your position is the centre of the triangle, however, there should be sufficient detail on the ground and the map to confirm this.

Global Positioning Systems

GPS stands for Global Positioning System. It is a military satellite-based navigation system, free for civil use. The system was developed by the US Department of Defence and owned by the Department of Transportation.

The process of Selective Availability [S/A] was turned off in May 2000. Selective availability caused the GPS position to drift randomly & unpredictably giving an inaccurate reading position up to several hundred metres from the true location. Selective availability was at best accurate up to 100 metres for 95% of the time and up to 300 metres the other 5% of the time. GPS accuracy is now to within 10 metres of the true position at all times.

The system uses 24 satellites that circle the earth twice a day in 6 pre set orbits at an altitude of 22,200 kilometres to calculate position, altitude and velocity. This is achieved by GPS receivers on the ground using these satellites as precise reference points to fix their position by measuring the travel time of a signal transmitted from each satellite. The GPS then computes its distance from the satellite and with this distance and distances from at least 4 satellites can deliver reliable predictions.



Expedition Skills & Campcraft

The rise in popularity of outdoor recreation has led to an increase in the number of bushwalkers and expedition groups visiting national parks and wilderness areas. It is important to remember that as well as recreational bushwalking in small groups there is much interest in the more institutional 'expedition skills training'. This aspect of bushwalking is generally oriented toward youth groups and educational institutions. An expedition is defined as a journey with a purpose.

Groups and organisations are encouraged in the interest of safety to prepare a written plan and leave a copy with a responsible adult in the form of friends, relatives, property owners, rangers or police in the area of the expedition as part of their 'notification'.

THE ROLE OF EXPEDITIONS

Expedition training presents an exciting challenge to groups, it requires them to train for and carry out expeditions or explorations with a specific purpose in unfamiliar country.

Prior planning & preparation

Organising, planning, training for and completing any expedition requires a high level of teamwork, self-reliance and co-operation between group members. Emphasis should be on a preliminary training program designed to develop specific skills related to the particular type of expedition. Ideally the expedition should aim at encouraging group members to gain confidence in meeting new challenges and to develop a spirit of adventure through personal accomplishment.

Expedition purpose

All expeditions should have a clearly defined pre-conceived purpose and all members of the group should have been involved in the planning process and be aware of the purpose of the expedition.

EXPEDITION LEADERSHIP

Organisers of expeditions must be aware of their responsibility under duty-of-care legislation and any appointed leaders should be prepared to accept responsibility for the safety of the group on expedition.

Duty of expedition leaders

The duty owed by an expedition leader to a group can best be described as the duty of a reasonably prudent leader or supervisor who has a duty to take reasonable care to avoid exposing the group to unnecessary risk of injury and while there may be no consideration of remuneration there is nevertheless a relationship whereby the group may be expected to submit to a course of instruction which at times will require them to undertake training and perform tasks in what may prove to be dangerous situations.

The expedition leader is required to provide a safe system for the group and give adequate instruction. There is seen to be an element of dependence upon the leader by the group.

Note:

The expedition organiser is required to guard against a risk of harmful event and injury that is reasonably foreseeable.



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Qualifying expeditions

Organisers should be satisfied that the group has completed an appropriate course of instruction for the proposed expedition. Where the requirements for a qualifying expedition state the group must act independently and not be accompanied they should ensure the group are capable of conducting the planned expedition.

Under normal circumstances and if the age of the group requires it the group should be accompanied on the expedition. If they are accompanied on any qualifying venture the leader must ensure that group members make all decisions affecting the outcome of the expedition.

Leaders acting in a supervisory capacity and not accompanying the group must remain in close proximity. The supervisor should be in contact with the group throughout the day and for reasons of safety be available at night.

Note:

The supervisor should have good oversight of the group throughout and accept responsibility for their plans and safety.

PRE-WALK CONSIDERATIONS

To walk with the least impact on the environment the right equipment is needed and all expeditions should be well planned with environmental impact a major consideration.

Expedition members

All group members should have completed a preliminary expedition skills training programme applicable to the level of the expedition.

Notifications

Before you leave let someone know where you will be walking, where you will camp, when you are due back and what equipment the group is carrying. A copy of your plan should be lodged with a responsible adult in the form of friends, relatives, property owners, rangers or police in the area of the expedition.

Note:

Remember that a search will be mounted for you only when you are classified as overdue.

Group size

Go in a small party [6-10] rather than a large one. Large parties usually have more impact on the environment and are socially more unwieldy. Should your group be larger, split up and meet at meal times and at campsites suitable for large groups.

Land owners

As a courtesy ensure that landowners have been contacted before entering their property. If traversing aboriginal land make sure you have the necessary permits, etc.

Environmental impact

In some national parks walking tracks have been upgraded to offset the impact of increasing foot traffic. You can help limit damage by staying on the track and walking through rough and muddy sections rather than widening the damage by walking on track edges. Also avoid cutting corners on steep 'zigzag' tracks.

Both these practices increase erosion and visual scarring as well as causing confusion for future walkers. Sensitive vegetation is easily destroyed by trampling, so stay on rocks and hard ground wherever possible. Choose your footwear for the terrain. Solid lightweight walking boots can be used on most tracks. Wear joggers around the campsite rather than thongs or bare feet.



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THE EXPEDITION PLANNING PROCESS

Expeditions require plans to be produced and briefings and de-briefings to be conducted. Briefings are the provision of general information whilst plans contain directives. The de-briefing is used to obtain on-going information and eventual assessment.

BRIEFINGS

The two distinct parts to a briefing are the preparation of the briefing and the conduct of the briefing.

Preparation for a briefing session

Experience has proven that the selection of the best possible venue, and the use of suitable aids will enhance the value of the briefing. Things to be considered include presentation, venue, location, lighting and weather protection. Briefing aids include maps, models, photographs and display boards.

Conduct of a briefing session

Having prepared the venue and aids, the briefing should be conducted in such a manner that the briefing officer controls the activity. The sequence is to conduct an introduction, make sure everyone can see, encourage the taking of notes and set up a format for asking questions.

EXPEDITION PLANS

Expedition plans are the vehicle by which the expedition plan is conveyed to those involved in the expedition. Such orders need to be correctly prepared, presented in a systematic way and re-examined as a result of information gained through de-briefings. They must be accurate, brief but clear, contain all necessary information and most importantly be capable of being actioned.

Layout of expedition plans

Plans need to follow a logical sequence to ensure all aspects are covered. The five headings covered by the plan should include -

- S** Situation
- M** Mission
- E** Execution
- A** Administration & Logistics
- C** Command & Communications

SITUATION [introduction]

Gives background information in sequence and gives general details of the expedition, people involved, topography, others in the area and any resources available.

MISSION [expedition purpose]

A clear, concise, single purpose statement of the overall outcome to be achieved.



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EXECUTION [how the expedition will be conducted]

Details how the mission will be accomplished and includes a general outline including details of roles, tasks, method, boundaries and special equipment. This section of the plan should also contain the co-ordinating instructions for the expedition.

Actions On [contingency plans]

Actions to be taken in the event of an emergency or an unexpected happening. These include when the expedition is terminated before the planned finishing time, injuries, lost persons, vehicle break-down, medical emergencies and casualty evacuations.

Co-ordinating Instructions

These are the details common to all members by which the expedition organiser or leader maintains control. Includes details of timings, movement, navigation and transport.

ADMINISTRATION & LOGISTICS [what is needed and what will be provided]

Details of food and water, re-supply arrangements and dress and equipment requirements.

COMMAND & COMMUNICATIONS [leader details and any communications]

Who will be in control and details of communications system including the type of radio, primary and secondary frequencies, call signs, situation reports, radio schedule times, code words and details of telephones and any other methods of communications.

DE-BRIEFINGS

No expedition should be concluded until a de-briefing has been conducted. This is the primary method employed to assess performance. Depending on the size of the activity and the number of participants there may be different types of de-briefings including phase de-briefings to update information and revise plans and de-briefing of all involved prior to conclusion to determine effectiveness.

De-briefing Methodology

It is a good idea to have a structured approach to de-briefings which requires course participants to analyse the experience by concentrating on performance and outcomes. Activities should be examined to determine what went well and what did not, rather than who went well and who did not. This separation of ego from performance is vital. Activities should be addressed by sequentially examining the following specific aspects –

Facts

This aspect deals with what has occurred and should concentrate on data and facts.

Emotions

Participants should be encouraged to discuss how they feel about the experience and concentrate on intuition, gut feelings, emotions and hunches.

Negatives

Everybody should be given the opportunity to discuss what did not fit and to be judgemental. This aspect deals with negatives, caution, risk and why things went wrong.

Positives

This aspect should always be dealt with after the negatives and should address what went well. It encourages optimistic thinking and deals with positives, benefits and merit.

Creativity

Deals with growth, ideas, alternative uses for what has been learned and future possibilities.

Focus

Finally the group should focus on whether the activity delivered and if all objectives were achieved and the purpose accomplished. Agendas should be set for any future change.



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PRACTICAL BUSHWALKING

For members of a group to walk a long way with packs on their backs is as much about mental attitude, self-discipline and teamwork as about physical effort.

Setting off

The first step is to agree on a time of departure and for all to be ready to depart on time with all packs properly packed, being suitably dressed for the weather and taking a last look over the campsite to make sure nothing has been left behind. The first leg of the route should be appraised and maps should be ready.

Walking rhythm

After making a note of the time on your route plan card set off, walking at a slow, steady, deliberate pace. Establish a walking rhythm be aware of it and try to maintain it.

Observations

Keep checking the landmarks and terrain with the map as you reach them. After you have been walking for fifteen or twenty minutes it may be necessary to remove or adjust clothing. It is vital to avoid clothing being soaked in perspiration.

Coping with steep terrain

When the trail becomes steep, shorten your stride but try to maintain the same steady rhythm. If the route should become steeper it will be necessary to zigzag to reduce the steepness of the climb. This enables the heel of the foot to be placed on the ground as it places a great strain on the leg muscles if you only walk on the front of the foot.

Walking down steep terrain may not be exhausting but it can be uncomfortable and more slips and falls occur while descending than while climbing. When you walk on flat ground you automatically lean forward to maintain balance, when walking downhill there is often a tendency to lean back, away from the slope, which can have upsetting results. Make sure that you bend the knees to avoid jarring the joints and zigzag downhill in the same fashion as walking up hill. By doing this, rhythm can be maintained and the whole of the foot can be placed firmly on the ground to improve grip and reduce the chance of slipping.

Note:

Never run downhill and always be careful never to dislodge stones that may injure anyone below.

Wet weather routine

If it should start to rain the whole group should decide to stop together and don wet weather clothing. It is as important to prevent clothing being soaked with rain as it is with perspiration.

Schedules

If the group is falling behind time it may be necessary to reduce some of the breaks or meal stops to catch up with the schedule. This should be discussed within the group to ensure that any changes are not going to place unreal expectations on individuals. It may be that your schedule is beyond the physical capabilities of the group or individuals within the group.

It is a good idea to be realistic when setting schedules and build in an amount of recovery time into a route plan to cope with unforeseen circumstances or slow pace over the ground.



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Actions at waypoints

Once you have completed each leg note the time and attend to all needs during the break such as adjusting clothing and packs, checking the route plan, studying the map and visualising the next leg before noting the time and resuming your journey.

Personal fitness

Much of the slow progress and unduly prolonged journey times associated with expeditions lasting a few days are due to a lack of physical fitness. This is especially apparent when faced with carrying a loaded pack.

Any physical exercise or training that will increase stamina will be beneficial before undertaking an extended bushwalking expedition. The personal fitness levels of group members should be accounted for in the planning stage.

JOURNAL WRITING

Journals can help to measure the process and task orientation of an expedition by providing expedition members with a vehicle to focus in a rational way and then reflect on the processes involved in the expedition. They can also be a source of enjoyment and interest for recreational bushwalkers. Interest can be heightened by the inclusion of sketches, maps and photographs.

Journal writing guidelines

The following are general guidelines to what might be written in a journal -

- Feelings on commencing the expedition.
- Understanding of the processes involved and what it is like to be involved.
- Performance as a group member.
- Feelings as a leader when [and if] required to lead.
- Ability and willingness to achieve the set objectives.
- Identifiable behaviour both of self and others.
- Any obvious areas of concern.
- Comments on planning, clothing, equipment and food.
- Any plan for future change not only for physical resources but also behaviours.

SAFETY CONSIDERATIONS

Before any trip the leader and the group should discuss and set their trip objectives. It is important that these should be within the capabilities of the entire group.

Responsibilities of organisers

Organisers should realise the scope of their responsibilities and the duty-of-care questions that may be asked by authorities should any form of accident or disaster overtake an expedition they have organised or sanctioned.

Planning

A brainstorming session with leaders and group members is a good idea in the planning stages of an expedition.



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Route plans

All members of the group should have a copy of the route plan and should be aware of any hazardous sections and ensure all maps are current and accurate

Leaders

If there is a leader appointed they should be competent in all skills required for the trip. Assistant leaders must be experienced enough to safely care for the party should something unforeseen happen to the leader. Leaders and assistant leaders should be conversant with the area in which the expedition is conducted.

Medical limitations

Any medical condition suffered by any member of the group or any limiting personal factors or disabilities must be known to the leader prior to commencing the expedition.

Actions-on and safety

In the interests of safety 'actions-on' should be set for all foreseeable emergency situations and all members of the group should know the agreed emergency procedures. An individual emergency procedure card can be printed and issued.

Escape routes and actions should be set prior to departure and must be known to all members of the group.

Notifications

Notifications need to be posted prior to departure and cancelled on return with a responsible adult in the form of friends, relatives, property owners, rangers or police in the area of the expedition.

Police in Western Australia receive training in bushcraft and survival skills and it is a good practice to discuss your plans with them.

Note:

If a walker or group is lost the nearest police should be notified immediately as it is the role of police to organise land search operations in Western Australia.

PRINCIPLES OF MINIMUM IMPACT CAMPING

With the rise in popularity of outdoor recreation has come an increasing risk of damage to the natural environment. Fortunately along with the increasing number of walkers a new bushwalking ethic has also developed. The minimum impact philosophy is now being widely adopted for bushwalking and expeditioning in Western Australia.

Campsites

Look for low impact campsites, sandy or hard surfaces are better than boggy or vegetated areas. Where possible camp at an existing campsite rather than creating a new one. If a campsite does not exist camp at least 50 metres away from watercourses and the track. Spend only one or two nights at such a campsite. With modern camping equipment you should leave a campsite looking as if you have never been there.

Fireplaces

Use only existing and safe fireplaces and remember that compared to campfires fuel stoves are faster, cleaner and a lot easier to use in wet weather. If you need to use a fire use an existing fireplace. Collect only deadwood and keep the fire small and manageable.

Note:

Be aware of fire bans and how they relate to the use of stoves.



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Washing-up

Remember that detergents, toothpaste and soap [even biodegradable types] harm fish and water life. Wash 50 metres away from lakes and streams and scatter the wash water so that it will filter through the soil before returning to the stream. Avoid putting food scraps into streams or lakes. Do not wash-up directly under the tap of a rainwater tank. Under no circumstances should you wash in stock troughs on pastoral properties.

Rubbish disposal

Pack to minimise rubbish and avoid carrying potential rubbish such as bottles, cans and excess wrappings. Do not burn, bash or bury rubbish as this disturbs the soil and the rubbish is likely to be dug up and scattered by animals. Carry out all your rubbish.

Note:

If you come across other people's rubbish pick that up too.

Toilets

Where there is a toilet please use it, in areas without toilets bury your faecal waste. Choose a spot at least 100 metres away from camp-sites and watercourses and dig a hole 15cm deep within the soil's organic layer [a hand trowel is useful for this] and bury all faecal waste.

FOOD AND COOKING

The need for a balanced diet becomes increasingly important as the length of an expedition increases. For journeys lasting up to four or five days following normal eating habits will ensure that the diet is adequately balanced. Probably too much thought is given to achieving variety in the menu instead of paying more attention to the need to maintain an adequate intake of liquids, especially in hot weather. Considerably more energy than usual will be expended during a camping expedition, and so more food will need to be eaten to maintain a balance.

Planning menus for bushwalking expeditions

When planning a menu a balance needs to be achieved where you will need to remember that since the food will have to be carried too much will add unnecessary weight to the load. If too little food is taken then the group will go hungry and the efficiency of the group may be impaired. The prime need is to pack as much energy into the smallest possible weight and volume. Increasing the amount of carbohydrates and fats and by using dehydrated, freeze dried and canned food usually achieves this.

Supermarkets carry an endless variety of dehydrated foods and freeze dried meals so if there is a plentiful supply of water there is no need to carry the extra weight of canned food. The packaging of such products is good, they are quick to prepare and usually only require the addition of water. Check how long the food takes to cook and wherever possible choose those that cook in the shortest possible time.

Only carry the foods you like and enjoy and keep all meals uncomplicated and simple to prepare, meals such as soups, stews, casseroles and pasta dishes are ideal. To ensure that you drink sufficiently especially in hot weather always carry more tea, coffee, milk and sugar than you think you will need. Fruit flavoured drink powders and cordials are also useful.



Occasionally, since I bought the ute, I have been thinking of ways to mount my awning and spotlights that I kept from the patrol. As I would only need the awning from time to time I wanted to still use my Yakima easy off brackets so it would be easily removable. Having roof rails on the ute already, my options were to buy awning brackets to suit the rails or get crossbars. Settling on crossbars it was time to shop, I wasn't aware there were so many to choose from with prices ranging from fair to taking the pi^*

Being for occasional usage I went for budget concious Gearup crossbars from Ebay at \$93.00 delivered.

Surprisingly (in a good way) the bars appear robust enough for the job and they have a quick and easy clamp arrangement making fitting and removing easy and as a bonus the Yakima brackets fit well.

The spotlights have had me thinking for a while now with no real places to mount them and not wanting to install a bullbar I nearly gave up on the idea but now they sit happily on the roof mounted to the front crossbar. Again not doing much driving at night now they don't have to live on the car so I have wired them up using Anderson plugs for quick removal.

Brisey





Test Your 12V Fuses *TIPS, TECH, & TINKER TIME*

HOW TO:

TEST

YOUR

FUSES

Are your lights on the blink? Here's how to use a multimeter to check the fuses for your 12V appliances

COMPILED BY MICHAEL BORG



Modern 12V electrical setups are a true blessing when things are working well, however, when things go wrong, it can quickly turn into a curse, especially if

you're not handy with electrical stuff. Luckily, it can be easy to at least check for a blown fuse yourself, and I'm going to do my best to explain how.

WHAT YOU NEED

Get the right gear before you need it and if possible familiarise yourself with it so it's not a steep learning curve when you are in a stressed situation trying to work out a problem. I recommend getting a multimeter with the following functions.

- Voltmeter suitable for 12 volts DC
- Continuity/ resistance test. Preferably with an audible sound

Get multiple spare fuses to suit your needs. Get the right style and amp rating.



FUSE RATING (IN AMPS)

2
3
4
5
7-1/2
10
15
20
25
30
35

WHERE TO START

When you come across an accessory, such as a light, that's not working, start from the simple stuff first.

- Is the switch on?
- Is the power on?

If it's not that, then it's time to look for a blown fuse. Hopefully, it's nicely labelled. Once you find the appropriate fuse you can start testing to see if it's blown.

The easiest way to do this is to remove the fuse and have a good look as most fuses (but not all) have a visible fuse element and can be obvious if it's blown.



TEST THE FUSE

If not, then you can use the continuity or resistance function on the multimeter to check the fuse.

To do this:

- Turn the multimeter on and set it to the continuity function.
- Then put the two probes of the meter together to test the meter and make sure it's working. You should see a reading of zero and hear a tone.
- Then put the two meter probes, one on each of the two terminals of the fuse.

If the fuse is blown then you will not have continuity and will not hear a sound and the meter will read "OL" or a high number. Then it would be a simple job of replacing the fuse and testing the light to see if it works.







Water Crossings 101 TIPS, TECH, & TINKER TIME



ROLLING ON THE RIVER

Pack your flippers and your floaties as we're about to run through the ins and outs of taking your 4WD for a swim!

COMPILED BY MICHAEL BORG

What's an adventure without a little water, eh? Yep, it's hard to beat that exhilarating feeling of tackling a particularly challenging water crossing

and making it out the other side in one piece. But let's face it, not everybody makes it to the other side! In fact, there's a bit of an art to successfully negotiating a tricky stretch of water, and it's

an art that could save you a lot of money in the long run. So, we thought we'd take a crash course on tackling water crossings in your 4WD. So, whack your reading goggles on, it's time to dive in!

TIPS, TECH. & TINKER TIME Water Crossings 101

SEAL UP YOUR SET-UP

Let's get one thing straight, a 4WD is not a boat. Nor is your camper trailer for that matter. Sure, they can handle a bit of water, but even ducks can drown, right? Now, there are a few things you can do to prepare your set-up for the wet stuff, and sealing up any gaps is a darn good place to start. Yep, making sure water cannot get inside your engine or any of its critical electrical components is absolutely essential.



SCOUT IT OUT



Before attempting a water crossing, you should almost always scout it out and get the lay of the land first. It's always nice to know how deep the water is or if there are any deeper holes or potential hazards in the path ahead. Then there's the benefit of knowing how fast

the water is flowing and if the base has enough traction available.

Obviously, if you are up in northern Australia where Saltwater Crocodiles are a concern, it can be a little tricky to walk the crossing, so a bit of common sense will prevail here.

MUST HAVE MODS

SNORKEL: A snorkel will raise your engines air intake to the top of the vehicle. So, you can rest assure it won't get submerged and suck in a gut full of water.

EXTENDED BREATHERS: Your vehicles drivetrain needs to breathe, or more specifically allow air to vent outside to prevent pressure building up inside the assembly. These breathers should also be extended to a higher point to ensure they don't allow water to enter or get clogged up.

MARINE HUB SEALS: Marine hub seals are a cheap and easy way to help seal up your camper trailers hub assembly. They're designed to perform better while submerged in water than general automotive seals as they are generally used for boat trailers and the like.



GEARED RIGHT

Selecting low range for a water crossing is almost always advisable. It will give you maximum engine torque while allowing you to maintain a controllable speed, which is exactly what you'll need to push through the water while

you're towing a trailer. What gear you ask? Well, you'll want to pick a gear that offers plenty of mumbo. Choose a gear that you can stay in for the duration of the water crossing. This is because shifting gears mid-way through can cause you

to lose momentum. Plus, in manual vehicles, pressing the clutch while the vehicles bell housing is submerged can allow water to get in between the clutch plate and flywheel, this causes a loss of friction resulting in a slipping clutch and reduced drive.





FOR PEACE OF MIND, CARRY AN EMERGENCY GLASS BREAKER IN YOUR CAR!

TOP TIPS – PREPERATION IS KEY!

WINDOWS DOWN: Car doors are notoriously hard to open when a vehicle is fully submerged, and electric windows are prone to failure if the vehicle floods. So, it's best to leave your window open for an emergency escape route. Leave your seatbelt off while you cross the water too!

COOL BRAKES: If your vehicles brakes are hot, let them cool down before you drop the hot metal into cold water, eh? Otherwise, you not only risk warping your brake rotors, but the hub can contract with the rapid change of temperature and suck water into the hub assembly.

WATER BRA: If the water is deep enough for part of the engine bay to be submerged, a water bra is worth considering. The idea is it will allow you to push the water in front of your vehicle to create a bow wave, which reduces the amount of water that gets into your engine bay.

GET YOUR RECOVERY GEAR READY: If the crossing looks even remotely sketchy, get your recovery gear ready and have a plan B in place. There's nothing worse than having water lapping at your knees while you try and work out what to do next.



WHAT'S YOUR PLAN-B

If there is any chance you may get bogged half way through a river crossing, its best to have a plan of recovery in place. This could mean simply spotting a good tree to potentially winch off, or the snatch-strap ready with a clear plan for the recovery vehicle before you even hit the water.



FINAL THOUGHTS

At the end of the day, if you have any inkling that a particular water crossing is dangerous or unachievable, your best bet is to avoid it like the plague! However, the majority of water crossing's you're likely to encounter on a typical 4WD track are well within the limits of a true 4WD. So, use your best judgment, and have fun! **CTL**



4WD versus AWD, what are the functional differences?



Subaru Symmetrical All Wheel Drive is one of the most well known AWD platforms.

What's the difference between AWD and 4WD?

Whether you're shopping for a new car or looking to understand your current vehicle better, you may have heard lots of terms, acronyms and codes being thrown around.

This blog post is going to help you out when you're looking for information about the terms 'All wheel drive' or 'four wheel drive' and want to understand what the differences are.

Here's a detailed breakdown to help you understand different vehicle drivetrains, their advantages, and how they relate to tyre care.

What is meant by 'Drive'?

When talking about passenger vehicles, 'drive' refers to which wheels receive power to propel the car forward. It doesn't matter whether that power comes from a petrol or diesel internal combustion engine, an electric motor, or even a combination of both.

Whether the driving forces are sent to the front wheels, rear wheels, or a combination of both have implications in terms of influencing handling, efficiency and capability. Before we dive into the AWD vs 4WD question, what are the more traditional drivetrain layouts?

Rear-Wheel Drive (RWD)

Common amongst utility vehicles and sports cars alike, rear wheel drive drivetrains send their power exclusively to the rear wheels. This offers a better front to rear weight balance and handling in high performance conditions.

Many commercial vehicles are rear wheel drive as a practical choice. Ensuring that the driven wheels are under where the payload is helps with traction in slippery conditions.

Front-Wheel Drive (FWD)

Found on most passenger vehicles, smaller vehicles and economy-oriented cars, a front wheel drivetrain directs all the power to the front wheels. This is generally great for efficiency, and the smaller size is more practical to fit in a variety of vehicles.

All-Wheel Drive (AWD)

Picture just about any Subaru and that's going to be the best example of AWD that most people know. Some AWD drivetrains favour the front or rear axle for torque output or can vary the percentage of torque sent to each end of the car depending on conditions based on computer control and an electronic or hydraulic centre differential.

While some AWD systems can reach an even 50:50 torque split front to rear, the degree and duration that AWD systems can do this is often heavily restricted compared to 4WD drivetrains.

AWD drivetrains are ideal for on-road driving and mild offroad conditions such as wet grass, gravel, snow and ice. AWD vehicles don't allow drivers to 'disengage' parts of the drivetrain when they're not required.



Pros:

Improved traction in varied weather conditions, compared to FWD or RWD.
Better handling and acceleration for mid-corner or low grip situations.

Cons:

Higher fuel consumption than FWD or RWD.
Can be more complex and expensive to maintain.



Even though 4x4 or 4wd can be used to label whole vehicles, the name relates to drivetrain type.

Four-Wheel Drive (4WD)

4WD and AWD share similarities in that engine power can be distributed to both front and rear wheels, however, 4WD systems allow the driver to switch between drivetrain settings through a mechanically operated differential. Many 4WD vehicles can operate in rear wheel drive-only most of the time, and allow the front wheel to be engaged only when required. It is also possible to mechanically lock the centre differential or transfer case in order to send up to 50% of the engine torque to the front and rear wheels almost without limitation. This can be extremely useful off road, and is the main point of difference between 4WD and AWD systems. You'll find 4WD drivetrains most commonly in larger SUVs and trucks like the Toyota Landcruiser, Ford Rangers, Tritons, Navara's and other similar vehicles. 4WD drivetrains are preferred for severe off-road activities such as rock crawling, sand, mud and more extreme conditions thanks to their ability to be activated to best suit the current conditions.

Pros:

Switchable drivetrain modes.
Ability to lock front and rear axles together through mechanical means.

Cons:

Generally poorer fuel economy.
4WD drivetrains are heavier and often less comfortable for everyday driving.

Choosing the Right Drivetrain

When it comes to off-road use, 4WD is undoubtedly the better choice for serious off-road driving. Thanks to their more robust construction and selectable drive modes, they're often able to be used more efficiently, based on what the driver needs at the time. If you're sticking on road, AWD systems are more suitable for general use in varying weather conditions. The functions of an AWD system are more transparent to the driver and will react to what's happening on the road.



What Different Drivetrains Mean to Tyres

The type of drivetrain in your vehicle will heavily influence how your tyres wear out over time.

For example, in a front wheel drive car, the front tyres are responsible for all of the acceleration forces, all of the steering forces and most of the brake forces, while the rear wheels are simply holding the back of the car off the ground. Rear wheel drive vehicles put all their acceleration forces into their rear wheels, while the fronts still handle most of the braking and steering forces.

This is grossly simplified, but a great example of how drivetrains can affect tyre wear, and how tyre rotations can help spread different types of wear around, ensuring that your tyres last as long as possible.

AWD and 4WD vehicles spread their tyre wear out a lot more evenly than FWD vehicles do, but this doesn't mean that routine tyre inspections should be glossed over. Due to the complex nature of most AWD systems and their hydraulically controlled differentials, they are much more sensitive to premature tyre wear and mismatched tyre sizes. This is why many manufacturers recommend changing tyres in pairs or in sets, should a tyre require a replacement.

Due to their mechanical nature, many 4WD drivetrains are more resilient to tyre size differences. It's always best to consult your owners manual for specific advice on tyre rotation schedules as well as permissible tyre replacement procedures.

Your Local Specialists

Regardless of what vehicle you drive, your local Tyrepower store can help you out. With over 55 locations in Western Australia, you're never far away from getting the power with Australias largest independent tyre retailer network.

With a wide range of vehicle data available to us, all the top brands, state of the art equipment and great customer service, Tyrepower should be your first call if you have any questions relating to your tyres and wheels.

Reach out to Tyrepower Greenwood today by calling (08) 9247 1166 or by visiting our workshop, conveniently located at 26 Canham Way, Greenwood.



FULLY BBQ'D BREAKFAST

- 4** Eggs
- 2** Small red capsicums
- 2** Chorizo sausages, fresh not dried
- 4** Large field mushrooms
- 1** Bunch asparagus
- Fresh sourdough, sliced
- Basil leaves, finely shredded to serve
- 100g** Fetta cheese crumbled
- Olive oil
- Sea salt and fresh ground black pepper

Pre heat the BBQ to medium.

Cut the red capsicums in half and remove the seeds and membranes and begin grilling them cut side down for 3-4 minutes. Flip them over and crack an egg into each capsicum half.

Cook the chorizos on the flat plate, turning regularly. Finish off on the grill plate for lovely grill marks.

Peel the outer skin off the field mushrooms and place upside down on the grill and drizzle olive oil on each and season with salt and pepper. Don't turn over.

Brush the asparagus and sliced sourdough with olive oil and grill until nicely charred.

Serve together with finely shredded basil leaves for garnish and fetta cheese crumbled over the top.

SERVES 4

Preparation: 10 minutes Cooking: 20 minutes

the outdoors made easy



Gasmate®

BUTTER CHICKEN CURRY



Serves 4 people

Butter chicken is a great curry for any age and full of lots of vegetables. Mild, creamy and packed with flavour, this dish is a winner for colder nights when holidaying outdoors.

Prep Time 30 Minutes

1. Dice onion, capsicum and carrots.
 2. Spray frypan with olive oil and once hot, add diced ingredients. Sauté on medium to high heat, stirring them until they start to get soft.
 3. Add diced chicken and when it starts to brown add garlic, ginger and butter chicken pastes. Cook for approximately 5 minutes, stirring and scraping the bottom of the frypan to remove any residue that is stuck.
 4. Add canned diced tomatoes and salt, stir to combine and reduce heat, simmering for 5 minutes and then add cream and simmer for further few minutes before adding spinach.
 5. Mix in spinach and as soon as it breaks down turn off heat.
 6. Serve with rice and/or flatbread/roti with some Greek yogurt on the side.
- Any vegetables can be substituted or added such as sweet potato or broccoli.
 - Serve on cauliflower rice or sweet potato mash for a low carb option instead of rice.

700g	Chicken thigh or breast fillet (diced)
1 medium	Brown Onion diced
400g	Canned diced tomato
½ cup	Thickened cream (can use lite cream)
1 small	Capsicum diced
1 large	Carrot diced
120g	Spinach
1 tbsp	Garlic paste
1 tbsp	Ginger paste
2 tbsp	Butter Chicken paste
¾ tsp	Salt
1 tbsp	Extra Virgin Olive Oil
200g	Plain Greek Yogurt (to serve)
1 tbsp	Ginger paste
	As desired: Cooked Rice for serving

THE OUTDOORS MADE EASY.



Gasmate®

BREAKFAST GRANOLA

This is great to have on hand for an easy, quick and no fuss healthy breakfast. It can be made beforehand and packed in an airtight container or make it on your holiday. This is a great every day pantry item as well!



Makes enough to fill an 850L container
Prep Time 15 Minutes

1. Spray a large frypan with olive oil and heat frypan on medium-high heat.
 2. Add all dry ingredients to frypan and mix to combine.
 3. Drizzle honey over dry ingredients and stir through the mixture.
 4. Stir mixture as it cooks keeping the ingredients loose for approximately 15 minutes or until golden brown.
 5. Pour granola onto a sheet of baking paper to cool down and then transfer to an airtight container.
- Serve with fresh or frozen berries and your favorite yogurt.
 - For Keto/no carbohydrates version remove rolled oats.

1 cup	Mixed nuts chopped roughly
½ cup	Rollled oats
½ cup	Sunflower seeds
½ cup	Pumpkin seeds
¾ cup	Shredded coconut
½ cup	Sultanas
½ cup	Chia seeds
1 tbsp	Ground cinnamon
½ cup	Honey

THE OUTDOORS MADE EASY.

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PRICE REDUCED!

Kimberley Kamper Platinum 2006/07 Model

\$17500 ono



This kamper although older and used, is in excellent condition. It has always been garaged when not in use, regularly serviced and maintained with original or better replacement parts. Any additional information wanted please text me. **Brian 0400946684**

Tare 1260 Agg 1600

New Lithium Batteries 30% increase of original setup and much lighter.

Webasto HWU Recently Serviced

Fox Shock Absorbers Recently replaced

Just serviced, new brakes fitted

Optioned up with additional storage boxes

Drawer under bed

Kwik awning

Bedioun Annexe with walls and skirt

Ensuite Tent. Original zip on to side of kamper

Webasto diesel hot water unit and shower

Ability to pump water from external source not to contaminate water tank

130litre water tank

Innersprung mattress

Rhino cargo bag

160watt portable solar panels. 80watts When folded attached to kamper with ctek solar bcdc charger

Spare wheel bearings

Good tyres

Eutectic fridge. Very economical on battery power

Many extras if wanted



First of all, thankyou to everyone that attended the Annual General Meeting last night.

It was a great night, with great people, great food, great raffle prizes, and great (cheap) drinks.

Thankyou to the previous Committee for your efforts throughout the past year. It truly is appreciated.

And with the previous Committee standing down, I would like to welcome in the new Committee:

- President (Chairperson): Aaron Crane
- Vice President (Julie Power)
- Secretary: Gary Mayes
- Treasurer: Dave Knudsen
- Insurance Officer: Julie Power
- Property Officer: Jacob Yardley
- Environmental Officer: Duane Buckenara
- Delegates: Ray & Sharon Warry
- Magazine Editor: Brian Tanner
- Webmaster: Gary Mayes
- Trip Coordinator: Steven Power

Thankyou very much to the new Committee Members for taking on these positions. It truly is recognised & appreciated.

We also had our club awards presented, as follows:

- Club Person of the Year: Julie Power
- Most Talked about Trip: Dave Knudsen, for his Lancellin Dunes Trip
- Best Mishap: Leon Castle, for the succession of events during the Calcup Hill Trip over the Australia Day Long Weekend.
- Club Stirrer of the Year: Duane Buckenara

There was also an additional award this year, which was deemed the Whoopsy Daisy award. This one went to Jacob Yardley, for accidentally putting the wrong fuel into his vehicle...

Once again, thankyou to everyone that was able to attend, and we will see you at the next General Meeting on Wednesday 27th July 2025.











TRIPPING OUT



KENNEDY RANGES & MT AUGUSTUS



TRIPPING OUT



KENNEDY RANGES & MT AUGUSTUS



TRIPPING OUT



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TRIPPING OUT



KENNEDY RANGES & MT AUGUSTUS





TRIPPING OUT



KENNEDY RANGES & MT AUGUSTUS





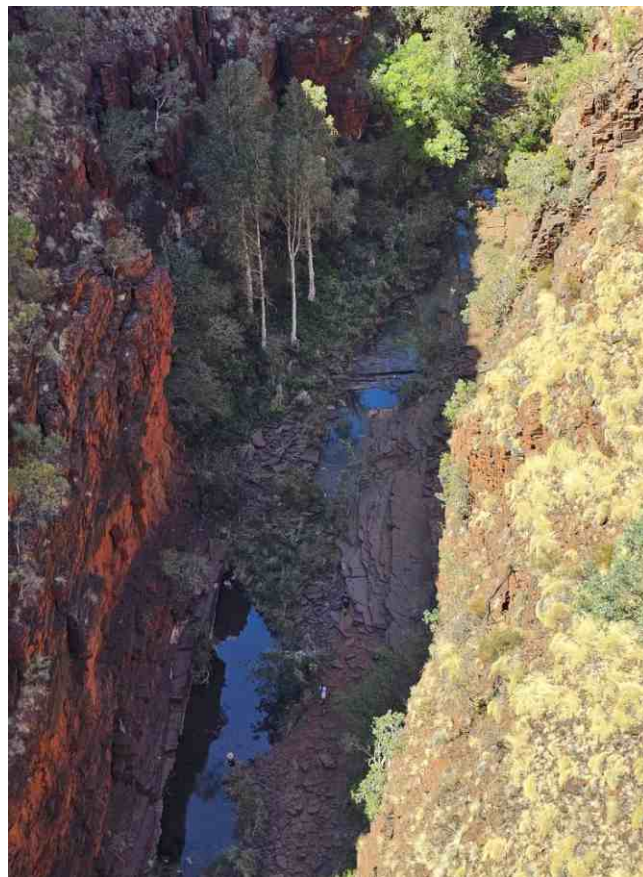
TRIPPING OUT



KENNEDY RANGES & MT AUGUSTUS



TRIPPING OUT



KENNEDY RANGES & MT AUGUSTUS



TRIPPING OUT



KENNEDY RANGES & MT AUGUSTUS









PEEL 4X4 CLUB SCHOOL TERMS 2026

WA 2026 school holidays

First day of school Monday 2 February

Autumn holidays Friday 3 April – Sunday 19 April

Winter holidays Saturday 4 July – Sunday 19 July

Spring holidays Saturday 26 September – Sunday 11 October

Summer holidays Friday 18 December – Sunday 31 January 2027

VIC school holidays 2026

First day of school Tuesday 27 January (students start 28 January in government schools)

Autumn holidays Friday 3 April – Sunday 19 April

Winter holidays Saturday 27 June – Sunday 12 July

Spring holidays Saturday 19 September – Sunday 4 October

Summer holidays Saturday 19 December – Tuesday 26 January 2027 (students start 28 January in government schools)

NT school holidays 2026

First day of school Wednesday 28 January

Autumn holidays Friday 3 April – Sunday 12 April

Winter holidays Saturday 20 June – Sunday 12 July

Spring holidays Saturday 19 September – Sunday 4 October

Summer holidays Saturday 12 December – Tuesday 26 January 2027



ACT 2026 school holidays

First day of school Friday 30 January (new students) | Monday 2 February 2026 (returning students)

Autumn holidays Friday 3 April – Monday 20 April

Winter holidays Saturday 4 July – Monday 20 July

Spring holidays Saturday 26 September – Monday 12 October

Summer holidays Saturday 19 December – Monday 1 February 2027

TAS school holidays 2026

First day of school Thursday 5 February 2026

Autumn holidays Saturday 18 April – Sunday 3 May

Winter holidays Saturday 11 July – Sunday 26 July

Spring holidays Saturday 3 October – Sunday 18 October

Summer holidays Friday 18 December – TBA

QLD 2026 school holidays

First day of school Tuesday 27 January

Autumn holidays Friday 3 April – Sunday 19 April

Winter holidays Saturday 27 June – Sunday 12 July

Spring holidays Saturday 19 September – Monday 5 October

Summer holidays Saturday 12 December to Tuesday 26 January 2027

NSW 2026 school holidays

First day of school Tuesday 27 January (Eastern) | Tuesday 3 February (Western)

Autumn holidays Friday 1 April – Sunday 19 April

Winter holidays Saturday 4 July – Sunday 19 July

Spring holidays Saturday 26 September – Sunday 11 October

Summer holidays Friday 18 December – Wednesday 27 January 2027 (Eastern division), Wednesday 3 February 2026 (Western division)



Whitegum 4x4 Park Overnighter

Event by Jacob Yardley and Peel 4x4 Club Members

680 Cameron Rd, Malebelling WA 6302

Duration: 2 days

Private · Only people who are invited

Join us for a overnight at the Whitegum Farm. There is powered & unpowered sites for vans or tents/swags.

Thought if we arrive around Midday & set up we can go for a 4x4 tour in the area, then get together for dinner, drinks & some laughs.

In the morning after breakfast we can tackle the parks 4x4 tracks. Open to anyone's other suggestions to do if you know the area. Maybe a pub on the way home?

Hi all

Calling for final numbers for the Whitegum Park overnighter on the 20th of September.

I have contacted the park & they have room, powered & unpowered for our group.

Please e-mail the park at info@whitegumfarm.com.au & book your site, you can pay on arrival.

Please comment in the e-mail that you are part of the Peel 4x4 club group so they can put us all close together. Also if you want to use the 4x4 park on the Sunday as part of our group.

After doing this can you confirm via e-mail to myself betheljy@outlook.com or msg on Fb so I can have final numbers.

Closer to the event i'll see if we want to have dinner in the restaurant on the Saturday night or a cook up together & share.

Cheers Jacob

The Westonia Wildflower trip is the following weekend from the Whitegum Park trip so I have decided I will be staying at Whitegum for an extra night then on the Monday I will be travelling to Merredin staying at the Merredin Caravan Park 4 nights, on the Friday I will travel to Westonia.

The time in Merredin will be visiting wildflower hotspots and interesting sites.

Anyone is welcome to tag along with me but you will need to make your own arrangements for accomodation.

Leading on from the Westonia Trip Mark Skeels will be leading his trip to Lake Perkalilli Red Dust Revival. Please contact Mark if you are interested.

Brisey



WESTONIA WILDFLOWER WANDER

When:

Kings Birthday Weekend Friday 26 September to Tuesday 30 September

Where:

Westonia Caravan Park Corner Kaolin Street and Wolfram Street Westonia. Check in time 2.00 PM

Accommodation:

Caravan, camper trailer, tent or swag at the caravan park.

Rooms may be available at the Westonia Tavern 90467012 phone after 4.00 PM

Caravan Park:

Caravan site \$25.00 per night Tent site \$15.00 per night.

[Caravan Park](#)

Westonia Tavern:

[Westonia Tavern](#) 90467012 phone after 4.00 PM

Bookings and payments:

At the next General Meeting 26 March please add your name to the trip sheet include if you need a caravan or tent site.

If you can't make it to the next General Meeting please email me peel4x4magazine@gmail.com include if you need a caravan or tent site.

After the next General Meeting I will make a tentative booking with the caravan park for those that are on the trip sheet plus a few extra sites.

Payment can be made at the Shire Office in Woolfram Street or to the onsite caretaker.

If you wish to stay at the Westonia Tavern please organise your own booking as a deposit will probably be required

Fuel:

Carrabin, corner Great Eastern Highway and Westonia Road
Westonia, unmanned credit card site.

What to expect:

Saturday 27 September as some people may be arriving a walk around town and visit the museum in the morning then a 30 Km return drive to Boodalin Soak and Sandford nature reserve after lunch to look for wildflowers. Dinner at the pub for anyone interested

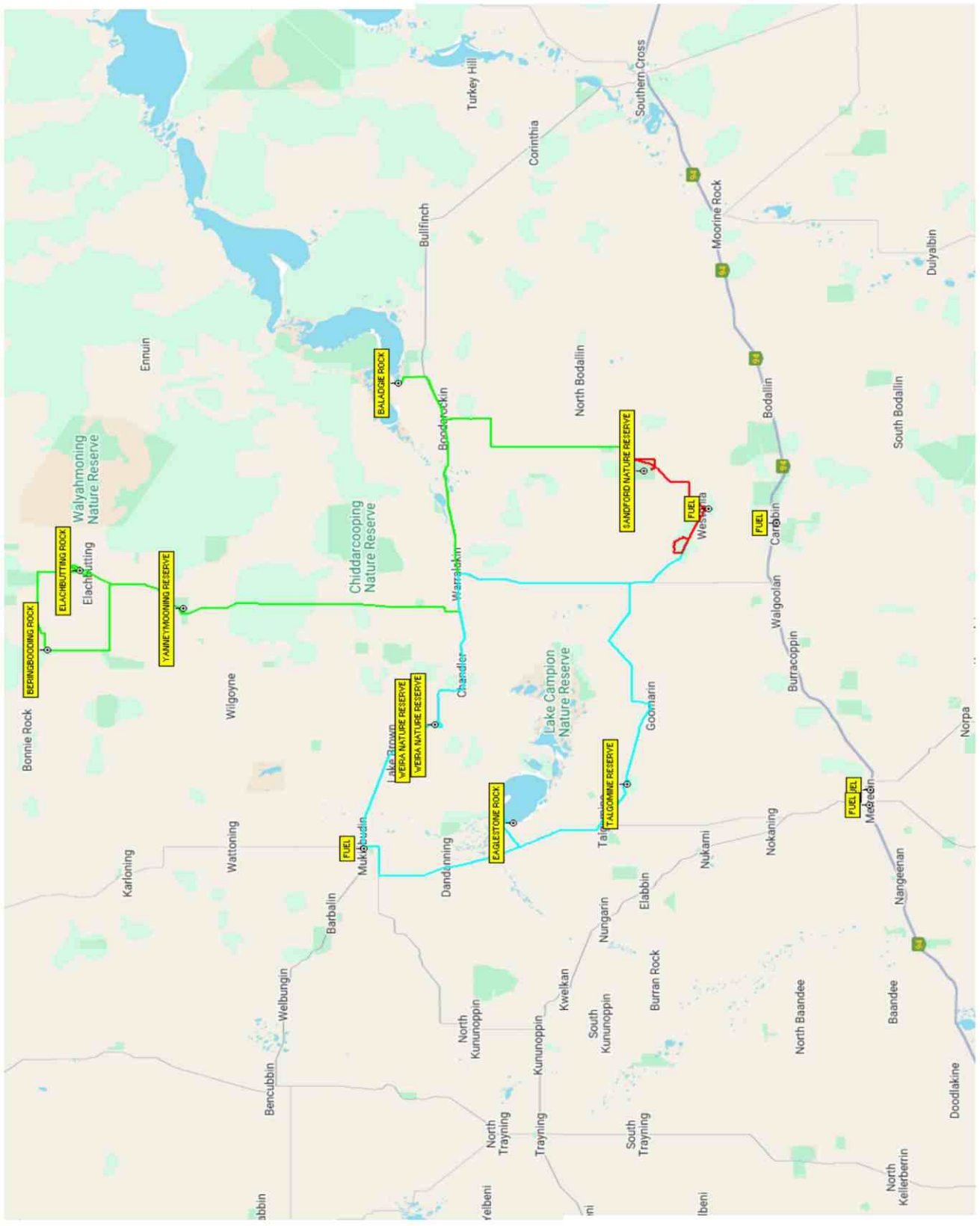
Sunday 28 September an early start for a 300 Km return drive to Baladgie Rock, Yanneymooning Reserve, Elachbutting Rock and Beringbooding Rock to look for wildflowers.

Monday 29 September an early start for a 170 Km return drive to Weira Nature Reserve (2 sites), Eaglestone Rock and Talgomine Reserve to look for wildflowers.

Tuesday 30 September journey home via Bruce Rock and York



EXCURSION EDIFICATION





KENNEDY RANGES AND BEYOND

TRIP LEADER: DUANE BUCKENARA AND MAX MILBANKE

PART 1: KENNEDY RANGES AND MOUNT AUGUSTUS

MEETING TIME: 10.AM SUNDAY AUGUST 10

DURATION: APPROXIMATELY 7 TO 8 DAYS

MEETING PLACE: BP SERVO MUCHEA (TOP END OF TONKIN HIGHWAY)

PART 2: MOUNT AUGUSTUS TO KARIJINI

DURATION: UP TO 2 WEEKS

PART 3: KARIJINI TO EXMOUTH

PROVIDING PHONE SERVICE IS AVAILABLE INTERESTED PEOPLE COULD BE KEPT UP TO DATE WHEN THE 2ND AND 3RD PARTS WILL BE COMENCING AND A MEETING PLACE CAN BE ESTABLISHED.

CAMPER TRAILERS AND OFFROAD CARAVANS TO BE TAKEN AT YOUR OWN RISK



Sunday 24th August
Mystery Trip
Nuddo
Medium

Wednesday 27th to Sunday 31st August
Dowerin
Mark Skeels
Medium

Whitegum Farm
Saturday 20th September to Sunday 21st
September
Jacob Yardley
Medium

Westonia Wildflower Wander Kings Birthday Long
Weekend
Friday 26th September to Tuesday 30th
September
Brian Tanner
Easy

Lake Perkolilli
Thursday 2nd October to Monday 6th October
Mark Skeels
Medium

Mandurah Boat, Caravan, 4WD & Camping Show
Thursday 9th October to Sunday 12th October
Information Only

Koorda Drive-In & Karrara Ranges
Friday 17th October to Saturday 25th October
Mark Skeels
Medium

Sandy Cape Swag Trip
Saturday 18th October to Sunday 19th October
Hugh Burns
Medium

Perth 4WD Show
Thursday 6th November to Sunday 9th November
Information Only

Lancellin Dunes Day Trip
Sunday 16th November
TBC
Medium

Peel 4x4 Club Christmas Party
Sunday 14th December
Peel 4x4 Club Committee
Social

Australia Day @ Windy Harbour
Friday 23rd January to Monday 26th January
2026
Steve Power
Medium