PEEL 4X4 CLUB

EST: 1998

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MARCH 2024 MAGAZINE

CONTENTS

CLUB INFORMATION 3
Committee and club contact details

GENERAL STUFF 4
Things to be aware of

PRESIDENT'S PARABLE 9
President's editorial column

BRISEY'S BULLDUST 10
Magazine editor's editorial column

MEETING MURMURS 11
Meeting minutes

HAPPY BIRTHDAY 16
Birthday wishes to members and families

WHERE THE **** ARE WE? 17
Navigation articles of interest

TESTED TO DESTRUCTION 19
Product reports from members experiences

ENLIGHTENING ELUCIDATIONS 20
Topical articles of interest not necessarily about 4 wheel driving

THE EPICUREAN 37
Camp cooking

EATERY EVALUATION 38
Café reviews

ADDED VALUE 39
Advertising from our sponsors

READERS MART 40
Members surplus items for sale

TRIPPING OUT 41
Club trip reports and photos

EXCURSION EDIFICATION 58
Upcoming trip advertising

TRIP CALENDAR 68
Upcoming trips

CLUB INFORMATION

CLUB CONTACT DETAILS
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Magazine Email: briantanner57@bigpond.com

NEXT GENERAL MEETING
27/3/2024
GENERAL MEETING MEETING VENUE
Secret Harbour Surf Lifesaving Club
Doors open 7.00 pm
Meeting starts 7.30 pm
NEXT COMMITTEE MEETING
10/4/24
COMMITTEE MEETING VENUE
The Crewe's home

Upcoming trips

Black Point/ Lake Jasper 29 March—1 April (Easter weekend 2 days after the meeting)

Koorda Drive in 6 April

Kaarakin Clean Up 7 April

WA4WDA Gathering Whitegum Farm York 19—21 April

ANZAC Day 25 April

Find us on Facebook peel4x4club

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

GENERAL STUFF

PEEL 4X4 CLUB BYLAWS

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

PEEL 4X4 CODE OF ETHICS

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

This code is valuable only if you observe it

CLUB SHIRTS

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 List

1 x Space Case (900L x 390W x 400H)

4 x 490mm Black Plastic Sand Pegs

1 x ARB Gazebo

1 X Wanderer Gazebo

1 x Heatlie BBQ (880mm x 540mm)

2 x Peel 4 x 4 Club Retractable Vertical Banners

2 x Peel 4 x 4 Club Flags with water filled bases.

1 x Plastic Peel 4 x 4 Club sign (Folding Triangle Core Flute Type)

1 x 5.33kg Gas Bottle (Empty)

1 x Wanderer single wall for gazebo

1 x Wanderer half wall for gazebo

1 x 60mm diameter collapsible bin

Gravel & block – with Gary Mayes

Trophy – Most talked about event of the year (1998 – 2014)

Trophy – Burnt pot award (2000 – 2014)

2 x 40 channel Uniden UHF Radios

1 x musty smelling orange cotton vest

4 x metal Peel 4 x 4 signs (staked flag design)

Various large paper & laminated maps

1 x 2.9 Snatch Strap

1 x red & Yellow Peel 4 x 4 Club Flad/Banner (1940mm x 970mm)

2 x heavy Wooden speed check signs

1 x Tennis net in bad (no racquets)

Heaps of old Peel 4 x 4 Club magazines, hard floppy disks, and stuff ……

Santa Suite

Containers for Change

*

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

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

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

C11064407

Peel 4 X 4

We are fundraising with Entertainment

Buy online today!

SCAN ME

SHOW YOUR SUPPORT

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

PRESIDENT'S PARABLE

Presidents Report

Hi Everyone,

This month saw a bit of a change in our 4x4 activities, with a night trip out along the Captain Fawcett Track. Driving tracks at night gives a completely different aspect to tracks that you may otherwise be familiar with, and was good to change it up a bit.

It was also nice to see the nocturnal wildlife coming out, which you do not normally encounter throughout the day.

With Easter being quite early this year, and the expectation that we will most likely still be subject to Total Fire Bans, I felt it a timely reminder to be talking a little about camp fire safety. We are unlikely to be having camp fires during the Easter break, however the cooler weather & easing of fire restrictions won't be far off.

Having spoken with burns specialists many years ago, the Easter break is historically the time of year where they see a dramatic increase in the number of camp fire burns / injuries.

When leaving your camp site, as responsible campers & 4wders, please ensure you put you fire out with plenty of water. DO NOT just cover it with sand, as this only insulates the fire, keeping the outer surface cool to the touch, but still glowing red beneath the sand.

If you do not have enough water, do not start a fire.

This is an issue that is extremely close to my heart, having had to deal with the consequences of someone covering a fire with sand. They obviously thought they were doing the right thing by not allowing the fire to spread, however this resulted in our daughter being airlifted to hospital, and subsequent burns treatments & skin grafts.

For those going away over Easter, I expect it will be quite busy out on the roads this year, so please take your time if travelling, and make sure you take breaks as required.

With the previous General Meeting running for a little longer than anticipated, I will be looking to discuss the two main recovery types during the Technical Segment at this meeting.

As a club that undertakes quite a bit of Four Wheel Driving, people are bound to get stuck. This session just aims to provide a few fundamental things to consider when looking at recovering vehicles, and will also help to reinforce the dangers associated with recoveries.

Stay safe out on the tracks everyone, and I look forward to seeing you all at the upcoming General Meeting on Wednesday 27th March.

BRISEY'S BULLDUST

With GPS so widely used now you could imagine that map reading skills will eventually be all but forgotten. A failure of your chosen GPS unit or no phone coverage for Google Maps won't cause a lot of problems in the metro area but as we intrepid 4 wheelers venture away from phone reception a GPS failure could be a more serious event. As I have said many times to anyone who cared to listen we should always have a paper type map, in a reasonable scale, of the area we are travelling in and a reasonably good compass that you can navigate by, such as the Silva, which can be bought from map shops and camping stores. A basic knowledge of how to navigate by compass is also needed.

Before you shout out how does one learn how to use a compass and map I have included a good guide to map reading in the "Enlightening Edifications" section by Natmap which covers just that.

This magazine is going rom strength to strength with another 70 pager, it seems I just can't help myself, so this is a good time to get some feedback on the magazine. I would appreciate any comments, good, bad or indifferent on the magazine.

Does it have the content you like to see?

Is there something else you would like to see in it?

Are you tired of me doing it and would like another editor?

Any suggestions for the layout?

GENERAL MEETING OF THE PEEL 4X4 CLUB

Meeting Minutes

Date: Wednesday 28th February 2024

Venue: Secret Harbour Surf Life Saving Club

Meeting Start : 7.30pm

1. CONFIRMATION OF ATTENDEES

ATTENDEES – Reminded to sign in if they hadn't done so.

VISITORS – Welcome visitors to club. Discussion around what we do, and how to join.

APOLOGIES / PROXIES – Rina Baxter, Glen and Janelle Poad, Carl and Julie, Bianca and Max.

2. TRIPS SINCE LAST MEETING

- Surf Club Carnival – Sunday 14th January
- Northcliffe – Australia Day Weekend
- MundAl Track (Part 1) POSTPONED – Sunday 11th February

3. CONFIRMATION OF MINUTES FROM PREVIOUS GENERAL MEETING – 07/01/2024

Chairperson has accepted & signed the minutes.

No objections as to the accuracy of the minutes.

Unanimously Accepted.

4. BUSINESS FROM THE PREVIOUS MINUTES

- Nil

5. PRESIDENTS REPORT: Gary Mayes

- Nothing to report
- No Business for the President

6. SECRETARYS REPORT: Donna Light

Mail In: Bank Statement, passed to President.

Business for the Secretary: No business for secretary

7. TREASURERS REPORT: Cassie Mayes

Current balance $ 5567.25, with $22 yet to reimburse for flyers.

- No questions or queries around the latest Treasurers report.
- No business for the treasurer.

8. INSURANCE OFFICERS REPORT: Dave Knudsen

- Discussion was held around visitors not being covered under the Association's Insurance. The Association are in the process of putting together a temporary membership form, and talking about including a small fee so that visitors can be covered. If Peel 4x4 manage visitors in this way, the club will need to introduce a new membership type and change the constitution. Gary will be attending the Association's meeting to discuss further.
  As a club we decided to hold off on the temporary memberships, and to bear in mind that there is currently no public liability for visitors, so we are not to request visitors to do any recoveries etc.
- Dave Knudsen has touched base with the 4wd Association and confirmed that the club should hold any incident report forms, in case of litigation, or future insurance claims.
- No business for the Insurance Officer

9. PROPERTY OFFICERS REPORT: Phillip Crewe

- Phil will be disposing of unused and out of date goods, and the club's property to be cleaned up and thinned out. Phil will be resigning from Property Officer's role as of next month. Phil has offered for the club to store the goods at his house while he is away, and for us to get what we need when needed. Also, a suggestion of Bianca to take over the property officer's role. Phil to ask her. Chris Jones can store some things but doesn't have room for the gazebo's and larger items.
- No business for the Property Officer.

10. ENVIRONMENTAL OFFICERS REPORT: Peter Light

Business for the Environmental Officer:

- Pete attended the Environmental Officers meeting held on Wednesday 6th March at Gosnells RSL Hall.
- Pete has been in contact with Mandurah Heritage and Environmental group, who referred him to Bouvard Coast Care regarding some options for the club to offer their help.
- Bouvard Coast Care has asked if we can help on the long weekend in June, ferrying people along the 4wd tracks, to do their planting. Trip sheet was done up and placed on the table.
- No business for the Environmental Officer

11. DELEGATES REPORT: Gary Mayes

- WA4WDA have now signed an agreement with DLGSC, and have $20k in the bank for clubs to apply for. Clubs can now apply for $1000 per year, with requirements around what can be claimed and how it can be used. President asked the members to have a think about what we would like to apply for. Gary to find out if we need to spend the funding first and then apply for reimbursement.
- WA4WDA website has now been updated with the DLGSC logo. Other stuff also added. We are responsible for blog content for May 2024.
- MundAl Track waypoints downloads is now easier. All 5x sections now on there, along with a video of Mark Skeels for the MundAl Track.
  North Dandalup Dam & Nanga Brook have changes. Have to go around or through Hoffman Mill Road. Gary asked if anyone with OziExplorer able to log a track file, and Brisey was ok to do this at a later date.
- Temporary membership needs to be established prior to a trip.

  Visitors need to follow club rules & regulations, and abide by the directions of the Trip Leader.

  Need to speak up if they do not feel comfortable driving a particular section, etc...
  No Public Liability Insurance, therefore cannot give directions.
- National Gathering update provided to members.
  No Business for the Delegate:

12. MAGAZINE EDITORS REPORT: Brian Tanner

- Big Magazine this month, a total of 74 pages. Brisey will email a copy of the magazine to our visitors in the next day or two.
- Brisey has developed a Quick Reference Guide to download MundAl tTrack waypoints from the WA4WDA website.
- Brisey will also develop a Quick Reference Guide for several popular navigation devices, to show how to put the MundAl Track waypoints onto devices such as HX1, HX2, HEMA 7 & OziExplorer. Will aim to tackle next week.
- All of these QRG's will be available on the WA4WDA website once complete.
- No Business for the Magazine Editor:

13. WEBMASTERS REPORT: Cassie Mayes

- Cassie sent her apologies to the club, as she will be unable to attend another general meeting until August. There has been a lot of activity through the website, and she is looking forward to meeting all the new members.
- The new website has one login, and is able to post to several social media sites with one post.
- Nuddo has searched the club and it comes up in Insta and FB, however when you click on the fb link from Google, there seems to be problems linking us with the most current face book page. Nuddo explained that he found a way around it and got to the most updated FB page.
- No business for the Webmaster

14. TRIP COORDINATORS REPORT: Steven Power & Julie Power

- 8th March Captain Fawcett Track – night drive, Trip leader Nuddo
- 16th March, - Social BBQ and games at Leigh and Phil Crewe's house
- Easter long weekend. Lake Jasper & Black Point - Trip Leader Gary
- 19th – 21st April 4WD association gathering at White Gum Farm.
- 24th – 25th April, Anzac Day – Yarloop to help the local community set up and take down for the Anzac day commemorations – more info to come.
- 12th May – Lennards Track – Gary Trip leader
- 2nd June Tims Thickett – Peter Light trip leader
- Max Milbanke is going to Victorian High Country aroud Easter for 2 weeks and is looking for someone to join him.
- There was discussion around Northcliffe caravan park, and if the members are happy to go there for the next Australia Day.
- No business for the Trip Coordinator.

14. GENERAL BUSINESS:

- WA4WDA National Gathering Update. 48 sites booked, so will have exclusive access.
  Visitors are welcome. Will be using regos for access to park.
  No powered sites left.
  Quiz night, guest speaker, and demonstrations from others.
  Happy hour Saturday afternoon, 5pm to 6pm. Grazing plates from Committee, and cheap drinks from Gary.
  Make Tracks ARB are covering track access costs.
- Applications for Christmas Pageant open on 1st July.
- Dave Knudsen presented Achievement awards to everyone who attended the Calcup Hill Trip – they conquered the biggest sand dune in the SW region of WA.
- Mark Skeels provided some information to the members & visitors present in regards to Starlink.
  This will provide internet reception to wherever the shy is visible, therefore potentially replacing satellite phones. Following the meeting, rates were looked at, and found to vave a monthly cost of $174 for mobile coverage, and a $599 hardware cost.

15. TECHNICAL

- No technical display at this meeting due to timing, and decision from members.

16. NEXT MEETINGS:

GENERAL MEETING – Wednesday 27th March, 2024. Secret Harbour Surf Lifesaving Club.
Doors open at 7:00pm. Meeting starts at 7:30pm. Pizza for those interested.

COMMITTEE MEETING – Wednesday 10th April 2024. Hosted by Phillip & Leigh Crewe

17. MEETING CLOSURE 9.10pm

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

Gary Mayes

Peel 4x4 Club Chairperson

Date: 18/03/2024

To any Club Members or their family having a birthday in April

OLD 'HEMA EXPLORER CLOUD' UPDATE NOTE

1 **ATTENTION: OLD 'HEMA EXPLORER CLOUD' UPDATE NOTE**

2 Hema has migrated to a new digital platform (learn more) that has allowed for the release of a number of new products (4x4 Explorer App & HX-2) that have provided for significant improvements in data quality, load speed, file size and capability for our online and app based digital products. This digital platform also has a new cloud account that allows for these products to be synced to the Hema Cloud and allow users to to sync their tracks, waypoints and photos between their devices.

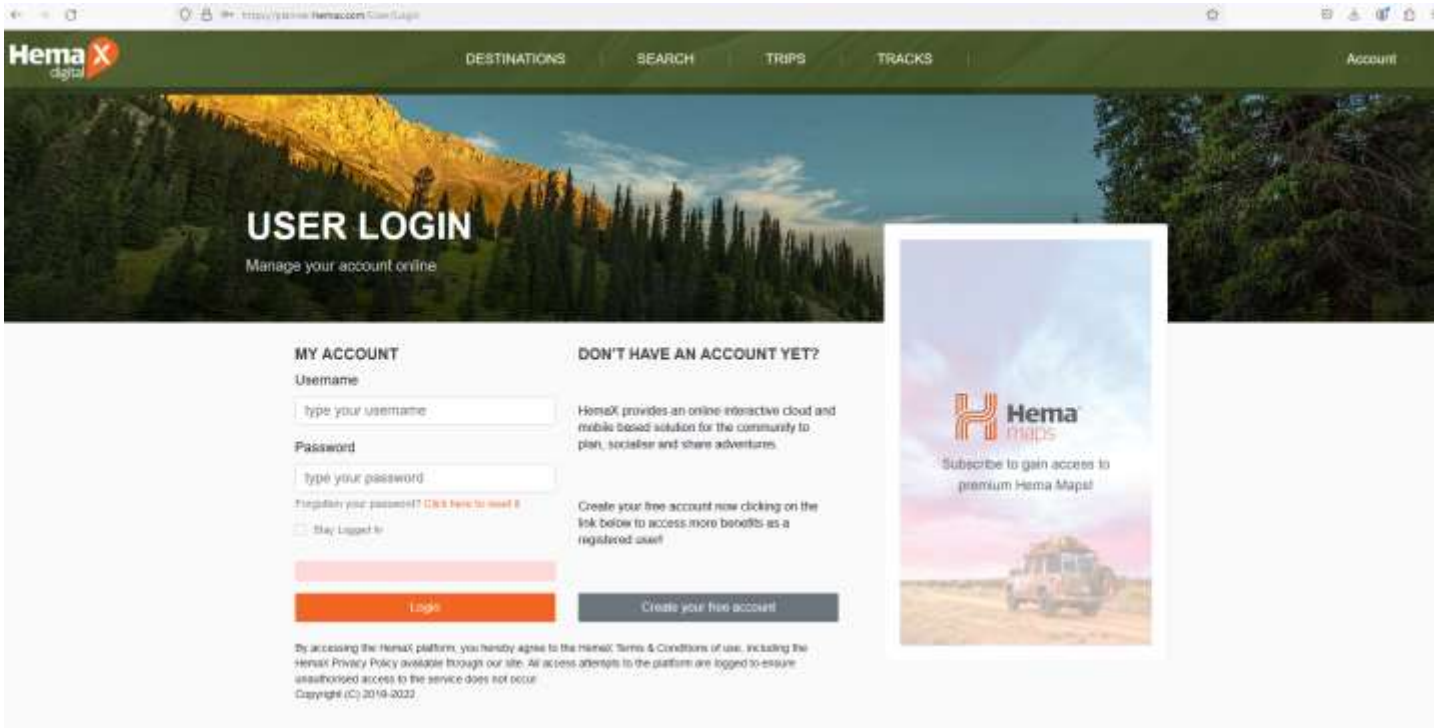
3 For users who are migrating from our older products (HX-1 and Hema Explorer App) there are two ways that data that is stored in Hema's 'old explorer cloud' can be migrated to the 'new HemaX cloud':

4 If a user only has a small number of tracks to migrate (up to 3MB) the easiest way is to download each individual track (in GPX) from the old explorer cloud and then to sign into your new HemaX cloud account and upload that track directly into the new cloud (via Tracks/My Tracks/Import my track). For more information refer to this link.

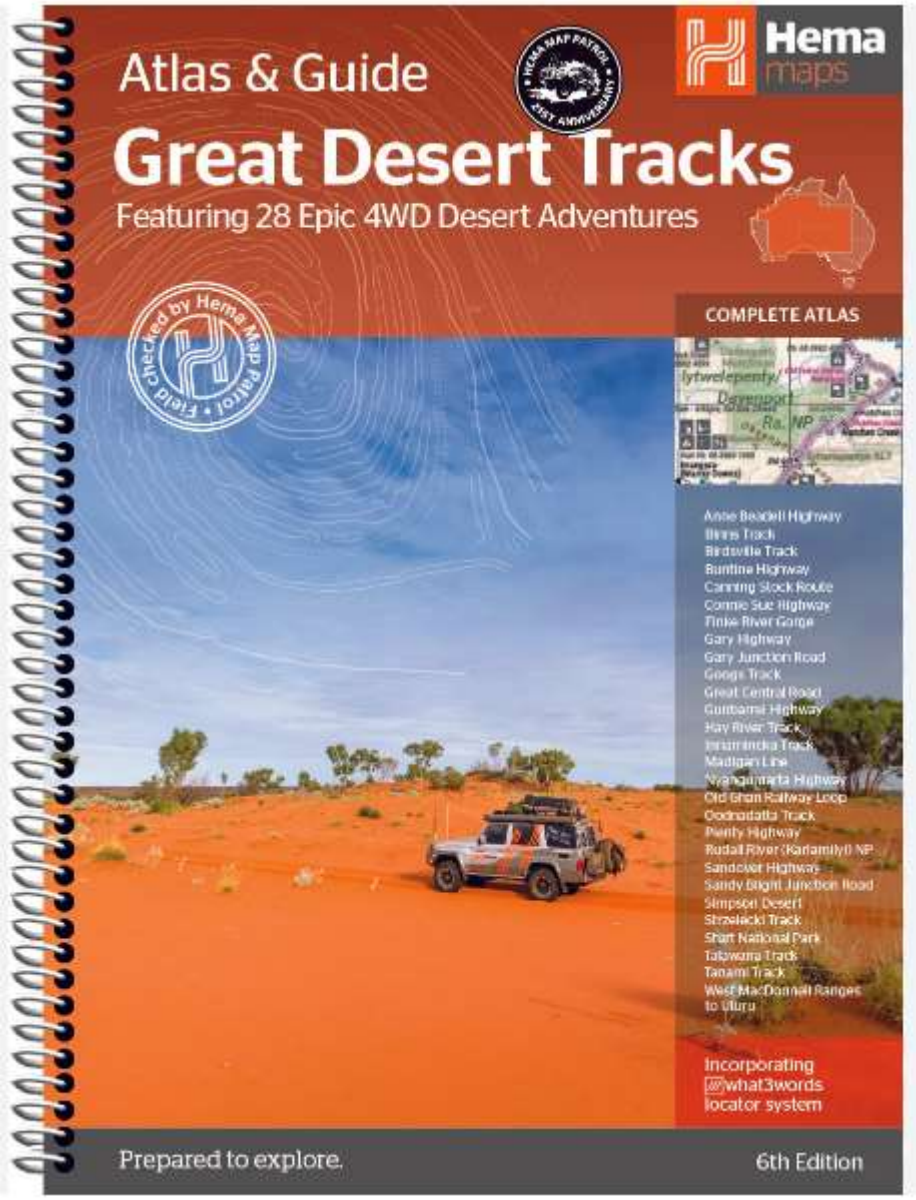
If a user has a more extensive set of tracks in the old cloud, there is a transfer tool setup in the new cloud to automatically transfer these tracks across to the new cloud. This can be accessed under the profile dropdown menu and selecting "Migrate from Old Cloud". Note this will require you to login with your old cloud account details. For a small number of users with very large numbers of detailed tracks, some assistance may be required from our Technical Support team. A ticket can be raised for this at this link.

For users of the old explorer cloud, Hema has recently been advised by Amazon Web Services (AWS) that their server environment is being upgraded in January 2023 which may impact on our ability to continue maintaining the old explorer cloud (given that the old cloud was built nearly 10 years ago). We are working with AWS to further understand the implications of this upgrade but disruptions to the old cloud are likely during this period. Irrespective of the outcome of this server upgrade, we will be looking to decommission the old explorer cloud in 2023/24 and therefore would encourage users to look to migrate to the new HemaX cloud as soon as practical.

Of course, whether using the new cloud or the old cloud we would strongly recommend that users back-up their data (tracks and images) on a local drive and not solely rely on storage in the cloud environment.



The Hema Great Desert Tracks Atlas & Guide edition 6 is now available



TESTED TO DESTRUCTION

During the MundAl Track trip I I was spied topping up my fuel from jerry cans using my Tanami pump and was asked about it so I thought I would write about it.

The pump is designed to fit metal jerry cans with the squarish opening and clamp arrangement, there is model for petrol and diesel designated by colour. It has a tube that fits diagonally to the bottom of the can and clamps securely to the spout. The can is then pressurised, via a valve, which then forces the fuel up the tube into your tank. A foot pump can be used to pressurise the can but I found that is hard work so I now use my compressor. It only needs a few pounds of pressure to work but as the fuel level drops the pressure has to be topped up to continue to empty the can. It only takes a few minutes to empty a jerry can completely and there is a pressure relief valve to use before taking the pump out of the jerrycan.

The only place I can find that still sells them is RV4x4 https://www.rv4x4.net.au/4x4-accessories/fuel-related/tanami-pump/

Geoscience Australia
Cnr Jerrabomberra Avenue & Hindmarsh Drive
Symonston ACT 2609
GPO Box 378 Canberra ACT 2601
Freecall (within Australia) 1800 800 173
Email: mapsales@ga.gov.au
Tel + 61 2 6249 9966
Fax + 61 2 6249 9960
www.ga.gov.au

GEOSCIENCE AUSTRALIA
Department of Industry, Tourism and Resources

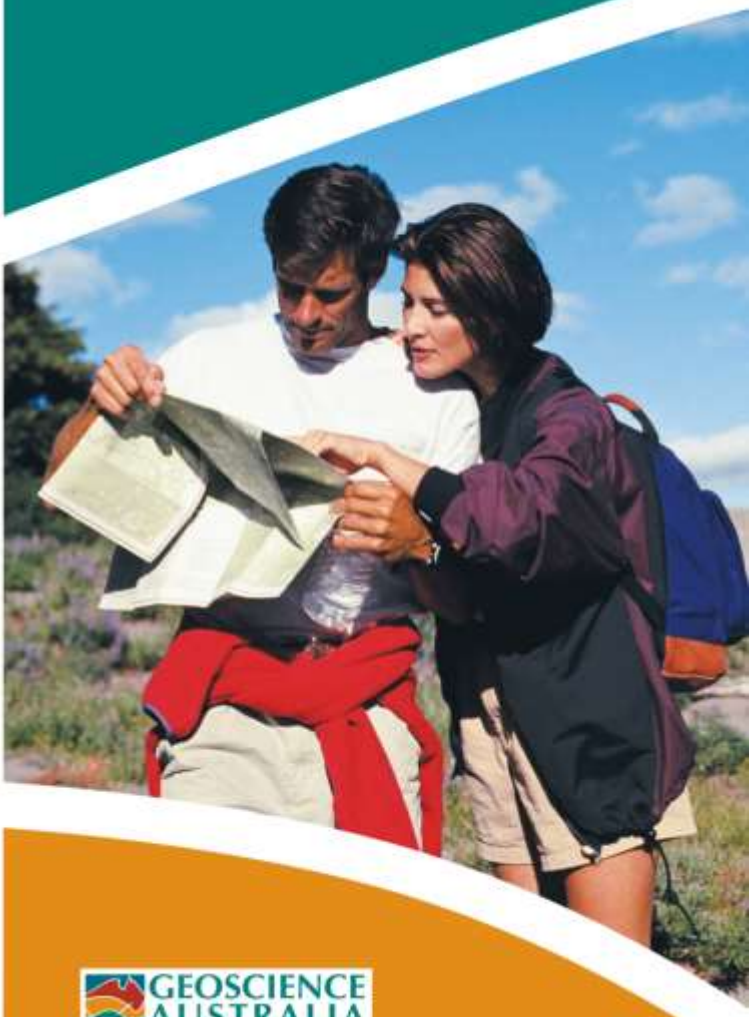
9 314231 221273

RRP $2.00

NATMAP

Map Reading Guide

How to use Topographic Maps



GEOSCIENCE AUSTRALIA

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The Hon. Ian Macfarlane, MP
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CONTENTS

What is a topographic map? 1

Who makes topographic maps? 2

How to read a topographic map 2

Map scale 3

Distance 5

Directions 5

Bearings 6

Map symbols (the legend) 7

Relief shading 8

Hypsometric tinting 8

Contour lines 9

Datums 9

Map coordinates 11

Geographical coordinates - latitude and longitude . . .11

Grid coordinates - eastings and northings 11

How to quote a grid reference for a particular point .12

Planning a trip 14

Using a GPS 14

The GPS satellite system 15

Using GPS with a map 16

The magnetic compass 16

Compass errors 17

Features of a compass 17

Using your compass to reach a destination 17

Conversion of bearings 19

Simple uses of a map 20

Orienting a map 20

Finding your present position 20

Setting a course 21

Glossary 24

Preface
This booklet will help you use topographic maps. It explains the types of information on topographic maps, how to interpret that information and how to use these maps with satellite positioning instruments, such as the Global Positioning System (GPS), and a compass. It does not cover the use of other types of maps, such as general reference, thematic, tourist and cadastral.

It will help to read the booklet in sequence because the early chapters explain concepts that are mentioned in later chapters. The glossary also contains definitions of words and terms.

Map cards
Map cards are useful for map reading. These transparent cards have line scales (in kilometres) marked along each edge. Each card also includes a grid reference guide, a compass rose and a bearing guide.

The map card available with this guide has line scales and text that are colour coded for different map scales:

Blue	1:250 000 scale
Black	1:100 000 scale
Red	1:50 000 scale
Green	1:25 000 scale

With thanks to Silva Sweden AB, a leading compass supplier, for permission to include text and images from their *Read this, or get lost* leaflet on pages 17 to 23. Members of the **Intergovernmental Committee for Surveying and Mapping** for feedback and comments during the development of this booklet.

Map Reading Guide

How to use Topographic Maps

What is a Topographic map?

Topographic maps are detailed, accurate graphic representations of features that appear on the Earth's surface. These features include:

- **Cultural**: roads, buildings, urban development, railways, airports, names of places and geographic features, administrative boundaries, state and international borders, reserves
- **Hydrography**: lakes, rivers, streams, swamps, coastal flats
- **Relief**: mountains, valleys, slopes, depressions
- **Vegetation**: wooded and cleared areas, vineyards and orchards.

A map's legend (or key) lists the features shown on that map, and their corresponding symbols.

Topographic maps usually show a geographic graticule (latitude and longitude, in degrees, minutes and seconds) and a coordinate grid (eastings and northings, in metres), so you can determine relative and absolute positions of mapped features.

Segment of a 1:250 000 scale topographic map (actual size)

Maps are produced from information available on a certain date. Over time, that information may change. Topographic maps include a reliability statement, which states the map's age and accuracy.

WHO MAKES TOPOGRAPHIC MAPS?

Topographic maps of Australia are published by Commonwealth and State government agencies and private industry.

Topographic maps at **1:10 000, 1:25 000 and 1:50 000** scales show geographic features in detail. They are useful for a wide range of activities such as local navigation by vehicle or on foot, locality area planning, study of the environment, and so on.

As well as State agencies, the Department of Defence produces topographic maps at the **1:50 000** scale, primarily of northern Australia. Some are available to the public through Geoscience Australia and its retailers.

Geoscience Australia produces **1:100 000**, **1:250 000, 1:1 million, 1:2.5 million and 1:5 million** scale maps. These maps are available through map retailers or direct. Geoscience Australia publishes the only complete national topographic map coverage and these maps are branded as NATMAP products.

The 1:100 000 and 1:250 000 scale maps are useful for planning travel over large distances, while the 1:1 million, 1:2.5 million and 1:5 million scale maps are best for giving an overview. Topographic maps are also available on CD-ROM as NATMAP Raster products.

HOW TO READ A TOPOGRAPHIC MAP

HINT
Pay attention to how your map unfolds, so you can fold it back up again.

The first step in reading a topographic map is to become familiar with the specific characteristics of the map or maps that you are using. Open up your map, check that it covers the places of interest, and then find the following characteristics:

- **What is the map scale?** This is important because scale tells you about the comparative size of features and distances displayed on the map.
- **Which direction is north?** This is important because direction orients the map to the real world.
- **What symbols are used on the map?** Have a look at the legend. This is important because to understand the map you need to understand the symbols. While there are some "standard" symbols for many features, these and the less common features may vary across different topographic map series.
- **If you are going to use the coordinates** from the map, you will need to determine which coordinate system (or datum) is used on the map. Datums are explained later in this booklet. This information will be contained in the text on the map margin. Few topographic maps include Global Positioning System (GPS) coordinates, though some newer maps show this information.

  Remember to set your GPS to the right system, or a compatible one, and to include a reference to the datum when quoting the coordinates. Maps on the new Geocentric Datum of Australia (GDA) system are compatible with GPS.

The two main parts of a map are:

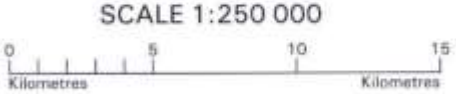
- the map face, which shows the area mapped and includes information to help you visualise or recognise the area and locate features on the map; and
- the map margin information, which gives details that help you use the map, as well as explanations on when, where and how the information was compiled.

The following sections explain some significant elements of a map.

Map scale

A map represents a given area on the ground. A map scale refers to the relationship (or ratio) between distance on a map and the corresponding distance on the ground. Map scales can be shown using a scale bar.

Scale bar for a 1:250 000 map



Common scales for Australian topographic maps are:

	Scale	Ground Distance of 1cm on the Map
Larger ↑	1:10 000	100 m
	1:25 000	250 m
	1:50 000	500 m
	1:100 000	1 km
	1:250 000	2.5 km
↓ Smaller	1:1 million	10 km
	1:5 million	50 km
	1:10 million	100 km

To explain scales graphically, let's look at a 1:100 000 scale map. The first number of the scale (1) represents a core unit of distance on the map, while the second (100 000) represents that same distance on the ground.

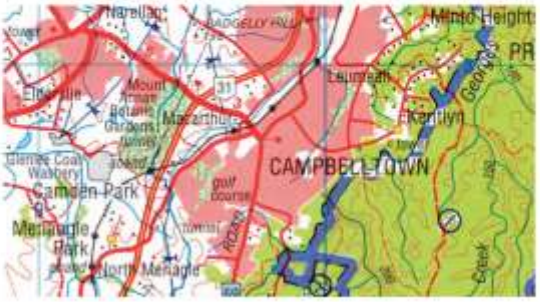
Segment of a 1:100 000 scale map of Campbelltown.

In this case, one centimetre on the map represents 100 000 centimetres, or one kilometre, on the ground.

The larger the scale of a map, the smaller the area that is covered and the more detailed the graphic representation of the ground. So, for example, small scale maps (such as 1:250 000) are good for long distance vehicle navigation, while large scale maps (1:50 000) are ideal for travel on foot.

Segment of a 1:50 000 scale map of Campbelltown.

Segment of a 1:250 000 scale map of Campbelltown.



Distance

Most topographic maps include a scale bar that you can use to determine the distance between two points on the map. Scales are usually shown in increments of one, five or 10 kilometres.

HINT

Use a piece of string, ruler or strip of paper to measure the distance between two points on the map. Then compare that measurement to the scale bar on the map to determine how many kilometres the measurement represents.

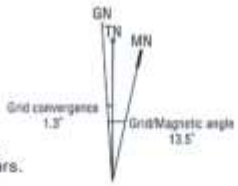
Directions

Maps usually include a north point diagram in the map margin information which shows the direction of **true north**, **grid north** and **magnetic north** at the centre of the map.

Example of a North points diagram

True North (TN), Grid North (GN) and Magnetic North (MN) are shown diagrammatically for the centre of the map.

MN is correct for 1997 and moves easterly by less than 0.1° in 10 years.



This graphic also shows the actual grid-magnetic angle for the centre of the map face.

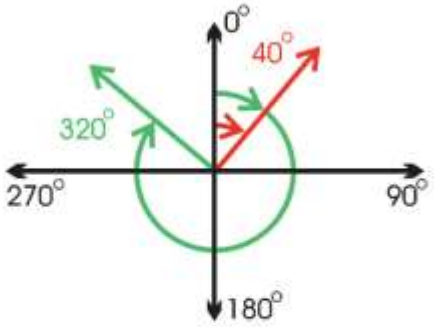
- **True north** (TN) is the direction to the Earth's geographic North Pole.
- **Grid north** (GN) is the direction of the vertical grid lines (eastings) on a topographic map. The angular difference between GN and TN is known as *grid convergence*. This varies across the country, its magnitude and direction east or west of TN being usually less than 2°.

- **Magnetic north** (MN) is the direction from any point on the surface of the earth towards the earth's north magnetic pole. The angular difference between TN and MN is known as magnetic declination. As GN is used in preference to TN for map reading purposes, it is more useful to know the difference between GN and MN. This is known as the *Grid/Magnetic angle*. It ranges from about 5° west of true north in Western Australia to about 15° east of true north in eastern Australia. Because the position of the north magnetic pole moves slightly from year to year, the grid/magnetic angle and magnetic declination will vary by a small amount each year. In using a map for accurate navigation, magnetic variation can be important, particularly if the map is several years old.

Bearings

Directions can also be expressed as bearings. A bearing is the clockwise horizontal angle, measured from north to a chosen direction. Bearings are usually shown in degrees and range from 0° (north) to 360° (also north). South is 180°, east is 90°, west is 270°.

Illustration depicting bearings of 40° and 320°



Map cards (see inside back cover) include a compass rose and bearing guide.

A compass rose and bearing guide

where:
W = west
N = north
S = south
E = east

and, for example
ESE = east south east
SSW = south south west

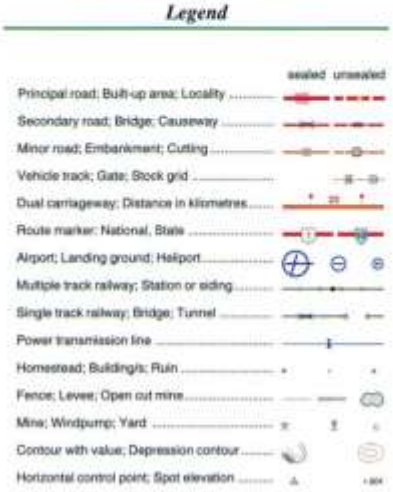
Map symbols (the legend)

Maps use symbols to represent features on the ground. These features include roads, tracks, rivers, lakes, vegetation, fences, buildings, powerlines, administrative boundaries and the like. Given the size of a map, it is not possible to show all features that occur on the ground. Large scale maps show more detail and a larger number of features.

Colour plays an important part in symbols, and some international conventions apply to the use of colour. For example, blue for water features, black for culture and green for vegetation.

While most symbols are easily recognised as the features they represent, you can always refer to the map's legend.

Sample legend



Symbols are grouped in themes on the Legend. Two or more symbols are often shown on the same line. The first feature named on the line corresponds to the first symbol on the same line, and so on.

Relief shading

Some maps show relief shading. As with hypsometric tinting and contour lines, this shading helps you visualise the terrain. Hills and valleys are shaded as if they were illuminated from the north-west, with heavy shading representing steeper slopes.

Example of relief shading.
Source: Armidale NATMAP 100K, 1:100 000 scale.

Hypsometric tinting

This is usually the application of different colours to the areas between contours on a map. On a small scale map, the representation of relief through this layer system is simplified as a series of elevation zones.

Example of hypsometric tinting.
Source: Armidale NATMAP 1M, 1:1 000 000 scale.

Contour lines

Topographic maps also show contour lines. These lines, which join points of equal height, represent the relief in the terrain depicted. For example, if there are many contour lines close together, the terrain is steep. Contour lines that are far apart indicate land with gentle slopes.

HINT
Contour values read uphill, so as you read the contour numbers, you would be looking up hill.

Examples of contour shapes.
Source: Yarwal 1:50 000 scale.

Datums

Mapping and coordinate systems are based on a datum, which is a mathematical surface that best fits the shape of the Earth. Australia's previous datum, the Australian Geodetic Datum (AGD) was defined in 1966 and best fitted the shape of the Earth in the Australian region only.

An updated version of this datum, known as AGD84, was adopted by some Australian States in 1984. AGD84 coordinates are based on the same datum as

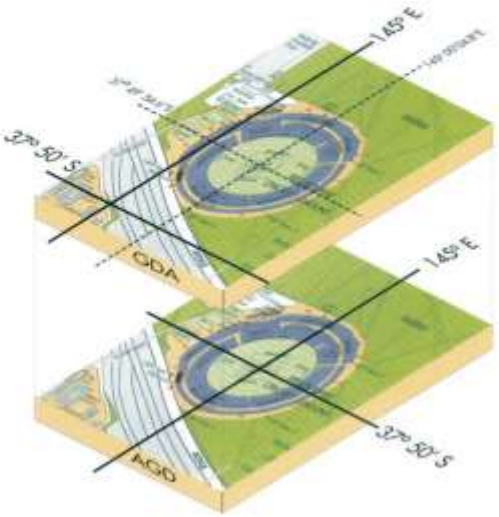
HINT
Look for the GDA logo on your topographic map. If it is not present, check the datum used. Remember, your GPS may show your location as 200m different if the map is not on the GDA.

AGD66 and for map reading and navigation purposes can be regarded as being the same.

From the year 2000, all Australian mapping authorities are using a new datum, the Geocentric Datum of Australia (GDA). This new datum was defined in 1994, and is based on a mathematical surface that best fits the shape of the Earth as a whole, with its origin at the Earth's centre of mass, hence the term "geocentric".

The primary reason for this change is the widespread use of satellite-based navigation systems such as the Global Positioning System (GPS), which is based on a geocentric datum known as the World Geocentric System 1984 (WGS84). For most practical purposes, WGS84 and GDA coordinates are the same.

A major implication of this change is that GDA coordinates, both latitudes and longitudes, and eastings and northings, differ from their AGD predecessors by approximately 200 metres in a north-easterly direction.



This illustrates the difference between latitude and longitude coordinates generated from both AGD and GDA datum.

The diagram on the previous page illustrates the difference between latitude and longitude coordinates generated from both the AGD and GDA datum. While features on the ground will not change, their coordinates will change by approximately 200m in a north-easterly direction.

Map coordinates

Map coordinates are usually shown in one of two ways:

- **geographical coordinates**, given as latitude and longitude values in degrees, minutes and seconds; or
- **grid coordinates**, given as easting and northing values, in metres.

Geographical coordinates—latitude and longitude

You can find or express a location using the geographic coordinates of latitude (north or south) and longitude (east or west).

These are measured in degrees (°), minutes (') and seconds ("). For example, the geographical coordinates for a position could be stated as: 33°40'30"S, 153°10'40"E. Each degree is divided into 60 minutes; each minute is divided into 60 seconds.

HINT
Because of its location in the southern hemisphere, all Australian co-ordinates are south and east.

Latitude is the angular expression of the distance north or south from the equator (0° latitude). The South Pole is at 90°S; the North Pole at 90°N.

Longitude is the angular expression of the distance east or west from the imaginary line known as the Prime Meridian—0° longitude on all maps.

Latitude and longitude coordinates are shown at each corner of a map's face. On some maps, short black lines along the edges of the map face indicate the minutes of latitude and longitude. When expressing coordinates, latitude is given first.

Grid coordinates—eastings and northings

Grid lines can also be used to find or express a location. Grid lines are the equally spaced vertical and horizontal intersecting lines superimposed over the

entire map face. Each line is numbered at the edge of the map face. On 1:100 000 scale maps, the distance between adjacent lines represents 1000 metres or 1km.

The following terms are used to indicate the different types of coordinates and their datum (see explanation of datums on page 9):

- AGD66 & AGD84 – geographical coordinates based on the AGD
- AMG66 & AMG84 – grid coordinates based on the AGD
- GDA94 – geographical coordinates based on the GDA
- MGA94 – grid coordinates based on the GDA

Maps are normally printed so grid north points to the top of the sheet (when the print is the normal way up). One set of grid lines runs north-south, while the other runs east-west. The position of a point on the map is described as its distance east from a north-south line and its distance north of an east-west line.

For this reason, grid lines are also called:

- eastings – these are the vertical lines running from top to bottom (north to south). They divide the map from west to east. Their values increase towards the east; and
- northings – these are the horizontal lines running from left to right (west to east). They divide the map from north to south. Their values increase towards the north.

The squares formed by intersecting eastings and northings are called grid squares. On 1:100 000 scale maps, each square represents an area of 100 hectares or one square kilometre.

How to quote a grid reference for a particular point

A grid reference is used to describe a unique position on the face of the map. The degree of accuracy required will determine the method used to generate a grid reference. All methods follow a similar approach. A four figure grid reference is used to identify which grid square contains a map feature. A six figure grid reference will further specify the position to an accuracy of one tenth of the grid interval. In a map's margin, there is usually a section devoted to how to quote a grid reference. The information needed to complete a grid reference will be found in this section of the margin.

Example of determining a grid reference (not to scale)

To obtain a complete 1:100000 scale grid reference for point A (Panoro), on the map above, you need to:

1. Note the **map name**.
   The grid zone number, a unique identifier, can be used as an alternative. It is found in the map margin. Point A is located on the Wagin map sheet. The grid zone number is 50H.
2. Read the letters identifying the relevant 100,000 metre square containing the point. In this case it is NH.
3. Locate the **vertical grid line to the left** of the point of interest and read the two figure easting value. Point A's easting value is 04.
4. Estimate the tenths from the vertical grid to the point. If using the Map Card supplied with this guide, place the matching scale grid referencing tool over the point to be measured as shown in

HINT
Use the corresponding scale grid referencing tool on a map card to help in estimating the number of tenths, from a position to a grid line.

the diagram above. Using the same vertical grid line as described earlier, count the tenths back from Point A to the grid line. In this case it is 4.

5. Locate the **horizontal grid line below** the point of interest and read the two figure northing value Point A's northing value is 98.

6. Estimate the tenths from the horizontal grid line to the point. Using the same method as described in point 4, count the tenths down from Point A to the grid line. In this case it is 8.

HINT
If a grid reference starts with a zero, remember to include it.

Note the **datum** of the map from the map margin. The Wagin Map is on GDA94. Therefore, the complete grid reference for Point A is either: Wagin, NH044988 or: 50HNH044988.

PLANNING A TRIP

Planning a successful route through rough country usually requires a topographic map, a compass, perhaps a Global Positioning System (GPS) receiver, and observation of various landforms. Streams and vegetation can help with navigation but may hinder your progress.

Make sure you have the right scale map for the trip you are planning. Obviously, journeys on foot should be supported by a larger scale map, or set of maps.

Often, route finding does not require great accuracy, but it does require planning. Before setting out, study the map. Find your start and finish points. The terrain depicted on the map will help you select a suitable route, and anticipate and make best use of the features you will encounter.

For example, you may discover a leading spur or main ridge that will help you avoid a river valley with cliffs or steep terrain. You will also be able to measure the route's distance and any heights to climb, allowing you to estimate how long each stage of the trip will take.

USING A GPS

The Global Positioning System (GPS) is a satellite-based navigation system developed by the United States of America's Department of Defense. It is widely used for civilian navigation and positioning, surveying and scientific applications, and although an excellent tool, it is best used with a map.

GPS receivers have many useful features for navigation, such as the ability to store positions and determine speed and direction of travel, (which are beyond the scope of this Guide).

Provided it is used correctly, a comparatively inexpensive, hand-held GPS receiver can provide positions with an accuracy better than 15 metres and often at the 5 metre level.

Examples of GPS receivers

The GPS satellite system

There are 24 GPS satellites orbiting the Earth. A GPS receiver calculates position by measuring distances to four or more of these satellites. GPS is accessible 24 hours a day, anywhere in the world, in all weather.

Illustration of the GPS constellation of satellites

HINT
Set your GPS datum to match your map datum.

Using GPS with a map

GPS is based on the WGS84 datum (see explanation of datums on page 9). However, not all maps have a WGS84 datum. It is important to check which datum your map is based upon.

This datum information will be shown in the map margin. For the best match between coordinates of your map and GPS receiver, configure the GPS receiver to display coordinates (geographical or grid) on the same datum as the map being used.

Most GPS receivers have the ability to display either geographic or grid coordinates on a number of national and regional datums. It is important to know how to set the correct datum in your receiver. Please consult the GPS receiver's user guide for details. If the datum you need is not offered in your receiver, consult your GPS dealer or local surveying and mapping authority for assistance.

It is recommended practice to check your GPS receiver against well-defined map features every time you use it. Visit a feature such as a road intersection, determine its position by GPS and compare this with coordinates calculated from a map. The larger the scale of this map, the better. The coordinates of survey control marks or trig points, may be obtained from your local surveying and mapping authority and used for this purpose.

HINT
Metal objects such as cars, fence posts, steel power poles and transmission lines, can affect the accuracy of a compass reading. Stand clear of such items when using a compass - at least one metre from metal fence posts and up to 20 metres from a car.

THE MAGNETIC COMPASS

A magnetic compass is an important aid to route-finding and anyone who ventures into untracked country should carry one.

A compass works on the principle that the pivoting magnetised needle (or the north point of the swinging dial) always points to the north magnetic pole.

As a result, you can use a compass with graduations (degrees) marked on it to measure the bearing of a chosen direction from magnetic north.

Compass errors

Geological features such as iron ore deposits and dolerite rock that has been struck by lightning can affect a compass. It is even possible for the needle to become reverse-polarised if it is stored for a long time near a strongly magnetised object.

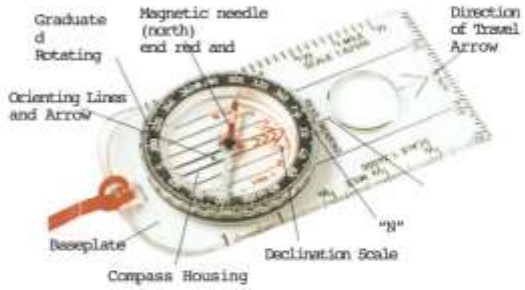
It is therefore advisable to treat magnetic bearings with caution and to check the accuracy of your compass. Determine magnetic bearings between objects at least one kilometre apart, using information available from a map and compare them with your compass bearing. This should be repeated in different directions. Check for local anomalies by reading bearings between objects about 100 metres apart in both directions. The bearings should differ by 180 degrees.

Features of a compass

There are numerous types of compasses. The pivoted needle, adjustable dial compass is the most useful type. See sample Silva compass below.

As well as a north-pointing Needle, it usually has a transparent base with a Direction of Travel Arrow and Orienting Lines marked on the Rotating Dial housing, whereby it can be used as a protractor for measuring grid bearings on a map.

Features of the Silva® compass ® registered name of Silva AB.



Using your compass to reach a destination

To follow compass bearings to your chosen destination, you will either need to determine magnetic bearings from visible features along the route, or will already have these bearings.

To determine magnetic bearings:

1. Select a visible feature along the route you want to travel. Holding the compass level, point the Direction of Travel Arrow at the visible feature.

2. Find your bearing to the visible feature by turning the Compass Dial until the "N" aligns with the red end of the Needle. Read your bearing in degrees at the Index Line.

3. Keeping the Needle aligned with the "N", proceed in the direction indicated by the bearing at the Index Line. The bearing will help you keep on track when the feature is not visible. Repeat this procedure until you reach your destination.

FIG. 1

When magnetic bearings are known:

1. If you've been given a bearing in degrees to travel, turn the dial so that the bearing is set at the Index Line. Hold the compass level in front of you, with the Direction of Travel Arrow pointing straight ahead.

2. Turn your body until the red end of the Needle is aligned with the "N" on the dial. You are now facing your direction of travel.

3. Pick out a visible feature in line with your bearing and walk to it. Repeat the procedure until you reach your destination.

Conversion of bearings

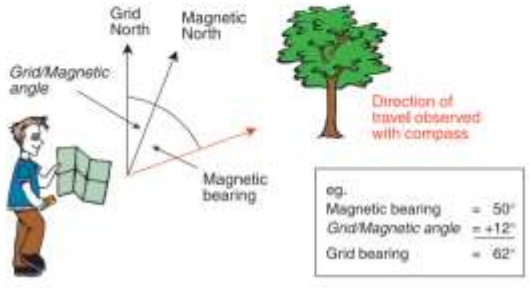
Magnetic bearings measured with a compass must be converted to grid bearings for plotting on a map. Similarly, grid bearings measured on a map must be converted to magnetic bearings for compass navigation on the ground.

The *Grid/Magnetic angle* is the difference between grid north and magnetic north. If magnetic north is east of grid north, it is a positive value. If magnetic north is west of true north, it is a negative value.

To convert from a Magnetic bearing to a Grid bearing, Add the *Grid/Magnetic angle* to the magnetic bearing.

To convert a grid bearing to a magnetic bearing, subtract the *Grid/Magnetic angle* (see page 5).

HINT
The M A G rule is:
Magnetic
Add Grid



SIMPLE USES OF A MAP

Orienting a map

It is a good habit to orient your map before reading it. To do this, hold your map horizontally and rotate it until its direction and features correspond to what you see before you on the ground.

If you are unable to identify the surrounding features, you can use the compass to orient the map. To do this:

- lay the map flat and place your compass so the baseplate side edge lies along any grid north line, and the Direction of Travel arrow is also pointing to grid north;
- rotate the map and compass until the north point of the compass needle is east or west of the Index Line by the amount of the *Grid/Magnetic angle* shown in the map's margin.

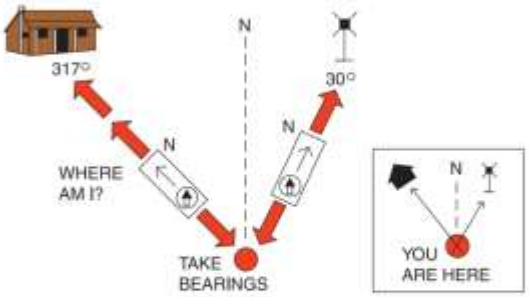
Once the map is oriented, you should be able to identify prominent features in the landscape.

HINT
Pack your map and compass in an easy-to-reach place. In wet weather, put the map, with the appropriate area displayed, in a clear plastic bag.

Finding your present position

If you have a GPS receiver, you can use it to determine your coordinates, remembering to set it to a datum corresponding to the datum on your map. Or, once you can identify surrounding features on the ground and on the map, you can use the following procedure to find your current position:

1. Choose two visible features and find these on your map. Now point the Direction of Travel Arrow towards one feature and rotate the Compass Dial until the red end of the Needle points to the "N" on the dial.
2. Add the *Grid/Magnetic angle* to the bearing shown at the Index Line and turn the dial to the new bearing.



3. Place the compass on your map with the side edge of the Baseplate touching the feature and pivot it until the Orienting Arrow or lines align with the grid north lines. Draw a line from the feature along the side of the Baseplate across the map.
4. Repeat this process with the second feature. Where the two lines intersect is your location.

Setting a course

Once you have oriented your map and identified your position, you can set a course. Do this by sighting or by laying a straight line (using the edge of the map card or a piece of string) across the map. It is also good practice to identify a distant visible feature that is on the line, such as a rocky outcrop, and proceed. Then identify another feature on the line, and so on, until you reach your destination.

When features are sparse, you could use a GPS receiver. First, determine the coordinates of the destination point from the map and enter them into the receiver, then walk in the approximate direction of your destination, letting the receiver point you in the right direction as you go.

HINT
Check your map to determine if there are land features that may prevent you from following your GPS bearing.

Or you can use your map and compass in this way:

1. Before you start on your way, place the compass on the map so that the side edge of the Baseplate connects your present position (No 5 Bore) to your destination (No 11 Bore), and the Direction of Travel Arrow is also pointing that way.

2. Turn the compass dial until the Orienting Lines are parallel with the grid north lines on the map and the Orienting Arrow is also pointing to grid north.

3. The dial's reading at the Index Line shows the grid bearing. Subtract the *Grid/Magnetic angle* from this bearing and turn the dial to show the new magnetic bearing at the Index Line.

4. Put the map aside. Hold the compass steady and level in front of you with the Direction of Travel Arrow pointing straight ahead. Turn your body until the red end of the Needle is directly over the Orienting Arrow, pointing to the "N" on the dial. The Direction of Travel Arrow now points to your destination (No 11 Bore). Look up, align the Direction of Travel Arrow with a feature and walk to it. Repeat this procedure until you reach your destination.

GLOSSARY

AGD Australian Geodetic Datum – the framework used for coordinates in Australia from 1966 to 2000. It has now been superseded by the Geocentric Datum of Australia (GDA).

AHD Australian Height Datum - the datum used for the determination of elevations in Australia. The determination used a national network of bench marks and tide gauges, and set mean sea level as zero elevation.

AMG Australian Map Grid - a Cartesian coordinate system based on the Universal Transverse Mercator projection and the Australian Geodetic Datum. The unit of measure is the metre.

Bearing – geographic orientation of a line given as an angle measurement in degrees clockwise from north.

Cadastral map – a map showing land boundaries and parcels.

Cartography – the art and science of producing maps, charts and other representations of spatial relationships.

Contour – a line drawn on a map joining all the points on the Earth that are the same height above sea level.

Coordinates – linear or angular values which designate the position of a point in a given reference or grid system.

Coordinate, geographic – a system of spherical coordinates commonly known as latitude and longitude.

Coordinates, grid – a plane-rectangular coordinate system expressed as eastings and northings.

Datum – a mathematical surface on which a mapping and coordinate system is based.

Elevation – the height above mean sea level.

GDA Geocentric Datum of Australia - a new coordinate framework for Australia which is compatible with the Global Positioning System (GPS). The GDA was adopted in 1994 and implemented from the year 2000.

Geocentric Datum – a datum which has its origin at the Earth's centre of mass. The advantage of the geocentric datum is that it is directly compatible with satellite-based navigation systems.

Geographical coordinates – a position given in terms of latitude and longitude.

Geographical grid – grid derived from geographical coordinates (commonly referred to as longitude and latitude or graticule).

GPS Global Positioning System – is a satellite based navigation system developed by the United States Department of Defense and widely used for civilian navigation and positioning.

Graticule – a network of lines on a map or chart representing the parallels of latitude and meridians of longitude of the Earth.

Grid – two sets of parallel lines intersecting at right angles to form squares.

Grid convergence – the angular difference in direction between Grid North and True North.

Hypsometric tint – a shade or tint of colour between two contours showing high and low land at a glance.

Latitude – the latitude of a feature is its angular distance on a meridian, measured northwards or southwards from the Equator.

Longitude – an angular distance measured east or west from a reference meridian (Greenwich).

Map – a representation of the Earth's surface. A cadastral map is one showing the land subdivided into units of ownership; a topographic map is one showing the physical and superficial features as they appear on the ground; a thematic map displays a particular theme, such as vegetation or population density.

Map Grid of Australia 1994 (MGA94) – a cartesian coordinate system based on the Universal Transverse Mercator projection and the Geocentric Datum of Australia 1994. The unit of measure is the metre.

Map projection – any systematic way of representing the meridians and parallels of the Earth upon a plane surface.

Mercator projection – the conformal cylindrical projection tangential to the Equator, possessing the additional valuable property that all rhumb lines are represented by straight lines. Used extensively for hydrographic and aeronautical charts.

Meridian – an imaginary line from the North Pole to the South Pole connecting points of equal longitude.

Relief – the deviation of an area of the Earth's surface from a plane. It refers to the physical shape of the surface of the Earth.

Rhumb line – a curve on the surface of a sphere which cuts all meridians at the same angle; the path which maintains a constant true bearing.

Topography – description or representation on a map of the physical and cultural surface features.

Transverse Mercator (TM) projection – A conformal cylindrical map projection, originally devised by Gauss, also known as the Gauss-Kruger projection. As its name implies, its construction is on the same principle as the Mercator projection, the only difference being that the great circle of tangency is now any nominated meridian. Meridians and parallels are curved lines, except for the central meridian for a specified zone (meridian of tangency), which remains a straight line. Projection zones are established about the central meridian and vary in width from two degrees to six degrees of longitude, with some overlap between zones. The amount of scale distortion may become unacceptable at distances greater than about 1.5 degrees in longitude from the central meridian. In a modified form the projection is in general use for topographic mapping at scales of 1:250 000 and larger. See Universal Transverse Mercator projection.

Universal Transverse Mercator (UTM) – A world wide systematic application of the Transverse Mercator Projection applying to the region between 80°S and 84°N latitude. The UTM is a modified TM projection whereby the natural scale of the central meridian is scaled by a factor of 0.9996 to enable a wider area to be mapped with acceptable distortion. Each Zone is six degrees of longitude in width with a half degree of overlap within the adjoining zone and having a true origin at the intersection of the central meridian of that zone and the Equator.

WGS84 World Geodetic System 1984 – a geocentric geodetic datum developed by the United States Department of Defense for use with GPS. For most practical purposes, GDA94 is equivalent to WGS84.

NOTES

NOTES

From Camper trailer Lifestyle

BORGY'S ONE POT WONDER

A campfire casserole that is full of hearty winter flavours, this is one dish you've just got to try!

SEE MORE RECIPES!

WHAT YOU'LL NEED

- Potatoes, sliced (1-2 per person)
- Gravy Powder
- Thick Sausages of your choice (1-2 per person)
- Lamb Forequarter chops (1-2 per person)
- Onions (1 or 2)
- Diced Tomatoes (1 to 2 cans)
- Curry Powder
- Worcestershire sauce

HOW IT'S DONE

1. To kick things off, make sure your campfire is going strong with plenty of hot coals ready for cooking on.
2. Add one layer of mixed lamb chops and sausages, followed by a layer of sliced potatoes on top.
3. Then, lavishly sprinkle your curry powder, gravy powder, and Worcestershire sauce over the top.
4. Repeat steps two and three until you run out of meat and potatoes.
5. Add a nice thick layer of sliced onion over the top.
6. Tip your diced tomatoes over the top.
7. Add roughly one or two cups of water and place the camp oven on the fire.
8. Cook for between 1-2 hours, or until potatoes are cooked through.
9. Serve it up, give yourself a pat on the back and tuck in. You deserve it!

EATERY EVALUATON

Suggested by	Recommended Venues	Meal detail
Mark Skeels	King Road Brewery Boston Brewery in Denmark Gage Roads in A Shed Kakka Alley in Jurien Bay Long Neck near the Causeway Running With Thieves at South Beach	https://kingroadbrewery.com/
Brisey	Lakeside Deli Mandurah Road	Ham and salad rolls Works Burgers
Donna Light	Betty's Burgers Mandurah Terrace, Mandurah	Smallish burgers but taste great

Suggested by	Disappointing Venues	Meal detail

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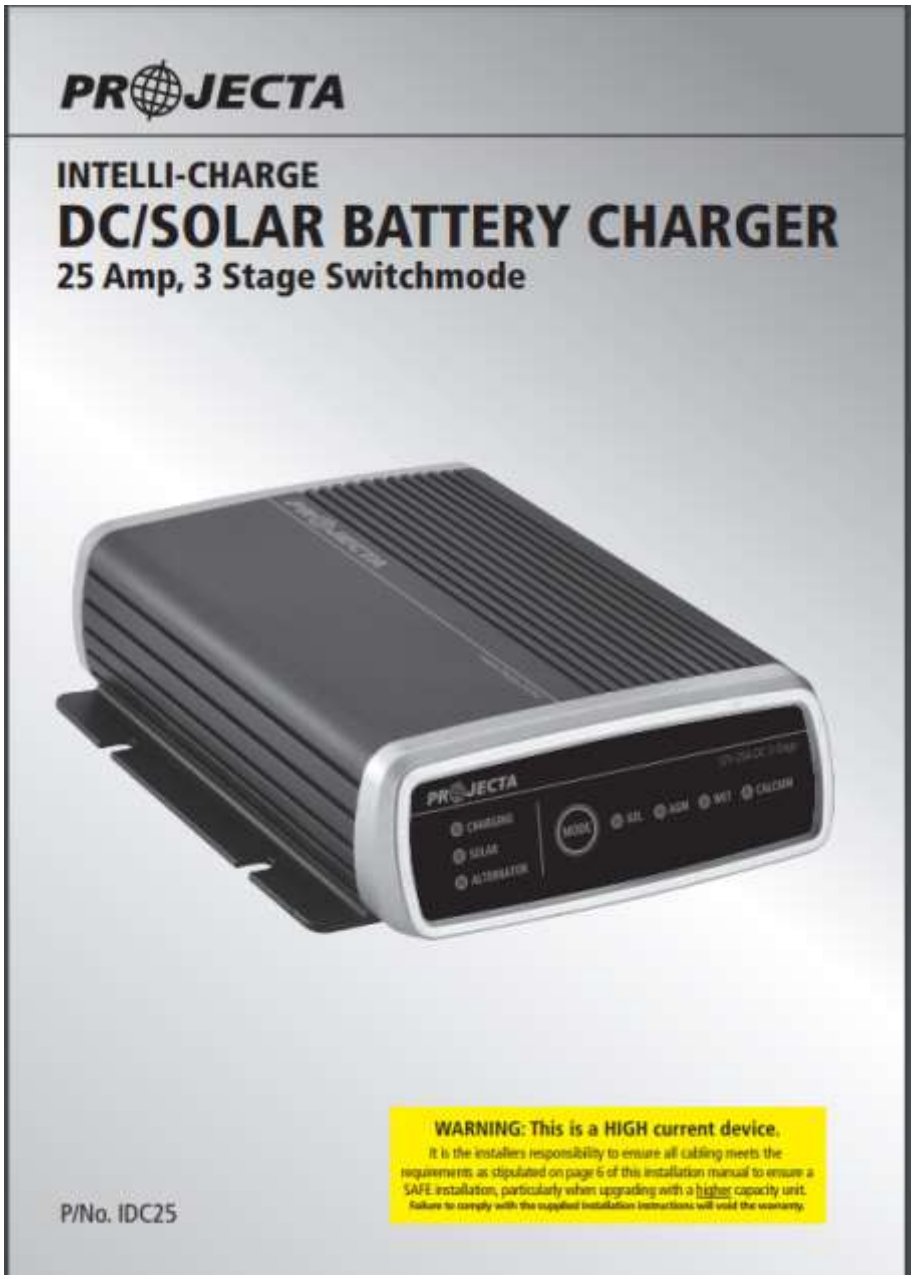
Projecta 3 stage DC / Solar DCDC battery charger

- Suitable for most smart alternators
- 25Amp charging output
- Suitable for a range of battery types BUT NOT LITHIUM

I have just replaced this with a Victron DCDC battery charger because this unit sometimes wont start charging due to my alternator voltage dropping too low sometimes when there is little load. I have monitored my voltage as low as 11.5 volts. It always charges when I have the caravan fridge and headlights on causing the alternator voltage to rise over the threshold.

Manual is here:
https://www.projecta.com.au/ts1649203692/attachments/ProductAttachmentGroup/1/IDC25+Instruction+Manual+12.03.20.pdf

Brisey



TRIPPING OUT

MundAl Track part 2 Collie to Albany By Teresa

Collie to Denmark trip using off-road tracks and staying off the black top. We were 80% successful staying off the black top. This trip was not about 4wding it was more a touring / exploring trip.

Trip attendees:

Brissy trip leader / navigator

Winton

Glen and Sue.

Dwayne - Tail End Charlie

Myself.

Day 1:

We left with 5 cars in our convoy on time at 9am from Collie. We went through the back way and came out at the front of Glen Mervyn Dam. Barely any water in the dam never seen it that low. Traveled from Glen Mervyn Dam through Boyup Brook and on to Chowerup Hall to have morning smoko. This beautiful completely wooden hall est 1925 is well maintained and was a lovely shady spot to stop. We drove over many water crossings that were dry this time of year but had this trip been done in wetter times this trip would have been a very wet and muddy one. Total turn arounds for day one was four….

Second leg:

Went from Chowerup Hall to the massive Lake Unicup. Gravel tracks were dry and dusty and in very good condition with long straight sections allowing for rapid travel. Lake Unicup completely dry this time of year. Used for water skiing when has water. I didn't mark the corner resulting in Dwane driving straight past the turn off to the lake.

Third leg:

Lake Unicup to Rocky Gully Rest Stop our camp for the night. We arrived around 3.30pm at this totally brilliant spot with shady trees, flushing loose, water tap, gazebo, very quiet, and a lunch bar /fuel station across the road. Quick set up and dinners cooked we all sat together for social beverage and it was early to bed.

Day 2:

Total turn arounds 2. Everyone was quick to pack up and get going in the morning with all ready in convoy on time at 9am. A few made good use of the very modern cafe in the morning and I made use of the diesel pump and paid an eye watering amount per litre.

Leg 1:

From Rocky Gully Rest Stop the convoy proceeded to the Mount Franklin National Park. Here commenced one of the most brilliant days of touring. Driving down remote tracks under the canopy of magnificent giant trees that had us all in awe. Track conditions were dry and long straights with many dry water crossings. We stopped for morning smoko and were joined by the flies of the month.

Leg 2:

We continued driving through the Mount Franklin National park and found a track completely blocked by a massive tree. Discussions were had about moving some branches and making a path, however, with the chainsaw battery flat it was decided it's best to turn around and find an alternative track. The splendour of these tracks was enjoyed by all.

We came to a wooden bridge where we stopped for lunch. This bridge was constructed out of whole tree trunks laying side by side over the ice cold river. I know because I dipped my feet in as the humidity was high. There were some wheel sized gaps between some tree trunks that needed to be avoided. Brizzy did the job of spotter and got us all across safe.

Leg 3:

We stopped at the Mount Franklin Lookout and had a magnificent view from the stainless steel viewing platform. None of us had the energy to climb the massive rock.

Leg 4:

We drove on from there and experienced a range of track conditions from Rocky, boggy sand to red pea gravel with lots of twists and turns to keep us on our toes. We all got a free car wash when the heavens opened. This was welcomed as the rain dampened down the dusty tracks which had impeded visibility most of the day.

By around 3.30pm ish we reached a point that was recorded by Skeelz as something along the lines of danger, danger, big bog hole, big holes bad if filled with water. Given that it had been raining and it was late in the day it was decided we didn't have time to tackle and maybe get stuck on this section of track. We re routed and went a different way.

We realised we were not going to make it to Shelly Beach which was the overnight destination. Brissy successfully found alternate accomodation at the Ocean Front Caravan Park in Denmark. Any feelings of disappointment soon disappeared with the knowledge that hot water showers were awaiting us at the caravan park. This is an amazing park especially if you have kids. Fantastic playground, bouncy pillow and pedal cars. Lots of shade and nice and clean. The caravan park did us a deal of $27- a night instead of $37-. Check in was fast and we circled the wagons at the unpowered spot designated for us at the rear of the caravan park.

Winton set up his Jocoola Hot Water Shower and kindly offered for us to use as the ablution blocks were a footy field away from our location. The best thing since sliced bread. Again everyone was quick to set up and cook quick dinners, a social beverage and relatively early to bed. We discovered some ppl snore….One thing that had everyone excited was the Elon Musk starlight's came overhead and were extremely bright and spectacular.

Day 3:

Every one was up early and packing up. Brizzy was the first to shoot off at 7am.

Thank you to Brissy for organising this trip and being trip leader. We appreciate you very much. Your navigational knowledge is a massive asset to this club. Thank you to Brissy and Skeels and others who worked out and way pointed this twisted and amazing trip. Thank you to everyone on this trip for your awesome company and for making it one of the most memorable trips I have done

During our second night drinkies around the nonexistent campfire I happened to look up and saw a satellite train of at least 50 satellites traveling across the sky from west to east. To say it was amazing would be the understatement of the year, we all had a go at photographing it with mixed results, Duane found the photo below on the net. Apprently you have to be really lucky to see this as it is only visible when the satellites are first employed and then only if you are viewing from the right angle to see the reflected light. Soon after deployment the satellites move into their correct orbit and become difficult to spot again.

Brisey

More info https://www.space.com/starlink-satellite-train-how-to-see-and-track-it


TOYOTA


DINGERUP HALL 1925


LAKE UNICUP


Walpole Wilderness
Mount Frankland
National Park

Captain Fawcett Track night run

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2024 HOLIDAY DATES

2024 WA SCHOOL HOLIDAYS AND TERM DATES

Period	Start	Finish	Length
Term 1	Wednesday, 31 January 2024	Thursday, 28 March 2024	8 Weeks
School Holidays	Friday, 29 March 2024	Sunday, 14 April 2024	
Term 2	Monday, 15 April 2024	Friday, 28 June 2024	11 Weeks
School Holidays	Saturday, 29 June 2024	Sunday, 14 July 2024	
Term 3	Monday, 15 July 2024	Friday, 20 September 2024	10 Weeks
School Holidays	Saturday, 21 September 2024	Sunday, 6 October 2024	
Term 4	Monday, 7 October 2024	Thursday, 12 December 2024	10 Weeks
School Holidays	Friday, 13 December 2024	Tuesday, 4 February 2025	

Public holidays in Western Australia - 2024 to 2026

	2024	2025	2026
New Year's Day	Monday 1 January	Wednesday 1 January	Thursday 1 January
Australia Day	Friday 26 January	Monday 27 January	Monday 26 January
Labour Day	Monday 4 March	Monday 3 March	Monday 2 March
Good Friday	Friday 29 March	Friday 18 April	Friday 3 April
Easter Sunday	Sunday 31 March *	Sunday 20 April *	Sunday 5 April *
Easter Monday	Monday 1 April	Monday 21 April	Monday 6 April
Anzac Day	Thursday 25 April	Friday 25 April	Saturday 25 April & Monday 27 April
Western Australia Day	Monday 3 June	Monday 2 June	Monday 1 June
King's Birthday #	Monday 23 September	Monday 29 September	Monday 28 September
Christmas Day	Wednesday 25 December	Thursday 25 December	Friday 25 December
Boxing Day	Thursday 26 December	Friday 26 December	Saturday 26 December & Monday 28 December

21

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

Perth Caravan & Camping Show 2024 (Official Event)

Claremont Showground

Easter Weekend Southwest Stroll

Day 1: Crooked Carrot to Alexandra Bridge (~250km)

Meet at The Crooked Carrot at 8:00am, to leave by 8:30am
Drive out to Dunsborough
Three Bears Track
Alexandra Bridge (overnight)
Drive over to Hamelin Bay to check out the Stingrays (time permitting)

Alternative camp site: Boranup campground
Alternative Camp site: Jarrahdene Campground

Day 2: Alexandra Bridge to Snotty Gobble (~120km)

Milyeanup Track, via Black Point & Lake Jasper
Snotty Gobble – Carey Brook Campground

Alternative camp site: Lake Jasper campground
Alternative camp site: Grass Tree Hollow

Day 3: Carey Brook Campground to Banksia Camp (~180km)

Northcliffe
Moores Hut
Westcliffe Head
Banksia Camp
Mouth of Broke Inlet, via Fishermans Track (time permitting)

Alternative camp site: Crystal Springs
Alternative camp site: Mouth of Broke Inlet, or huts along the way

Day 4: Banksia Camp to Home (~400km)

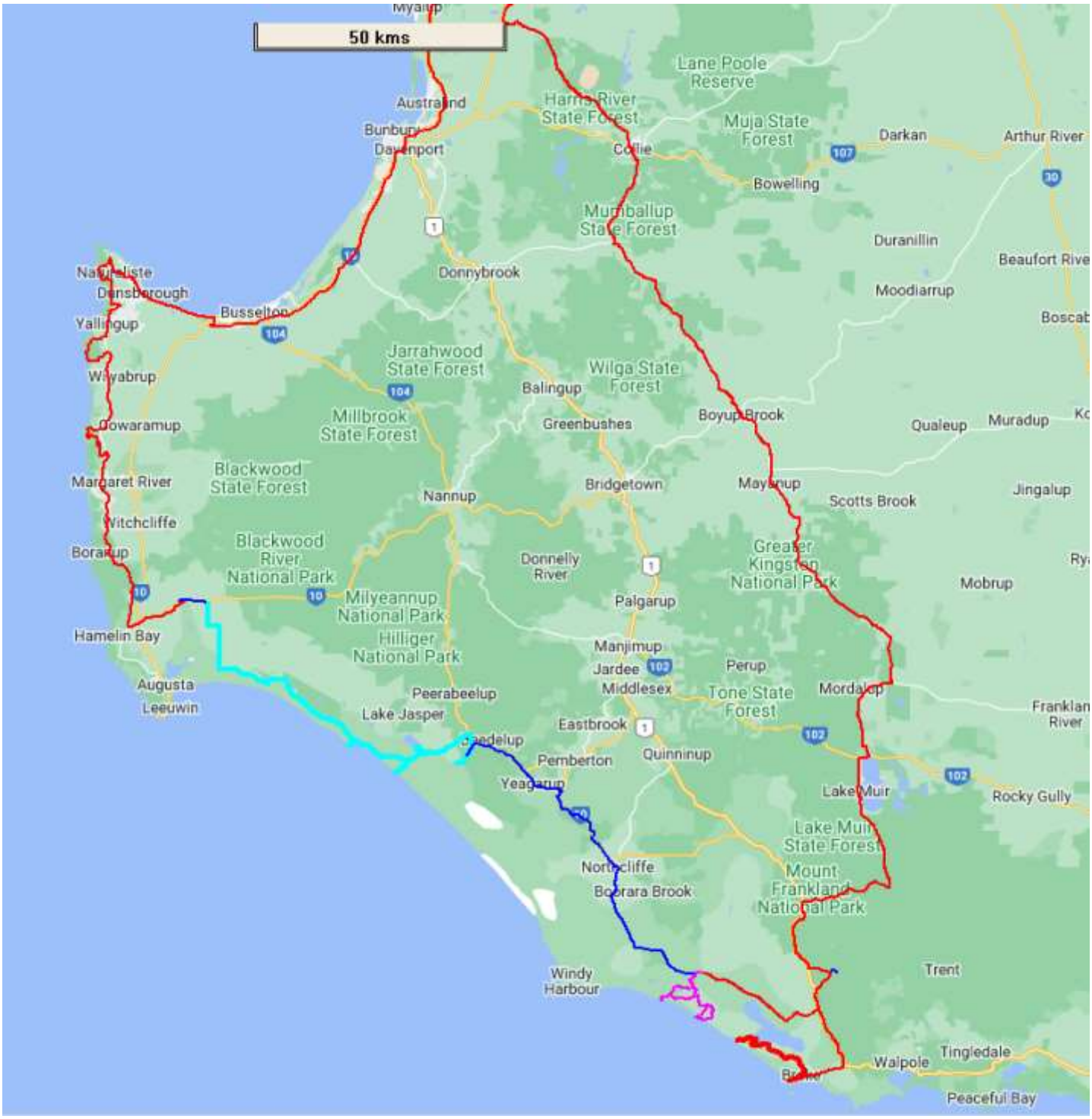
Fernhook Falls
Mount Frankland
Lake Muir
Boyup Brook
Home

What to bring:

Enough food for the duration
Adequate water (may be locations to fill up, such as fuel stations)
Adequate fuel (fuel stations along the way)
Shovel
Recovery equipment
Recovery boards
First Aid Kit
UHF radio
Air Compressor
Tyre deflators
Sense of adventure

Editors note fuel availability:

1st day:
Dunsborough and Karridale
3rd day:
Northcliffe
4th day:
Walpole (deviation from trip), Boyup Brook


50 kms
Lane Poole Reserve
Harris River State Forest
Muja State Forest
Darkan
Arthur River
Collie
Bowelling
Mumballup State Forest
Duranillin
Beaufort River
Moodiarrup
Donnybrook
Busselton
Dunsborough
Yallingup
Jarrahwood State Forest
Wilga State Forest
Balingup
Millbrook State Forest
Greenbushes
Boyup Brook
Qualeup
Muradup
Margaret River
Blackwood State Forest
Nannup
Bridgetown
Scotts Brook
Jingalup
Witchcliffe
Blackwood River National Park
Donnelly River
Greater Kingston National Park
Mobrup
Palgarup
Milyeannup National Park
Hilliger National Park
Hamelin Bay
Manjimup
Jardee
Perup
Middlesex
Tone State Forest
Augusta
Leeuwin
Peerabeelup
Lake Jasper
Eastbrook
Pemberton
Quinninup
Yeagarup
Lake Muir
Rocky Gully
Lake Muir State Forest
Northcliffe
Mount Frankland National Park
Windy Harbour
Trent
Walpole
Tingledale
Peaceful Bay

PEEL 4X4 CLUB

KOORDA DRIVE-IN

05-07 APRIL 2024

This trip is a social trip that involves some driving and camping.

The plan is to head to Koorda for their Saturday night (06April) drive-in show.

The plan is to meet up in Toodyay (at the Coca Cola Café) and depart around 1400wst for Koorda. Stay Friday and Saturday nights at Koorda Caravan Park and head home (or wherever you wish) on Sunday.

I will be departing Koorda incredibly early Sunday to get to the Max Pinjarra Car Show around 1000wst.

The trip involves sealed and maintained Hwys and dirt roads.

There are limited food supplies available in Koorda though the IGA does a reasonable coffee and the pub does a nice meal. There is food available at the Koorda Drive-in.

Warnbro to Koorda is 290kms.

The Koorda CP has powered and unpowered sites…if you want/need power you need to book in advance via the Shire…for unpowered just roll up and pay cash in the honesty box.

There are also units available in the town with all bookings made via the Shire.

Depending on stuff there may be an opportunity to have a little drive around on the Saturday…maybe.

Please SMS if you think you need further info.

Mark SKEELS

0429108389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PEEL 4X4 CLUB

KALGNET and MAGENEW TRAKS

15-30 SEPTEMBER 2024

This trip is planned to travel along the Kalgnet and Magenew Traks. These are two of the five "Traks" which make up the South West Australia Way. This 4wd touring route was set-up by the WA 4WD Association in 2019.

The plan is to commence Sun15Sept in Kalgoorlie and be home Mon30Sept.

NOTE - These dates and the route are subject to change for any reason which may include weather and anything else you can think/dream of.

NOTE - **The trip will commence on departure @ 1500hrs from Kalgoorlie.** (Warnbro – Kal 600kms)

The trip involves sealed and maintained Hwys and dirt roads as well as unmaintained roads and tracks that will be overgrown (scratches) and rough…including many washouts and corrugations.

The weather will play a major part in the road/track conditions.

There will be limited opportunity to shop for food etc after Kalgoorlie. You need to be as self-sufficient as possible though is limited food available at Leonora and Mount Magnet. You need to make sure you have plenty of water as potable water sources will also be very limited. If you intend to purchase alcohol, be aware that there are some strange rules re what/how much you can purchase and some weird opening hours.

Your 4wd will require a sandflag and a fire extinguisher...and it is a good idea to always have a pair of welding gloves in your 4wd anyway. It would be good to have a couple of 1L spray bottles filled with water handy.

You will need a fuel range of at least 800kms. Fuel available at Kalgoorlie, Leonora, Mount Magnet, Yalgoo, Mingenew and at various places between Mingenew and home. Please be aware that some places may require cash and others a credit card to operate the pump.

Recovery equipment suitable for sandy/mud track travel to be carried as well as Maxtrax (or similar) + a long handle shovel

Puncture repair kit to be carried. There should be 1 x UHF handset available for each person in the vehicle as there will be a lot of opportunity to go walking during this trip and in this type of country it is easy to get misplaced.

Food…I will have a BBQ plate for…BBQs. We will have a couple of nights in the same place during this trip so if you wish to do the camp oven thing you are welcome to do so. If possible, please bring a bag of wood to share out for the first couple of nights.

Clothing…whatever you want but try and be fashionable. There will also be the opportunity for walking and exploring so please make sure you have decent shoes (steel cap boots are better) and appropriate clothing. It would be wise to have at least one piece of HiViz clothing to put over whatever you will be wearing…makes it easier for the helicopter to spot you.

NOTE…there is nowhere to wash clothes between leaving home and arriving back home at the end of the trip.

Weather…

For this trip expect hot, warm, cool, cold, cloudy, sunny, windy, calm, dry and wet…if it does rain and flood then all bets are off and we will likely be exiting by the quickest route.

There's a chance that the nights will be cold (freezing…) so make sure you have warm and cosy sleeping stuff.

Timings…the aim will be to have camp set up and enjoying a beer (or whatever) at least 90mins before sunset. That's the aim. There will be a couple of days where some reasonable distances may need to be travelled and a couple of nights in the same place. Solars, nuclear fusion, angels' tears, unicorn farts or whatever you need to keep your batteries topped up when not moving will be required.

One thing that may be a factor in packing up our camp each morning is how wet everything will get from the dew and condensation…it may take a while to dry.

Please SMS if you think you need further info.

There is a limit of 8 vehicles from club members for this trip.

If you wish to download the SWAW waypoints you will find them here… https://www.wa4wda.com.au/services/

2024 KALGNET and MAGENEW TRAKS TRIP

DAY#		DAY/DATE	O/NIGHT	
1	SU	15SEP	LAKE PERKOLILI	# @
2	M	16	ROWLES LAGOON	
3	T	17	GOONGARRIE STN	
4	W	18	BUSH	
5	TH	19	MALCOLM DAM	
6	F	20	LEONORA CP	$ # @
7	S	21	BUSH	
8	SU	22	MT ELVIRE	
9	M	23	“	
10	T	24	BUSH	
11	W	25	DALGARANGA	
12	TH	26	“	
13	F	27	MELANGATA	
14	S	28	“	
15	SU	29	KARARA	#
16	M	30	HOME	# @

NOTE $ = payment to camp # = fuel available @ = some food may be available

Further information will be available in May 2024 or if you really think you need to know more, please send an SMS to 0429108389.

Mark SKEELS

TRIP CALENDAR

Trip Name	Perth Caravan and Camping Show
Date	21—24 March
Trip Leader	Information only not a club trip
Trip Rating	Easy

Trip Name	Black Point/ Lake Jasper
Date	29 March—1 April (Easter)
Trip Leader	Steven Power and Gary Mayes
Trip Rating	Medium

Trip Name	Koorda Drive in
Date	6 April
Trip Leader	
Trip Rating	Easy

Trip Name	Kaarakin Clean Up
Date	7 April
Trip Leader	
Trip Rating	

Trip Name	WA4WDA Gathering Whitegum Farm York
Date	19—21 April
Trip Leader	
Trip Rating	Medium

Trip Name	ANZAC Day
Date	25 April
Trip Leader	Dave Knudsen
Trip Rating	Easy

Trip Name	Captain Fawcet Track and Lennard Track
Date	12 May
Trip Leader	Gary Mayes
Trip Rating	Medium

Trip Name	Ningham Station
Date	1—3 June (long weekend)
Trip Leader	Dave Knudsen
Trip Rating	Medium

Trip Name	Fenceline Track Clean Up
Date	9 June
Trip Leader	Gary Mayes
Trip Rating	Medium

Trip Name	Kaarakin Clean Up
Date	16 June
Trip Leader	
Trip Rating	

Trip Name	AGM
Date	6th July 2024
Trip Leader	
Trip Rating	Extreme

Trip Name	Mornington Road (Brunswick)
Date	7 July
Trip Leader	Duane Buckenara
Trip Rating	Medium to difficult

Trip Name	Fenceline Track
Date	4 August
Trip Leader	Gary Mayes
Trip Rating	

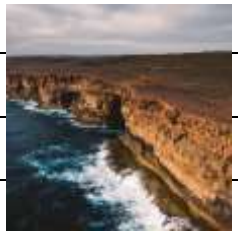
Trip Name	Mystery Day Trip
Date	25 August
Trip Leader	Dave Knudsen
Trip Rating	

Trip Name	Dowerin Field day
Date	28—29 August
Trip Leader	Information only not a club trip
Trip Rating	Easy

Trip Name	Donneybrook to Nannup
Date	21—23 September (long weekend)
Trip Leader	Steven Power
Trip Rating	Medium

Trip Name	Grand Final Party
Date	28 September
Trip Leader	Dave Knudsen
Trip Rating	Boozy

Trip Name	Shark Bay
Date	13– 19 October
Trip Leader	Duane Buckenara
Trip Rating	Medium



Trip Name	Perth 4WD and Adventure Show
Date	8—10 November
Trip Leader	Information only not a club trip
Trip Rating	Easy

Trip Name	Koorda Drive In
Date	16 November
Trip Leader	Mark Skeels
Trip Rating	Easy

Trip Name	Lancellin Sand Dunes
Date	17 November
Trip Leader	Dave Knudsen
Trip Rating	Medium

Trip Name	Christmas Party
Date	15 December
Trip Leader	
Trip Rating	Pressies !!!!

Trip Name	
Date	
Trip Leader	
Trip Rating	

Trip Name	
Date	
Trip Leader	
Trip Rating	