



Graphical Area Forecasts (GAF) Frequently Asked Questions



GAF Areas and Sub Areas

1. How do I locate forecast information for the sub area that is drawn on the graphic? E.g. B1

The forecast information for any sub area (e.g. A1, B1, C2, etc) is provided in the table under the parent area (e.g. A, B, C etc). For example, if you require forecast information for A1 you should refer to Area A in the table. All forecast information for A will also occur in A1 unless otherwise stated.

2. How do I locate forecast information if there are two separate or exclusive Area B's on the GAF image?

The forecast information detailed in the table for Area B is valid for all Areas labelled as B on the graphic.

3. What do the different rows (divided by dotted lines) for each Area in the GAF table represent, for example if Area A has one row, Area B has 5 rows, and Area C has 4 rows, do these rows represent changes in the area with time during the forecast period?

The different rows (divided by the dotted lines) within each Area in the table detail the weather and associated visibility expected in the whole area (unless otherwise stated), along with any associated cloud, icing or turbulence. The dotted lines are there to show the cloud, icing and turbulence that are associated with a particular weather and visibility.

Refer to pages 61–64 of the *GAF User Guide* for examples and more information:
<http://www.bom.gov.au/aviation/data/education/GAF-user-guide.pdf>

4. Why are some GAF regions larger than others?

Australia is a large country with a wide range of weather conditions. Some parts of the country have significant topography and more complex weather, for example eastern New South Wales. As a result, the domain boundaries were designed in consultation with industry representatives and meteorologists to construct a domain size that is suitable to the region.

GAF Amendments

5. If GAFs are not amended how do I find out about a deterioration to forecast conditions?

Information on deteriorating conditions in a GAF will be in the form of an AIRMET or SIGMET, depending on the observed or forecast conditions meeting the specific criteria of the product.

6. If GAFs are not amended how do I find out about an improvement to forecast conditions?

Improvement of conditions meeting certain criteria will be provided in a 'corrected GAF'. Corrections will be issued with the term CORRECTED in the Header field and will include a brief description of the correction in the Remarks field.

Interpreting the GAF

7. Is cloud repeated throughout the GAF area for all weather types?

No. Cloud will only be forecast for other weather and surface visibility listed in an area if it differs from the prevailing cloud conditions. Generally, cloud coverage and/or base/top heights will vary depending on the weather. However, in situations where the cloud does not vary with weather phenomena, the cloud will only be mentioned in the prevailing weather group. If the prevailing conditions are not >10KM NIL (e.g. 9000M WDSPR RA), the same rule will still apply. The idea is that this cloud is the prevailing cloud over the whole area – including the parts that may be affected by other weather phenomena.

For example, in the following GAF sample BKN CU/SC 5000/9000FT is expected throughout the entire Area A (including sub area A1), with bases lowering to 2500FT in showers.

AREA	SURFACE VIS AND WX	CLOUD, ICING AND TURB	FZLVL
A	>10KM NIL	SCT ST 1200/3000FT LAND FM 09Z SCT CU/SC 2500/9000FT, BKN IN A1 BKN CU/SC 5000/9000FT	ABV 10000FT
	6000M ISOL FU BLW 8000FT LAND		
	3000M ISOL SHRA (SCT IN A1)	BKN ST 0800/2500FT BKN CU/SC 2500/9000FT	
		MOD TURB BLW 6000FT NW OF YGM/YGGS	

8. How are snow showers formatted in the GAF?

Precipitation falling as snow is forecast if it is expected to reach the ground, including the ranges. Snow showers are formatted the same as other weather groups, however, usually the vertical extent of these snow showers will be included to indicate where the change from showers of snow (SHSN) to showers of rain (SHRA) occurs (unless the SHSN is falling to mean sea level). An example of the format is:4000M ISOL SHRA (SHSN ABV 4000FT)

When snow showers have a different visibility to SHRA, it will be included as its own separate weather group.

9. How is fog and low stratus formatted in an area or sub area of the GAF?

If broken low cloud is expected throughout an area, or sub area, but there are some isolated fog areas also, it is formatted as follows:

B	>10KM NIL	BKN ST 1000/2000FT B1 ONLY FEW ST 1500/3000FT FEW SC 4000/6000FT
	0500M ISOL FG B1 ONLY	

10. What does a FZ LYR mean in the FZLVL column?

Sometimes, there may be multiple freezing levels in the atmosphere when a strong temperature inversion occurs just above the freezing level. The temperature may fluctuate around zero degrees Celsius through a layer of the atmosphere.

FZ LYR 6000/8000FT in the FZLVL column would indicate that while ascending or descending through 6000 to 8000FT a pilot may encounter the freezing level several times.

The main freezing level is always included. The FZLVL column should include both the main freezing level and the freezing layer as shown as: E.g. 9000FT FZ LYR 4000/6000FT

For more information on freezing levels and freezing layers refer to page 22 of the *GAF User Guide* found at: <http://www.bom.gov.au/aviation/data/education/GAF-user-guide.pdf>

11. How are SIGMETs referenced in the GAF?

The SIGMET phenomenon is referenced in the GAF as it appears in the SIGMET at the start of the GAF validity period. This is achieved by either using weather area boundaries on the GAF image, PCA locations or latitude and longitude in the GAF table. The SIGMET area on the GAF may not exactly match the graphical SIGMET area as this may detract from the comprehensibility of the GAF. A GAF will not be amended to reflect any changes to a SIGMETs shape/position, therefore pilots are required to check for any valid SIGMET(s) (as highlighted in the GAF Legend).

GPWT Forecasts

12. Is there any set size for each grid on the Grid Point Wind and Temperature charts?

Low level regional GPWT Forecast charts have a resolution of 1.5 degrees by 1.5 degrees. The national chart however is 5 degrees by 5 degrees.

13. Do the GPWT forecast charts maintain their same routine issues and validity?

Low level GPWT forecast charts are issued every six hours and cover the following 24 hour period. Each chart is valid for the 3 hour period following the validity time shown on the bottom left hand corner of every chart.

GPWT FORECASTS (1000FT - FL140) - AUS			
PROVIDED BY AUSTRALIAN BUREAU OF METEOROLOGY		ISA	
VALID:	1200 UTC 23 May 2019	FL/FT	hPa T
ISSUED:	0238 UTC 23 May 2019	140	600 -13
		10000	700 -05
DATA FORMAT:	dd fff tTT	7000	800 +01
dd:	WIND DIR TENS OF DEG TRUE	5000	850 +05
fff:	WIND SPEED IN KNOTS	2000	950 +11
tTT:	TEMP IN DEG CELSIUS	1000	975 +13
FORECAST is valid for the centre of the box			

14. Is there a method of correction to these charts if needed?

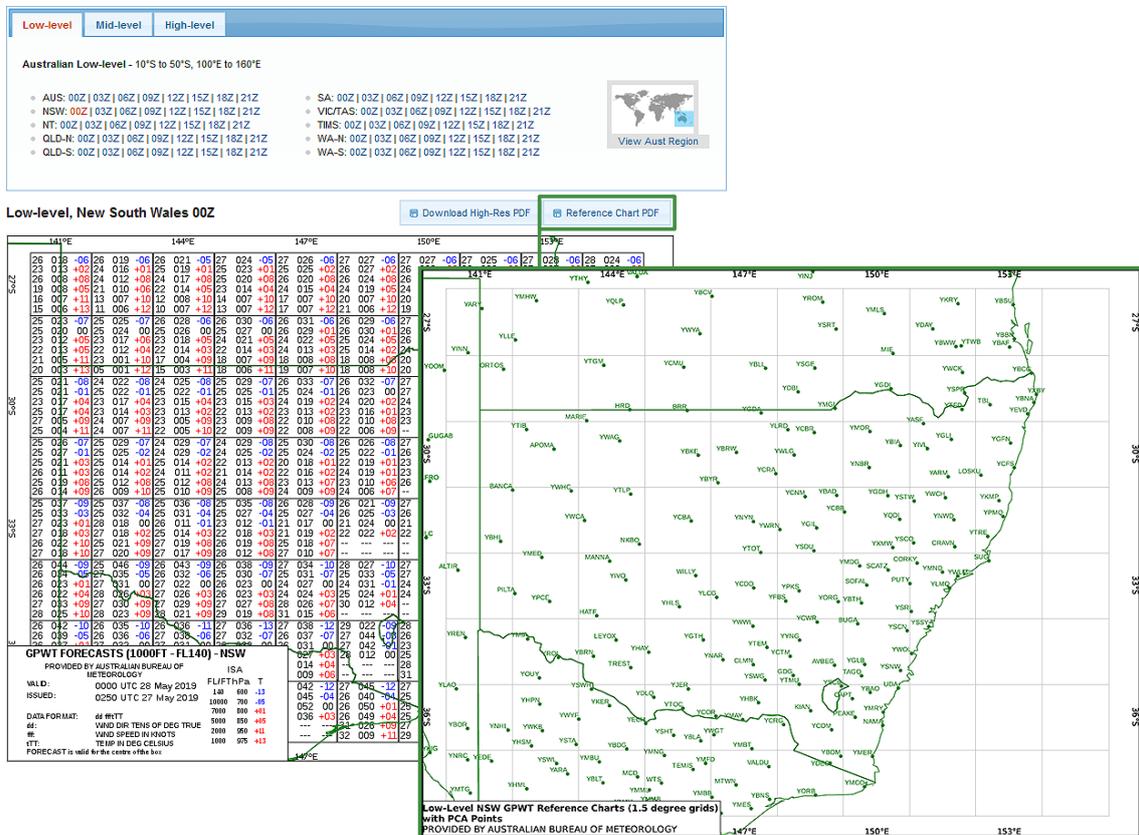
No, these charts are automatically produced from reliable numerical weather prediction data.

15. How can I easily reference a planned flight path across an area on a GPWT Forecast chart?

GPWT reference charts (available on the Bureau website and NAIPS chart directory) may be used for this purpose. GPWT reference charts are made available for all low level regional GPWT domains except the Timor Sea (TIMS). Each reference chart covers the exact domain as the corresponding low level GPWT forecast, and has the same gridded layout. The grid boxes however, contain no data and PCA locations have been added to the chart.

The Reference Chart can be used to plot a flight path and the corresponding grids of the GPWT forecast will determine the forecast wind conditions for the planned route.

Note: the GPWT forecast is valid for the centre of the grid box and not necessarily for the PCA location in that box.



More information can be found on our website at:

<http://www.bom.gov.au/aviation/charts/grid-point-forecasts/>
<http://www.bom.gov.au/aviation/data/education/gridpoint.pdf>

Area QNH

16. What are the QNH areas?

The QNH areas are smaller than the GAF. Area QNH information is therefore not currently available as part of the current GAF product. Please refer to the Aviation Forecasts section of our website to access current QNH information. Additional education material can be found at: <http://www.bom.gov.au/aviation/data/education/area-qnh.pdf>, including a map of the Area QNH boundaries.

SIGMETs and AIRMETs

17. Are SIGMETs and AIRMETs automatically displayed below the chart?

SIGMETs and AIRMETs are displayed in the NAIPS Briefing/QNH Area briefing.

18. How do I access AIRMETs?

AIRMETs are currently included when an area briefing or Specific Pre-flight Information Briefing (SPFIB) is obtained in NAIPS or through the major Electronic Flight Bag (EFB) products. AIRMETs are also transmitted over radio by ATC.

19. How are AIRMETs and SIGMETs displayed?

AIRMETs and SIGMETs are displayed graphically and are available via NAIPS Chart Directory.

NAIPS Weather Briefing

20. How are GAFs displayed in the current area briefing service in NAIPS?

GAF and GPWT charts are displayed as images in the NAIPS area briefing, with a high-resolution image linked (click the relevant image). The default briefing time is 6 hours. Information contained in the area briefing is as follows:

- i. Area QNH,
- ii. TAFs and METARs,
- iii. any valid AIRMETs (that have not been cancelled),
- iv. any valid SIGMETs over the FIR (that have not been cancelled),
- v. NOTAM information,
- vi. GAF relevant to Briefing/QNH Area (one or two depending on the duration of the briefing),
- vii. GPWT Forecasts relevant to Briefing/QNH Area (number will vary depending on the duration of the briefing). Flight operations between 10000FT and FL200, Medium-level SIGWX charts are available.

Contact Information

21. Bureau of Meteorology – Aviation Meteorological Service

For further information on the GAF or GPWT charts please contact webav@bom.gov.au or visit <http://www.bom.gov.au/aviation/gaf>

22. AirServices Australia – NAIPS

Any questions regarding NAIPS, including Area Briefings, please contact the AirServices Australia Network Coordination Centre (NCC) on 1300 272 662 (1300 ASA NOC) or via: <https://www.airservicesaustralia.com/noc/contact>