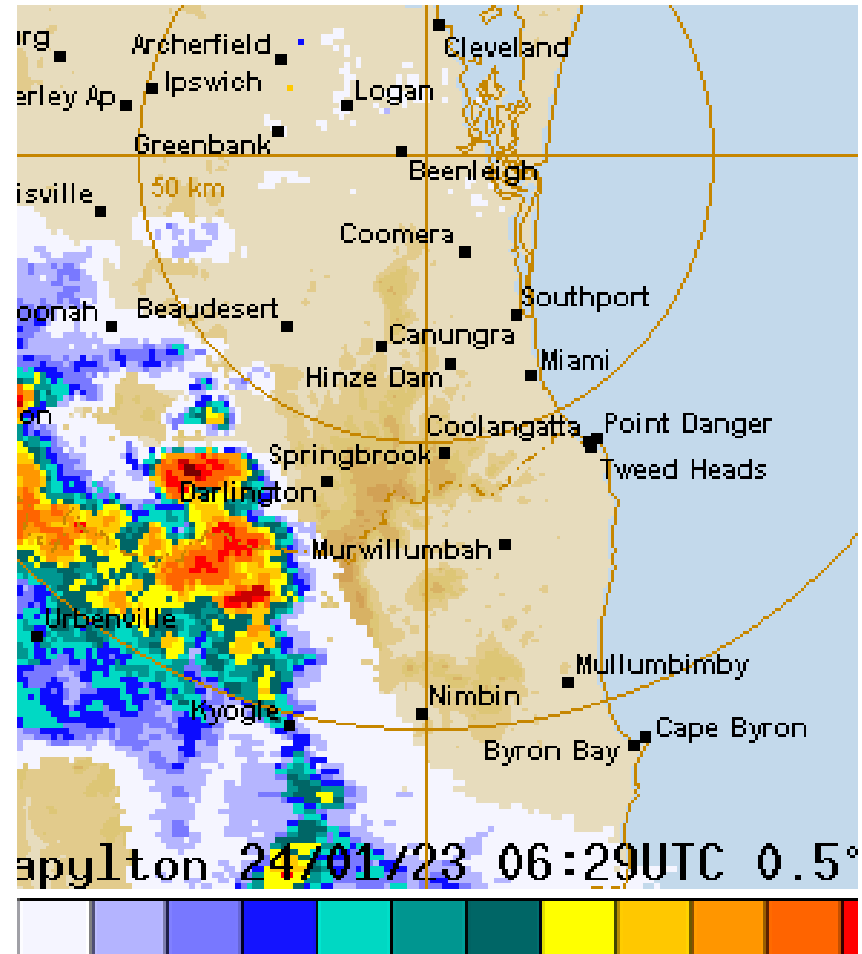


# Interpreting the GAF and GPWT



# What you see – What you get?



## Legal

- Going only to BOM or other unofficial sites does not meet CASR 91.230 requirements. SIGWX, TEMPO, INTER & TURB are not provided on alternative unofficial services.
- CASA approved Apps are acceptable if linked to NAIPS credentials

## Planning

- Flight Planning requires accurate cloud and wind information whether for a local flight or cross-country flight.
- e.g. VMC confirmation, fuel planning, RWY use

## Safety

- A study by the Air Safety Foundation found that **27% of general aviation accidents are due to adverse weather** conditions.
- Between November 1, 2012 and November 1, 2022 **11 accidents** were recorded in Australian airspace due to **VFR into IMC, resulting in 22 fatalities**.
- <https://www.atsb.gov.au/publications/2019/avoidable-accidents-4-vfr-into-imc>





## 10. Pre-flight planning and preparation

### Flight preparation requirements – weather assessment (91.230)

You must comply with the following flight preparation requirements.

#### Forecasts for flight planning (MOS 7.02)

You must study the authorised weather forecasts and reports for the route, and for the departure, the planned destination and any planned alternate aerodrome to be used, as well as any other reasonably available relevant weather information for your intended flight. If you first study the forecasts **more than one hour** before commencing a flight you must review an update to that information before the flight begins.

An authorised weather forecast **must cover the whole period of the flight**, and include a wind and temperature forecast and **one of the following**:

- › for a flight at or below 10,000 ft above mean sea level (AMSL), **a graphical area forecast (GAF)** or general aviation meteorological (GAMET) area forecast



# Big Picture – Small picture

Start with the synoptic chart



Interpret the Graphical Area Forecast (GAF)



Confirm the winds for your TR, HDG and fuel calculations from GPWT



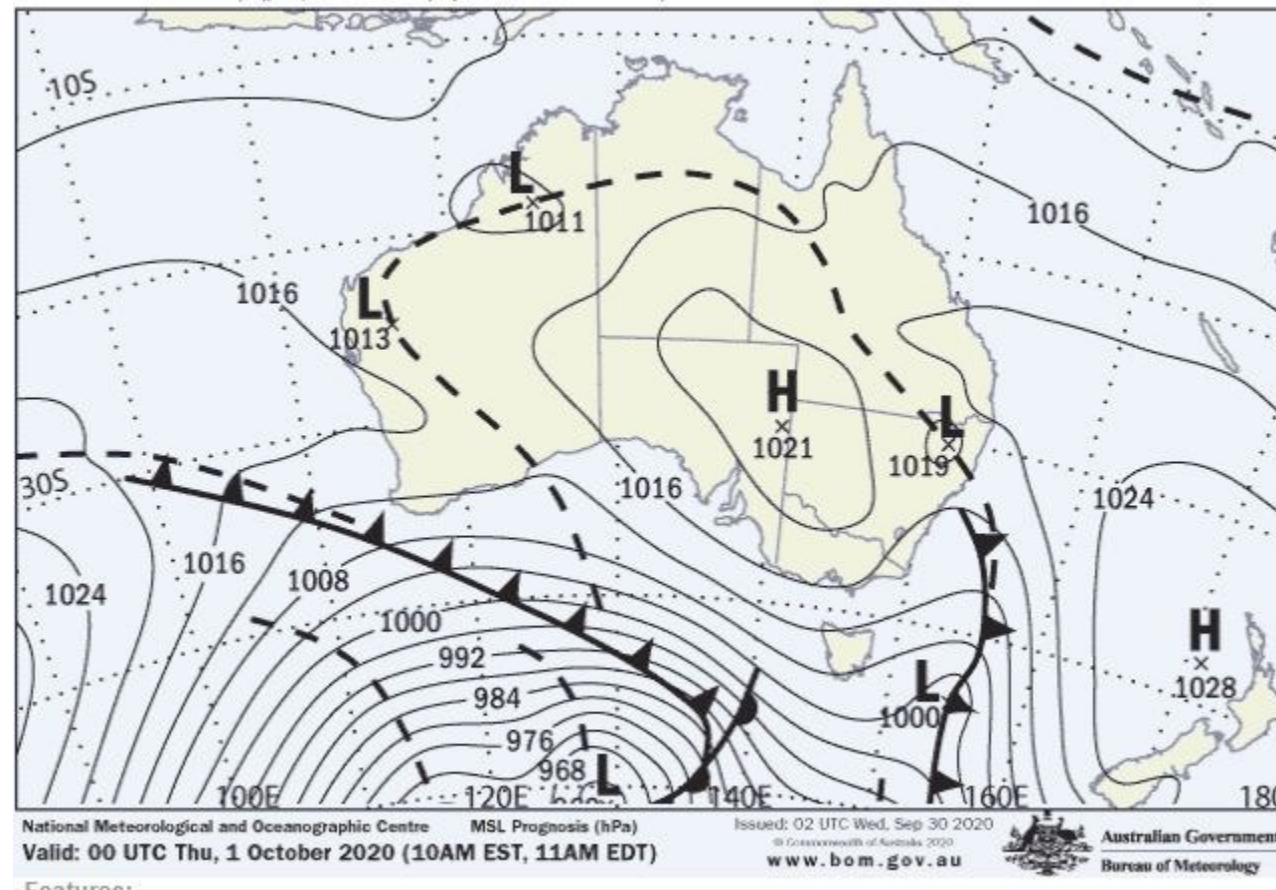
Only then look at the TAF/ TAF3 for planning & destinations



**NEILS TIP:** Remember forecasts are still horoscopes with numbers!



# The art of the chart: How to read a weather map



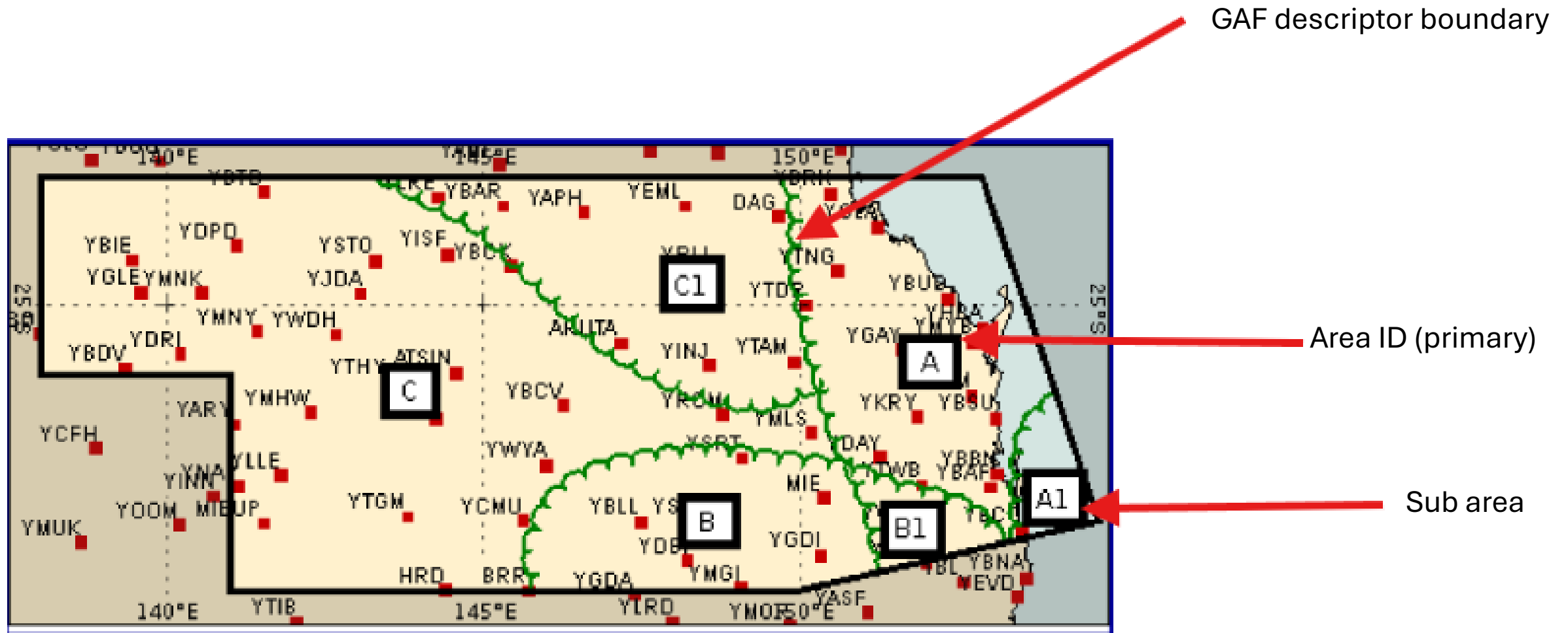
<http://media.bom.gov.au/social/blog/2391/the-art-of-the-chart-how-to-read-a-weather-map/>

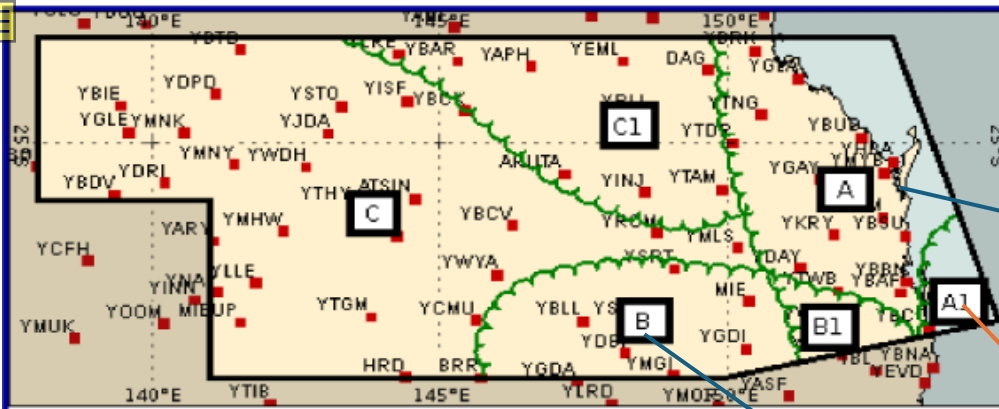
Aviation services

# Graphical Area Forecast (GAF)



## Graphical Area Forecast (GAF)





All heights AMSL

TS / CB / TCU implies SEV ICE and SEV TURB

CU / SC / AC implies MOD TURB

Speed of movement in KT

■ refers to Limit of Forecast

Check AIRMETs, SIGMETs and NOTAMs

CLD ABV FZLVL implies MOD ICE

• refers to Critical Locations

REMARKS:

## Graphical Area Forecast SFC - 10000FT QLD-S

Issued at 2502101625Z - Valid 101700 to 102300Z

Weather Features valid at 101700Z



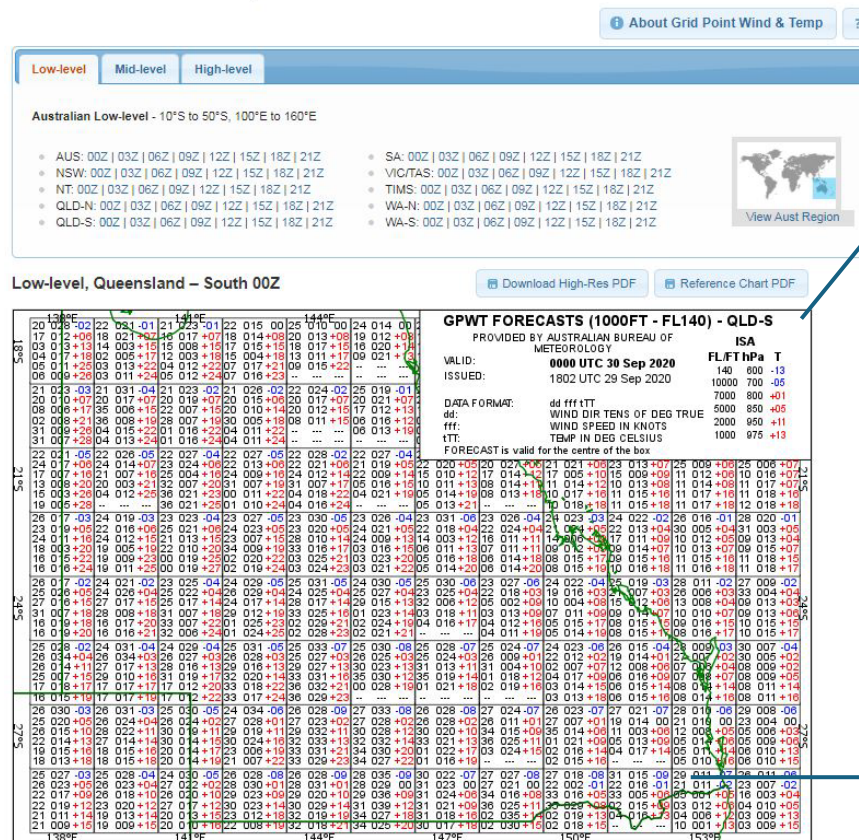
The Bureau  
of Meteorology

AREA	SURFACE VIS AND WX	CLOUD, ICING AND TURB	FZLVL
A	>10KM NIL	SCT ST 1000/2000FT LAND BKN SC 2000/3000FT LAND SCT CU/SC 3000/9000FT, BASES 2000FT SEA/10NM INLAND	ABV 10000FT
	5000M ISOL FU BLW 5000FT LAND		
	3000M ISOL SHRA SEA/20NM INLAND (SCT A1)	ISOL TCU 3000/ABV10000FT IN A1 BKN ST 1000/3000FT BKN CU 3000/ABV10000FT, BASES 2000FT SEA/10NM INLAND	
B	>10KM NIL	BKN SC 2000/6000FT IN B1 ONLY FEW CU/SC 9000/ABV10000FT (BASES 5000FT IN B1)	ABV 10000FT
	5000M ISOL FU BLW 9000FT E OF YBCV/YGDA		
	4000M ISOL SHRA	ISOL TCU 9000/ABV10000FT (BASES 5000FT IN B1) SCT SC 2000/6000FT BKN CU 9000/ABV10000FT (BASES 5000FT IN B1)	
	2000M ISOL TSRA	ISOL CB 9000/ABV10000FT (BASES 5000FT IN B1) SCT SC 2000/6000FT (BKN IN B1)	
	0500M ISOL FG IN B1 TL 21Z		
C	>10KM NIL	SCT ST 1500/2000FT IN C1 FM 18Z BKN SC 2000/4000FT IN C1 ONLY FEW CU/SC 9000/ABV10000FT (SCT AND BASES 6000FT IN C1)	ABV 10000FT
	5000M ISOL FU BLW 9000FT E OF YLRE/YBCV		

Note VIS!

# Interpreting Grid winds

## Grid Point Wind and Temperature Forecasts



## GPWT FORECASTS (1000FT - FL140) - QLD-S

PROVIDED BY AUSTRALIAN BUREAU OF METEOROLOGY

VALID: 0300 UTC 11 Feb 2025

ISSUED: 0028 UTC 11 Feb 2025

DATA FORMAT: dd fff tTT  
dd: WIND DIR TENS OF DEG TRUE  
fff: WIND SPEED IN KNOTS  
tTT: TEMP IN DEG CELSIUS

FORECAST is valid for the centre of the box

ISA  
FL/FT hPa T  
140 600 -13  
10000 700 -05  
7000 800 +01  
5000 850 +05  
2000 950 +11  
1000 975 +13



# Tunnell vision thinking?

*"It was OK when I looked outside"*

Complacency

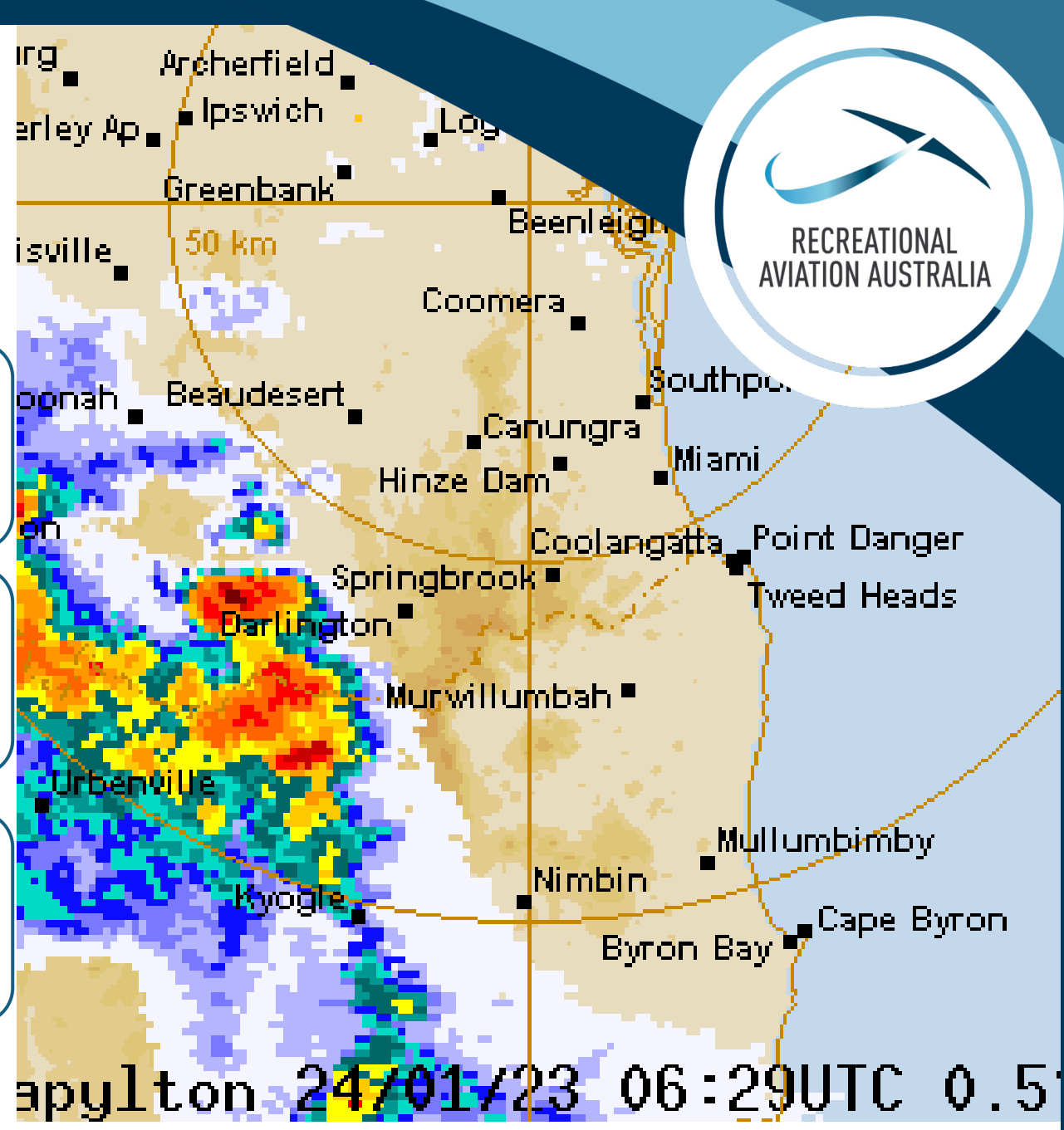
- It's sometimes easy to just believe what you can see. Stick to planning disciplines.
- Get the official weather every time you intend to fly

Normalisation

- We're just going for a short local flight at sunrise?
- Forecast 112000Z PROB 40 FG BR 0500
- Knowing the dewpoint might just save you one not so sunny morning

Invulnerability

"I've never been caught out yet, they always go around us".  
I'll just go west, they're only INTER's"



# Questions



Contact: [training@raaus.com.au](mailto:training@raaus.com.au)

