Public Meeting 29th August 2017 2017STH027 - Bega Valley - DA 2017.445 1070 Princess Highway, Frogs Hollow

Public Concern/Statement - Operational Wind Conditions at Frogs Hollow Airfield

The statement was made that weather conditions (in particular wind conditions) at Frogs Hollow made the air field unsuitable. The statement was made that of 441 days, the wind conditions exceeded 20Km/hr and therefore the flights could not operate safely 336 days of the year which was said to equate to 76% of the year.

The following document has been put together to address this statement directly. A basic level of aviation and the impact of winds has been explained to help the reader better understand the data.

Response

Mitch Boyle, senior flight instructor and commercial pilot on behalf of Sports Aviation Flight College Australia Ltd (SAA) provides the following information to explain why the statements made are incorrect.

Firstly, it is important to understand some fundamentals of aviation.

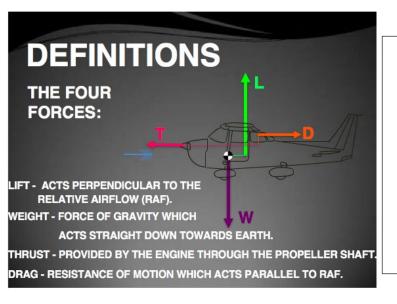


Image 1.1 The Basics of Flight

The image to the left shows the forces at play during flight.

- Thrust is referred to as the forward force (please not this is measured relative to the flying body, NOT the ground speed)
- The weight of the body is constantly pulling the body downwards.
- The lift is created by air traveling over the wings at particular angles
- Drag is the force pulling the body in a backwards motion
- The resulting force is the accumulative effect of these forces and is the result. This is particularly relevant in the take off and landing of aircraft as this "resulting force" is the trajectory of flight.

The image on the following page explains the effects that no wind, headwinds and tailwinds have on the resulting ground speed. It should be noted that the ground speed of the aircraft is a result of it's travel speed combined with the forces of the wind effecting the aircraft.

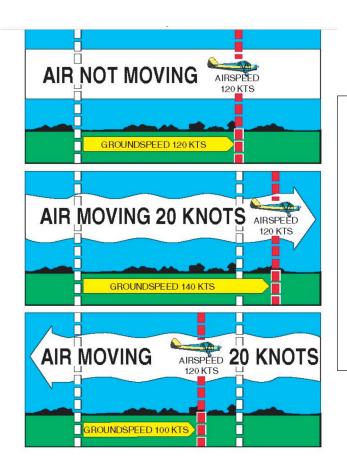


Image 1.2 The Effects of Wind on Aircraft Speed

The image to the left shows the effects of wind (nil, headwind and tailwind shown in the diagram) on the aircraft's ground speed.

- The top image shows the aircraft flying with no wind effecting the aircraft.
 In this instance the aircraft's airspeed is identical to the aircraft's ground speed.
- The centre image shows the aircraft flying with a tailwind in play. In this
 scenario, the ground speed is the combination of the tailwind speed AND
 the aircraft's flight speed.
- The bottom image shows the aircraft flying with a headwind in play. In this scenario, the ground speed is the result of the aircraft's airspeed MINUS the headwind speed.

These effects of wind on the aircraft are particularly relevant for take-off and landing as they directly affect the distance and speed required to take off and land an aircraft. The following image demonstrates the effect of a headwind on an aircraft during takeoff.

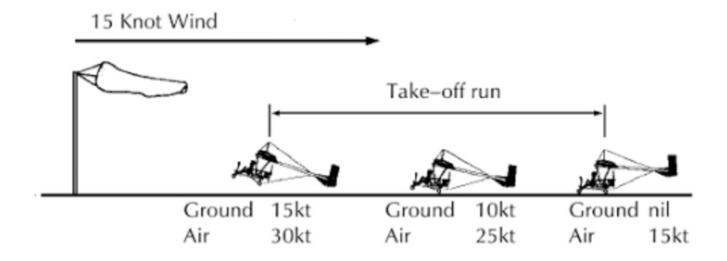


Image 1.3 Ground Speed VS Air Speed during Take-off

The image above demonstrates the effect that a 15 knot headwind has on the take-off of an aircraft.

- At each of the positions, the relative air speeds of the aircraft and the ground speed are shown. A 15 knot ground speed is required to achieve a 30 knot air speed.
- In the above scenario, due to the headwind the take-off run is a shorter distance and a slower ground speed is required than it would be if there was no wind. This is advantageous for flight as less of the runway is required for takeoff.
- If there was a direct tailwind of the same magnitude, the results would be the opposite The aircraft would need MORE of the runway to takeoff and a much faster ground speed would be required.
- It should also be noted that crosswinds (winds perpendicular to the side of the aircraft) have zero effect on the take-off run distance or speed required for take-off.

A similar effect is applied when landing an aircraft. The image below shows the different effects that headwinds, nil winds and tail winds have on the distance required to land an aircraft.

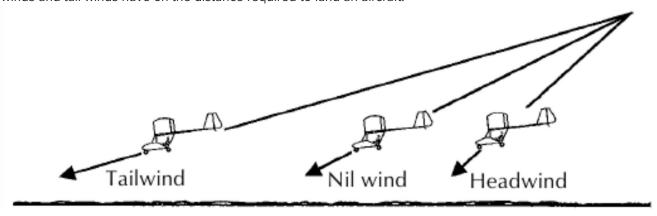


Image 1.4 Effect of Wind Direction

The image above demonstrates the effect that the direction of wind (or no wind) has on an aircraft when landing

- Tailwind increases the distance traveled to complete the landing
- Nil wind has no effect on the distance traveled to complete the landing
- Headwind decreases the distance traveled to complete the landing
- While tailwinds are advantageous for shorter flight times once airborne, headwinds are advantageous for take off and landing as they require less of the runway and reduced take-off and landing speeds.
- Once again, cross winds (winds perpendicular to the side of the aircraft) have no effect on the distance required or speed of the aircraft when landing.

It should be noted however, that not all wind acting on an aircraft is a direct headwind, tailwind or crosswind. An example is shown in the image below, where the wind is acting on the aircraft at approximately 45 degrees.

This provides for a combination of headwind and crosswind acting on the aircraft and the amount of each can be calculated.

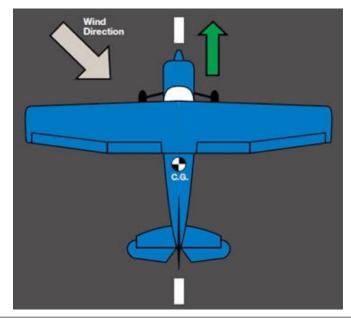


Image 1.5 Aircraft with a Partial Headwind and a Partial Crosswind

The image above shows a partial headwind and a partial crosswind applied to the aircraft

- This wind direction is a combination of headwind AND crosswind.
- $\bullet \qquad \hbox{This angled wind can be broken down into it's effective headwind and crosswind components}\\$

The image below shows the procedures a pilot takes when there is a direct crosswind effect on the aircraft.

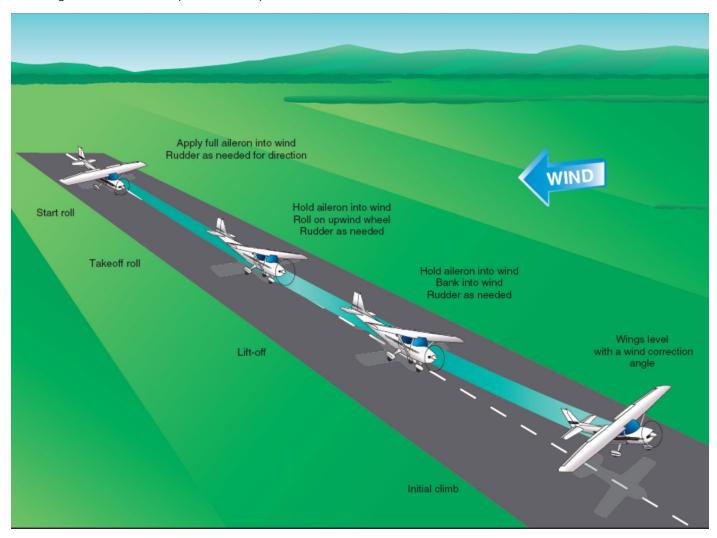


Image 1.6 Aircraft Operation with a Crosswind

The image above demonstrates how an aircraft takes off with a cross wind.



All aircraft have a direct crosswind component stipulated by the aircraft manufacturer (which is different for each type of aircraft). This is the maximum 'direct' crosswind specified by the manufacturer for the aircraft to operate safely during take-off and landing. The Bantam aircraft (shown above) that will be used by SAA has a 15 knot (25.93 Km/hr) crosswind component.

Calculating Safe Wind Speeds for Operations

To calculate the safe maximum wind speed for operating the Bantam at Flight College, we can use the Bantam's direct crosswind component of 15 knots (25.93Km/hr) and work backwards.

To do this, we firstly need to understand the advantages of having a cross-directional runway.

Cross Directional Runway

With two runways perpendicular to each other, as is the case at Frog's Hollow, take-off and landing directions can be chosen to take advantage of the relative wind direction.

Image 1.8a - Runway A operating

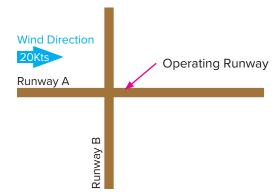
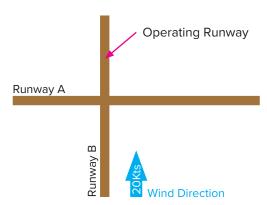


Image 1.8b - Runway B operating



Images 1.8a and 1.8b Wind Direction vs Operating Runway

The image above demonstrates which runway is used depending on the direction of the wind.

- In image 1.8a, the wind is running parallel to Runway A which is therefore the runway which would be used in this example. Runway B would have direct crosswinds (shown above as 20Kts) and would not be used.
- Similarly in image 1.8b, the wind is running parallel to Runway B which is therefore the runway which would be used in this example. This time runway A would have direct crosswinds (20Kts) and would therefore not be used.

To calculate the maximum wind strength for operation of the Bantam at Frogs Hollow we use a combination of the aircraft's crosswind component (15 Knots) and the wind acting at 45 degrees to the aircraft. We apply this to the standard graph shown on the following page

The 'worst case wind direction' for either runway is shown in the diagram below (at 45 degrees to runway)

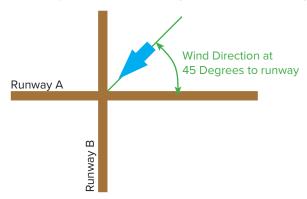
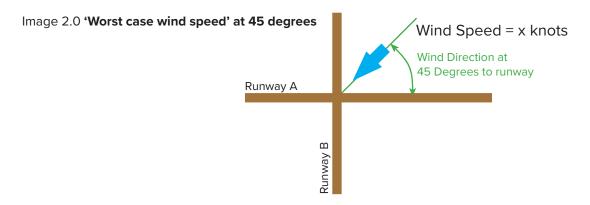


Image 1.9 'Worst case wind direction"

The image above shows the wind direction that will produce the highest level of crosswinds on either runway at any time.

- · As this angle is split in between the two runways, changing runways does not make a difference to the crosswind component
- As this is not a direct crosswind (perpendicular to the operating runway), the effective crosswind speed is one component of the wind and can be calculated using the table on the following page.



We therefore need to calculate what Wind Speed (shown as "x" above) traveling at 45 degrees to the runway that will produce a crosswind component of 15 knots (25.93Km/hr).

The relationship between direction of wind and the resulting headwind components and crosswind components can be seen in the table below.

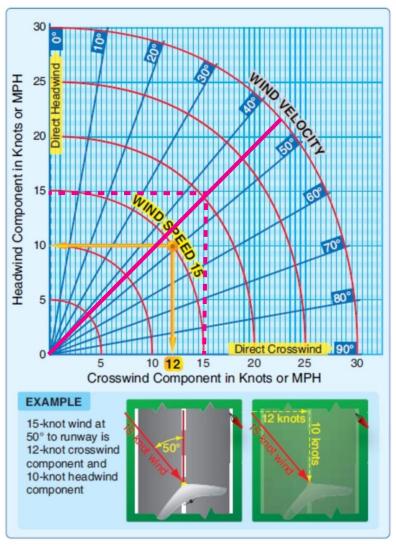


Image 2.1 Direct Crosswind Component Graph

The pink line that has been overlayed shows that a wind velocity of around 20 knots (37.04Km/hr) at 45 degrees produces a crosswind component of 15 knots (25.93Km/hr). This is of course the worst case scenario.

On the following pages we have displayed screenshots taken from the Bureau of Meteorology's website that shows the Daily Weather Conditions for each month of the year that the College is flying (2 months of the year there is no flight training).

Image 2.2 Bega AWS Monthly Weather Conditions

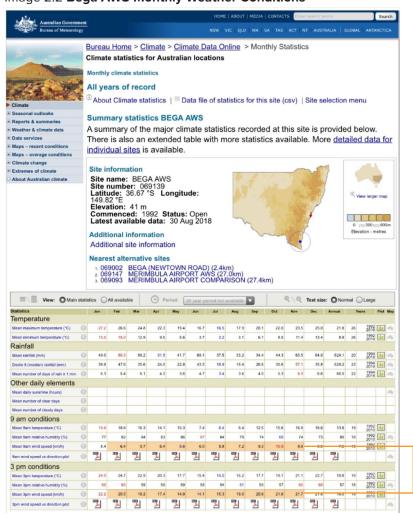


Image 2.2 to the left shows the monthly averages of weather conditions at the "Bega AWS location". The highest monthly average wind speed for the year recorded at 9am was 10.5km/hr and 22.2km/hr recorded at 3pm. These averages are nowhere near the threshold of 37km/hr derived from the previous calculations.

Images 2.3 - 3.2 are screenshots of the weather conditions broken down into each day's records. As the College is to only perform flight training between February and November, only these months have been shown.

The two columns showing the daily recordings of wind speed at 9am and 3pm have been outlined in orange. The highest speed of each month for each time slot is shown in red text and any day where the recorded wind speed is 37km/hr or above has been highlighted in orange.

The past year's average wind speeds for each month that the College will be flying. Measurements taken at 9am and 3pm each day.

Image 2.3 Bega AWS Feb 2018 Weather Conditions

| Bega, New South Wales |
|-------------------------------------------------|
| February 2018 Daily Weather Observations |

| | | Ter | nps | D-1 | F | ٥ | Max | wind | gust | | | | 9 am | | | | | 3 | pm | | |
|------|-------|------|------|------|------|-------|------|------|-------|------|----|-----------------|------|------|--------|------|----|-----------------|-----|------|-------|
| Date | Dav | Min | Max | Rain | Evap | Sun | Dir | Spd | Time | Temp | RH | Cld | Dir | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSLF |
| | , | °C | | mm | mm | hours | | km/h | local | °C | % | 8 th | | km/h | hPa | °C | % | 8 th | | km/h | hP |
| 1 | Th | 8.4 | 21.9 | 0.2 | | | ssw | 46 | 06:52 | 16.2 | 59 | | SW | 9 | 1016.8 | 20.5 | 49 | | SE | 17 | 1016. |
| 2 | Fr | 8.8 | 25.2 | 0 | | | ESE | 33 | 14:48 | 15.3 | 76 | | (| Calm | 1019.3 | 23.7 | 44 | | ESE | 19 | 1017. |
| 3 | Sa | 12.0 | 25.4 | 0 | | | SW | 31 | 11:59 | 16.9 | 89 | | WSW | 2 | 1022.5 | 22.0 | 60 | | SE | 20 | 1022. |
| 4 | Su | 11.6 | 25.7 | 1.0 | | | E | 30 | 13:31 | 16.5 | 93 | | (| Calm | 1025.0 | 24.1 | 57 | | ESE | 15 | 1022. |
| 5 | Мо | 11.7 | 28.9 | 0 | | | ESE | 31 | 14:05 | 17.0 | 89 | | SSE | 4 | 1020.7 | 27.2 | 43 | | SE | 20 | 1017. |
| 6 | Tu | 13.8 | 26.7 | 0 | | | ENE | 39 | 13:17 | 19.8 | 79 | | (| Calm | 1020.9 | 24.9 | 60 | | ENE | 24 | 1019. |
| 7 | We | 17.1 | 28.8 | 0 | | | NE | 50 | 15:20 | 23.3 | 68 | | NE | 9 | 1020.0 | 26.6 | | | NE | 35 | 1016. |
| 8 | Th | 15.2 | 36.4 | 0 | | | SSE | 30 | 15:22 | 21.9 | 79 | | SE | 6 | 1015.8 | 35.8 | 39 | | ENE | 13 | 1009. |
| 9 | | | 27.2 | 0 | | | SE | | 15:15 | 23.0 | 80 | | NNE | | 1014.9 | 25.4 | | | ENE | | 1013. |
| 10 | Sa | 18.4 | 31.5 | 0 | | | S | | 15:27 | 22.0 | 86 | | Е | 6 | 1011.0 | 29.4 | 57 | | Е | 26 | 1005. |
| 11 | Su | 17.2 | 28.0 | 1.0 | | | SSW | 41 | 08:02 | 20.4 | 77 | | SW | 28 | 1004.9 | 26.4 | 46 | | Е | 17 | 1003. |
| 12 | Мо | 16.3 | 22.4 | 0 | | | ENE | 24 | 15:23 | 17.8 | 75 | | | Calm | 1009.3 | 21.8 | | | SE | 11 | 1009. |
| 13 | Tu | 14.7 | 25.4 | 0 | | | ENE | 33 | 14:40 | 18.2 | 82 | | ESE | 2 | 1014.1 | 24.2 | 60 | | NE | 19 | 1011. |
| 14 | We | 14.6 | 36.4 | 0 | | | W | 67 | 12:17 | | | | (| Calm | 1005.8 | 35.1 | 14 | | WNW | | 1001. |
| 15 | Th | 14.1 | 28.8 | 0 | | | SE | 33 | 17:52 | 19.2 | 66 | | S | 11 | 1014.0 | 27.6 | 49 | | ENE | 22 | 1007. |
| 16 | Fr | 15.2 | 26.5 | 0 | | | ESE | 37 | 12:04 | 20.1 | 74 | | Е | 6 | 1011.3 | 23.5 | 57 | | ESE | 20 | 1011. |
| 17 | Sa | 15.3 | 30.4 | 0 | | | ENE | 37 | 13:50 | 21.7 | 68 | | N | 19 | 1013.9 | 29.1 | 51 | | ENE | 20 | 1009. |
| 18 | Su | 16.0 | 30.8 | 0 | | | SE | 33 | 13:26 | 20.9 | 80 | | Е | 7 | 1012.3 | 27.7 | 53 | | ESE | 20 | 1010. |
| 19 | Мо | 18.4 | 22.4 | 2.2 | | | SE | 44 | 17:54 | 18.7 | 95 | | WSW | 7 | 1015.4 | 21.6 | 75 | | SSW | 9 | 1015. |
| 20 | Tu | 15.4 | 21.9 | 13.2 | | | E | 31 | 13:50 | 16.7 | 72 | | SW | 13 | 1022.6 | 19.7 | 55 | | ESE | 22 | 1020. |
| 21 | We | 11.6 | 24.9 | 0.2 | | | NE | 33 | 15:20 | 16.9 | 84 | | E | 2 | 1019.7 | 23.9 | 47 | | NE | 22 | 1016. |
| 22 | Th | 12.8 | 28.3 | 0 | | | ENE | 43 | 15:07 | 15.7 | 93 | | SSW | 2 | 1017.2 | 26.2 | 50 | | ENE | 24 | 1013. |
| 23 | Fr | 14.7 | 29.4 | 0 | | | NNE | 41 | 09:22 | 18.1 | 99 | | S | 6 | 1015.2 | 28.4 | 52 | | NE | 24 | 1010. |
| 24 | Sa | 16.4 | 39.2 | 0 | | | NW | 50 | 11:17 | 21.3 | 87 | | S | 7 | 1005.9 | 37.6 | 27 | | WNW | 19 | 999. |
| 25 | Su | 16.6 | 21.0 | 12.0 | | | SE | 44 | 16:03 | 17.3 | 84 | | SSE | 11 | 1009.4 | 20.0 | 69 | | NE | 9 | 1010. |
| 26 | Мо | 14.2 | 22.7 | 20.8 | | | SE | 33 | 16:24 | 15.6 | 95 | | (| Calm | 1017.5 | 22.1 | 65 | | Е | 17 | 1017. |
| 27 | Tu | 11.3 | 25.3 | 1.8 | | | NNE | 31 | 11:28 | 12.8 | 99 | | SE | 2 | 1019.5 | 24.3 | 56 | | ENE | 20 | 1015. |
| 28 | We | 10.3 | 30.7 | 0 | | | SSW | 33 | 19:48 | 13.1 | 99 | | SSW | 2 | 1010.0 | 27.5 | 54 | | ESE | 13 | 1004. |
| Sta | itis | tic | s f | or F | ebr | uai | ry 2 | 01 | 8 | | | | | | | | | | | | |
| | | | 27.6 | | | | | | | 18.4 | 83 | | | 5 | 1015.2 | 25.9 | 52 | | | 19 | 1012 |
| | | | 21.0 | 0 | | | | | | 12.8 | 59 | | | Calm | 1004.9 | 19.7 | 14 | | | 9 | 999. |
| Hig | hest | 18.8 | 39.2 | 20.8 | | | w | 67 | | 23.3 | 99 | | SW | 28 | 1025.0 | 37.6 | 75 | | | 35 | 1022. |
| | Total | | | 52.4 | | | | | | | | | | | | | | | | | |

0 measurements over 37Km/hr in either time slot in February

Image 2.4 Bega AWS Mar 2018 Weather Conditions

Bega, New South Wales March 2018 Daily Weather Observations

| | | | nps | Rain | Evap | Sun | Max | wind | gust | | | | 9 am | | | | | ; | 3 pm | | |
|------|---------------|------|------|--------|------|-------|------|------|-------|------|----|-----------------|------|------|--------|------|----|-----------------|------|------|------|
| Date | Day | Min | Max | Itaiii | LVap | Juli | Dir | Spd | Time | Temp | RH | Cld | Dir | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSL |
| | | °C | °C | mm | mm | hours | | km/h | local | °C | % | 8 th | | km/h | hPa | °C | % | 8 th | | km/h | hF |
| 1 | Th | 13.0 | 25.9 | 0 | | | SSW | 50 | 06:32 | 19.8 | 54 | | WSW | 19 | 1011.9 | 23.6 | 50 | | S | 22 | 1012 |
| 2 | Fr | 12.1 | 24.9 | 0 | | | SSE | 28 | 11:06 | 17.4 | 81 | | Е | 4 | 1015.6 | 23.3 | 54 | | ENE | 11 | 1012 |
| 3 | Sa | 17.1 | 28.7 | 0 | | | Е | 30 | 13:32 | 19.8 | 80 | | SE | 2 | 1010.7 | 26.8 | 60 | | Е | 20 | 1007 |
| 4 | Su | 16.6 | 24.7 | 0 | | | ESE | 30 | 18:02 | 20.4 | 72 | | ESE | 7 | 1013.7 | 22.0 | 59 | | E | 17 | 1013 |
| 5 | Мо | 16.0 | 21.2 | 0 | | | SW | 28 | 18:02 | 17.0 | 86 | | W | 7 | 1017.1 | 19.9 | 61 | | S | 11 | 1017 |
| 6 | Tu | 13.8 | 23.6 | 0 | | | ESE | 39 | 11:54 | 17.7 | 70 | | SSW | 7 | 1025.8 | 22.8 | 52 | | ESE | 19 | 1026 |
| 7 | We | 12.7 | 24.6 | 0.2 | | | ESE | 31 | 13:36 | 16.3 | 93 | | NE | 6 | 1028.7 | 22.2 | 52 | | ENE | 17 | 1026 |
| 8 | Th | 8.4 | 25.5 | 0 | | | E | 35 | 13:47 | 12.6 | 97 | | (| Calm | 1027.6 | 24.1 | 52 | | ENE | 22 | 1024 |
| 9 | Fr | 12.6 | 26.1 | 0.2 | | | ENE | 31 | 14:55 | 16.1 | 82 | | (| Calm | 1028.6 | 25.3 | 49 | | NE | 22 | 1024 |
| 10 | Sa | 9.7 | 27.7 | 0 | | | NE | 39 | 15:20 | 13.6 | 98 | | (| Calm | 1027.7 | 25.8 | 51 | | NE | 24 | 1024 |
| 11 | Su | 11.0 | 34.9 | 0 | | | SSE | 35 | 16:53 | 13.8 | 99 | | (| Calm | 1021.8 | 34.0 | 21 | | ENE | 11 | 1016 |
| 12 | Mo | 13.4 | 24.9 | 0 | | | E | 30 | 14:12 | 16.7 | 89 | | (| Calm | 1019.5 | 23.5 | 53 | | E | 20 | 1017 |
| 13 | Tu | 7.8 | 24.7 | 0 | | | W | 28 | 09:37 | 14.0 | 83 | | (| Calm | 1021.5 | 23.5 | 47 | | ESE | 19 | 1019 |
| 14 | We | 13.3 | 28.4 | 0 | | | ENE | 39 | 14:04 | 17.3 | 81 | | SE | 2 | 1020.0 | 25.8 | 56 | | ENE | 26 | 1013 |
| 15 | Th | 15.4 | 25.1 | 2.6 | | | SE | 35 | 13:05 | 17.0 | 99 | | S | 4 | 1012.7 | 21.2 | 69 | | ESE | 22 | 1011 |
| 16 | Fr | 16.0 | 24.6 | 0 | | | NE | 39 | 14:00 | 18.6 | 77 | | (| Calm | 1018.6 | 22.5 | 62 | | NNE | 26 | 1015 |
| 17 | Sa | 16.4 | 31.7 | 1.0 | | | E | 30 | 13:21 | 19.5 | 86 | | NE | 6 | 1014.3 | 29.5 | 34 | | ESE | 20 | 1011 |
| 18 | Su | 15.1 | 38.6 | 0.2 | | | NW | 76 | 13:37 | 18.2 | 79 | | SSW | 4 | 1006.0 | 38.4 | 15 | | WNW | 30 | 1002 |
| 19 | Mo | 9.8 | 28.7 | 0 | | | SSE | 28 | 16:16 | 14.4 | 82 | | SSW | 7 | 1014.5 | 28.1 | 37 | | ESE | 17 | 1011 |
| 20 | Tu | 11.2 | 24.8 | 0 | | | E | 41 | 12:29 | 14.8 | 79 | | ENE | 6 | 1023.5 | 19.5 | 64 | | SE | 17 | 1025 |
| 21 | We | 12.8 | 19.0 | 2.0 | | | ESE | 30 | 14:09 | 14.3 | 88 | | SW | 9 | 1033.5 | 18.6 | 51 | | SE | 19 | 1032 |
| 22 | Th | 12.7 | 20.0 | 5.6 | | | NE | 39 | 14:37 | 14.1 | 99 | | SW | 11 | 1031.5 | 18.7 | 74 | | ENE | 20 | 1029 |
| 23 | Fr | 14.1 | 22.5 | 5.8 | | | NE | 35 | 12:12 | 15.5 | 98 | | SSW | 4 | 1026.8 | 22.3 | 64 | | NE | 22 | 1021 |
| 24 | Sa | 13.4 | 26.3 | 0 | | | SW | 35 | 13:34 | 15.7 | 94 | | SE | 4 | 1017.2 | 22.7 | 79 | | | Calm | 1012 |
| 25 | Su | 15.7 | 27.1 | 5.0 | | | SW | 41 | 12:30 | 17.8 | 98 | | SSW | 9 | 1003.6 | 24.7 | 43 | | wsw | 26 | 1002 |
| 26 | Mo | 10.2 | 22.8 | 1.4 | | | W | 48 | 13:58 | 14.6 | 53 | | W | 20 | 1004.8 | 22.4 | 30 | | W | 26 | 1005 |
| 27 | Tu | 5.2 | 22.4 | 0 | | | NE | 43 | 14:44 | 11.2 | 78 | | (| Calm | 1018.3 | 21.0 | 45 | | ENE | 30 | 1016 |
| 28 | We | 11.2 | 29.1 | 0 | | | NE | 22 | 15:19 | 14.7 | 88 | | (| Calm | 1016.1 | 27.5 | 31 | | NE | 13 | 1013 |
| 29 | Th | 8.6 | 28.4 | 0 | | | ENE | 26 | 16:13 | 13.8 | 90 | | ENE | 2 | 1017.4 | 27.8 | 59 | | ENE | 11 | 1012 |
| 30 | Fr | 13.5 | 25.1 | 0 | | | SE | 31 | 14:26 | 17.1 | 95 | | S | 2 | 1013.9 | 23.5 | 61 | | Е | 13 | 1013 |
| 31 | Sa | 16.9 | 23.7 | 0 | | | ENE | 31 | 15:09 | 18.4 | 70 | | NE | 7 | 1020.7 | 23.4 | 63 | | NE | 20 | 1016 |
| Sta | itis | tic | s fo | or N | lar | ch 2 | 201 | В | | | | | | | | | | | | | |
| | /lean | | | | | | | | | 16.2 | 84 | | | | 1018.8 | 24.3 | 51 | | | 10 | 1016 |
| | west | | | 0 | | | | | | 11.2 | 53 | | - | | 1018.8 | 18.6 | 15 | | | Calm | |
| | hest | | | 5.8 | | | NW | 76 | | 20.4 | | | W | | 1003.6 | 38.4 | | | | | 1002 |
| | nest Total | 17.1 | 30.0 | 24.0 | | | INVV | 10 | | 20.4 | 99 | | ٧١ | 20 | 1000.5 | 30.4 | 19 | | - 1 | 30 | 1032 |
| | 10tai W201 | | | | | | | | | | | | | | | | | | | | |

Image 2.5 Bega AWS Apr 2018 Weather Conditions

Bega, New South Wales April 2018 Daily Weather Observations

| | | Temps | Pain | Evap | Sur | Max | wind | gust | | | 6 | am | | | | | : | 3 pm | | |
|------|-------|-----------|------|----------|----------|--------|--------|-------|---------|----|-----------------|-----|------|--------|------|----|-----------------|------|------|-------|
| Date | Day | Min Max | Kain | ⊏vap | Sun | Dir | Spd | Time | Temp | RH | Cld | Dir | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSLF |
| | | °C °C | mm | mm | hours | | km/h | local | °C | % | 8 th | | km/h | hPa | °C | % | 8 th | | km/h | hP |
| 1 | Su | 12.4 23.7 | 0 | | | SE | 19 | 12:47 | 13.8 | 99 | П | S | 4 | 1015.2 | 23.0 | 63 | | Е | 11 | 1013. |
| 2 | Мо | 13.8 26.4 | 0 | | | SE | 35 | 13:45 | 18.4 | 78 | | - | Calm | 1014.3 | 23.6 | 60 | | ESE | 20 | 1014. |
| 3 | Tu | 14.8 22.3 | 0 | | | Е | 26 | 13:05 | 17.9 | 77 | | S | 7 | 1023.3 | 20.2 | 62 | | ESE | 11 | 1020. |
| 4 | We | 15.2 24.6 | 0 | | | ESE | 26 | 12:44 | 18.5 | 78 | | S | 2 | 1022.4 | 23.2 | 66 | | Е | 15 | 1018. |
| 5 | Th | 11.8 30.0 | 0 | | | SSE | 28 | 13:28 | 15.5 | 99 | | - | Calm | 1015.8 | 28.9 | 42 | | ENE | 17 | 1011. |
| 6 | Fr | 15.4 20.7 | 0 | | | ESE | 20 | 18:11 | 17.3 | 88 | | S | 6 | 1019.7 | 19.5 | 73 | | ENE | 9 | 1017. |
| 7 | Sa | 15.7 25.6 | 0 | | | ESE | 24 | 15:02 | 18.1 | 80 | | ESE | 4 | 1020.4 | 24.0 | 63 | | ESE | 15 | 1016. |
| 8 | Su | 15.7 26.3 | 0 | | | NE | 26 | 15:05 | 19.4 | 79 | | NE | 7 | 1020.1 | 25.3 | 58 | | ENE | 17 | 1014. |
| 9 | Мо | 11.0 28.5 | 0.2 | | | Е | 43 | 13:23 | 18.3 | 81 | | NNE | 7 | 1016.8 | 23.9 | 58 | | ENE | 22 | 1016. |
| 10 | Tu | 11.3 23.1 | 0.2 | | | NE | 37 | 14:38 | 15.5 | 94 | | SSE | 6 | 1022.7 | 21.7 | 65 | | ENE | 24 | 1018. |
| 11 | We | 12.3 31.6 | 0 | | | WNW | 20 | 00:24 | 19.1 | 77 | | Е | 2 | 1017.8 | 30.3 | 47 | | ESE | 7 | 1013. |
| 12 | Th | 12.6 36.5 | 0 | | | WNW | 59 | 12:56 | 21.3 | 74 | | SE | 4 | 1012.5 | 34.9 | 19 | | WNW | 24 | 1007. |
| 13 | Fr | 12.7 24.4 | 0 | | | NNW | 24 | 23:59 | 19.7 | 72 | | SSE | 7 | 1011.8 | 21.9 | 72 | | SSE | 9 | 1006. |
| 14 | Sa | 15.1 27.8 | 0 | | | WNW | 93 | 15:38 | 23.0 | 29 | | WSW | 17 | 1000.2 | 26.2 | 20 | | NW | 35 | 994. |
| 15 | Su | 14.6 26.2 | 0 | | | W | 54 | 13:43 | 19.8 | 35 | | W | 20 | 999.4 | 26.0 | 26 | | W | 20 | 998. |
| 16 | Мо | 10.3 27.7 | 0 | | | wsw | 67 | 13:09 | 17.9 | 73 | | Е | 6 | 1007.7 | 25.9 | 33 | | W | 26 | 1007. |
| 17 | Tu | 12.0 21.7 | 0 | | | SW | 35 | 00:43 | 16.0 | 47 | | SSW | 13 | 1022.9 | 20.8 | 34 | | SE | 6 | 1021. |
| 18 | We | 2.8 23.0 | 0 | | | ENE | 35 | 14:40 | 9.4 | 84 | | S | 2 | 1025.8 | 20.7 | 56 | | NE | 26 | 1020. |
| 19 | Th | 5.9 25.4 | 0 | | | ESE | 22 | 14:38 | 10.1 | 99 | | NE | 2 | 1020.3 | 23.0 | 40 | | ESE | 17 | 1017. |
| 20 | Fr | 5.9 24.7 | 0 | | | SE | 28 | 13:21 | 12.7 | 78 | | SSE | 2 | 1022.4 | 21.0 | 65 | | ESE | 19 | 1020. |
| 21 | Sa | 12.7 21.8 | 0 | | | NE | 24 | 15:45 | 15.7 | 94 | | - | Calm | 1024.5 | 19.6 | 68 | | ENE | 17 | 1021. |
| 22 | Su | 8.6 24.2 | 0.2 | | | NE | 30 | 14:46 | 12.1 | 99 | | NE | 2 | 1023.8 | 20.9 | 63 | | NE | 20 | 1020. |
| 23 | Мо | 8.3 24.9 | 0.2 | | | SSE | 24 | 13:19 | 10.9 | 99 | | NNE | 4 | 1021.7 | 23.9 | 54 | | Е | 15 | 1018. |
| 24 | Tu | 7.5 28.0 | 0.2 | | | NE | 20 | 13:27 | 11.0 | 99 | | SE | 6 | 1019.5 | 25.0 | 56 | | SE | 13 | 1014. |
| 25 | We | 7.9 25.6 | 0 | | | NE | 30 | 15:45 | 13.6 | 97 | | NE | 6 | 1017.5 | 24.8 | 57 | | ENE | 19 | 1013. |
| 26 | Th | 9.6 24.5 | 0.2 | | | Е | 30 | 13:09 | 14.1 | 97 | | (| Calm | 1016.4 | 22.2 | 49 | | ENE | 17 | 1015. |
| 27 | Fr | 9.1 20.2 | 0 | | | SSW | 44 | 13:55 | 15.8 | 52 | | SW | 17 | 1025.3 | 19.9 | 48 | | S | 19 | 1025. |
| 28 | Sa | 4.3 20.9 | 0 | | | ESE | 26 | 12:42 | 11.8 | 76 | | ENE | 7 | 1028.5 | 17.9 | 70 | | ESE | 19 | 1025. |
| 29 | Su | 7.5 20.6 | 0 | | | SW | 33 | 11:45 | 11.5 | 99 | | NE | 6 | 1027.1 | 20.2 | 48 | | S | 7 | 1024. |
| 30 | Мо | 3.5 23.6 | 0 | | | SE | 24 | 14:37 | 11.2 | 86 | | NE | 2 | 1027.6 | 21.1 | 42 | | ESE | 17 | 1024. |
| Sta | tis | tics f | or A | hnri | 1 20 | 18 | | | | | | | | | | | | | | |
| | | 10.7 25.1 | J. , | · . | 0 | | | | 15.6 | 80 | | | 5 | 1018.8 | 23.3 | 52 | | | 17 | 1015. |
| | | 2.8 20.2 | 0 | | | | | | 9.4 | 29 | | | | 999.4 | 17.9 | 19 | | SI | | 994. |
| | | 15.7 36.5 | 0.2 | | | WNW | 93 | | 23.0 | | | W | | 1028.5 | 34.9 | | | NV | | 1025. |
| | Total | 10.7 30.3 | 1.2 | | | ****** | 90 | | 20.0 | 55 | | - 1 | 20 | 1020.0 | 54.5 | 73 | | - ' | 33 | 1020. |
| | | 3.201804 | | nd at 15 | 2:00 LIT | C on S | aturda | 10 A. | auch 20 | 10 | | | | | | _ | _ | | | |

0 measurements over 37Km/hr in either time slot in April

Image 2.7 Bega AWS Jun 2018 Weather Conditions

Bega, New South Wales June 2018 Daily Weather Observations

| | | Ten | | Rain | Evap | Sun | | | gust | | | | 9 am | | | | | | pm | | |
|------|-------|------|------|------|------|-------|-----|------|-------|-----------|----|-----------------|------|------|--------|------|----|-----------------|-----|------|-------|
| Date | Day | Min | | | | | Dir | | | ········· | | | | | MSLP | | | | Dir | | |
| | | °C | °C | mm | mm | hours | | km/h | local | °C | % | 8 th | | km/h | hPa | °C | % | 8 th | | km/h | hF |
| 1 | Fr | 10.2 | 15.3 | 0 | | | SW | 59 | 14:29 | 12.4 | 61 | | SW | 22 | 1026.8 | 14.1 | 56 | | SSW | 35 | 1024 |
| 2 | Sa | 11.5 | 15.3 | 0 | | | SW | 50 | 15:20 | 13.5 | 55 | | SW | 28 | 1023.5 | 15.1 | 60 | | SW | 24 | 1022 |
| 3 | Su | 10.2 | 17.9 | 0.4 | | | WSW | 30 | 04:00 | 13.6 | 76 | | WSW | 6 | 1023.4 | 17.1 | 54 | | S | 9 | 1020 |
| 4 | Мо | 8.4 | 16.6 | 0.4 | | | SSW | 26 | 11:52 | 12.3 | 92 | | Е | 6 | 1021.9 | 15.2 | 68 | | SE | 11 | 1020 |
| 5 | Tu | | 17.6 | 0.2 | | | SSW | 31 | 13:14 | 7.7 | 91 | | NNE | 6 | 1028.5 | 16.3 | 57 | | ESE | 13 | 1028 |
| 6 | We | 7.7 | 15.1 | 32.4 | | | WSW | 15 | 06:42 | 11.4 | 99 | | (| alm | 1033.3 | 14.4 | 93 | | SW | 6 | 1031 |
| 7 | Th | 6.5 | 19.4 | 5.8 | | | N | 39 | 13:55 | 8.0 | 99 | | | alm | 1031.8 | 18.4 | | | NNE | 20 | 1026 |
| 8 | Fr | 7.8 | 17.0 | 0 | | | N | 26 | 01:31 | 11.5 | 86 | | SSW | 7 | 1021.3 | 16.9 | 58 | | N | 9 | 1017. |
| 9 | Sa | 9.2 | 18.6 | 2.0 | | | SE | 20 | 15:51 | 9.6 | 99 | | (| alm | 1021.8 | 17.0 | 62 | | WNW | 7 | 1020 |
| 10 | Su | 2.1 | 17.3 | 0.2 | | | Е | 30 | 13:36 | 6.7 | 99 | | NE | 6 | 1028.6 | 16.0 | 68 | | ESE | 11 | 1026 |
| 11 | Мо | 5.7 | 17.4 | 2.2 | | | ENE | 24 | 13:52 | 7.5 | 99 | | (| alm | 1026.1 | 14.0 | 74 | | NE | 15 | 1021. |
| 12 | Tu | 2.3 | 17.7 | 0.2 | | | N | 20 | 15:59 | 6.2 | 99 | | SSW | 2 | 1011.4 | 17.3 | 62 | | NNE | 2 | 1005 |
| 13 | We | 4.2 | 16.2 | 0.6 | | | SSW | 13 | 01:10 | 7.4 | 99 | | NNE | 4 | 1008.8 | 15.0 | 72 | | NNE | 2 | 1006 |
| 14 | Th | 3.0 | 18.4 | 0 | | | WNW | 39 | 12:51 | 8.0 | 81 | | Е | 7 | 1011.9 | 17.0 | 33 | | W | 19 | 1010 |
| 15 | Fr | 5.1 | 20.3 | 0 | | | W | 57 | 18:11 | 12.5 | 62 | | ESE | 6 | 1008.3 | 17.0 | 30 | | WNW | 24 | 1006 |
| 16 | Sa | 8.8 | 16.5 | 0 | | | WNW | 83 | 00:22 | 12.8 | 32 | | W | 30 | 1010.3 | 15.6 | 28 | | WNW | 30 | 1008 |
| 17 | Su | -2.2 | 17.1 | 0 | | | WSW | 48 | 16:57 | 11.2 | 45 | | NNW | 11 | 1007.0 | 13.9 | 45 | | WSW | 22 | 1007 |
| 18 | Мо | 7.5 | 14.6 | 22.0 | | | S | 52 | 12:36 | 12.4 | 67 | | SW | 28 | 1018.3 | 10.8 | 95 | П | SE | 2 | 1019 |
| 19 | Tu | 8.6 | 15.9 | 4.2 | | | SW | 43 | 00:23 | 11.9 | 72 | | SW | 26 | 1026.5 | 12.3 | 82 | | SSW | 11 | 1026 |
| 20 | We | 3.9 | 16.8 | 0.6 | | | NNE | 9 | 02:02 | 7.1 | 98 | | (| alm | 1030.2 | 15.6 | 48 | | N | 4 | 1027 |
| 21 | Th | -0.5 | 17.2 | 0.2 | | | ESE | 20 | 15:35 | 2.5 | 99 | | (| alm | 1029.5 | 16.2 | 43 | | Е | 9 | 1026 |
| 22 | Fr | -1.4 | 16.3 | 0 | | | E | 17 | 14:45 | 1.5 | 99 | | S | 6 | 1029.0 | 14.7 | 60 | | Е | 13 | 1025 |
| 23 | Sa | -1.1 | 15.4 | 0.2 | | | NNE | 13 | 14:41 | -0.1 | 99 | | (| alm | 1025.9 | 14.7 | 48 | | NNE | 11 | 1023 |
| 24 | Su | -0.1 | 15.6 | 0 | | | WSW | 41 | 12:02 | 8.1 | 78 | | W | 9 | 1028.0 | 14.4 | 42 | | WSW | 30 | 1025 |
| 25 | Мо | -2.8 | 16.6 | 0 | | | W | 22 | 11:44 | 2.7 | 92 | | (| alm | 1031.5 | 16.0 | 40 | | NE | 6 | 1029 |
| 26 | Tu | -2.0 | 15.9 | 0 | | | SE | 24 | 13:54 | 1.8 | 99 | | (| alm | 1035.1 | 15.0 | 62 | | Е | 13 | 1031 |
| 27 | We | 1.8 | 18.0 | 0 | | | NNE | 31 | 14:38 | 7.1 | 99 | | NE | 4 | 1033.3 | 17.0 | 55 | | NE | 15 | 1028 |
| 28 | Th | 5.7 | 12.4 | 3.8 | | | N | 19 | 22:38 | 8.7 | 99 | | (| alm | 1026.2 | 12.2 | 99 | | WSW | 6 | 1021 |
| 29 | Fr | 6.2 | 17.6 | 16.8 | | | ENE | 17 | 15:08 | 8.1 | 99 | | (| alm | 1018.9 | 15.8 | 62 | | Е | 7 | 1016 |
| 30 | Sa | -0.5 | 17.6 | 0.2 | | | W | 52 | 12:03 | 5.1 | 93 | | NNE | 4 | 1017.9 | 16.8 | 33 | | WSW | 20 | 1016 |
| Sta | tis | tic | s fo | or J | une | 20 | 18 | | | | | | | | | | | | | | |
| N | 1ean | 4.3 | 16.8 | | | | | | | 8.3 | 85 | | | 7 | 1023.2 | 15.4 | 58 | | | 13 | 1020 |
| Lo | west | -2.8 | 12.4 | 0 | | | | | | -0.1 | 32 | | (| alm | 1007.0 | 10.8 | 28 | | # | 2 | 1005 |
| Hig | hest | 11.5 | 20.3 | 32.4 | | | WNW | 83 | | 13.6 | 99 | | W | 30 | 1035.1 | 18.4 | 99 | | SSW | 35 | 1031 |
| | Total | | | 92.4 | | | | | | | | | | | | | | | | | |

0 measurements over 37Km/hr in either time slot in June

Image 2.6 Bega AWS May 2018 Weather Conditions

Bega, New South Wales May 2018 Daily Weather Observations

| | | Ten | | Dain | Evap | e | Max | wind | gust | | | | 9 am | | | | | : | 3 pm | | |
|-----|-------|------|------|------|------|-------|-----|------|-------|------|------|-----------------|------|------|--------|------|----|-----------------|------|------|------|
| ate | Day | Min | Max | Rain | ⊏vap | Sun | Dir | Spd | Time | Temp | RH | Cld | Dir | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSLI |
| | | °C | °C | mm | mm | hours | | km/h | local | °C | % | 8 th | | km/h | hPa | °C | % | 8 th | | km/h | hF |
| 1 | Tu | 1.4 | 24.8 | 0 | | | ENE | 20 | 15:15 | 8.9 | 89 | | (| Calm | 1027.4 | 24.0 | 37 | | ENE | 13 | 1022 |
| 2 | We | | 20.5 | 0 | | | NNE | | 14:11 | 9.5 | 88 | | (| Calm | 1020.7 | 20.3 | 51 | | (| | 1016 |
| 3 | Th | 4.2 | 29.7 | 0 | | | NW | 35 | 12:15 | 11.8 | 82 | | (| Calm | 1017.5 | 28.4 | 28 | | N | 20 | 1011 |
| 4 | Fr | 11.8 | 23.2 | 0 | | | | | | 21.8 | 43 | | WSW | 17 | 1008.5 | 19.5 | 32 | | W | 33 | 1009 |
| 5 | Sa | 2.9 | 24.0 | 0 | | | SW | 30 | 11:55 | 11.3 | 61 | | SSW | 4 | 1025.6 | 21.8 | 36 | | ENE | 20 | 1024 |
| 6 | Su | 1.8 | 23.9 | 0 | | | ENE | 31 | 14:36 | 8.4 | 85 | | S | 2 | 1031.7 | 21.3 | 37 | | NE | 24 | 1026 |
| 7 | Мо | 0.9 | 25.2 | 0 | | | ENE | | 14:55 | 6.8 | 90 | | (| Calm | 1023.4 | | | | ENE | 20 | 1015 |
| 8 | Tu | 6.8 | 21.9 | 0 | | | ESE | 33 | 12:40 | 14.7 | 55 | | | Calm | 1021.7 | 18.3 | 65 | | Е | 19 | 1021 |
| 9 | We | 7.8 | 25.8 | 0 | | | ESE | 20 | 15:03 | 9.2 | 99 | | SSW | 6 | 1019.5 | 24.2 | 38 | | ESE | 13 | 1013 |
| 10 | Th | 7.4 | 19.8 | 0 | | | ESE | 35 | 11:16 | 13.2 | 67 | | S | 7 | 1007.4 | 12.9 | 75 | | SE | 4 | 1005 |
| 11 | Fr | 1.9 | 18.5 | 0 | | | WSW | 44 | 11:39 | 10.9 | 56 | | WSW | 22 | 1005.1 | 17.8 | 30 | | WNW | 20 | 1002 |
| 12 | Sa | 10.3 | 15.9 | 4.4 | | | SW | 81 | 06:30 | 13.1 | 88 | | WSW | 17 | 1010.6 | 12.8 | 87 | | SW | 19 | 1013 |
| 13 | Su | 12.1 | 18.3 | 23.0 | | | SW | 59 | 00:24 | 15.8 | 60 | | SW | 22 | 1023.3 | 17.8 | 49 | | SSW | 30 | 1023 |
| 14 | Мо | 8.7 | 19.1 | 0 | | | WSW | 35 | 09:17 | 13.4 | 61 | | WSW | 19 | 1028.8 | 18.2 | 51 | | SSE | 13 | 1024 |
| 15 | Tu | 1.7 | 18.2 | 0 | | | WSW | 35 | 23:54 | 6.9 | 98 | | (| Calm | 1024.3 | 17.8 | 48 | | S | 9 | 1021 |
| 16 | We | 6.9 | 16.8 | 0 | | | WSW | 33 | 02:02 | 13.0 | 59 | | SW | 15 | 1028.4 | 16.6 | 45 | | SE | 11 | 1026 |
| 17 | Th | 0.3 | 17.6 | 0 | | | NNE | 19 | 16:26 | 7.0 | 80 | | NNE | 6 | 1026.8 | 16.8 | 44 | | ENE | 7 | 1021 |
| 18 | Fr | 5.2 | 21.3 | 0 | | | WSW | 39 | 10:57 | 10.9 | 77 | | ESE | 7 | 1020.6 | 21.1 | 37 | | SSW | 13 | 1018 |
| 19 | Sa | 2.2 | 19.7 | 0 | | | SE | 33 | 14:44 | 8.3 | 93 | | (| Calm | 1023.5 | 17.5 | 55 | | ESE | 19 | 1019 |
| 20 | Su | 0.5 | 20.7 | 0 | | | SW | 59 | 16:45 | 4.5 | 99 | | SSW | 2 | 1019.2 | 20.2 | 33 | | SW | 24 | 1016 |
| 21 | Мо | 4.5 | | 0 | | | | | | 11.6 | 72 | | ESE | 4 | 1017.1 | | | | | | |
| 22 | Tu | 6.2 | 22.2 | | | | SW | 59 | 15:52 | 19.1 | 48 | | SW | 15 | 1017.0 | 20.7 | 45 | | SW | 20 | 1016 |
| 23 | We | 9.5 | 21.5 | 0 | | | wsw | 39 | 01:13 | 13.6 | 71 | | ENE | 6 | 1024.9 | 19.0 | 53 | | ENE | 17 | 1021 |
| 24 | Th | 1.4 | 17.8 | 0 | | | SW | 31 | 13:01 | 7.1 | 99 | | Е | 2 | 1026.3 | 17.6 | 45 | | SW | 15 | 1023 |
| 25 | Fr | 2.0 | 18.4 | 0 | | | Е | 20 | 13:34 | 5.8 | 89 | | SE | 2 | 1030.5 | 16.8 | 53 | | ESE | 15 | 1027 |
| 26 | Sa | 0.0 | 19.3 | 0 | | | ESE | 13 | 15:10 | 3.6 | 99 | | ENE | 4 | 1029.6 | 18.7 | 50 | | Е | 6 | 1026 |
| 27 | Su | -0.6 | 21.3 | 0.4 | | | ENE | - 11 | 12:40 | 2.8 | 99 | | (| Calm | 1028.8 | 19.5 | 42 | | Е | 7 | 1025 |
| 28 | Мо | 2.1 | 19.3 | 0 | | | NNE | 13 | 09:37 | 5.9 | 94 | | NE | 2 | 1024.7 | 18.3 | 55 | | (| Calm | 1020 |
| 29 | Tu | -0.2 | 22.3 | 0 | | | NW | 35 | 12:13 | 4.3 | 99 | | NNE | 4 | 1016.5 | 15.4 | 83 | | SSW | 6 | 1013 |
| 30 | We | 4.1 | 17.2 | 0.8 | | | wsw | 35 | 10:33 | 11.3 | 61 | | wsw | 13 | 1020.2 | 16.2 | 38 | | SW | 22 | 1018 |
| 31 | Th | 1.2 | 16.0 | 0 | | | SW | 69 | 13:23 | 13.0 | 49 | | SW | 28 | 1020.8 | 14.7 | 46 | | S | 24 | 1022 |
| Sta | tis | tic | s fo | or N | /lay | 20 | 18 | | | | | | | | | | | | | | |
| | | 4.2 | | | , | _, | _ | | | 10.2 | 77 | | | 7 | 1021.6 | 18.9 | 47 | | | 15 | 1019 |
| | | -0.6 | | 0 | | | | | | 2.8 | 43 | | | | 1005.1 | | | | | Calm | |
| | | | | 23.0 | | | SW | 81 | | 21.8 | 99 | | SW | | 1031.7 | | | | W | | 1027 |
| | Total | | | 28.6 | | | | | | | - 50 | | - " | | | | - | | - 1 | | |

0 measurements over 37Km/hr in either time slot in May

Image 2.8 Bega AWS Jul 2018 Weather Conditions

Bega, New South Wales July 2018 Daily Weather Observations

| | | Ten | nps | Dair | Evap | Sur | Max | wind | gust | | | | 9 am | | | | | 3 | pm | | |
|-----|-------|-------|-------|------|----------|-------|---------|------|-------|------|----|-----------------|-------|-----|--------|------|----|-----------------|-----|------|------------------|
| ate | Day | Min | Max | Rain | ⊏vap | Sun | Dir | Spd | Time | Temp | RH | Cld | Dir S | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSL |
| | | °C | °C | mm | mm | hours | | km/h | local | °C | % | 8 th | k | m/h | hPa | °C | % | 8 th | | km/h | hl |
| 1 | Su | -0.3 | 15.2 | 0 | | | WSW | 41 | 00:28 | 4.3 | 82 | | С | alm | 1032.4 | 14.7 | 39 | | SSW | 9 | 1029 |
| 2 | Мо | -2.3 | 15.9 | 0 | | | SE | 20 | 15:17 | 1.5 | 96 | | С | alm | 1034.0 | 15.1 | 52 | | ENE | 9 | 1030 |
| 3 | Tu | -2.3 | 18.8 | 0.2 | | | NNE | 31 | 12:35 | 2.6 | 99 | | С | alm | 1029.2 | 17.1 | 51 | | NE | 11 | 1024 |
| 4 | We | -0.1 | 19.8 | 0 | | | SSW | 15 | 21:51 | 3.3 | 99 | | С | alm | 1024.0 | 17.7 | 54 | | NE | 4 | 1019 |
| 5 | Th | 2.9 | 22.8 | 0 | | | NW | 20 | 02:51 | 9.9 | 60 | | S | 4 | 1018.5 | 22.1 | 32 | | (| Calm | 1012 |
| 6 | Fr | 7.4 | 22.9 | 0 | | | W | 72 | 11:43 | 21.3 | 36 | | NW | 17 | 1003.6 | 16.7 | 40 | | W | 26 | 1004 |
| 7 | Sa | -1.0 | 17.3 | 0 | | | WSW | 76 | 15:27 | 6.0 | 76 | | SSW | 7 | 1004.4 | 16.3 | 31 | | wsw | 28 | 1002 |
| 8 | Su | 6.0 | 16.7 | 0 | | | SW | 104 | 13:20 | 13.8 | 44 | | WSW | 19 | 1010.4 | 16.2 | 40 | | SW | 41 | 1010 |
| 9 | Мо | 10.6 | 15.9 | 0 | | | WSW | 69 | 00:37 | 12.4 | 52 | | SW | 20 | 1023.1 | 15.1 | 41 | | WSW | 19 | 1023 |
| 10 | Tu | 4.0 | 16.3 | 0 | | | WSW | 28 | 09:03 | 11.3 | 49 | | WSW | 17 | 1028.5 | 15.8 | 40 | | NNE | 7 | 1024 |
| 11 | We | -3.8 | 15.9 | 0 | | | NE | 22 | 14:33 | 0.5 | 94 | | С | alm | 1025.2 | 14.6 | 49 | | NE | 15 | 1022 |
| 12 | Th | 0.1 | 15.5 | 0 | | | W | 28 | 23:58 | 5.6 | 99 | | W | 4 | 1022.3 | 13.2 | 62 | | ESE | 15 | 101 |
| 13 | Fr | 5.6 | 14.8 | 0 | | | SSW | 67 | 14:51 | 12.1 | 55 | | wsw | 26 | 1015.3 | 13.9 | 40 | | SW | 43 | 101 |
| 14 | Sa | 3.6 | 16.5 | 0.2 | | | SSW | 39 | 11:17 | 7.4 | 74 | | E | 4 | 1019.9 | 14.5 | 46 | | SSW | 17 | 101 |
| 15 | Su | -3.8 | 15.7 | 0 | | | NNE | 20 | 15:58 | 0.5 | 94 | | ESE | 2 | 1016.6 | 15.0 | 35 | | ENE | 9 | 101: |
| 16 | Мо | -3.3 | 18.4 | 0 | | | WNW | 35 | 12:27 | 3.7 | 87 | | Е | 6 | 1011.6 | 17.1 | 34 | | S | 4 | 100 |
| 17 | Tu | -2.0 | 22.0 | 0.2 | | | W | 76 | 21:38 | 1.6 | 93 | | SSW | 2 | 1011.7 | 21.1 | 19 | | NNW | 20 | 100 |
| 18 | We | 1.6 | 17.9 | 0 | | | W | 50 | 02:59 | 9.6 | 48 | | SSW | 4 | 1016.4 | 15.7 | 39 | | NE | 19 | 1014 |
| 19 | Th | -2.7 | 16.0 | 0 | | | NNW | 30 | 19:23 | 1.6 | 90 | | NNW | 7 | 1014.0 | 13.9 | 53 | | NNE | 4 | 1008 |
| 20 | Fr | 0.4 | 15.4 | 0 | | | W | 59 | 15:19 | 6.2 | 78 | | NE | 6 | 1004.5 | 14.9 | 30 | | wsw | 31 | 1004 |
| 21 | Sa | 5.2 | 15.9 | 0 | | | SW | 50 | 11:33 | 11.8 | 43 | | WSW | 22 | 1019.5 | 15.4 | 34 | | wsw | 17 | 101 |
| 22 | Su | -1.6 | 14.9 | 0 | | | ESE | 28 | 14:25 | 2.6 | 92 | | С | alm | 1025.2 | 13.9 | 58 | | ENE | 13 | 102 |
| 23 | Мо | -1.9 | 15.8 | 0 | | | S | 24 | 23:30 | -0.1 | 99 | | С | alm | 1017.9 | 14.7 | 49 | | SE | 9 | 101° |
| 24 | Tu | -0.2 | 22.2 | 0.2 | | | WNW | 35 | 15:20 | 10.2 | 63 | | NE | 4 | 1010.0 | 21.2 | 18 | | NW | 20 | 1006 |
| 25 | We | 1.5 | 18.8 | 0 | | | NE | 28 | 14:15 | 6.7 | 78 | | С | alm | 1014.9 | 16.3 | 66 | | NE | 17 | 1013 |
| 26 | Th | -1.8 | 17.7 | 0 | | | ENE | 26 | 14:39 | 2.9 | 99 | | С | alm | 1019.0 | 16.5 | 40 | П | NE | 15 | 1014 |
| 27 | Fr | -2.6 | 20.0 | 0 | | | WSW | 41 | 15:37 | 3.9 | 96 | | NE | 2 | 1016.1 | 19.1 | 32 | | NNW | 13 | 1012 |
| 28 | Sa | 2.2 | 22.5 | 0 | | | NNE | 26 | 14:20 | 6.5 | 84 | | S | 6 | 1014.9 | 19.3 | 44 | | NNE | 19 | 1010 |
| 29 | Su | 6.4 | 21.7 | 0.4 | | | W | 69 | 14:45 | 10.1 | 92 | | s | 11 | 1002.8 | 18.5 | 28 | | W | 31 | 100° |
| 30 | Мо | 6.4 | 19.0 | 0.2 | | | WNW | 33 | 01:49 | 12.3 | 37 | | wsw | 13 | 1013.4 | 18.3 | 24 | | S | 13 | 101 ⁻ |
| 31 | Tu | -1.4 | 19.0 | 0 | | | W | 44 | 16:58 | 5.2 | 74 | | SSW | 11 | 1012.2 | 17.6 | 43 | | NE | 6 | 100 |
| Sta | itis | tic | s fo | or J | uly | 20 | 18 | | | | | | | | | | | | | | |
| | /lean | | | | ي | _, | - | | | 6.7 | 76 | | | 6 | 1017.1 | 16.5 | 40 | | | 16 | 101 |
| | west | | | 0 | | | | | | -0.1 | 36 | | С | | 1002.8 | 13.2 | 18 | | (| alm | |
| | hest | | | 0.4 | | | SW | 104 | | 21.3 | | | WSW | | 1034.0 | 22.1 | 66 | | SW | | 1030 |
| | Total | . 5.0 | | 1.4 | | | | | | | - | | | - | | | - | | | 1.0 | |
| | | 2 204 | 007 6 | | | | C on Tu | - | | | | | | _ | | | | | | - | |

1 measurement over 37Km/hr in either time slot in July

Image 2.9 Bega AWS Aug 2018 Weather Conditions

Bega, New South Wales August 2018 Daily Weather Observations

| | | Ten | nps | Dair | Ever | 0 | Max | wind | gust | | | 6 | am | | | | | 3 | 3 pm | | |
|------|-------|------|------|------|------|-------|------|------|-------|------|----|-----------------|-------|------|--------|------|----|-----------------|------|------|------|
| Date | Day | Min | Max | Kain | Evap | Sun | Dir | Spd | Time | Temp | RH | Cld | Dir | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSL |
| | | °C | °C | mm | mm | hours | | km/h | local | °C | % | 8 th | | km/h | hPa | °C | % | 8 th | | km/h | hF |
| 1 | We | 2.2 | 18.2 | 0 | | | SW | 39 | 12:57 | 9.1 | 68 | | ENE | 2 | 1016.3 | 17.6 | 27 | | SW | 19 | 1017 |
| 2 | Th | -0.6 | 17.5 | 0 | | | NNE | 39 | 11:41 | 3.3 | 87 | | (| Calm | 1026.2 | 15.6 | | | NE | 26 | 1019 |
| 3 | Fr | 0.8 | 18.9 | 0 | | | N | | 20:35 | 3.7 | 97 | | (| Calm | 1015.3 | 18.3 | 57 | | NE | 20 | 1006 |
| 4 | Sa | 3.7 | 21.3 | 0 | | | NNW | 54 | 03:58 | 15.7 | 33 | | W | 19 | 1010.7 | 19.9 | 24 | | NW | 17 | 1010 |
| 5 | Su | 2.5 | 19.6 | 0 | | | ENE | 28 | 16:10 | 5.7 | 86 | | (| Calm | 1015.2 | 18.2 | 51 | | Е | 17 | 1008 |
| 6 | Мо | 1.2 | 19.1 | 0 | | | WSW | 63 | 13:24 | 17.8 | 35 | | NNW | 19 | 1000.1 | 17.3 | | | W | 33 | 997 |
| 7 | Tu | 9.9 | 17.3 | 0 | | | W | | 09:47 | 12.4 | 37 | | W | 33 | 1003.8 | 16.1 | 26 | | W | 31 | 1005 |
| 8 | | -0.1 | | 0.8 | | | NW | | 12:46 | 6.2 | | | SSW | | 1010.8 | 18.7 | 32 | | NW | | 1007 |
| 9 | | -0.2 | | 0 | | | ENE | | 12:25 | 5.9 | 80 | | | | 1023.1 | 15.9 | | | NE | | 1019 |
| 10 | | -2.2 | | 0.2 | | | N | | 12:51 | 2.6 | 99 | | | | 1017.4 | 21.2 | | | N | | 1012 |
| 11 | Sa | 2.3 | 24.6 | 0 | | | NNW | 65 | 12:26 | 17.4 | 30 | | N | 13 | 1006.4 | 22.5 | | | NW | 19 | 1002 |
| 12 | Su | 1.0 | 16.5 | 0 | | | WSW | 52 | 09:27 | 11.2 | | | SW | | 1015.4 | 15.8 | | | SW | 17 | 1014 |
| 13 | | 8.4 | | 0 | | | SW | | 10:42 | 15.1 | | | SW | | 1018.7 | 20.8 | | | wsw | | 1016 |
| 14 | | -0.4 | | 0 | | | SE | | 13:56 | 9.2 | | | NE | | 1021.5 | 21.5 | | | ENE | | 1015 |
| 15 | | 0.3 | | 0 | | | W | | 15:22 | 19.0 | 27 | | W | | 1006.1 | 20.4 | 31 | | W | | 1003 |
| 16 | | 7.5 | | 0 | | | SSW | | 11:55 | 14.1 | 43 | | SSE | | 1010.5 | 18.6 | | | SSW | | 1009 |
| 17 | | -1.3 | | 0 | | | ENE | | 13:02 | 5.4 | 83 | | | | 1015.6 | 15.2 | | | ENE | | 1011 |
| 18 | Sa | -2.6 | 16.4 | 0 | | | W | | 14:41 | 6.7 | 76 | | N | 6 | 1006.9 | 13.1 | 52 | | WSW | 31 | 1005 |
| 19 | | 6.6 | | 0 | | | WSW | | 09:32 | 11.6 | | | W | | 1008.5 | 10.2 | | | wsw | | 1011 |
| 20 | Мо | | 14.9 | 0.8 | | | WSW | | 10:57 | 9.3 | 55 | | SW | | 1020.5 | 13.6 | | | WSW | | 1017 |
| 21 | | 3.2 | | 0 | | | SW | | 10:17 | 11.5 | 56 | | SSE | | 1012.4 | 18.5 | | | SW | | 1008 |
| 22 | | 6.1 | | 0 | | | SW | | 03:11 | 11.4 | 58 | | SSW | | 1016.2 | | 45 | | ESE | | 1015 |
| 23 | | -1.0 | | 0 | | | NE | | 14:17 | 4.0 | 99 | | | | 1022.1 | 15.4 | 52 | | NE | | 1019 |
| 24 | | 4.0 | | 0 | | | ENE | | 12:56 | 10.7 | 78 | | ESE | | 1024.6 | 15.3 | | | NE | | 1022 |
| 25 | | 2.9 | | 0 | | | ENE | | 13:08 | 5.9 | 99 | | S | | 1023.6 | 17.4 | | | NE | | 1016 |
| 26 | | 4.0 | | 0.2 | | | SE | | 13:04 | 8.4 | 99 | | ENE | _ | 1017.1 | 15.6 | 63 | | ESE | | 1013 |
| 27 | Мо | | 14.0 | 0 | | | SSW | | 15:35 | 10.3 | 50 | | SSW | | 1022.5 | 12.4 | 36 | | SW | | 1022 |
| 28 | | -2.1 | | 0.2 | | | SW | | 11:44 | 8.6 | 55 | | SW | | 1023.0 | 12.5 | | | S | | 1018 |
| 29 | | 4.1 | | 0 | | | SW | | 08:49 | 9.9 | | | wsw | | 1019.2 | 14.6 | | | SSW | | 1017 |
| 30 | | -2.8 | | 0 | | | Е | | 13:28 | 5.9 | 66 | | NE | | 1021.6 | 14.4 | | | ENE | | 1016 |
| 31 | | 4.9 | | 0 | | | SW | | 19:08 | 10.2 | | | SW | _ | 1007.6 | 12.9 | 66 | | N | 24 | 995 |
| Sta | tis | tic | s f | or t | he t | firs | t 31 | da | ys (| of A | uç | jus | st 20 | 18 | } | | | | | | |
| M | lean | 2.3 | 18.3 | | | | | | | 9.6 | 64 | | | 11 | 1015.4 | 16.6 | 41 | | | 21 | 1012 |
| Lov | west | -2.8 | 12.3 | 0 | | | | | | 2.6 | 27 | | (| alm | 1000.1 | 10.2 | 20 | | wsw | 11 | 995 |
| Hig | hest | 9.9 | 24.6 | 0.8 | | | W | 85 | | 19.0 | 99 | | # | 33 | 1026.2 | 22.5 | 66 | | wsw | 39 | 1022 |
| 1 | Total | | | 2.2 | | | | | | | | | | | | | | | | | |

1 measurement over 37Km/hr in either time slot in August

Image 3.1 Bega AWS Oct 2018 Weather Conditions Bega, New South Wales October 2017 Daily Weather Observations

| | | Ten | | Rain | Evap | Sun | Max | wind | gust | | | , | 9 am | | | | | 3 | pm | | |
|--------|------|-------|-------|-------|------|-------|--------|------|-------|------|----|-----------------|------|------|--------|------|----|-----------------|-----|------|-------|
| Date I | Day | Min | Max | Kaiii | Lvap | Juli | Dir | Spd | Time | Temp | RH | Cld | Dir | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSLF |
| | | °C | °C | mm | mm | hours | | km/h | local | °C | % | 8 th | , | km/h | hPa | °C | % | 8 th | | km/h | hP |
| 1 | Su | 1.9 | 21.6 | | | | Е | 31 | 13:46 | 9.4 | 69 | | ENE | 2 | 1021.2 | 19.7 | 41 | Т | ENE | 22 | 1018. |
| 2 | Мо | 6.2 | 21.2 | | | | ENE | 35 | 12:52 | 11.0 | 81 | | S | 4 | 1025.3 | 20.2 | 57 | П | NE | 20 | 1021. |
| 3 | Tu | 9.9 | 23.3 | | | | SE | 37 | 14:19 | 14.0 | 84 | | SSW | 7 | 1022.4 | 22.5 | 63 | П | SE | 22 | 1017. |
| 4 | We | 9.6 | 23.0 | | | | NE | 31 | 14:32 | 14.6 | 88 | | NE | 6 | 1023.1 | 20.0 | 56 | П | NE | 22 | 1019. |
| 5 | Th | 7.0 | 18.5 | | | | SSW | 30 | 12:12 | 9.7 | 99 | | S | 4 | 1016.6 | 18.1 | 74 | | N | 6 | 1013. |
| 6 | Fr | 9.7 | 20.9 | | | | SSW | 63 | 12:04 | 16.1 | 49 | | SW | 22 | 1014.5 | 18.2 | 51 | | SSW | 26 | 1016. |
| 7 | Sa | 9.8 | 20.0 | | | | SW | 28 | 00:24 | 15.2 | 57 | | WSW | 13 | 1023.7 | 18.4 | 59 | | Е | 17 | 1022. |
| 8 | Su | 6.3 | 23.2 | | | | NE | 28 | 12:24 | 13.0 | 84 | | S | 7 | 1017.9 | 22.2 | 59 | | ENE | 19 | 1012. |
| 9 | Мо | 12.8 | 29.0 | | | | wsw | 76 | 11:29 | 18.2 | 89 | | ENE | 4 | 1007.9 | 20.3 | 67 | | SE | 24 | 1006. |
| 10 | Tu | 5.3 | 20.7 | | | | NE | 35 | 13:41 | 13.2 | 81 | | Е | 2 | 1017.9 | 18.4 | 61 | П | ENE | 22 | 1015. |
| 11 | We | 12.5 | 26.6 | | | | ENE | 46 | 13:09 | 16.4 | 79 | | S | 9 | 1015.4 | 25.2 | 56 | П | NE | 33 | 1008. |
| 12 | Th | 15.8 | 22.9 | | | | ESE | 43 | 11:39 | 18.6 | 57 | | SSW | 22 | 1008.1 | 20.1 | 50 | | ESE | 20 | 1009. |
| 13 | Fr | 6.2 | 22.8 | | | | SE | 39 | 15:18 | 13.5 | 76 | | ENE | 4 | 1018.0 | 21.5 | 36 | | E | 17 | 1016. |
| 14 | Sa | 9.4 | 20.6 | | | | Е | 33 | 12:06 | 15.7 | 49 | | SSE | 6 | 1025.1 | 19.2 | 47 | | ESE | 22 | 1023. |
| 15 | Su | 4.0 | 24.1 | | | | Е | 35 | 13:18 | 11.6 | 80 | | ENE | 7 | 1025.6 | 22.6 | 45 | П | ENE | 22 | 1023. |
| 16 | Мо | 7.0 | 25.1 | | | | NE | 43 | 14:22 | 14.0 | 87 | | SSE | 4 | 1028.0 | 23.8 | 51 | | ENE | 28 | 1024. |
| 17 | Tu | 7.9 | 26.7 | | | | NE | 43 | 13:38 | 13.2 | 99 | | C | alm | 1026.8 | 24.7 | 51 | П | NE | 31 | 1023. |
| 18 | We | 7.8 | 26.5 | | | | NE | 48 | 14:06 | 16.1 | 77 | | SE | 6 | 1026.1 | 24.6 | 55 | | NE | 33 | 1022. |
| 19 | Th | 10.8 | 30.1 | | | | NE | 30 | 12:07 | 19.1 | 74 | | SSE | 7 | 1020.1 | 28.2 | 47 | | NE | 13 | 1015. |
| 20 | Fr | 14.2 | 19.9 | | | | SW | 41 | 13:02 | 14.8 | 70 | | SSW | 17 | 1021.7 | 19.0 | 50 | | SSW | 17 | 1021. |
| 21 | Sa | 3.4 | 19.7 | | | | ESE | 31 | 14:32 | 12.6 | 54 | | SSW | 20 | 1024.0 | 18.2 | 44 | | NE | 19 | 1018. |
| 22 | Su | 10.1 | 21.0 | | | | SSW | 37 | 08:59 | 15.4 | 50 | | SSW | 13 | 1015.2 | 20.0 | 42 | | SW | 20 | 1013. |
| 23 | Мо | 4.3 | 23.6 | | | | SE | 33 | 15:00 | 13.0 | 91 | | ENE | 7 | 1018.1 | 22.0 | 48 | П | Е | 20 | 1015. |
| 24 | Tu | 9.3 | 25.6 | | | | SE | 39 | 13:04 | 15.6 | 75 | | S | 7 | 1017.1 | 21.5 | 57 | | ESE | 20 | 1014. |
| 25 | We | 13.7 | 21.4 | | | | Е | 44 | 13:14 | 15.3 | 94 | | C | alm | 1012.7 | 19.3 | 77 | | ESE | 26 | 1009. |
| 26 | Th | 13.4 | 17.4 | | | | SE | 35 | 15:58 | 14.8 | 99 | | SSW | 9 | 1009.2 | 16.3 | 94 | П | SSE | 11 | 1006. |
| 27 | Fr | 14.1 | 21.4 | | | | NE | 30 | 18:06 | 16.8 | 83 | | SW | 15 | 1012.8 | 19.4 | 73 | П | NE | 11 | 1011. |
| 28 | Sa | 11.5 | 25.5 | | | | ESE | 33 | 14:57 | 16.9 | 90 | | S | 6 | 1008.5 | 24.2 | 61 | П | ESE | 22 | 1006. |
| 29 | Su | 15.9 | 28.7 | | | | NE | 43 | 15:33 | 18.5 | 93 | | ENE | 4 | 1006.8 | 27.9 | 46 | П | NE | 24 | 1001. |
| 30 | Мо | 11.7 | 19.7 | | | | SW | 39 | 19:33 | 18.8 | 69 | | Е | 20 | 1001.6 | 14.5 | 96 | | ESE | 9 | 1004. |
| 31 | Tu | 10.6 | 18.7 | | | | SSW | 56 | 14:01 | 13.6 | 53 | | SW | 20 | 1017.1 | 18.5 | 45 | | SSW | 31 | 1014. |
| Sta | tis | tic | s f | or C | ote | be | r 20 | 17 | | | | | | Т | | | | | | | |
| | | 9.4 | | | - | | | •• | | 14.8 | 76 | | | | 1017.7 | 20.9 | 56 | | | 20 | 1015. |
| | vest | | 17.4 | | | | | | | 9.4 | 49 | | | - | 1017.7 | 14.5 | | | N | | 1015. |
| | | 15.9 | | | | | wsw | 76 | | 19.1 | 99 | | # | - | 1028.0 | 28.2 | | | NE | | 1001. |
| | otal | 13.5 | 50.1 | | | | ***3** | 70 | | 15.1 | 35 | | # | 122 | 1020.0 | 20.2 | 30 | | INL | - 13 | 1024. |
| DCJDV | | 0.004 | 740 . | _ | | | | | | | | | | - | | | | | | - | |

0 measurements over 37Km/hr in either time slot in October

Image 3.0 Bega AWS Sep 2018 Weather Conditions

Bega, New South Wales September 2017 Daily Weather Observations

| | | Ter | nps | D-i | Evap | C | Max v | vina | gust | | | | 9 am | | | | | 3 | 3 pm | | |
|-----|-------|-------|-------|--------|------|----------|---------|------|-------|------|----|-----------------|------|------|--------|------|-----|-----------------|------|------|------|
| ate | Day | Min | Max | Kain | Evap | Sun | Dir : | Spd | Time | Temp | RH | Cld | Dir | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSL |
| | Ī | °C | °C | mm | mm | hours | ŀ | m/h | local | °C | % | 8 th | | km/h | hPa | °C | % | 8 th | | km/h | hF |
| 1 | Fr | -0.3 | 16.8 | | | | ENE | 30 | 14:19 | 7.5 | 75 | | SE | 2 | 1027.0 | 15.1 | 52 | П | ESE | 17 | 1021 |
| 2 | Sa | 0.1 | 21.1 | | | | NE | 24 | 16:23 | 7.3 | 87 | | ENE | 6 | 1020.7 | 19.0 | 49 | | ENE | 15 | 1015 |
| 3 | Su | 7.3 | 28.2 | | | | W | 72 | 16:15 | 10.4 | 88 | | NNE | 7 | 1008.4 | 25.7 | 21 | | NNW | 30 | 999 |
| 4 | Мо | 3.2 | 18.6 | | | | W | 65 | 11:30 | 16.9 | 34 | | N | 9 | 1004.2 | 16.4 | 29 | | W | 28 | 1002 |
| 5 | Tu | 9.2 | 16.0 | | | | W | 70 | 12:57 | 12.4 | 31 | | W | 35 | 1006.0 | 14.9 | 26 | | WNW | 35 | 1004 |
| 6 | We | 4.8 | 18.4 | | | | WSW | 54 | 12:27 | 12.7 | 34 | | W | 24 | 1009.8 | 17.8 | 30 | | W | 22 | 1009 |
| 7 | Th | 0.1 | 20.3 | | | | WSW | 50 | 14:52 | 10.5 | 66 | | ENE | 7 | 1016.5 | 19.2 | 25 | | WSW | 33 | 1012 |
| 8 | Fr | 2.2 | 16.9 | | | | WSW | 69 | 22:57 | 11.2 | 53 | | WSW | 20 | 1017.5 | 15.1 | 32 | | SSW | 33 | 1015 |
| 9 | Sa | 8.8 | 17.1 | | | | SW | 59 | 01:32 | 12.4 | 54 | | SW | 15 | 1021.3 | 15.6 | 39 | | SW | 26 | 1019 |
| 10 | Su | 1.6 | 19.0 | | | | WSW | 35 | 01:14 | 12.5 | 66 | | Е | 4 | 1022.7 | 17.0 | 45 | | ENE | 19 | 1019 |
| 11 | Мо | -0.4 | 21.5 | | | | ESE | 20 | 15:05 | 7.2 | 83 | | (| Calm | 1018.7 | 20.9 | 35 | | Е | 9 | 1014 |
| 12 | Tu | 5.3 | 27.4 | | | | W | 74 | 14:56 | 11.3 | 74 | | (| Calm | 1010.8 | 27.0 | 24 | | W | 50 | 100€ |
| 13 | We | 5.4 | 26.8 | | | | WNW | 72 | 12:38 | 14.6 | 67 | | ENE | 6 | 1001.2 | 24.3 | 24 | | W | 24 | 1000 |
| 14 | Th | 5.7 | 17.6 | | | | WSW | 69 | 11:00 | 11.0 | 48 | | WSW | 26 | 1010.3 | 16.2 | 26 | | WSW | 31 | 1009 |
| 15 | Fr | 11.0 | 23.2 | | | | W | 44 | 03:37 | 17.2 | 36 | | WSW | 22 | 1015.1 | 22.8 | 28 | | W | 17 | 1013 |
| 16 | Sa | 4.4 | 15.1 | | | | SSW | 65 | 13:52 | 11.8 | 57 | | WSW | 31 | 1015.9 | 13.1 | 32 | | SW | 41 | 1018 |
| 17 | Su | 5.5 | 17.8 | | | | W | 33 | 00:01 | 12.2 | 46 | | SW | 17 | 1027.1 | 15.6 | 42 | | Е | 17 | 1023 |
| 18 | Мо | -1.3 | 26.2 | | | | ENE | 28 | 14:05 | 7.7 | 75 | | NE | 7 | 1019.7 | 23.9 | 30 | | NE | 20 | 101° |
| 19 | Tu | 6.2 | 20.4 | | | | wsw | 59 | 10:18 | 15.7 | 38 | | SW | 24 | 1013.0 | 19.4 | 31 | | SW | 20 | 1013 |
| 20 | We | 1.1 | 19.4 | | | | ENE | 30 | 13:41 | 12.1 | 65 | | NE | 7 | 1021.7 | 16.5 | 45 | | ENE | 20 | 1016 |
| 21 | Th | 0.9 | 21.6 | | | | SSE | 20 | 12:58 | 10.4 | 76 | | ESE | 2 | 1015.7 | 18.9 | 60 | | SE | 13 | 1010 |
| 22 | Fr | 9.6 | 27.1 | | | | NE | 19 | 15:57 | 14.5 | 80 | | WSW | 2 | 1011.4 | 26.7 | 32 | | Е | 11 | 1007 |
| 23 | Sa | 6.5 | 35.4 | | | | ESE | 43 | 23:56 | 17.2 | 54 | | ENE | 2 | 1003.9 | 34.3 | 12 | | NNE | 22 | 994 |
| 24 | Su | 11.2 | 24.8 | | | | WNW | 74 | 11:56 | 17.2 | 66 | | NNE | 9 | 1000.3 | 23.7 | 20 | | W | 31 | 998 |
| 25 | Мо | 15.8 | 23.4 | | | | W | 52 | 01:05 | 19.4 | 29 | | W | 15 | 1004.0 | 16.3 | 58 | | Е | 24 | 1004 |
| 26 | Tu | 5.5 | 19.8 | | | | ESE | 35 | 13:20 | 13.3 | 46 | | SW | 20 | 1017.0 | 16.3 | 52 | | ENE | 22 | 1015 |
| 27 | We | 6.4 | 23.5 | | | | NNE | 37 | 16:42 | 16.1 | 57 | | N | 13 | 1014.1 | 21.9 | 53 | | NE | 20 | 100 |
| 28 | Th | 11.5 | 24.0 | | | | ESE | 46 | 10:18 | 21.9 | 30 | | WNW | 30 | 1003.2 | 19.7 | 54 | | SE | 22 | 1004 |
| 29 | Fr | 11.2 | 20.9 | | | | ENE | 37 | 14:04 | 16.3 | 69 | | Е | 13 | 1014.0 | 19.0 | 59 | | NE | 26 | 1008 |
| 30 | Sa | 7.6 | 21.9 | | | | SW | 74 | 11:38 | 19.1 | 29 | | WSW | 31 | 1010.2 | 19.3 | 29 | | SSW | 37 | 1012 |
| Sta | itis | tic | s fo | or S | en | tem | ber | 20 | 17 | | | | | | | | | | | | |
| | | 5.5 | | | - JP | | | _, | | 13.3 | 57 | | | 13 | 1013.4 | 19.7 | 36 | | | 24 | 1010 |
| | | -1.3 | | | | | | | | | 29 | | | | 1000.3 | 13.1 | 12 | | Е | 9 | 994 |
| | | 15.8 | | | | | # | 74 | | 21.9 | | | W | | 1000.3 | 34.3 | | | W | | 1023 |
| | Total | 10.0 | 55.4 | | | | - " | | | 21.5 | 00 | | ** | 33 | 1027.1 | 04.0 | -00 | | ** | 30 | 1020 |
| | | 2 204 | 700 1 | - - | | 1.00 LIT | C on Sa | | | | | _ | | - | | | | | | | |

3 measurements equal to or over 37Km/hr in either time slot in September

Image 3.2 **Bega AWS Nov 2018 Weather Conditions Bega, New South Wales**

November 2017 Daily Weather Observations

| | | | nps | Dain | Evap | Sun | Max | wind | gust | | | Ş | am | | | | | 3 | pm | | |
|------|-------|------|------|-------|------|-------|-------|------|-------|------|-----|-----------------|-----|------|--------|------|----|-----------------|-----|------|------|
| Date | Day | Min | Max | Kaiii | Lvap | Jun | Dir | Spd | Time | Temp | RH | Cld | Dir | Spd | MSLP | Temp | RH | Cld | Dir | Spd | MSLI |
| | | °C | °C | mm | mm | hours | | km/h | local | °C | % | 8 th | | km/h | hPa | °C | % | 8 th | | km/h | hF |
| 1 | We | 8.7 | 21.5 | 0 | | | SW | 65 | 12:45 | 15.4 | 48 | | SW | 30 | 1013.8 | 20.4 | 49 | | SSW | 35 | 1010 |
| 2 | Th | 10.8 | 22.5 | 0 | | | WSW | 44 | 06:48 | 17.2 | 53 | | WSW | 28 | 1013.8 | 20.6 | 52 | | ENE | 20 | 1011 |
| 3 | | 11.6 | 20.1 | 0.2 | | | ESE | 44 | 12:11 | 13.8 | 91 | | SW | 9 | 1010.5 | 18.0 | 71 | Ц | ESE | 22 | 1010 |
| 4 | Sa | | 18.8 | 0 | | | E | | 13:36 | 11.7 | 49 | | SE | | 1019.6 | 17.7 | 49 | Ц | Е | | 1018 |
| 5 | Su | | 19.6 | 0 | | | ESE | 35 | 11:20 | 13.5 | 68 | | ENE | | 1023.7 | 17.3 | 54 | Ц | Е | | 1021 |
| 6 | Мо | 12.4 | 15.0 | 11.8 | | | SW | 43 | 20:12 | 13.2 | 97 | | NNW | 2 | 1011.9 | 13.7 | 93 | Ц | SSW | 11 | 1008 |
| 7 | | | 19.6 | 28.4 | | | SW | | 07:19 | 14.7 | 57 | | SSW | | 1015.9 | 19.0 | 44 | Ц | SSW | | 1016 |
| 8 | We | | 20.2 | 0.2 | | | ESE | | 14:28 | 13.7 | 66 | | ENE | - | 1027.1 | 19.4 | 50 | Ц | ESE | | 1025 |
| 9 | Th | | 23.0 | 0 | | | ESE | | 12:42 | 15.2 | 77 | | N | | 1027.6 | 20.8 | 54 | Ц | ESE | | 1025 |
| 10 | Fr | | 22.3 | 0 | | | ESE | | 12:49 | 15.7 | 86 | | ENE | | 1029.0 | 19.6 | 71 | Ц | ESE | | 1026 |
| 11 | Sa | 12.2 | 23.0 | 0 | | | E | 31 | 12:06 | 19.5 | 66 | | ENE | 11 | 1027.1 | 21.5 | 62 | Ц | ENE | 19 | 1024 |
| 12 | Su | 9.4 | 24.1 | 0 | | | ENE | 41 | 13:46 | 18.2 | 77 | | NE | | 1025.2 | | | | ENE | 31 | 1022 |
| 13 | | | 23.0 | 0 | | | NE | | 12:30 | 19.4 | 60 | | ENE | | 1024.4 | | 51 | | NE | | 1021 |
| 14 | Tu | | 24.1 | 0 | | | NE | | 12:41 | 19.4 | 52 | | NNE | | 1022.4 | 22.2 | 50 | Ц | NE | _ | 1018 |
| 15 | We | | 27.3 | 0 | | | ENE | | 14:37 | 20.2 | 64 | | NE | | 1017.9 | 25.5 | 53 | Ц | NE | | 1012 |
| 16 | Th | 12.2 | 27.3 | 0 | | | NE | 43 | 13:21 | 21.5 | 69 | | SE | 6 | 1014.1 | 23.8 | 60 | Ц | NE | 30 | 1012 |
| 17 | Fr | 17.4 | 21.5 | 8.8 | | | ENE | 41 | 16:04 | 17.5 | 96 | | NNE | 11 | 1018.0 | | | | NE | 15 | 1018 |
| 18 | Sa | 16.9 | 23.0 | 4.6 | | | NE | 44 | 17:02 | 18.7 | 88 | | NE | _ | 1021.5 | 20.8 | 72 | Ц | NE | 19 | 1020 |
| 19 | | | 23.4 | 0.6 | | | NE | | 15:54 | 20.0 | 81 | | NE | | 1024.4 | 22.0 | | Ц | NE | | 1023 |
| 20 | Мо | 10.5 | 25.5 | 0.2 | | | ENE | 41 | 13:28 | 18.1 | 83 | | SE | 6 | 1026.5 | 23.6 | 54 | | NE | 26 | 1024 |
| 21 | | | 24.6 | 0 | | | ENE | | 15:09 | 17.6 | 79 | | SE | | 1025.0 | | | | NE | 20 | 1021 |
| 22 | | | 24.2 | 0 | | | ENE | | 14:37 | 19.3 | 67 | | NE | | 1021.0 | | | Ц | NE | | 1017 |
| 23 | Th | 15.2 | 25.5 | 0 | | | N | 37 | 08:26 | 22.4 | 64 | | ENE | 11 | 1015.6 | 21.4 | 77 | | NNW | 7 | 1013 |
| 24 | Fr | 10.5 | 31.7 | 0 | | | ENE | 30 | 13:04 | 20.6 | 68 | | E | | 1015.1 | 26.4 | 49 | Ц | SE | 15 | 1013 |
| 25 | Sa | 11.8 | 30.0 | 0.2 | | | ENE | 43 | 12:51 | 21.6 | 64 | | SSE | 6 | 1017.6 | 26.8 | 53 | | NE | 30 | 1014 |
| 26 | Su | 14.7 | 28.5 | 0 | | | ENE | 43 | 13:07 | 22.5 | 68 | | ENE | 13 | 1016.1 | 24.9 | 67 | | NE | 28 | 1013 |
| 27 | Мо | 17.8 | 26.3 | 6.4 | | | SE | 43 | 12:33 | 20.7 | 88 | | S | 7 | 1015.1 | 18.7 | 97 | | S | 7 | 1015 |
| 28 | Tu | 13.6 | 27.3 | 0.6 | | | SE | 30 | 14:31 | 17.6 | 100 | | N | 6 | 1020.9 | 26.3 | 61 | | Е | 15 | 1018 |
| 29 | We | 15.0 | 28.2 | 0 | | | NE | 39 | 14:30 | 18.6 | 100 | | SE | 6 | 1021.1 | 26.5 | 59 | | NE | 26 | 1017 |
| 30 | Th | 14.5 | 28.8 | 0 | | | NE | 43 | 13:33 | 22.4 | 79 | | NE | 6 | 1017.1 | 27.8 | 58 | | NE | 28 | 1012 |
| Sta | ıtis | tic | s fo | or N | lov | eml | ber : | 201 | 17 | | | | | | | | | | | | |
| ٨ | 1ean | 11.4 | 24.0 | | | | | | | 18.0 | 73 | | | 9 | 1020.0 | 21.8 | 60 | | | 22 | 1017 |
| Lo | west | 5.1 | 15.0 | 0 | | | | | | 11.7 | 48 | | # | 2 | 1010.5 | 13.7 | 44 | | # | 7 | 1008 |
| Hig | hest | 17.8 | 31.7 | 28.4 | | | SW | 65 | | 22.5 | 100 | | SW | 30 | 1029.0 | 27.8 | 97 | | SSW | 35 | 1026 |
| | Total | | | 62.0 | | | | | | | | | | | | | | | | | |

O measurements over 37Km/hr in either time slot in November

Conclusion

When comparing the historic data from the **Australian Bureau of Meteorology (ABM)** for a direct comparison of **the ten months operational period** of the flight college using the maximum wind component of the proposed training aircraft there are:

- only **5 readings** from the ABM for the ten month period **equal or exceed 21 knots (37Km/hr)** the maximum wind component for the training aircraft.
- The operational procedure for the Flight College is to deliver **flight training on 15 days of the month** (Mondays to Fridays) with limited remedial training on Saturdays.
- The flight training reality, given the historic weather data from the ABM and the operational maximum wind
 component of the training aircraft, is that there are only a possible maximum of five days when flight operations
 would not be conducted.

Wind in most cases is viewed by pilots as a positive given that the headwind component during takeoffs and landings permits slower speeds and shorter landing and take-off distances.

Mitch Boyle

Senior Flight Instructor