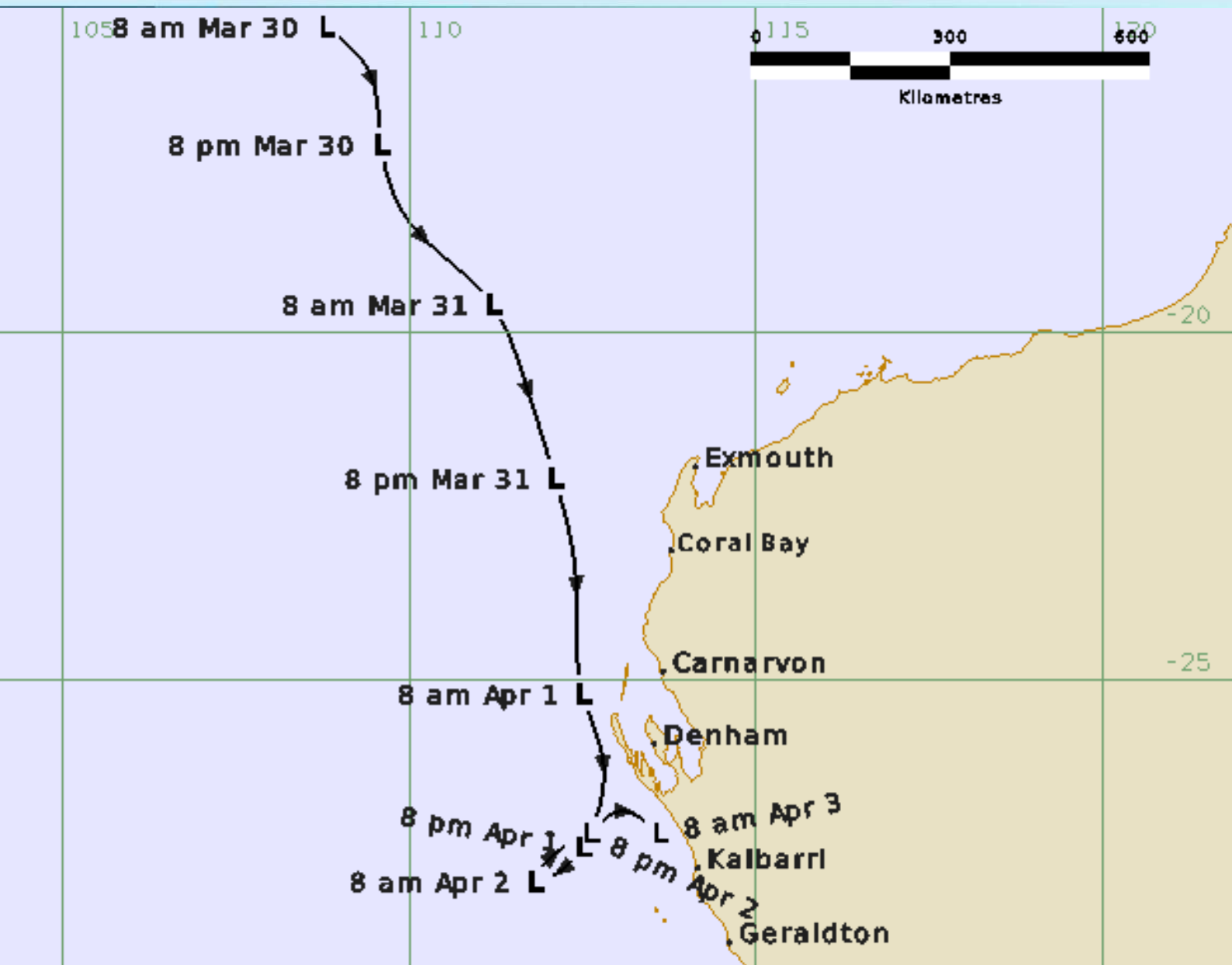




Tropical Low 30U

30 March – 3 April 2022

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April 2022



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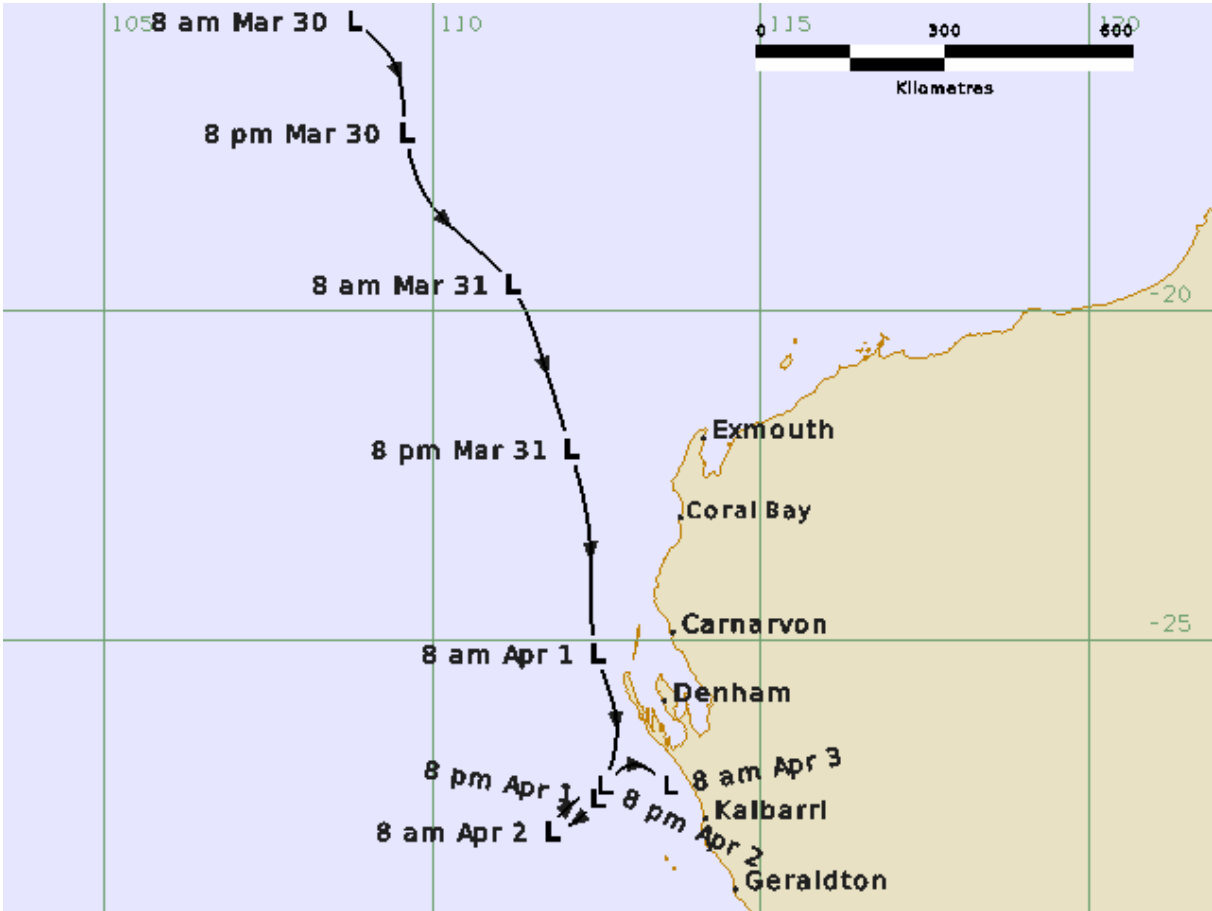
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1 Summary

Tropical low 30U tracked off the west coast of Western Australia and while it did not cause gale-force winds, it did lead to heavy rain and associated flooding near the west coast.

Rainfall totals between 100-200 millimetres (mm) fell along the Gascoyne coast between Shark Bay and Exmouth. Localised flooding caused road disruptions including the closure of the North West Coastal Highway from south of Carnarvon to the Shark Bay road for two days. Flash flood impacts were reported in Carnarvon with minor inundation of some roads, commercial and residential buildings. Heavy rainfall resulted in very quick and significant river responses from local runoff in the Wooramel, Gascoyne, Greenough, and Ashburton River catchments.

FIGURE 1 Best track of Tropical Low 30U 30 March - 3 April 2022 (times in Australian Western Standard Time (AWST), UTC+8).



2 Meteorological Description

2.1 Intensity analysis

A low developed in the Indian Ocean south of Christmas Island on 30 March, favoured by upper-level outflow and a low vertical wind shear environment over warm tropical waters. Increasing upper-level northwesterly winds associated with a slow moving upper low to the southwest increased the vertical wind shear on 31 March and the system failed to develop further. As 30U moved to the south, off the WA coast, on 1 April it became sub-tropical under the influence of the upper low. 30U moved slowly eventually weakened on 3 April off Kalbarri as shown in Figure 1.

2.2 Motion

Tropical low 30U was initially steered to the southeast by the monsoonal flow and the mid-level ridge to the east, and then to the south from 31 March under the influence of the mid and upper low to the west.

3 Impact

Heavy rain and localised flooding caused secondary and primary road disruptions such as the North West Coastal Highway from south of Carnarvon to the Shark Bay road. The road was closed for two days from 1 April with all culverts, floodways and table drains inundated. Flash flood impacts were reported in Carnarvon with minor inundation of some roads, commercial and residential buildings.

Heavy rainfall resulted in very quick and significant river responses from local runoff in the Wooramel, Gascoyne, Greenough, and Ashburton River catchments. Capricorn Range in the Ashburton River reached the Minor Flood level on 2 April. A flood watch was issued for the Onslow Coast, Lyndon-Minilya, Wooramel and Murchison River catchments.

4 Observations

Rainfall

Notable daily rainfall totals to 9 am AWST included:

1 April 2022

105.6 mm at Learmonth

105.2 mm at Minilya Bridge

60.6 mm at Carnarvon

2 April 2022

118.6 mm at Carnarvon

59.2 mm at Minilya Bridge

Note: Significant rainfall fell at other times around this time but are not included as 30U was not the dominant mechanism.

Figure 2. Weekly rainfall distribution to 9am WST 3 April 2022.

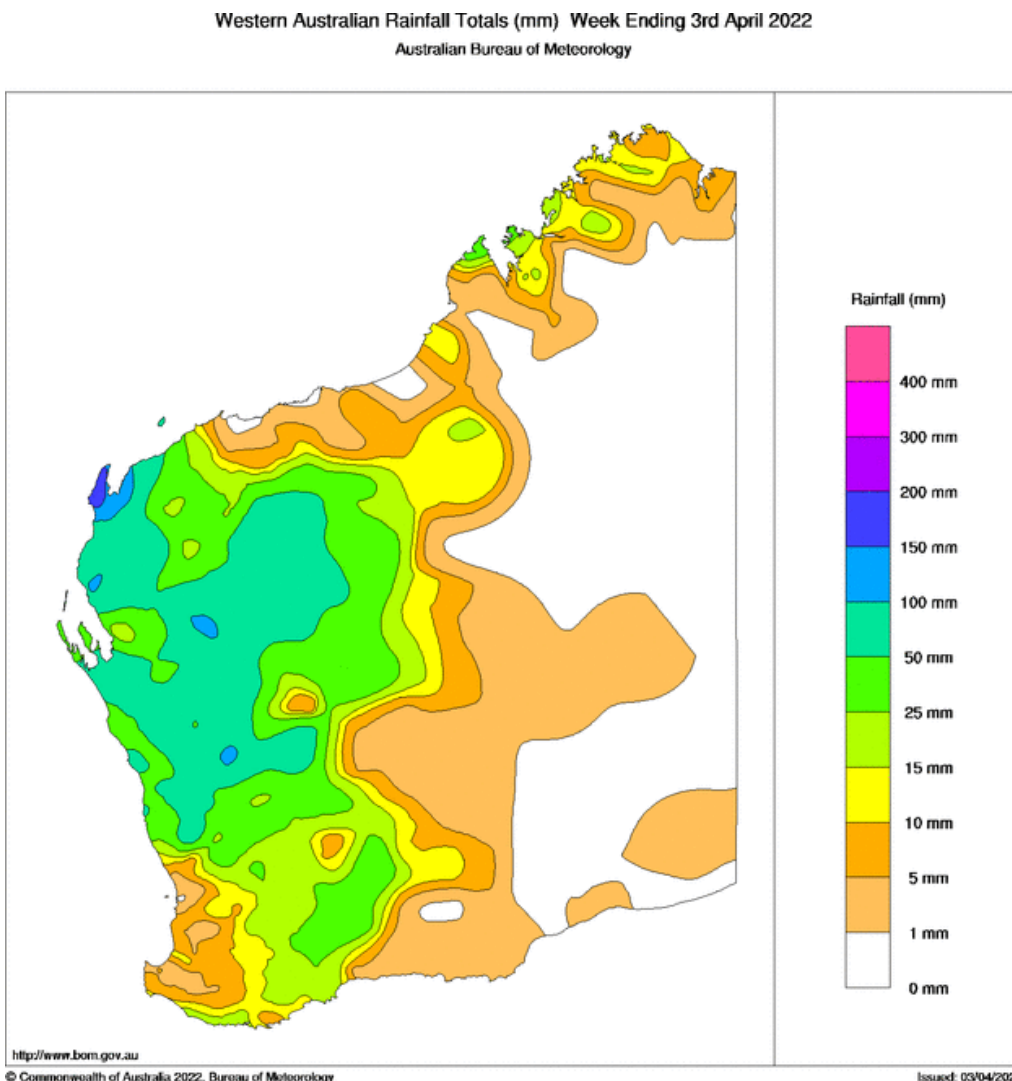


TABLE 1. Best track summary for tropical low 30U, 30 March to 3 April 2022.

Refer to the Australian Tropical Cyclone database for complete listing of parameters and track.
 Note: UTC is WST - 8 hours.

Year	Month	Day	Hour UTC	Pos. Lat. S	Pos. Long. E	Pos. Acc. nm	Max Wind 10min kn	Max gust kn	Cent. Press. hPa	Rad. of gales (NE/SE/SW/NW)	Rad. of storm (NE/SE/SW/NW)	RMW n mi
2022	03	30	00	15.6	108.8	40	20	45	1005	-	-	-
2022	03	30	06	16.2	109.4	40	20	45	1004	-	-	-
2022	03	30	12	17.3	109.6	40	25	45	1004	-	-	-
2022	03	30	18	18.4	110.0	40	25	45	1004	-	-	-
2022	03	31	00	19.6	111.2	30	25	35	1004	-	-	-
2022	03	31	06	20.5	111.6	20	25	35	1004	-	-	-
2022	03	31	12	22.1	112.1	25	25	35	1004	-	-	-
2022	03	31	18	23.5	112.4	25	25	35	1004	-	-	-
2022	04	01	00	25.2	112.5	20	20	35	1004	-	-	-
2022	04	01	06	26.2	112.8	15	20	35	1004	-	-	-
2022	04	01	12	27.4	112.5	20	15	35	1004	-	-	-
2022	04	01	18	27.8	112.1	20	15	35	1004	-	-	-
2022	04	02	00	27.9	111.8	15	15	35	1004	-	-	-
2022	04	02	06	27.5	112.1	15	15	35	1004	-	-	-
2022	04	02	12	27.2	112.6	20	15	35	1006	-	-	-
2022	04	02	18	26.9	113.0	15	15	35	1006	-	-	-
2022	04	03	00	27.2	113.6	15	15	35	1006	-	-	-

5 Forecast Performance

There were no publicly issued official tropical cyclone forecasts for this system. This system was not expected to become a tropical cyclone but was nevertheless monitored closely given the proximity of the forecast track to the coast and to the offshore Pilbara oil and gas industry.