



Australian Government
Bureau of Meteorology

Severe Tropical Cyclone *Brian*

19 – 27 January 1980

Perth Tropical Cyclone Warning Centre
Bureau of Meteorology

A. Summary

A low that formed north of Darwin on 18 January moved along a general west southwest track developing into Tropical Cyclone *Brian* north of the Kimberley. *Brian* peaked as in intense cyclone on 23 January well to the northwest of the state before weakening as it moved over cooler waters.

Brian remained over open waters during its lifetime and had no direct impact on coastal communities. There were economic losses owing to disruption to some industry operations.

B. Meteorological Description

A surface depression was located just east of Bathurst Island early on 18 January 1980. Under the influence of an easterly mid-tropospheric flow to the north of the subtropical ridge, the system moved west-southwest for five days at an average speed of 26 km/h.

Brian intensified very rapidly during 19 January and at 2100 UTC a drilling ship and two smaller ships within 50 km of the centre reported sustained winds of 110 km/h. Three hours later Scott Reef recorded a pressure of 988.5 hPa only 20 km from the storm centre. *Brian* continued to intensify rapidly to peak intensity at 0000 UTC 23 January, the central pressure then being 930 hPa, with a maximum sustained wind speed of 205 km/h. This intensity was maintained for about 24 hours before the storm commenced weakening. The cyclone moved southwest for over two days then south and became an extra-tropical depression with below gale force winds late on 27 January.

After 20 January 1980 no ship reports were received from near the storm centre. However, at 1200 UTC on 22 January a drifting buoy within 60 km of the centre recorded a pressure of 970.6 hPa when the estimated minimum pressure was estimated at 940 hPa.

C. Impact

Brian did not cause any damage to the mainland, although production losses to oil companies due to shut-down of operations amounted to an estimated \$1.74 million.

Table 1. Best track summary for Tropical Cyclone Brian, 18-27 January 1980.

Note: Add 8 hours to convert to WST. Refer to best track database for complete track details.

Year	Month	Day	Hour (UTC)	Latitude S	Longitude E	Max Wind knots	Central Pressure hPa	Radius of Gales nm
1980	1	18	0000	10.1	130.4		1003	
1980	1	18	0600	11.2	129.8		1003	
1980	1	18	1200	12.2	128.9		1002	
1980	1	18	1800	12.8	127.7		1001	
1980	1	19	0000	13.2	126.6		1000	
1980	1	19	0600	13.4	125.7		998	
1980	1	19	1200	13.4	124.6		996	
1980	1	19	1800	13.4	123.2		993	
1980	1	20	0000	13.8	121.7		990	
1980	1	20	0600	14.3	120.4		986	
1980	1	20	1200	15.2	119.0		982	
1980	1	20	1800	15.8	117.2		975	
1980	1	21	0000	15.8	115.3		970	
1980	1	21	0600	16.1	113.9		963	
1980	1	21	1200	16.3	112.2		955	
1980	1	21	1800	16.8	111.7		948	
1980	1	22	0000	17.1	108.9		940	
1980	1	22	0600	17.2	107.3		937	
1980	1	22	1200	17.3	105.8		934	
1980	1	22	1800	17.4	104.4		932	
1980	1	23	0000	18.0	103.0		930	
1980	1	23	0600	18.5	101.8		933	
1980	1	23	1200	19.3	100.7		940	
1980	1	23	1800	20.0	99.8		948	
1980	1	24	0000	20.9	98.6		955	
1980	1	24	0600	21.8	97.6		961	
1980	1	24	1200	22.7	96.5		966	
1980	1	24	1800	23.6	95.4		971	
1980	1	25	0000	24.6	94.4		975	
1980	1	25	0600	25.7	93.2		979	
1980	1	25	1200	27.5	92.3		983	
1980	1	25	1800	29.3	92.3		987	
1980	1	26	0000	30.4	92.7		990	
1980	1	26	0600	31.2	93.0		992	
1980	1	26	1200	31.7	93.2		994	
1980	1	26	1800	32.1	93.5		996	
1980	1	27	0000	32.4	93.7		998	

Figure 1. Track of Tropical Cyclone *Brian*, 18 – 27 January 1980. All times in WST.

