Australian Government
Bureau of Meteorology

# Tropical Cyclone *Vivienne*

4 – 9 February 2005

Perth Tropical Cyclone Warning Centre
Bureau of Meteorology

## A. Summary

A low formed north of Port Hedland on 4 February associated with a monsoon burst. It suffered under moderate easterly shear for much of its lifetime limiting development. Gales occurred on the western side from the 5th through to when it was named on the 8th. On these days, however, gales did not appear to extend more than halfway around the low level centre and convection pulsed diurnally. Its duration as a cyclone was brief on 8 February, and weakened rapidly the following day.

There was no known impact associated with TC *Vivienne*.

## B. Meteorological Description

*Intensity*
Initially a broad low formed in an active monsoon trough. By the 6 February a low level circulation centre (LLCC) was clearly visible to the northeast of convection. Deep convection continued to cycle to the south east of the LLCC over the next few days. Early on 8 February the low level centre moved under the cold cloud and the system briefly reached cyclone intensity. By 1200 UTC *Vivienne* had weakened to below cyclone intensity and by 0000 UTC 9 February the low level centre was well removed from any convection.

*Motion*
TC *Vivienne* was located north of a mid-level anti-cyclone and was initially steered in a south westerly direction. On the 6 and 7 February steering was weak and the system was near stationary. During the 8 February *Vivienne* moved north before shearing apart and the low level centre moved southwards before dissipating.

*Structure*
TC *Vivienne* was affected by at least 10-20 knots of shear over its lifetime. It is likely that gales never completely encircled *Vivienne*.

## C. Impact

There was no known impact associated with TC *Vivienne*.

Table 1 Best track summary for Tropical Cyclone *Vivienne* 4 – 9 February 2005. Note: Add 8 hours to convert to WST. Refer to best track database for complete track details.

| Year | Month | Day | Hour (UTC) | Position Latitude S | Position Longitude E | Max wind Speeds | Rad. Gales nm | Central Pressure hPa | Radius Max. Wind (RMW) |
|---|---|---|---|---|---|---|---|---|---|
| 2005 | 2 | 4 | 0 | 14.5 | 118 | 10 | | 1005 | 55 |
| 2005 | 2 | 4 | 6 | 14.8 | 118 | 10 | | 1005 | 55 |
| 2005 | 2 | 4 | 12 | 15 | 117.9 | 10 | | 1005 | 55 |
| 2005 | 2 | 4 | 18 | 15.2 | 117.8 | 13 | | 1000 | 55 |
| 2005 | 2 | 5 | 0 | 15.4 | 117.7 | 15 | | 995 | 55 |
| 2005 | 2 | 5 | 6 | 15.7 | 117.3 | 15 | | 995 | 55 |
| 2005 | 2 | 5 | 12 | 16 | 117 | 15 | | 995 | 55 |
| 2005 | 2 | 5 | 18 | 16 | 116.7 | 15 | | 995 | 55 |
| 2005 | 2 | 6 | 0 | 16.2 | 116.5 | 15 | | 995 | 16 |
| 2005 | 2 | 6 | 6 | 16.4 | 116.3 | 15 | | 995 | 16 |
| 2005 | 2 | 6 | 12 | 16.5 | 116.4 | 15 | | 995 | 16 |
| 2005 | 2 | 6 | 18 | 16.5 | 116.5 | 15 | | 995 | 16 |
| 2005 | 2 | 7 | 0 | 16.5 | 116.5 | 15 | | 995 | 16 |
| 2005 | 2 | 7 | 6 | 16.4 | 116.5 | 15 | | 995 | 16 |
| 2005 | 2 | 7 | 12 | 16.3 | 116.5 | 15 | | 995 | 16 |
| 2005 | 2 | 7 | 18 | 16.1 | 116.3 | 15 | | 995 | 16 |
| 2005 | 2 | 8 | 0 | 15.9 | 116.1 | 18 | 18 | 990 | 27 |
| 2005 | 2 | 8 | 6 | 15.6 | 116.1 | 18 | 18 | 990 | 27 |
| 2005 | 2 | 8 | 12 | 15.4 | 116.2 | 15 | | 990 | 27 |
| 2005 | 2 | 8 | 18 | 15.6 | 116.5 | 13 | | 995 | 27 |
| 2005 | 2 | 9 | 0 | 15.9 | 116.8 | 10 | | 1000 | 27 |
| 2005 | 2 | 9 | 6 | 16.1 | 117 | 10 | | 1005 | 27 |
| 2005 | 2 | 9 | 12 | 16.3 | 117.1 | 10 | | 1005 | 27 |

Figure 1. Track of Tropical Cyclone *Vivienne* 4 – 9 February 2005
*All times in WST.*