



## **INVESTIGATION INTO PARTICULATE MATTER EXCEEDANCES ON THE 17<sup>th</sup> APRIL 2007 AND 19<sup>th</sup> NOVEMBER 2007.**

This report has been produced at the request of the Department of Planning (DoP) to investigate causes of exceedance in particulate matter at the High Velocity Air Sampler located adjacent to the Marquette property. The two exceedances occurred on the 17<sup>th</sup> April 2007 (56ug/m<sup>3</sup>) and 19<sup>th</sup> November 2007 (52ug/m<sup>3</sup>). The Whitehaven Group would also like to reiterate to the DoP that exceedances occurred prior to Whitehaven's complete ownership and direct management of the Werris Creek site.

During the investigations of the two exceedances, it was noted that the high volume air sampler is positioned in close proximity to Liverpool Plains Shire Council (LPSC) owned and operated gravel quarries. The proximity of the sampler to the quarries has been regularly noted in on site historical records, however the date of operations of the quarry required confirmation to cross check against the dates of exceedance. The WCC environmental officer contacted the LPSC on Wednesday 19<sup>th</sup> March 2008 and received confirmation the quarry was being worked on the day of the 17<sup>th</sup> of April 2007, however there were no records indicating operations took place in November 2007. Confirmation of this advice is attached as Appendix 1.

A review of the meteorological data (appendix 2) from the Werris Creek Coal Meteorological Station, located immediately adjacent to the quarries, showed wind direction from the south and south west and mild wind conditions averaging around 2m/s on the days of exceedance. These winds travelled northward through the quarry area and straight into the path of the high volume air sampler. The location of the high volume air sampler in relation to the LPSC quarries can be seen in plates 1 and 2.

In light of evidence received from LPSC indicating the operation of the quarries coincided with the exceedance date of 17<sup>th</sup> April 2007, and prevailing winds were from the south west, WCC believe the exceedance on the 17<sup>th</sup> of April was directly related to operational activities in the LPSC quarries.

Whilst there is no evidence to suggest operation of the quarries on the date of exceedance in November, prevailing wind conditions were similar to those experienced on April 17<sup>th</sup>, thereby resulting in potential dust lift off from exposed surfaces within the quarry area. It should be noted that the result on the 19<sup>th</sup> November was uncharacteristic in comparison to the results obtained for the month in total. The November monthly average for the Marquette sampler was 16.8ug/m<sup>3</sup>, whilst the annual average following the November round of sampling was at 16.9ug/m<sup>3</sup>. Overall the Marquette sampler remains well within the annual criteria limit of 30ug/m<sup>3</sup>.

**Plates 1:** High volume air sampler, Marquette.



**Plate 2:** Air sampler located north of quarry.



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