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PBAJV
Unit 5, West End Corporate Park
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Attention: Luke van Heuzen

27 May 2008

Ref: 1666/RepLet3

Dear Luke

Re: AIRPORT LINK – AIR QUALITY ASSESSMENT, SUPPLEMENTARY INFORMATION

We understand that suplpementary information regarding the Air Quality Assessment is required for the purposes of finalising the Change Report for the Airport Link project. Specifically, information relating to the following is required:

(a) Brief summary of outcomes of air quality assessment for both the stacks and surface roads using the BrisConnections traffic data.

(b) Summary of predicted air quality concentrations for ambient background plus stack contributions and comparison to relevant air quality standards.

(c) Authorisation to append consultant's reports (if required).

This additional information is provided in the following sections.

SUMMARY OF AIR QUALITY OUTCOMES

An assessment of the predicted air quality outcomes of the Airport Link project has previously been presented in the report *'Airport Link – Air Quality Assessment of Ventilation Station Outlets,*

January 2008' prepared by Air Noise Environment Pty Ltd on behalf of the PBAJV.

The air quality assessment report included an analysis of the potential air quality impacts of the proposed ventilation station outlets (VSOs) and a review of the potential impacts of surface roads. The VSO emissions modelling considered the 2012 traffic scenario only as this was understood to represent the worst case scenario from an emissions perspective. This is because of the improvements in vehicle emissions that are legislated to occur prior to 2026, and the new technologies that are currently being adopted that have lower emissions than the legislated requirements at present.

Detailed modelling of the BrisConnections design was completed using a consistent methodology to that adopted in the EIS to predict air quality outcomes for the BrisConnections design for Airport Link. Based on the measured and projected ambient air quality, the results of the dispersion modelling of the VSO emissions indicates that compliance is expected to be achieved by a significant margin for cumulative concentrations, except in the case of particulates where the margin of compliance is less. For particulates, existing background concentrations dominate hence the contribution of the Airport Link emissions to cumulative receptor concentrations is predicted to have a negligible influence on exsiting air quality.

Review of the potential increase in predicted roadside concentrations for both the 2012 and 2026 BrisConnections projected surface traffic flows confirm that the appropriate air quality goals are expected to be met at all sensitive receptors. Overall, for the surface traffic effects, it is concluded that the differences in predicted AADT for the BrisConnections design relative to the EIS may result in a redistribution of air pollutants whilst maintaining compliance by a significant margin with the project air quality goals.

SUMMARY OF CUMULATIVE CONCENTRATIONS

Tables showing the maximum predicted cumulative modelling results for the ventilation station outlets are appended to this letter as Tables 1a – 1c.

AUTHORISATION TO RELEASE REPORTS

Air Noise Environment Pty Ltd gives authorisation for the report *'Airport Link – Air Quality Assessment of Ventilation Station Outlets, January 2008'* prepared by Air Noise Environment Pty Ltd on behalf of the PBAJV to be appended to the RFPC if required.

Please do not hesitate to contact me should you require any further information.

Yours sincerely
for Air Noise Environment Pty Ltd

Claire Richardson BSc(Hons), MAAS
Principal Consultant

TABLE 1a: CUMULATIVE VSO MODELLING RESULTS (2012) – BOWEN HILLS

Pollutant	Goal	Unit	Measuring Period	Maximum Ground Level Concentration	Existing Ambient Concentrations	Cumulative Concentration
Carbon monoxide (CO)	8 or 10	ppm mg/m^3	8 hour maximum	0.09 mg/m^3	2.5 mg/m^3	2.59 mg/m^3
Nitrogen dioxide (NO_2)	62	$\mu g/ m^3$	Annual mean	0.27 $\mu g/m^3$	25 $\mu g/m^3$	25.27 $\mu g/m^3$
	0.12 or 246	ppm $\mu g/m^3$	1 hour maximum	18.15 $\mu g/m^3$	129 $\mu g/m^3$	147.15 $\mu g/m^3$
Particulate matter less than 10 µm (PM_{10})[1]	50 50	$\mu g/m^3$ $\mu g/m^3$	24 hour maximum Annual mean	0.47 $\mu g/m^3$ 0.06 $\mu g/m^3$	35 $\mu g/m^3$ 9 $\mu g/m^3$	35.47 $\mu g/m^3$ 9.06 $\mu g/m^3$

TABLE 1b: CUMULATIVE VSO MODELLING RESULTS (2012) – KEDRON

Pollutant	Goal	Unit	Measuring Period	Maximum Ground Level Concentration	Existing Ambient Concentrations	Cumulative Concentration
Carbon monoxide (CO)	8 or 10	ppm mg/m^3	8 hour maximum	0.06 mg/m^3	2.5 mg/m^3	2.56 mg/m^3
Nitrogen dioxide (NO_2)	62	$\mu g/ m^3$	Annual mean	0.14 $\mu g/m^3$	25 $\mu g/m^3$	25.14 $\mu g/m^3$
	0.12 or 246	ppm $\mu g/m^3$	1 hour maximum	6.01 $\mu g/m^3$	129 $\mu g/m^3$	135.01 $\mu g/m^3$
Particulate matter less than 10 µm (PM_{10})[1]	50 50	$\mu g/m^3$ $\mu g/m^3$	24 hour maximum Annual mean	0.37 $\mu g/m^3$ 0.03 $\mu g/m^3$	35 $\mu g/m^3$ 9 $\mu g/m^3$	35.37 $\mu g/m^3$ 9.03 $\mu g/m^3$

TABLE 1c: CUMULATIVE VSO MODELLING RESULTS (2012) – TOOMBUL (25 M VSO)

Pollutant	Goal	Unit	Measuring Period	Maximum Ground Level Concentration	Existing Ambient Concentrations	Cumulative Concentration
Carbon monoxide (CO)	8 or 10	ppm mg/m^3	8 hour maximum	0.16 mg/m^3	2.5 mg/m^3	2.66 mg/m^3
Nitrogen dioxide (NO_2)	62	µg/ m^3	Annual mean	0.19 μg/m^3	25 μg/m^3	25.19 μg/m^3
	0.12 or 246	ppm µg/m^3	1 hour maximum	43.53 μg/m^3	129 μg/m^3	172.53 μg/m^3
Particulate matter less than 10 µm (PM_{10})[1]	50 50	µg/m^3 µg/m^3	24 hour maximum Annual mean	0.41 μg/m^3 0.03 μg/m^3	35 μg/m^3 9 μg/m^3	35.41 μg/m^3 9.03 μg/m^3