JOINT REGIONAL PLANNING PANEL
(Hunter & Central Coast Region)

JRPP No	**2010HCC027**
DA Number	**DA/1282/2010**
Local Government Area	**Lake Macquarie Council**
Proposed Development	**Industry - Asphalt Plan**
Street Address	**11-18 Billbrooke Close, Cameron Park**
Applicant/Owner	**Parsons Brinckerhoff**
Number of Submissions	**134**
Recommendation	**Deferral**
Report by	**Chris Dwyer** **Principal Development Planner**

SUPPLEMENTARY DEVELOPMENT ASSESSMENT REPORT
DA/1282/2010

Proposal: **Industry – Asphalt Plant**
Address: **11, 15 and 18 Billbrooke Close, Cameron Park**
Lots 317, 318 and 319 DP1089554
Applicant: **Parsons Brinckerhoff**
Owner: **Bitupave Limited**
Consent Authority: **Joint Regional Planning Panel**
Lodged: **3 August 2010**
Value: **$10 million**

Background
An initial assessment was reported to the JRPP at its meeting on 10 March 2011. The recommendations of that report were as follows:
The assessment of the application has identified significant concerns regarding methodology and level of investigation associated with air quality assessment, acoustic impact and hazardous development analysis.
It is concluded that:

1 *The development application including the EIS and additional information does not provide a sufficient level of information to enable a full and proper assessment of air quality impacts, including odour, of the Asphalt Plant. The air quality impacts of the development are to date unknown and a precautionary approach would indicate that without full knowledge of the impacts, approval is not justified.*

2 *The development application including the EIS and additional information does not provide a sufficient level of information to enable a full and proper assessment of acoustic impacts of the Asphalt Plant. The acoustic impacts of the development are to date unknown and a precautionary approach would indicate that without full knowledge of the impacts, approval is not justified.*

3 *The risk assessment methodology selected for the Preliminary Risk Assessment is not suitable to be compared against HIPAP No 4 risk criteria, and does not provide a sufficient level of information to enable a full and proper assessment of risk impacts of the Asphalt Plant. The risk impacts of the development are to date unknown and a precautionary approach would indicate that without full knowledge of the impacts, approval is not justified.*

It is recommended that the application be refused for the above reasons.

Subsequent to the report, but prior to the meeting, the applicant lodged additional information on 9 March 2011 directly with the JRPP, seeking to address the concerns raised by Council.

At its meeting on 10 March 2011, the JRPP moved the following:

1. *The matter be deferred.*
2. *The applicant is to provide such information as it wishes to provide to the Council within 4 weeks.*

That information was lodged with Council, by agreement, on 18 April 2011.

Once that information was lodged, Council and Council's consultant GHD undertook preliminary assessment and a number of meetings and liaison with the applicant, Boral and PAE Holmes (a consultant for the applicant) occurred.

As a result of these discussions and given the technical nature of the information provided, further clarification was requested of the applicant and received by Council on 13 May 2011.

Council's consultant report by GHD was received on Friday 24 June 2011.

This supplementary development assessment report provides an assessment of additional information as lodged from 9 March 2011 onward. The report concentrates on the specific matters of air, odour and noise emissions from the development proposal, and considers additional submissions made since the first report to the JRPP on 10 March 2011.

The documents relied upon are:

- Letter Correspondence dated 08 March 2011 Ref: 2117105A LT_3826/ED/ac from Parsons Brinckerhoff to Joint Regional Planning Panel, including Attachments A and B;
- Response to LMCC on DA/1282/2010 - Boral Cameron Park (2101HCC027) April 2011 Parsons Brinckerhoff; Ref 2117105A PR_4060;
- Letter correspondence from PAE Holmes to Boral Asphalt NSW dated 11 May 2011, Ref: 5950F Acoustic Response 12052011.docx;
- Letter correspondence from PAE Holmes to Boral Asphalt NSW dated 13 May 2011, Ref: 5750C Cameron Park Asphalt;

- AUSPLUME configuration files received by LMCC from Parsons Brinckerhoff by email 13 May 2011.

SUPPLEMENTARY ASSESSMENT - SUMMARY

METHODOLOGY

Through initial and supplementary assessment, a significant amount of technical information has been submitted to Council and agreement and clarification on a number of key technical issues associated with air quality and noise emissions has been made between Council and the applicant, through consultants for both parties.
Agreement has been reached regarding the methodology and use of meteorological data and parameters of measurement.
The applicant concludes that the proposed Asphalt Plant complies with all relevant criteria regarding noise, dust, odour and air emissions if the plant were to operate at 200,000 tonnes per year production capacity, 24 hours a day, 7 days per week, with two conditions:

(a) loading is undertaken via a "tarping inside" method, and

(b) odour concentration exceedences on neighbouring sites are justified in the circumstances.

Odour Impact

Reliance on Tarping Inside – What is the Application?

It is not clear whether the application proposes tarping inside or tarping outside. Information in the Parson Brinckerhoff Executive Summary (April 2011) indicates that the enclosure of the asphalt delivery area, with negative pressure extraction, is a change to the project, but then notes that no impacts are predicted using the tarping outside method (the night time exceedences are considered justified), however if significant odour impacts do arise (after operation begins and monitoring is undertaken), then tarping inside 'can be undertaken'.
The application has not been amended to indicate the built form changes or mechanical alterations such as exhausts, etc (including associated acoustic impact if applicable), associated with tarping inside. This point may seem minor but it is significant. Council is not in a position to recommend approval of any application without sufficient or relevant information. In this case it is not possible for an approval to be issued without knowing what will be constructed.
In any case, the tarping inside method has not demonstrated full compliance with the odour concentration criteria and so the weight of the issue of whether or not the application is amended is reduced.

Exeedences at neighbouring sensitive receivers

It is agreed that compliance is achieved at all receptors during the day and night with tarping inside with the exception of receptors R16 and R21.
The applicant acknowledges predicted odour concentrations above the relevant criteria at two sensitive receptors R16 and R21 located within the industrial area, in Billbrooke Close, at night. The reason given for asserting compliance even though the levels are exceeded is that the neighbouring premises (ie AMP Control) would not be staffed outside the hours of 7:00am to 5:00pm and as such, would not be affected.

The approved hours of AMPControl (DA/100/2007) are Mondays to Fridays 7:00am to 5:30pm and Saturdays 7:00am to 1:00pm. AMPControl has lodged a submission (objection) indicating that the office components of the development function at times until 7:00pm, and that a future application would consider a night shift.
Other neighbouring development in close proximity to the site is JJ Mac at 6-8 Billbrooke Close. This development has a range of approved hours being Mondays to Fridays 6:00am to 8:00pm (DA/2001/2008); a Warehouse (DA/1620/2008) with no hourly limits; and a Kitchen Warehouse (DA/729/2006/A) Mondays to Saturdays 6:00am to 8:00pm. JJ Mac also objects to the proposal. Both premises have a significant number of employees (up to 80) and AMP Control has an ability to expand the business to the rear portion of its site.
From Table 7.12 in the AQA 2011, the predicted OU (tarping inside) at night is 10.4 OU at R16, and 8.4 OU at R21. The Odour Performance Criteria that the applicant uses for these receptors is 5 OU. Even at the highest level of 7 OU, compliance is not achieved.
Acceptability of exceedences at R16 and R21
The premise that the exceedences at receptors R16 and R21 are acceptable due to the fact that AMP Control is not staffed at night is not agreed with. The narrow interpretation of development on adjoining land does not allow for existing evening hours of operation on other neighbouring properties (JJ Mac at 6-8 Billbrooke Close), nor does it allow for consideration of future development on vacant land adjacent to the site (14 Billbrooke Close), or future development of existing operations (as AMP Control have indicated).
Exceedences of the nature proposed have the probable effect of 'quarantining' neighbouring sites from reasonable industrial and light industrial use of that land. This is compounded by the way in which Billbrooke Close has developed as a "light industrial / warehouse / hi-tech industry" context. It is reasonable to expect that future development in Billbrooke Close (without the subject Asphalt Plant and its impacts) would continue in this manner.
Full compliance with the Odour Criteria is required, for all hours of the day and night, for all properties.

Possibility of compliance
Despite the uncertainty of the application and exceedences, the sources of the odour are known and it may be possible that the odour concentration at receptors R16 and R21 are brought into compliance through additional mechanical and built form alterations and additions. Given this possibility it is recommended that the matter be deferred and the applicant be given the opportunity to demonstrate compliance with the relevant odour concentration levels at receptors R16 and R21.

Acoustic Impact
The applicant's consultant PAE Holmes submitted a noise assessment 5750D which involved computer remodelling, unattended data logging of road traffic noise, and attended noise measurements, using sound pressure levels measured from similar equipment in operation at the Ballarat asphalt plant as input data.
The findings were that the crusher and screen plant were considerably louder than other machinery and it was recommended that these must be restricted to daytime use; proposed acoustic wall adjacent to AMPControl to be increased in height 1 metre to 4 metres; and some acoustic treatments to the front end loader. These requirements are agreed with.

However an additional concern is the measurement and frequency analysis of the exhaust stack, which PAE Holmes indicated a high frequency of 4kHz. Such high frequency component is unusual and unlikely for an exhaust stack and requires explanation.
The PAE Holmes argument that minor noise exceedences were acceptable in some areas of Cameron Park and Seahampton during night time periods under adverse weather conditions is not agreed with.
Further explanation of the "interpolation tolerance issue" is required. It may be that the grid resolution needs to be refined, but it is of concern that the noise contours do not reflect the computed noise levels. This issue of noise predictions could result in levels in Seahampton being lower than shown by the noise contours, but they may be higher in other areas.

Hazardous Development
The information contained in the additional information submitted is concurred with. There are no remaining issues associated with the hazardous nature of the development.

Conclusion
Council is not in a position to recommend approval of the proposal as:
(a) it does not possess adequate information regarding the tarping inside method and associated built and mechanical requirements as part of the application; and

(b) in the event that the application were clearly for tarping inside and information was lodged in this regard, exceedences of odour concentration occur at urban receptors R16 and R21. The justification for these exceedences is not accepted, and therefore the exceedences are not supported; and

(c) reported acoustic exceedences by site operations at nighttime under adverse weather conditions are not acceptable given the information available.

Recommendation
It is recommended that the JRPP defer consideration of the development application DA/1282/2010 for an Asphalt Plant at 11-18 Billbrooke Close, Cameron Park to allow for the applicant to lodge revised plans and documentation to:
(a) reflect what is proposed to be built;

(b) demonstrate full compliance with odour criteria [NSW Odour Criterion (DECC 2005)]; and

(c) demonstrate full compliance with acoustic criteria (NSW Industrial Noise Policy).

Chris Dwyer
Principal Development Planner
Lake Macquarie City Council

Appendix A - Supplementary Assessment

This report provides an assessment of the updated material presented in the application against all relevant State and local planning legislation and policy.

79C(1)(a)(iii) the provisions of any Development Control Plan (DCP)

Development Control Plan No. 1 – Principles of Development

Section 1.9 – Development Notification Requirements

Although an amount of information has been received from the applicant, the proposal has not changed. The addition information was therefore not re-notified. Notwithstanding, four additional submissions were received from the date of the JRPP meeting on 10 March 2011. These submissions are addressed at section 79C(1)(d) of this report.

Section 2.1 – Environmental Responsibility and Land Capability

2.1.15 Noise and Vibration

The intent of Council's requirements is to ensure that any noise and vibration source, now or in the future will not affect the surrounding population, whether they are employees, workers, or residents in adjoining or nearby buildings or passersby.

The applicant's consultant PAE Holmes submitted a noise assessment 5750D which involved computer remodelling, unattended data logging of road traffic noise, and attended noise measurements, using sound pressure levels measured from similar equipment in operation at the Ballarat asphalt plant as input data.

The findings were that the crusher and screen plant were considerably louder than other machinery and it was recommended that these must be restricted to daytime use; proposed acoustic wall adjacent to AMPControl to be increased in height 1 metre to 4 metres; and some acoustic treatments to the front end loader.

GHD reviewed the PAE Holmes report and provided comment which questioned the noise frequency spectrum used for plant, meteorological conditions such as temperature inversion, and traffic noise data and conclusions.

PAE Holmes then provided a response (report 5950F) to the queries raised by GHD, and subsequent discussions were held between PAE Holmes and GHD and the issues debated.

A final assessment indicates that there are discrepancies with sound power levels provided for the conveyor drive and mixing screen, but these will have minor impacts. Concerns include the measurement and frequency analysis of the exhaust stack, which PAE Holmes indicated a high frequency of 4kHz. The PAE Holmes argument that minor noise exceedences were acceptable in some areas of Cameron Park and Seahampton during nighttime periods under adverse weather conditions is not agreed with.

Noise contours used in the model do not match the actual contours and there may be discrepancies and impact to some areas of Seahampton because of this discrepancy.

Acoustic issues to be addressed during the nighttime operational period are in dispute. All other aspects of the acoustic impacts of the proposal are satisfactorily addressed.

2.1.16 Air Quality and Odour

The proponent indicates that the EIS and supplementary information accord with the *Approved Methods and Guidance for the Modelling of Air Pollutants in NSW* (DEC 2005), the *Technical Framework for Assessment and Management of Odour from Stationery Sources in NSW* (DEC 2006), the *Protection of the Environment*

Operations (Clean Air) Amendment (Industrial and Commercial Activities and Plant) Regulation 2005 and other relevant guidelines.

Air Quality

The intent of Council's requirements is to protect the air quality of the City (DCP No.1 Rev 5 Part 2.1.16). The intent may be achieved where:

***P1. Development illustrates that when in operation and when all measures proposed to minimise its impact have been employed, no negative impact will result that would diminish the amenity of adjacent properties, the surrounding area or water bodies, waterways and wetlands*.**

A1.1 Where the development will negatively affect air quality or where it will be affected by air pollution, a Statement of Air Quality is prepared and lodged

A1.2 Where a Statement of Air Quality requires further supporting information, an Air Quality Report is prepared and lodged.

A1.3 Where a monitoring program is required, it is carried out and reported on in accordance with the requirements of the relevant Australian Standards, such as, AS3580.4-1 Methods of sampling and analysis of ambient air – Determination of sulphur dioxide - Direct reading instrument method (1993).

In July 2010, the proponent prepared an *Environmental Impact Statement*, including *Appendix C Air Quality Impact Assessment* [referred to in the following as AQIA (2010)], as required under the Environmental Planning and Assessment Act 1979.

In February 2011, Council staff and external consultants (with technical expertise in air impact of asphalt plants) concluded that the AQIA (2010) report was inadequate, based on a number of technical issues associated with the modelling methodology and processing of model results.

In April 2011, the proponent submitted the *Air Quality Assessment Report, Appendix C of the Response to LMCC on DA/1282/2010 – Boral Cameron Park (2101HCC027)*, referred to as AQA (2011), to resolve the technical issues raised in February 2011.

Further correspondence in May 2011 between the proponent, Council and external consultants resolved additional technical issues in the report AQA (2011).

The AQA 2011 states that the Operational Scenarios of the proposal as:

- Typical plant run time for an average and peak day would be approximately four and seven hours respectively and would occur between 6:00am and 2:00pm.
- However, the plant is designed to be operational 24 hours per day, 7 days per week as necessary for some road construction projects (AQA 2011:4).
- Load out of asphalt and tarping of trucks would occur inside a load-out building which would operate under negative pressure, forcing air from the building to be combusted in the dryer and released from the stack exhaust (Sections 2.2 and 5.2).

Odour Impacts predicted for the following operational scenarios

- Tarping Outside (all hours) – Exceedences of NSW Odour Criterion DECC 2005 (Odour Units, OU) predicted for residential receptors (>2 OU) and industrial receptors (>7 OU).
- Tarping Outside (day time hours only) – Compliance achieved but only for daytime operations only.
- Tarping Inside (all hours) Exceedences predicted at industrial receptors (>7 OU).

Dust Impacts

Predicted levels comply with NSW dust deposition criteria for incremental impacts (2 g/m^2/month) and cumulative impacts (4 g/m^2/month).

Acceptable Solution

The Proponent (AQIA, 2010) proposes:

- Management practices and mitigation measures incorporated into a Construction Environmental Management Plan (CEMP) and an Air Quality Management Plan (AQMP), including Air Quality Response Levels (AQRLs) for controlling dust impacts and odour controls for bitumen vapours (Section 5.1.3).
- Load out of asphalt and tarping of trucks would occur inside a load-out building which would operate under negative pressure, forcing air from the building to be combusted in the dryer and released from the stack exhaust (Sections 2.2 and 5.2).

Council's Conclusion

The current proposal will comply with NSW Odour Criteria for the operating scenario Tarping Outside (day time hours only). For night time operations the technical information now indicates that tarping will be undertaken inside a load-out building under negative pressure and that when combined with other engineering solutions, is likely to result in compliance with the NSW Odour Criteria.

The load-out building is not currently part of the suite of plans for the application, and is only mentioned with certainty in the technical scenario for odour and air emissions (AQA 2011). The April 2011 response from Parsons Brinckerhoff recommends tarping inside if odour impacts prove to be 'significant'. Any built form and engineering solution to achieve this compliance should be required in plan form, and assessed.

Construction Phase CEMP

It is agreed that a site specific CEMP to be required as a condition of consent will address all relevant construction procedures.

Operational Phase – EMS

A site specific Environmental Management System to be required as a condition of consent will address all relevant operation procedures including an AQMP with AQRLs for controlling dust impacts and odour controls for bitumen vapours.

In addition, boundary monitoring of deposited dust complying with Approved Methods (DECC 2005) shall be undertaken for at least 12 months after plant start of operation, to verify that the modelling of dust has been accurate. If monitoring results exceed 4 g/m2/month or incremental impacts of 2 g/m2/month above background, then the plant shall cease operation. With regard to properties further afield (e.g. residential properties in the suburbs of Seahampton, West Wallsend and Cameron Park), no monitoring of dust is sought as it has been demonstrated that levels comply with the NSW Dust Criteria (DECC 2005).

Boundary monitoring / surveying of odour complying with Approved Methods (DECC 2005) shall be undertaken within 12 months after plant start of operation, to verify that the modelling of odour has been accurate. If monitoring results exceed 7 OU under the NSW Odour Criterion DECC (2005), then the plant shall cease operation. With regard to properties further afield (e.g. residential properties in the suburbs of Seahampton, West Wallsend and Cameron Park), no monitoring of odour is sought

as it has been demonstrated that levels comply with the NSW Odour Criterion DECC (2005) - Residential.
In summary, the AQA (2011) fails to illustrate the achievement of the intent to protect air quality, being odour concentration, for neighbouring properties. Compliance with this Criterion P1 can only be achieved with an engineering solution to reduce odour impacts to meet NSW odour criterion at neighbouring receptors.

P5. Development minimises both workplace and community exposure to toxic chemicals

A5.1 Development adheres to National Exposure Standards for Atmospheric Contaminants in the Occupational Environment – NOHSC 1995

A5.2 Development is designed to adhere to the Clean Air (Plant and Equipment) Regulation 1997 (remake 2010)

The AQA 2011 lacks a detailed technical assessment of workplace air quality with specific reference to NOHSC 1995.
By inference, results in AQA (2011) Tables 7.13 and 7.14 adhere to national exposure standards (NOHSC 1995), showing predicted concentrations of gaseous emissions (arsenic, beryllium, cadmium, nickel and mercury) at levels well within the one hour air quality goals at all receptor locations. Thus by inspection and direct comparison, the values in Tables 7.13 and 7.14 adhere to national exposure standards (NOHSC 1995).
The AQIA (2010) states that the greatest risk to workers is the risk of burn injuries from the hot-mix asphalt.
As noted in P1, above, modelling results for the operational scenario "Tarping Inside (all hours)" predicted exceedences at two urban receptors (>7 OU).

Technical advice from the NSW Office of Environment and Heritage and Council's external consultant confirms that an engineering solution is likely to exist to reduce predicted odour.

P6. Development minimised odour nuisance

A6 Development is designed to conform with the Environmental Protection Authority's Draft Policy: Assessment and Management of Odour from Stationary Sources in NSW (January 2001).

AQA 2011 assessed odour impacts in accordance with the *Approved methods for the modelling and assessment of air pollutants in NSW* (NSW DECC, 2005) and the *Technical Framework for Assessment and Management of Odour from Stationery Sources in NSW* (DEC 2006).
AQA 2011 improved on AQIA (2010), by intending that the design of proposed plant would minimise odour nuisance by enclosing the main odour sources (as noted in P1 above).
Load out of asphalt and tarping of trucks would occur inside a load-out building which would operate under negative pressure, forcing air from the building to be combusted in the dryer and released from the stack exhaust (Sections 2.2 and 5.2).
Modelling results for the operational scenario "Tarping Inside (all hours)" predicted exceedences at two urban receptors (>7 OU).

Technical advice from the NSW Office of Environment and Heritage and Council's external consultant confirms that an engineering solution is likely to exist to reduce predicted odour.

Section 2.7 – Streetscape and the Public Realm

The proposal remains inconsistent with this section of the DCP as it remains out of context with the existing and likely future context of the locality.

79C(1)(d) any submissions made in accordance with this Act or the Regulations?

Public submissions:

Four additional public submissions were received in the period from the first JRPP meeting on 10 March 2011 to present. AMP Control, JJ McInnes, Holmesville Progress Association Inc and owner of 27 Earl Street, Holmesville.

Issues of non compliance with Council's DCP in terms of setback, height, traffic, air quality and acoustic impact were raised. The matters raised in the objections have been considered in the above report, background analysis, original report and detailed external consultant reports. It is agreed that the impact of the Asphalt Plant on neighbouring properties as a result of acoustic and odour impacts is unacceptable.