



ENVIRONMENT PROTECTION AUTHORITY

Your reference: MP11_0044 & MP10_0227 Mod 3
Our reference: DOC11/52529
Our contact: Bob Marr

Ms Heather Warton
Director Metropolitan & Regional Projects North
Department of Planning
23-33 Bridge St
SYDNEY NSW 2001

Dear Ms Warton

The Environment Protection Authority (EPA) refers to your letter dated 11 November 2011 seeking a submission on the projects below:

- Commercial Building C3 - (MP11_0044) Barangaroo South; and
- Commercial Building C5 - (MP10_0227) Barangaroo South.

The EPA refers also to the CDs appended to your letter which included Environmental Assessment (EA) reports prepared by JBA Urban Planning Consultants, on behalf of the applicant (Lend Lease Millers Point Pty Ltd) detailing the proposals.

As you are aware the environmental aspects of activities across the entire Barangaroo site are regulated by conditions attached to Environment Protection Licence number 13336 which is held by the Barangaroo Delivery Authority (BDA).

The EPA has reviewed the EAs and considers that environmental impacts associated with these developments can be adequately managed. However, the EPA's review has revealed a number of areas where Environmental Management Plans for example may need to be adjusted to mitigate certain impacts. Details of EPA's specific comments on C3 are appended in **Attachment 1**, and on C5 in **Attachment 2** but in summary, EPA has no objections on environmental grounds to DoP&I approving these proposals should it decide to do so.

If you have any queries regarding these matters please contact Bob Marr on 9995 6825.

Yours sincerely

A handwritten signature in black ink, appearing to read 'G. Sheehy', followed by the date '20/12/11'.

GREG SHEEHY
Manager Sydney Industry
Environment Protection Authority

Attachment 1
EPA's Review of the Environmental Assessment for:
Commercial Building C3 - (MP11_0044) Barangaroo South.

Air Quality

General Comments

The Air Quality Impact Assessment AQIA has generally been performed in accordance with the Approved Method for the Modelling and Assessment of Air Pollutant in New South Wales. The AQIA identified nitrogen dioxide (NO₂) and particulate matter less than 10 micros (PM₁₀) as the pollutants of concern for the project. Based on the assumed construction scenarios (including a scenario of parallel construction of C3 Building ground level and C4 Building 120m elevation), the assessment predicts no exceedances of DECCW impact assessment criteria for NO₂ and PM₁₀. AQIA predicted incremental impacts (ie. Barangaroo emissions alone) are significantly lower than the relevant impact assessment criteria. The AQIA predicted cumulative impacts, for all pollutants and averaging periods, are dominated by background pollutant concentrations. Cumulative impacts were predicted to be up to 93% of the project criteria for NO₂ and approach the project criteria for 24 hour PM₁₀. The AQIA notes that the construction schedule for building C3, C4 and C5 is yet to be developed and that the construction may occur at different stages simultaneously, which are beyond the scope of the AQIA being an initial assessment. The AQIA also notes that additional dispersion modelling will be undertaken if the construction schedule changes require it. The AQIA states an Air Quality Management Plan will be specifically developed for the construction of Building C3, C4 and C5 and will include mitigation measures to ensure compliance with project (EPA assessment) criteria. The Draft Statement of Commitments for the project outlined in Section 6.0 of the Environmental Assessment includes a condition (number 33) to conduct construction and site management relate to the project "generally" in accordance with the Environmental, Construction and Site Management Plan (ECSMS) prepared by Cardno & Bovis Lend Lease within the EA dated October 2010 including the AQIA. EPA notes the current ECSMS does not contain all the mitigation measures outlined in the AQIA.

Recommendation

Based on the air assessment results, as well as the type and scale of the proposed project, it is likely that the project can be managed to prevent adverse air quality impacts.

To minimise the risk of adverse air quality impacts the proponent must develop and implement an air quality management plan for the project prior to construction activities commencing. As a minimum, the air quality management plan must include all mitigation measures included in the AQA: Air Quality Impact Assessment Barangaroo C3 Commercial Building (AECOM, 9 November 2010). Specifically the mitigation measures must include the air pollution control measures assumed in the original air assessment under Section 3.2 Potential Emission Sources and consider the control measures outlined under Section 8.0 Mitigation Measures (both listed below).

Air Pollution Controls (as outlined in AQIA. Note also that these are the same as for C4 Commercial Building)

AQIA Section 3.2 Potential Emission Sources

Paved roads were assumed to be maintained, swept and free of dust, with watering undertaken where required such that wheel-generated dust would be minimised.

Concrete would be delivered in trucks to the top of the excavation area (i.e. no concrete batching plant would be required, and there would be no wheel-generated dust from concrete trucks travelling to the plant).

Trucks delivering construction materials were assumed to drive on sealed hard stand areas or on watered roads.

AQIA Section 8.0 Mitigation Measures

8.1 Construction

Control of access via sealed roadways;

Vehicle speed limits on site;

Monitoring of wind speed and direction to manage dust-generating activities during undesirable conditions;

Construction equipment idling time minimisation and appropriate engine tuning and servicing to minimise exhaust emissions;

Procedures to address any complaints received; and

Development of contingency measures for identified potential air quality impact.

8.2 General

Turn engines off whilst parked onsite;

Vehicular access confined to designated access roads;

Equipment, plant and machinery regularly tuned, modified or maintained to minimise visible smoke and emissions;

Site speed limits implemented;

Minimising haul road lengths;

Covering exposed surfaces at the end of each shift and during dry / windy conditions;

Erection of windbreak barriers on the Site boundary;

Control roadway use i.e. defined road access to minimise dust;

Regular clean up of spills;

Implement a complaints management system;

Adjust work practices (as required) based on wind observations;

Adjust work practices (as required) based on real time dust monitoring results; and

Instantaneous dust monitoring at the boundary.

Noise and vibration

Operational noise levels from mechanical plant are predicted to not exceed the criterion at any receiver

The Interim Construction Noise Guideline (ICNG) does not specify criteria for day, evening and night, only during standard hours and outside standard hours, however the NIA specifies criteria for day, evening and night. EPA will assume that the "Day" criteria apply to the standard construction hours and the "Saturday (extended)" criteria will apply for the outside standard construction hours works occurring on Saturday afternoon.

EPA notes that there is predicted to be up to a 12 dB exceedance of the criterion, which is at the Hickson Road residences outside standard construction hours (Saturday afternoon) under Scenario B (C3 Building Construction) and Scenario D (Scenario B+C; Scenario C is C3 Façade construction).

The cumulative impact assessment (construction of Basement, C3, C4 and C5) indicates potential for up to 15 dB exceedance of the criteria at the Hickson Road residences.

The EPA recommends specific management measures to address these exceedances, such as community notification, installation of hoardings, using low noise equipment etc, (as described in the NIA) are to be included in the revised Construction Framework Environmental Management Plan.

Water

EPA considers that the providing the works are done in accordance with the revised Water and Stormwater Management Sub-Plan and in compliance with the conditions attached to Environment Protection Licence number 13336, impacts on the receiving waters can be adequately managed.

Waste

EPA considers that the providing the works are done in accordance with the revised Waste Management Plan and in compliance with the conditions attached to Environment Protection Licence number 13336, waste management impacts can be adequately managed.

Attachment 2

EPA's Review of the Environmental Assessment for: Commercial Building C5 - (MP10_0227) Barangaroo South.

Air Quality

General Comments

The Air Quality Impact Assessment AQIA has generally been performed in accordance with the Approved Method for the Modelling and Assessment of Air Pollutant in New South Wales. Emission sources included in each modelling scenario were: six cement trucks, three cranes, two forklifts and two concrete pumps. The AQIA identified nitrogen dioxide (NO₂) and particulate matter less than 10 micros (PM₁₀) as the pollutants of concern for the project. Based on the assumed construction scenarios (including a scenario of parallel construction of C5 Building at 120m elevation and C4 Building at ground level), the assessment predicts no exceedances of EPA impact assessment criteria for NO₂ and PM₁₀. AQIA predicted incremental impacts (ie. Barangaroo emissions alone) are significantly lower than the relevant impact assessment criteria. The AQIA predicted cumulative impacts, for all pollutants and averaging periods, are dominated by background pollutant concentrations. Cumulative impacts were predicted to approach project criteria for both NO₂ and 24 hour PM₁₀. The AQIA notes that the construction schedule for building C3, C4 and C5 is yet to be developed and that the construction may occur at different stages simultaneously, which are beyond the scope of the AQIA being an initial assessment. The AQIA also notes that additional dispersion modelling will be undertaken if the construction schedule changes require it. The AQIA states an Air Quality Management Plan will be specifically developed for the construction of Building C3, C4 and C5 and will include mitigation measures to ensure compliance with project (EPA assessment) criteria. The Draft Statement of Commitments for the project outlined in Section 6.0 of the Environmental Assessment includes a condition (number 33) to conduct construction and site management relate to the project "generally" in accordance with the Environmental, Construction and Site Management Plan (ECSMS) prepared by Cardno & Bovis Lend Lease within the EA dated October 2010 including the AQIA. EPA notes the current ECSMS does not contain all the mitigation measures outlined in the AQIA.

Recommendation

Based on the air assessment results, as well as the type and scale of the proposed project, it is likely that the project can be managed to prevent adverse air quality impacts.

To minimise the risk of adverse air quality impacts the proponent must develop and implement an air quality management plan for the project prior to construction activities commencing. As a minimum, the air quality management plan must include all mitigation measures included in the AQIA: Air Quality Impact Assessment Barangaroo C5 Commercial Building (AECOM, 9 November 2010). Specifically the mitigation measures must include the air pollution control measures assumed in the

original air assessment under Section 3.2 Potential Emission Sources and consider the control measures outlined under Section 8.0 Mitigation Measures (both listed below).

Air Pollution Controls (as outlined in AQIA. Note also that these are the same as for C3 and C4 Commercial Buildings)

AQIA Section 3.2 Potential Emission Sources

Paved roads were assumed to be maintained, swept and free of dust, with watering undertaken where required such that wheel-generated dust would be minimised.

Concrete would be delivered in trucks to the top of the excavation area (i.e. no concrete batching plant would be required, and there would be no wheel-generated dust from concrete trucks travelling to the plant).

Trucks delivering construction materials were assumed to drive on sealed hard stand areas or on watered roads.

AQIA Section 8.0 Mitigation Measures

8.1 Construction

Control of access via sealed roadways;

Vehicle speed limits on site;

Monitoring of wind speed and direction to manage dust-generating activities during undesirable conditions;

Construction equipment idling time minimisation and appropriate engine tuning and servicing to minimise exhaust emissions;

Procedures to address any complaints received; and

Development of contingency measures for identified potential air quality impact.

8.2 General

Turn engines off whilst parked onsite;

Vehicular access confined to designated access roads;

Equipment, plant and machinery regularly tuned, modified or maintained to minimise visible smoke and emissions;

Site speed limits implemented;

Minimising haul road lengths;

Covering exposed surfaces at the end of each shift and during dry / windy conditions;

Erection of windbreak barriers on the Site boundary;

Control roadway use i.e. defined road access to minimise dust;

Regular clean up of spills;

Implement a complaints management system;

Adjust work practices (as required) based on wind observations;

Adjust work practices (as required) based on real time dust monitoring results; and

Instantaneous dust monitoring at the boundary.

Noise

Operational noise levels from mechanical plant are predicted to not exceed the criterion at any receiver, noting that "some acoustic treatment, such as acoustic

louvres or silencer, will be required in the external openings in plant rooms”, however EPA notes that a cumulative assessment of operational noise from other mechanical plant on Barangaroo (including from buildings C3, C4 and C5) does not appear to have been undertaken.

EPA notes that the design of the plant rooms are indicative only at this stage and that the NIA notes “a review of the design will need to be assessed at detailed design stage to ensure that compliance with established noise criteria is maintained when specific plant selection and design has been determined”

The NIA suggests that operational traffic noise (including traffic from C3, C4 and C5) will not exceed the 2 dB(A) allowance in the Road Noise Policy.

The Interim Construction Noise Guideline (ICNG) does not specify criteria for day, evening and night, only during standard hours and outside standard hours, however the NIA specifies criteria for day, evening and night. EPA will assume that the “Day” criteria apply to the standard construction hours and the “Saturday (extended)” criteria will apply for the outside standard construction hours works occurring on Saturday afternoon.

EPA notes that there is predicted to be up to a 6 dB exceedance of the criterion, which is at the Hickson Road residences outside standard construction hours (Saturday afternoon) under Scenario B (C5 Building Construction). Most other predicted levels are within 2-3 dB above the criterion or are not predicted to exceed the criterion.

The cumulative impact assessment (construction of Basement, C3, C4 and C5) indicates potential for up to 15 dB exceedance of the criteria at the Hickson Road residences.

The EPA recommends specific management measures to address these exceedances, such as community notification, installation of hoardings, using low noise equipment etc, (as described in the NIA) are to be included in the revised Construction Framework Environmental Management Plan.

Water

EPA considers that the providing the works are done in accordance with the revised Water and Stormwater Management Sub-Plan and in compliance with the conditions attached to Environment Protection Licence number 13336, impacts on the receiving waters can be adequately managed.

Waste

EPA considers that the providing the works are done in accordance with the revised Waste Management Plan and in compliance with the conditions attached to Environment Protection Licence number 13336, waste management impacts can be adequately managed.

