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13 October 2017

Department of Planning and Environment
Level 22, 320 Pitt Street
Sydney NSW 2000

Attention: Chris Ritchie / Thomas Piovesan

Dear Chris and Thomas

**Oakdale South Industrial Estate – Stage 4 – Costco Wholesale (SSD 8209)
Submission on behalf of Jacfin Pty Ltd**

We act for Jacfin Pty Ltd (**Jacfin**), the owner of Lot A in DP 392343 (**Lot A**).

Lot A immediately adjoins the Oakdale South Industrial Estate (**OSE**) to the east. We note that an area of approximately 35 hectares along the southern and eastern boundaries of Lot A has been rezoned to RU4 Primary Production Small Lots, with the potential for future residential development on that part of the land (**Jacfin Land**).

This submission is made on behalf of Jacfin in relation to the Costco Wholesale Development Application SSD 8209 (**Costco DA**) which is currently on exhibition. We note that Jacfin has previously made submissions in relation to the Stage 1 Development Application for OSE and the modification of the Stage 1 Development Application.

Jacfin makes the following comments in relation to the Costco DA.

1 Noise Impacts

Jacfin has commissioned an expert analysis of the Noise Impact Assessment by SLR in relation to proposed Costco development (**Noise Report**). The **attached** letter from Wilkinson Murray identifies significant failings in the assessment presented in the Noise Report and raises significant concerns in relation to the noise impacts of the proposed development.

1.1 Noise Criteria

Condition B18 of the Stage 1 Development Consent for OSE (SSD 6917) (**Stage 1 Consent**) imposes an operational night time noise limit of 48dBA at all 'L3' receivers, including the Jacfin Land. The night time noise criteria applicable to the OSE is designed to prevent sleep disturbance as a result of noise. The Costco DA does not seek to alter the noise criteria applicable to the proposed development under the Stage 1 Consent.

The Noise Report concludes that the night time operational noise level of the proposed development in adverse weather at the Jacfin Land will be 48dBA. The noise impact of the proposed development

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is therefore at the limit of the maximum noise level permitted under the Stage 1 Consent, under adverse weather conditions.

Accordingly, there is no room for error in relation to the noise levels calculated by SLR. Even small variations in the assumptions adopted by SLR in undertaking the modelling presented in the Noise Report have the potential to result in an exceedance of the applicable noise criteria and unacceptable impacts on surrounding receivers.

In the circumstances, the discrepancies and issues identified by Wilkinson Murray (discussed further below) are significant and indicate that the proposed development is likely to have an unacceptable noise impact on the Jacfin Land.

1.2 Underestimated Noise Impacts

As noted above, the Noise Report concludes that the night time noise level generated by the proposed development at the Jacfin Land will be 48dBA. This is based on a number of assumptions with respect to the noise levels of sound-generating components of truck operations, including general truck noise, reversing alarms and braking. As noted by Wilkinson Murray, the Noise Report assumes general truck noise will be 103dBA and that reversing alarms and truck brake release will each generate levels of 115dBA.

The Noise Report does not provide any justification for these assumed noise levels. It is unclear from the Noise Report how these levels have been calculated, or from what source these levels have been adopted. The Noise Report also does not set out the calculations used to arrive at an overall noise level of 48dBA for night time operations.

Wilkinson Murray has confirmed that it has experience with measurements at higher levels for truck noise and reversing alarms than those assumed in the Noise Report. On the basis of the levels measured by Wilkinson Murray, the night time noise of the proposed development has been underestimated, and if its measured levels are adopted for the proposed development, the result is an exceedance of the relevant night time noise criteria at the Jacfin Land by at least 2dBA.

The Stage 1 Consent, as modified, requires the construction of a 5 metre high noise wall along a portion of the eastern boundary of the OSE. Based on the errors identified by Wilkinson Murray in the Noise Report, Wilkinson Murray has concluded that the approved noise wall will be insufficient to prevent unacceptable noise impacts on the Jacfin Land.

Wilkinson Murray has indicated that the noise wall will need to be increased in height to 7 metres in order for the applicable night time noise criteria for the development to be achieved at the Jacfin Land, upon correcting the assumptions adopted in the modelling undertaken by SLR. Calculations undertaken by Wilkinson Murray show that the higher wall would reduce noise from the proposed development by approximately 2dBA, thereby rendering the proposed development compliant.

We note that Jacfin's submission in relation to the now approved modification to the Stage 1 Consent (SSD 6917 MOD 1) raised the problematic nature of setting attenuation measures in the Stage 1 Consent in the absence of sufficient details of the developments proposed to be undertaken in proximity to the proposed noise wall. It was contended in that submission that it was impractical to identify, assess and condition the dimensions of a noise wall in a consent where details regarding the sources of noise generation that the wall is intended to mitigate were unknown and not yet even subject of development applications.

Unfortunately, it appears that Jacfin concerns were well-founded and now that full details of the proposed Costco development are available, it is apparent that the approved 5 metre noise wall is not sufficient.

Jacfin submits that any consent granted in relation to the Costco DA should include a condition requiring the construction of a 7 metre noise wall to mitigate the noise impacts of the proposed development.

1.3 Truck Alarm Assumptions

In calculating the noise level of truck reversing alarms and the overall noise impact of truck operations, the Noise Report assumes that all trucks used to transport goods to and from the proposed development will be fitted with non-tonal reversing alarms. This is a significant assumption, given that the use of tonal alarms would require a 5dB penalty to be applied to the predicted noise level and would result in clearly unacceptable noise levels at the Jacfin Land.

To mitigate the risk of unacceptable noise impacts on the Jacfin Land, Jacfin submits that, as a minimum, any consent to the Costco DA should include a condition requiring that any truck accessing the facility be fitted with non-tonal reversing alarms.

However, even if such a condition is imposed, Jacfin is concerned that Costco will not be able to ensure that this requirement is complied with by all vehicles accessing the site. The proposed Costco warehouse is significant in scale, including 33,588m² in floor space and 169 loading docks. The proposed development will be Costco's primary distribution facility in Australia. The volume of trucks accessing the site at all hours of the day and night will therefore be significant. The Costco DA does not provide any detail as to whether these trucks will come from a single, standardised fleet operated by Costco or a range of suppliers and subcontractors. The Costco DA also does not indicate how Costco proposes to control what vehicles are permitted to enter the site.

Presumably, suppliers will use their own vehicles when making deliveries to the Costco warehouse. If this is the case, Jacfin submits that it will be almost impossible for Costco to ensure that no trucks with tonal reversing alarms are able to access the site.

Accordingly, Jacfin submits that additional conditions of consent are required be imposed under any consent issued to the Costco DA. These conditions should include a requirement that the Applicant specify the operational mechanisms by which they will ensure compliance with the above recommended condition prohibiting the use of tonal reversing alarms, through the preparation and implementation of an Operational Noise Management Plan.

Further, any consent should require noise monitoring be carried out within three months of the commencement of operation of the proposed development, to confirm compliance with the relevant noise limits. Where the noise monitoring demonstrates that the proposed development exceeds these limits, the Applicant should be required to implement further mitigation measures or changes to relevant operating procedures to ensure compliance with the operational noise limits applicable under Condition B18 of the Stage 1 Consent.

1.4 Forklifts

The Noise Report does not consider noise generated by forklifts outside the warehouse facility on the basis that forklifts will only operate inside the facility. The operation of forklifts outside the proposed warehouse will increase the noise generated by the development above that predicted in the Noise Report.

Accordingly, the consent should include a condition specifying that forklifts are only to operate inside the warehouse facility.

1.5 Mechanical Plant Noise

The Noise Report considers that mechanical plant noise will be able to comply with the relevant noise limits applicable to the proposed development, however the Costco DA does not include a detailed design to demonstrate how this will be achieved, although it is noted that acoustic louvres, siting of plant and shielding of fixed plant will be adopted to ensure compliance.

Jacfin submits, in accordance with the recommendations made by Wilkinson Murray, that any consent to the Costco DA should include conditions requiring that:

- a report be prepared by a recognised acoustic consultant assessing compliance of all mechanical plant noise with the applicable noise limits, and lodged with the Department prior to the issue of a construction certificate;
- the sound power level of any ground-level condenser unit not exceed 80dBA; and
- the sound power level emitted in the easterly direction from each louvre and from each roof-mounted air-conditioning unit not exceed 70dBA.

The incorporation of these conditions, compliance with which should be measured as part of the noise monitoring described above, will assist to ensure that the proposed development does not exceed the applicable noise criteria.

1.6 Construction Noise

Construction of the proposed development is likely to generate substantial noise impacts on the Jacfin Land. While construction of the proposed development is likely to pre-date future residential development and occupation of the Jacfin Land, circumstances may eventuate where this is not the case. In this regard, we note that once works have commenced under any development consent granted to the Costco DA, that consent will remain valid and be capable of being acted upon indefinitely.

The Costco DA indicates that Costco Wholesale, rather than Goodman Property Services, will undertake the development. The Applicant is therefore not in a position to commit to a particular timeframe for carrying out the development.

As per Wilkinson Murray's recommendation, Jacfin submits that any consent to the Costco DA should include a condition requiring the preparation and implementation of a Construction Noise Management Plan in accordance with the requirements of the Interim Construction Noise Guideline of the NSW Environment Protection Authority, in the event that residential developments on the Jacfin Land are complete and occupied prior to completion of construction of the proposed Costco development.

2 Submission

Given the predicted night time noise level of the proposed development is at the limit permitted under the Stage 1 Consent, and given the errors identified by Wilkinson Murray, Jacfin submits that the Department should require a peer review of the Noise Report. If compliance with the applicable night time noise criteria at the Jacfin Land cannot be demonstrated, then consent for the Costco DA should be refused, unless the Applicant can propose additional mitigation measures that will adequately manage noise impacts within the established noise criteria.

In the event that the Minister is minded to grant consent to the Costco DA, that consent should be subject to the conditions identified and recommended by Wilkinson Murray, in order to ensure that the noise impacts of the development are appropriately managed and mitigated. In addition, a condition of consent should be imposed requiring the preparation and implementation of an

Operational Noise Management Plan to ensure that operational procedures are in place to ensure that only trucks with non-tonal reversing alarms access the proposed development.

Yours sincerely



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Attach

3 October 2017

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**Re: Costco Development at Oakdale South Estate
Assessment of Noise Impact upon Jacfin Residential Land**

I have reviewed the SLR report and a separate memorandum from SLR in relation to the Costco development on Lot 4A of Oakdale South Estate. The SLR documents reviewed are as follows:

- Report, *Oakdale South Estate – Costco Precinct (Lot 4A) – DA Noise Impact Assessment*, Report No. 630.11166-R06, 14 June 2014 (Noise Report); and
- Memorandum, *Oakdale South Estate – Costco Precinct (Lot 4A) – DA Noise Impact Assessment – Response to Allen’s Linklaters request for additional information dated 13 June 2017*, 18 June 2017.

I now make the following comments with respect to the Noise Report, in particular, focusing on the noise impacts of the proposed development on the adjacent residential land owned by Jacfin (Jacfin Land).

Traffic Noise

The Noise Report indicates that the general noise level (L_{Aeq}) calculated at the Jacfin Land as a result of the Costco operation, including the cumulative noise level, will comply with the appropriate limits.

The maximum noise level ($L_{A1,1min}$) calculated by the Noise Report at the Jacfin Land at night time for adverse weather conditions is 48dBA, and this equals the night time noise limit, with no margin of safety. The calculated level is based on assumed noise levels for truck operations (including 103dBA for truck noise, 115dBA for reversing alarms and 115dBA for truck brake release), but no information is provided to justify these assumptions. Wilkinson Murray has measured higher levels than the assumed ones, such as 105dBA for truck noise and up to 118dBA for reversing alarms. The calculated level appears to be under-estimated. There is therefore a reasonable probability that $L_{A1,1min}$ noise level will exceed the 48dBA noise limit.

Given this, there is a risk that the proposed development will result in unacceptable noise impacts on the Jacfin Land. To mitigate this, the proposed 5 metre noise wall should be extended in height to a total height of 7 metres. Such an increase in height is expected to reduce $L_{A1,1min}$ noise levels at the Jacfin Land by approximately 2dB.

It is also noted that the Noise Report assumes that forklifts will not operate outside the building. The Consent should include a condition to ensure that this assumption is complied with.

It is also noted that it is assumed that truck reversing alarms would be non-tonal in nature and a condition is required to ensure that this assumption is correct for all trucks. If some reversing alarms are tonal, then a 5dB penalty would need to be applied to the predicted noise level (in accordance with EPA policy) and the limit would not be complied with at the Jacfin Land. The higher noise wall proposed above would not mitigate this breach.

The practicality of ensuring that all trucks accessing the premises are fitted with non-tonal reversing alarms will depend upon the management system for truck delivery and pick-up. With the information currently available, the practicality cannot be confirmed. Accordingly, even if a condition is imposed prohibiting the use of tonal reversing alarms, there remains a risk that some trucks accessing the site will use tonal reversing alarms, causing exceedances of the night time sleep disturbance limit on the Jacfin Land.

Mechanical Plant Noise

The process followed in the Noise Report to address mechanical plant noise, involving calculating back from the noise limits to determine the maximum sound power levels of the equipment, is appropriate at this stage of the process. The report indicates that the derived sound power levels can be complied with during the Detailed Design *"by the incorporation of acoustic louvres, judicious selection of mechanical plant and localised shielding of fixed plant"*. Whilst this approach is sound, the Consent should include a condition requiring that the sound power level of the ground level condenser unit not exceed 80dBA and the sound power level emitted in the easterly direction from each louver and from each roof-mounted air-conditioning unit not exceed 70dBA.

Management of Operational Noise

Even if the noise wall is constructed as recommended above and appropriate noise conditions are implemented, there is a risk that noise levels will exceed the limits at the Jacfin Land because of the variability of truck operation and truck noise.

When the Costco development becomes operational, noise monitoring should be carried out at the Jacfin Land to check if the noise limits are being complied with. This will identify the need for any change or treatment to ensure compliance.

Construction Noise

As would be expected, the construction of the Costco development would be quite noisy at the Jacfin Land for a limited period of time. If residences have been constructed on the Jacfin Land prior to completion of the Costco development construction, a Noise Management Plan should be implemented for the construction in accordance with the requirements of the *Interim Construction Noise Guideline*.

Conclusion

The above comments demonstrate that the Noise Report underestimates the noise impact of the proposed development and there is a risk of unacceptable noise impact on the Jacfin Land.

It is my view that the Conditions of Consent should address the following issues:

- The $L_{A1,1min}$ noise level emitted from the premises should not exceed 48dBA as measured at any location on the Jacfin Land during the hours of 10.00pm to 7.00am on any day;
- Within three months of commencement of operation of the Costco development, noise monitoring should be carried out by a recognised acoustic consultant to check compliance with the noise limits. Where the measured levels are found to exceed the limits, modifications should be made to the development or the operating procedures to ensure compliance;
- The wall proposed on the eastern site boundary of the Costco development should be of height 7 metres above the retaining wall;
- No forklift should operate on the premises outside of the warehouse building;
- All trucks accessing the premises should be fitted with non-tonal reversing alarms;
- Prior to issue of the construction certificate a report prepared by a recognised acoustic consultant shall be submitted addressing compliance of noise from all mechanical plant with the noise limits;
- The sound power level of the ground-mounted condenser should not exceed 80dBA and the sound power level emitted in the eastern direction from each louvre and from each roof-mounted air-conditioning unit should not exceed 70dBA; and
- If residences have been constructed on the Jacfin Land prior to completion of the Costco development construction, a Noise Management Plan should be implemented for the construction in accordance with the requirements of the *Interim Construction Noise Guideline*.

I trust this information is sufficient. Please contact us if you have any further queries.

Yours faithfully

WILKINSON MURRAY



Barry Murray

Director