

**To:** Grace Macdonald  
**From:** Mark Irish  
**Date:** 25 February 2022  
**Subject:** Horsley Logistics Park - Jalco SSDA  
Response to EPA Request for Additional Information

**At:** ESR  
**At:** SLR Consulting Australia Pty Ltd  
**Ref:** 610.19360-M07-v1.0 Jalco EPA  
Response.docx

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SLR Consulting Australia Pty Ltd (SLR) was engaged by ESR to prepare an Operational Noise Impact Assessment (NIA) for the proposed Jalco manufacturing facility Development Application (SSD 21190804). The purpose of the report (SLR report 610.19360-R08-v1.3) was to assess potential noise impacts associated with the operation of the Jalco facility located at Lot 201 Warehouse 1, 327-335 Burley Road, Horsley Park, in New South Wales (NSW).

Following submission of the NIA, the NSW Environment Protection Authority (EPA) has requested additional information in a letter (DOC21/1027113-7), summarised below:

*The EPA has reviewed the EIS and Operational Noise Impact Assessment Version 1.3 – SLR Consulting Australia Pty Ltd – November 2021 (NIA). The EPA’s review of the NIA has identified the need for more information to amend or clarify aspects of this report. The key matters within this report that should be addressed include:*

- *Ensuring assessment locations meet the requirements of the Noise Policy for Industry (NPfI)*
- *Providing readable and informative site layout figures*
- *Providing transparent information about the inputs, assumptions and methods used to calculate noise levels*
- *Clarification and consideration of the scrubber system and exhausts*
- *Including an assessment of annoying characteristics to meet the NPfI requirements*
- *Clarifying the location of mitigation measures*

This memorandum includes SLR response to the above mentioned letter.

## **EPA Comment 1: Assessment Locations**

*NIA Chapter 6.1.5 states that “noise levels have been assessed at the most-affected point at each residential property.” However, a review of NIA Figures 3 and 4 indicates that this may not be the case and it is not clear if the requirements of Chapter 2.6 of the Noise Policy for Industry have been met. For example, at NCA 2 Loc 2, the contour maps appear to show areas in the northwest of the property that may receive higher noise levels than where the assessment point was placed.*

*The consultant must ensure that the assessment location has been placed at the worst affected location on or within the property boundary as defined within Section 2.6 of the NPfl.*

*EPA recommends that the receiver locations are reviewed and updated to be placed according to Section 2.6 of the Noise Policy for Industry and the assessment updated accordingly.*

#### **SLR Response to Comment 1:**

Section 2.6 of the NPfl includes the following comment regarding residential receiver assessment locations.

*“For a residence, the project noise trigger level and maximum noise levels are to be assessed at the reasonably most-affected point on or within the residential property boundary or, if that is more than 30 metres from the residence, at the reasonably most affected point within 30 metres of the residence, but not closer than 3 metres to a reflective surface and at a height of between 1.2–1.5 metres above ground level. This should not be read to infer that the project noise trigger level (or a limit in a statutory document) applies only at the reasonably most-affected location.”*

Taking the example of NCA2 Loc 2, the results in Table 9 and contours in Figure 4 indicate that daytime/evening noise levels are predicted to be 37 dBA at the residential facade, and around 1 dB higher (38 dBA) at a location 30 m towards the northern property boundary. This indicates that noise levels at a location 30 m from the facade would be compliant with the daytime and evening LAeq 40 dBA criterion, during the time periods where acoustic amenity around the residential property might reasonably be considered.

When assessing night-time amenity SLR considers it appropriate to assess both LAeq and LMax noise levels at the residential facade as the ‘reasonably most affected location’. For the night-time period (with enhanced weather conditions), noise levels at the residential facade are predicted to comply with the LAeq 38 dBA criterion as shown in Table 9 and Figure 5 of the report.

#### **EPA Comment 2: Site Layout Maps**

*The map of the site layout and noise sources in NIA Figure 2 is not clear, does not contain labels that identify the sources, is of poor image quality and is difficult to read and understand.*

*There are a number of noise sources listed in Section 6, however NIA Figure 2 and other figures in the NIA are not adequate such that EPA can clearly identify where noise sources are located. NIA Table 4 also lists a number of area sources used in the predictions, however EPA have not been able to identify the location and size of these area sources from any map or image in the NIA. The site layout does not clearly identify the location of openings or doors in the walls or roof.*

*EPA recommends a revised site layout is provided which includes labels and the source type at an appropriate resolution so that it can be read and understood. The site layout must include all noise sources modelled including point, area and line source types and a label to identify which item of plant or activity they represent. It should also include all details pertinent to an acoustic calculation, such as doors and openings (including penetrations for mechanical ventilation) in a building where noise breakouts.*

#### **SLR Response to Comment 2:**

The internal and external layouts in Figure 2 and Figure 3 of the report have been updated to confirm the locations of internal and external sources associated with the Jalco operations as shown below.

Figure 1 Lot 201 Warehouse 1 Internal Building Plan and Noise Sources (Updated Report Figure 2)

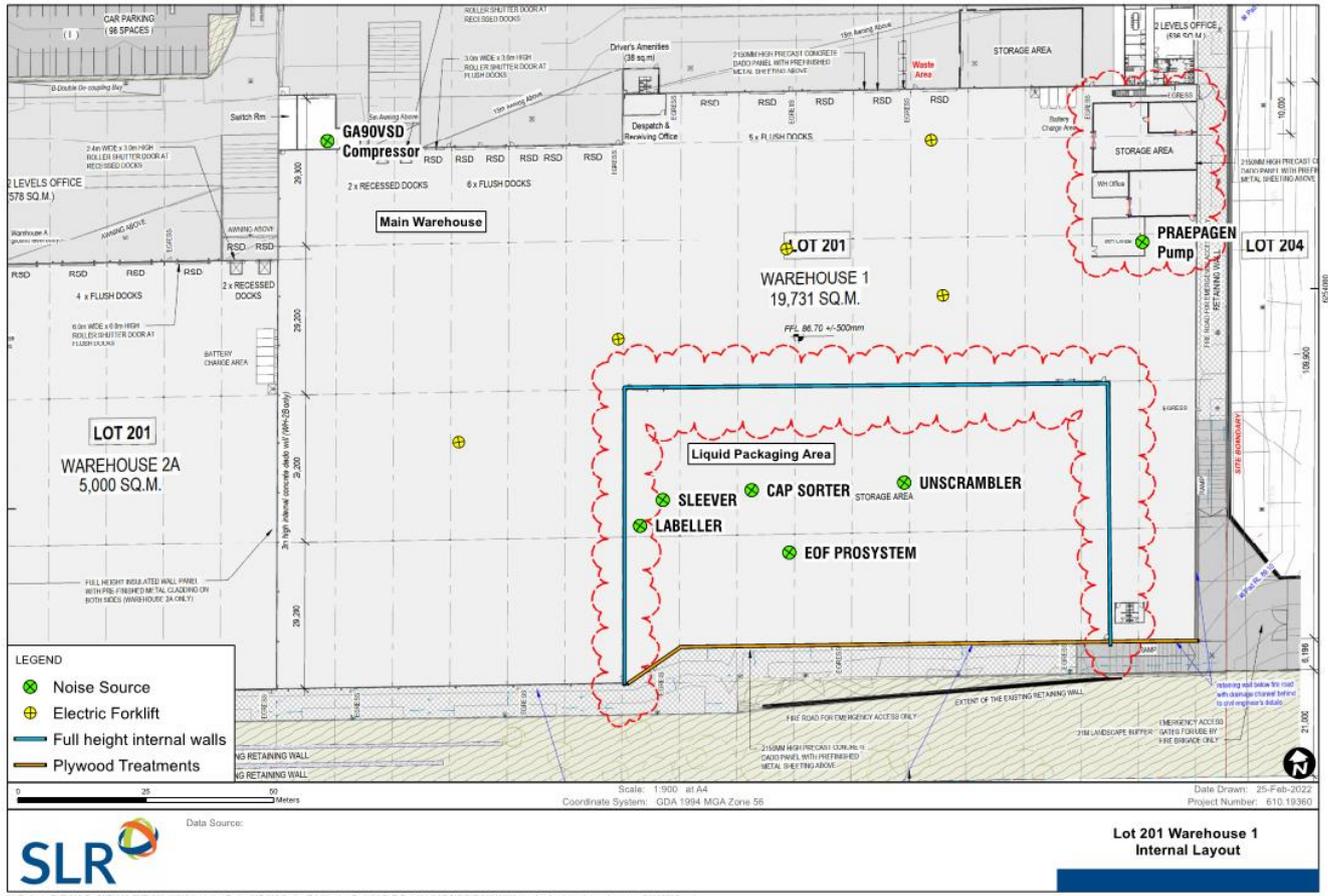


Figure 2 Lot 201 Warehouse 1 Rooftop Plant Locations (Updated Report Figure 3)



### EPA Comment 3: Noise Breakout Calculations

The NIA provides limited information on noise generated inside the building and how it breakouts of the building. Furthermore there are no details in the assessment which explain how the internal noise breakouts from the building were calculated. The calculation method stated in NIA Section 6.1 (CONCAWE) calculates the propagation of noise outdoors, however this method does not include calculations that consider how noise within buildings breaks out.

The NIA also does not include the acoustic performance assumptions of the walls, roof and doors, the assumptions for internal reverberation and the status of doors and openings (including penetrations for mechanical ventilation) being open or closed.

*For example, are the loading bay doors assumed to be open or closed and how would this affect noise emissions? Also the NIA includes a recommendation that a specific plywood lining is fitted to a section of the internal wall in Warehouse 1. However, it is not clear what the performance of the existing wall was assumed to be and what the required performance should be to make the plywood lining an effective control measure.*

*EPA recommends that the following information is provided:*

- *Details of the method and inputs used to calculate noise breakout from the warehouse.*
- *The assumptions used for the building envelope performance, including walls, roof, openings (including penetrations for mechanical ventilation) and doors and if doors and openings were open or closed in the calculations.*

### SLR Response to Comment 3:

Noise breakout from the building has been modelled within Soundplan using the source sound power levels included in Table 7 of the report, along with the design inputs summarised in **Table 1** and **Table 2**.

**Table 1 Noise breakout - building sound transmission inputs**

Building Element	Transmission Loss, Rw dB
<b>Walls</b>	
0.48mm steel cladding	20
Precast concrete panel	53
0.48mm steel cladding, 200mm cavity, 18mm marine plywood	38
Acoustic louvre	6
Roller door (closed)	12
Kingspan wall (internal)	24
<b>Roof</b>	
Steel roof with insulation lining	26
Skylights	21

**Table 2 Noise breakout - building absorption coefficients**

Building Element	Absorption Coefficient, 500 Hz octave band
<b>Walls</b>	
0.48mm steel cladding	0.15
Precast concrete panel	0.01
<b>Roof</b>	
Steel roof with insulation lining	0.95

The number of loading bay doors open in each scenario is in accordance with the number of HV movements in Table 2 and Table 3 of the report:

- Five loading bay doors open during the daytime
- Three loading bay doors open during the night-time

**EPA Comment 4: Corrections for annoying noise characteristics (NPfl Fact Sheet C)**

*The NIA does not appear to have included an assessment of corrections for annoying noise characteristics in accordance with NPfl Fact Sheet C as required by the NPfl.*

*EPA considers there may be potential for intermittent noise and/or low frequency noise issues associated with the manufacturing plant, and this has not been addressed in the NIA.*

*EPA recommends that the assessment includes an assessment of corrections for annoying noise characteristics in accordance with NPfl Fact Sheet C.*

**SLR Response to Comment 4:**

SLR has been advised by Jalco that all proposed manufacturing plant included in the NIA operates continuously and none are expected to exhibit strong low frequency noise components.

To confirm that an intermittency correction for internal plant is not required, the source rankings for night-time (noise-enhancing weather conditions) have been checked. This confirms that noise breakout from all manufacturing activities is not dominant at the nearest receiver as shaded in **Table 3** below.

**Table 3 NCA1 Loc 03 Receiver – Dominant noise source ranking**

Noise Source (with Jalco noise mitigation measures included)	Source Noise Level Contribution LAeq
Loading 202 (A)	27.4
<b>South wall (Jalco manufacturing area)</b>	<b>26.4</b>
202 (2) HV Night Loading	25.2
Loading 202 (B)	24.1
204 HV Night Loading	23.9
<b>Jalco Vent 4</b>	<b>23.8</b>
202 (1) HV Night Loading	23.3
<b>Roof 2 - Jalco manufacturing area</b>	<b>23.1</b>
202-B HV Night Loading	23.1
204 HV Night Road	23.0
<b>Total Receiver Noise Level <sup>1</sup></b>	<b>LAeq 38 dB</b>

Note 1. The total receiver noise level includes contributions from all sources operating at night-time, not just the ten highest source contributions included in the table.

Given the number of internal manufacturing noise sources operating concurrently and considering the overall noise contribution at the nearest receiver, it is not considered appropriate to include corrections for annoying characteristics in the event that any individual item of plant switches on or off as noise levels at the receivers are not likely to suddenly change by at least 5 dB.

With regard to low frequency noise adjustments, no A-weighted and C-weighted third octave noise data was available for the proposed plant. In the absence of any spectral data, reference was made to operational noise measurements carried out at the current Jalco premises at 277-303 Woodpark Road, Smithfield (Benbow Environmental report 201048\_NIA\_Rev11 dated 11 January 2021) in which no low frequency corrections were considered applicable to the existing operations.

Although the proposed plant will not be identical to the existing facility, given the operation and processes will be similar it is considered appropriate that no low frequency corrections are likely to be applicable to the new plant.

#### **EPA Comment 5: Noise mitigation measures**

*NIA Chapter 6.3 has included a recommendation for the following:*

*“Acoustic louvres to the Southern elevation of Liquid Packaging Area, specified as NAP 300 H-line, Fantech SBL1 or equivalent.”*

*The NIA does not provide the location of this measure, nor is it clear what this control measure is for.*

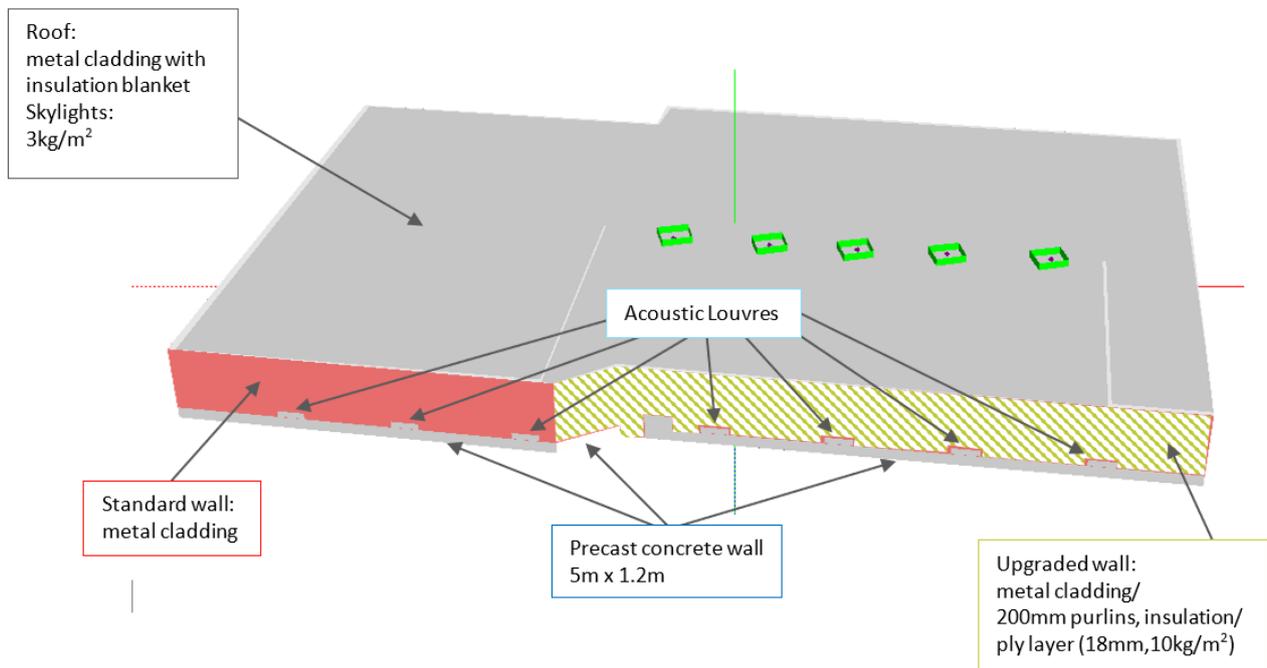
*EPA recommends that clarification is provided as to the location of the recommended louvres and the reason they have been recommended.*

#### **SLR Response to Comment 5:**

The acoustic louvres have been specified in the southern facade as ventilation openings were required to be included as part of the Odour assessment, along with fans located on the roof as shown in Figure 3 of the report.

The location of the louvres is indicated in **Figure 3** below.

**Figure 3** Location of noise breakout mitigation measures



### EPA Comment 6: Scrubber System

*The Architectural Plans and Air Quality Assessment submitted as part of this SSD application both mention scrubber stacks and the plans appear to show them exhausting at 4 locations in the roof.*

*The NIA does not appear to have considered the scrubber system and exhaust stacks in the assessment.*

*EPA recommends that the scrubber system is clarified in the assessment and it is updated accordingly.*

### SLR Response to Comment 6:

The NIA did not include the internal fans and stack discharges required as part of the scrubber system as no information was provided about this equipment at the time of report preparation.

The location of each stack outlet is shown in **Figure 2**. Maximum allowable sound power levels are provided in **Table 4** for each scrubber stack to ensure the stack noise contribution will maintain compliance at the nearest receivers.

The scrubber fans are proposed to be located internally and ducted to the roof so standard engineering controls (e.g. lined ductwork or splitters) are to be included to comply with the maximum sound power limits at each stack outlet.

**Table 4 Scrubber System Exhaust Stacks – Maximum Sound Power Levels**

Exhaust Stack	Maximum Stack Outlet SWL dBA
Stack 1 (HSFL) - Detergent	62
Stack 2 Fill line - Detergent	62
Stack 3 Bleach fill line	72
Stack 4 - Blending tank	72

The required scrubber stack discharge attenuation is to be determined at detail design stage once fan selections are made.

Checked/  
Authorised by: AW