14 May 2019

610.17533-L01-v2.2.docx

Hanson Construction Materials Pty Ltd
Level 18, 2-12 Macquarie Street
PARRAMATTA NSW 2150

Attention: Andrew Driver

Dear Andrew

Concrete Batch Plant NIA, Glebe Island Noise Impact Assessment (SSD 8544) Response to EPA Noise Submission

Hanson Construction Materials Pty Ltd (Hanson) is seeking development consent to develop a new intermodal aggregate storage facility and concrete batching plant at Glebe Island, and SLR provided a Noise Impact Assessment (NIA) in Report 610.17533-R01, dated 15 March 2018 to accompany the development application.

The EPA provided comments to the NIA (EPA reference DOC18/21/217489) and attached to this letter are the issues raised by the EPA (shown in *italic*), with the associated response presented thereafter.

Please advise if you require additional information or clarification of any matter at your earliest convenience.

Yours sincerely

GLENN THOMAS
Director

Checked: JS
Authorised by: GT

ATTACHMENT A

1. Construction phase

1.2 Noise impacts

The EPA emphasises the importance of properly managing noise and vibration impacts during site preparation, construction and construction-related activities, especially in regard to high noise impact activities, such as grinding, jack hammering, rock breaking and hammering, rock drilling and saw cutting.

The EPA notes that the accompanying Notes to Tables 14 and 15 of the Noise Impact Assessment (NIA), forming Appendix D of the EIS, introduces a 'negligible', 'moderate', and 'appreciable' rating for residual noise impacts above the relevant Interim Construction Noise Guideline (ICNG) noise management levels. This is inconsistent with the ICNG where specific actions are detailed where the noise management level is exceeded (ICNG, Table 2). The NIA mitigation actions should align with the ICNG specific actions.

*The EPA **recommends** that further information be provided in the 'response to submissions report' for this EIS where the proponent:*

- *propose mitigation actions for during construction that align with the ICNG specific actions, and*
- *presents detailed information on feasible and reasonable mitigation to manage construction noise from the proposal, and also cumulative construction noise impacts from the neighbouring Glebe Island Multi-User Facility.*

Construction noise impacts have been assessed in accordance with the ICNG (as presented in the NIA Section 7) where the predicted daytime construction noise levels comply with the relevant CNML (noise affected) except at Pyrmont (Bowman Street) where the Pyrmont CNML (noise affected) of 60 dBA is exceeded by up to 2 dBA, but well below the CNML (highly noise affected) of 75 dBA.

The exceedances are predicted during 'enabling' and 'silo' construction works when the construction equipment would be potentially operating on the eastern side of the site. However, for the majority of the time it is anticipated that when the enabling and silo construction work occurs, equipment would be operating at the middle of the site, or further to the west, resulting in reductions of typically 4 dBA at Bowman Street that would bring the predicted noise level at Bowman Street to below the CNML (noise affected) of 60 dBA.

In all cases, Hanson will implement best practice construction noise mitigation measures including:

- all construction works to be conducted within standard construction hours;
- schedule noisier activities during less sensitive times when possible;
- prioritise contactors utilising broadband reversing alarms when possible;
- stand-down construction plant and equipment when not in use;
- utilise equipment with the indicative SWLs presented in the NIA Appendix C;
- identify construction noise minimisation during contactor site inductions;
- implement an effective community information and notification regime; and
- respond to community concerns in a prompt and effective manner.

As described in NIA Section 7.2.1, subject to the approval of the Facility, Hanson will prepare a Construction Noise and Vibration Management Plan (CNVMP) detailing control, management and mitigation of construction noise impacts for the site. NIA Section 7.2.1 presents the cumulative construction noise impacts with the Multi-user Facility, but any cumulative noise impact will depend on the actual construction date for each facility so may be considered a worst case construction scenario. Similarly, NIA Section 7.2.2 presents the cumulative construction noise impacts with the Westconnex M4-M5 Link Rozelle site.

2. Operation phase (on-shore facility)

2.2 Noise impacts

The EPA notes the NIA suggestion to apply a noise management precinct approach in the assessment of operational noise from this proposal. Applying the precinct approach to industrial activities at Glebe Island however, requires further specific detail on how it will function in this instance, in accordance with Section 2.8 of the EPA's Noise Policy for Industry (NPfI). Without this necessary detail, the EPA cannot support a noise management precinct approach and can only consider the proposal in a standalone manner. Refer to Recommendation (a) of this part.

(a) provide further specific detail on how the proposed noise management precinct will function in accordance with Section 2.8 of the NPfI,

The attached letter dated 17 December 2018 (Attachment B) from the Port Authority provides an overview of two proposed noise guidelines that are being developed for Glebe Island and White Bay in consultation with the EPA and DP&E. The purpose of the first guideline is to manage ship noise. This is consistent with other areas of NSW transportation where the relevant authority has developed specific noise guidelines. The second proposed guideline is an approach to manage shore based noise in accordance with the concept of a noise management precinct as introduced by the NPfI. The NPfI has introduced noise management precincts with the aim of simplifying the management of large sites such as ports. The proposed noise management precinct would enable the port facility, with its multiple proponents and users, to operate as a single site where all operators are required to meet common precinct noise amenity criteria.

In accordance with the NPfI access agreements for port users would be developed which set noise standards for each user so that the combined port noise levels meet the relevant precinct noise amenity level. As indicated in the NIA, the batching plant contribution criteria for shore based noise from the concrete batching plant at Pyrmont is 47 dBA $L_{Aeq(9hour)}$ during the night time period which would be documented in the proposed Port Authority's noise standard. This provides allowance for other shore based port activities so that the combined noise levels meet the port precinct night time amenity noise level of 50 dBA $L_{Aeq(9hour)}$. Allowances have currently been made in project specific criteria at Pyrmont for equal noise contributions between the proposed Multi-User Facility, which if approved will be adjacent to the batching plant, and the batching plant. In other locations night time noise criteria have been set at 45 dBA $L_{Aeq(9hour)}$ to include the potential for noise contributions from multiple other shore based sources which is in accordance with the NPfI and will be documented in the proposed noise standard.

Should port night time amenity noise levels be projected to exceed 50 dBA, due to future shore based activities from other users, the access agreements will provide the flexibility for the batching plant contribution criteria in the noise standard to be reduced. The batching plant contribution criteria in the noise standard may be reduced if a new port user is able to identify feasible and reasonable noise mitigation for the batching plant operations that do not unreasonably interfere with the operation of the batching plant.

Prior to the operation of other new users at Glebe Island, the 9 hour night time noise contribution criteria from the batching plant are 47 dBA at Pyrmont and 45 dBA elsewhere. Hanson's will be responsible for demonstrating compliance with relevant noise criteria. Following the finalisation of the Port Authority's proposed noise guidelines, the noise contribution criteria will be included in the noise standard and may change depending on future users with approved operations under the noise management precinct.

The EPA notes that the NIA predicts a 2 dB exceedance of the sleep disturbance noise level at Pyrmont (Table 19). Although this is classified as a negligible increase, the events are associated with truck start ups and compressed air releases, with the potential to occur frequently. The exceedance is justified by referencing an external building façade criteria of 63 dB(A) for a development at Jackson's Landing (Pyrmont). The EPA does not consider this appropriate as a justification for residual noise impacts because feasible and reasonable mitigation should be investigated at the noise source, and transmission path before any consideration of mitigation at the receiver. Refer to Recommendation (b) and (c) of this part.

(b) carry out a detailed assessment of maximum noise level events as required by and in accordance with Section 2.5 of the NPfI,

(c) provide detailed information on feasible and reasonable mitigation measures to address the predicted 2 dB exceedance of the sleep disturbance noise level at Pyrmont (Table 19),

In accordance with Section 2.5 of the NPfI, it is noted that the SDNL 62 dBA LAmax is a screening noise level that triggers further investigation of the potential for sleep disturbance. The predicted maximum noise levels (NIA Table 19) potentially result from short term effects such as truck start-up, and parking brake with compressed air release. Of these events the SDNL 62 dBA LAmax was only exceeded by the parking brake compressed air release events. Hanson have subsequently investigated and confirmed the fitting of air release silencers to concrete trucks that will use the Facility. The silencers are commercially available and can be retrofitted with an estimated minimum noise reduction of 6 dBA to the LAmax noise level. This will remove the exceedance of the SDNL 62 dBA LAmax screening noise level, negating the requirement to conduct a detailed assessment of maximum noise level events.

It is unclear to the EPA whether the proponent has used the noise mitigation design at the façade of properties at Pyrmont to justify increasing the noise amenity trigger levels at that location, in turn permitting higher operational noise levels. If this is the intent of Table 8 and the accompanying Notes 6 and 7, the EPA considers such an approach to be inappropriate. Also, Notes 5 and 7 to Table 8, which gives the amenity and intrusiveness noise levels and resulting project trigger noise levels, suggest these have been influenced by façade noise attenuation design levels at Jackson's Landing, Pyrmont. It is inappropriate for these to be used to derive assessment criteria or to justify an increase in noise emissions, and is inconsistent with the NPfI. The NIA must derive project noise trigger levels in accordance with the NPfI. Although there is a case to be made about façade noise levels in the context of discussion about the impact, and feasible and reasonable mitigation to manage that impact, façade mitigation should not be used to justify a higher noise trigger level setting. Refer to Recommendation (d) of this part.

(d) derive project noise trigger levels in accordance with the NPfI,

The EPA notes that beneath Table 8, the NIA quotes how the NPfI characterises residual noise impacts. However, this implies that it can be interpreted as a means of assessing the significance of operational noise against a noise trigger level. This is not as intended, which is to guide decision making around what constitutes feasible and reasonable mitigation.

There is no need to reconsider and or revise the Project Trigger Noise Levels (PTNLs) for the Facility as they have been determined in accordance the NPfI and not influenced by the façade noise attenuation design levels. SLR can confirm that the noise mitigation design at the façade of properties at Pyrmont was not used to increase the noise amenity trigger levels. The 63 dBA $L_{Aeq(15minute)}$ Project Amenity noise levels of NIA Table 8 equate to the 60 dBA $L_{Aeq(period)}$ noise level + 3 dB, in accordance with the NPfI.

However, Hanson concurs with the EPAs view that, *there is a case to be made about façade noise levels in the context of discussion about the impact, and feasible and reasonable mitigation to manage that impact.*

ATTACHMENT A

Hanson has assessed the Facility in accordance with the requirements of the NPfI Section 3.1 *Applying Project Noise Trigger Levels and Determining Feasible and Reasonable Mitigation Measures*, in particular NIA Section 6.2.1 states: *In accordance with NPfI Section 3.1, Hanson is obligated to consider to feasible and reasonable noise mitigation measures for the Facility*.

Following the adoption of the feasible and reasonable noise mitigation measures presented in NIA Table 13, any residual noise impacts have been assessed in accordance with NPfI Table 4.1 *Significance of Residual Noise Impacts*. Hanson concludes that the noise impact assessment has been prepared in accordance with the requirements of the NPfI - as intended.

> *The EPA notes that Section 6.2.1 of the NIA refers to mitigation which has been identified and applied to the modelled noise sources used in the operational noise model detailed in Table 13. These assumed mitigation measures should be detailed. Refer to Recommendation (e) of this part.*
>
> *(e) provide detailed information regarding the assumed mitigation measures listed in Table 13 of the NIA,*

As described in NIA Section 6.2.1, noise mitigation requirements and resulting source and transmission noise control and management measures are presented in Table 13. Table 13 has been amended to include further detail of the noise mitigation measures as presented in Table 13A below.

Table 13A Facility and Berth Noise Mitigation Measures and Sound Power Levels (SWLs) (dBA re 1ρW)

Plant and Equipment	Nominal Noise Control	Mitigation Requirements	Overall SWL $L_{Aeq(15min)}$
Front End Loader [1] (Komatsu 480)	low-noise specification	Manufacturer's Specification	SWL 107 dBA per unit
Truck operation [1]	speed limited to 20 km/hr	Speed Limit Sign Posted	SWL 108 dBA per unit
Concrete Truck handbrake [1]	parking brake compressed air release silencers	Procurement specification with minimum reduction of 6 dBA	SWL L_{Amax} 116 dBA per unit
Reversing alarms [1]	squawker reversing alarms fitted to all mobile plant, concrete and aggregate trucks	Procurement specification	SWL L_{Amax} 105 dBA per unit
Building Enclosure[1]	selection of quiet mechanical plant and equipment	Confirmation of reverberant level during commissioning	Internal reverberant SPL 87 dBA
	construction colour bond minimum thickness 0.6 mm	Architectural drawings	
	roof ventilation maximum area 15 square metres	Architectural drawings	
	roller doors automatic open and closure; maximum opening time 60 seconds	No openings in roller doors rubber seal at reveal	
Conveyors [2]	low-noise specification with full enclosure	Manufacturer's Specification	SWL 95 dBA/100 m
Conveyor drive [2]	low-noise specification with full enclosure	Manufacturer's Specification	SWL 90 dBA/100 m
CSL Rhine [3,4]	In service operating condition	Internal hull reclaiming conveyor, with external discharge conveyor system	SWL 106 dBA

Note 1 SWL for mobile equipment and fixed plant from SLR database of equivalent operating machinery

Note 2 Conveyors and drives located external to buildings, silos and silo to ship hopper

Note 3 SWL inclusive of significant noise sources based on 12,000 tonnes vessel capacity

Note 4 Ship bow orientated south, with the discharge conveyor feeding the hopper

The EPA notes that Section 6.2.2 of the NIA provides no evidence to support its claim that no corrections are required for annoying noise characteristics. Refer to Recommendation (f) of this part.

(f) provide evidence to support the claim that no corrections are required for annoying noise characteristics as per Section 6.2.2 of the NIA, and

NIA Section 6.2.2 states that the proposed noise mitigation measures (Table 13) and associated noise controlled SWLs aim to minimise potential annoying characteristics from the Facility operating noise levels at the noise source, thus negating modifying factor corrections to the predicted intrusive noise levels (NIA Table 18) in accordance with NPfI Section 3.3.1 *Identifying noise parameters* and NPfI Fact Sheet C. The application of modifying factor adjustments (as described in NPfI Fact Sheet C) includes potential modifying factors for tonal noise, low frequency noise, and intermittent noise, each of which are further discussed below.

Tonal noise: Tonality is defined in the NPfI as *"noise containing a prominent frequency and characterised by a definite pitch"*. The occurrence of tonal noise (if any) is typically associated with stationary plant (i.e. pumps, fans, drives, and the like) where rotating equipment operates at a constant frequency. The NIA Table 13 lists the major items of stationary plant (and mobile equipment) and the associated sound power levels (SWL) for the Facility. A one third octave band analysis of the SWLs for the Facility does not indicate any tonal noise sources, hence no tonal noise modifying factor is applicable.

Low frequency noise (LFN): Low frequency noise is defined in the NPfI as *"noise containing major components in the low-frequency range (10 hertz [Hz] to 160 Hz) of the frequency spectrum"*. NIA Table 18 presents the predicted intrusive noise levels from the Facility to the nearest receivers. The C weighted intrusive noise levels have also been determined, and the difference between the C weighted and A weighted predicted intrusive noise levels are less 15 dB. Hence, compliance with the requirements of NPfI Table C1 would be achieved, no further assessment in accordance with Table C2 is warranted and no LFN noise modifying factor is applicable.

Intermittent noise: Is defined in the NPfI, as *"noise where the level suddenly drops/increases several times during the assessment period, with a noticeable change in source noise level of at least 5dB(A)",* which is subjectively assessed but should be assisted with measurement to gauge the extent of change in noise level. Intermittent noise is not typically a characteristic of a concrete batching facility, as a large proportion of the mobile equipment is operated in repeatable routines and a relatively smaller proportion of the noise emanates from fixed plant (refer to NIA Section 6.1), hence no intermittent noise modifying factor is applicable.

Furthermore, the major items of plant and equipment would be subject to procurement specifications to ensure that the major items are designed, installed, and operated in the absence of annoying characteristics.

The EPA recommends that further information be provided in the 'response to submissions report' for this EIS, specifically;

(g) clearly state whether the source sound power levels (SWLs) and assumptions on the number of deliveries / volume of concrete represent the maximum capacity of the proposal. If not, predictions must consider future growth of the project.

NIA Section 2.3 describes the maximum operating capacity of the Facility, and NIA Table 13 (and Table 13A above) presents the major plant and equipment operating SWLs of the Facility.

3. Operation phase (vessel operations)

3.2 Noise impacts

The EPA recognises that Glebe Island is a long-standing working port but anticipates changes in vessel movements associated with the proposed development may have significant operational noise impacts on nearby sensitive receivers.

The EPA notes the NIA inference that the NSW Industrial Noise Policy (INP) and its successor, the NPfI, are not appropriate to assess noise from vessels at berth. The EPA's expectation is that noise from vessels at berth must be assessed in the NIA against the requirements of the NPfI.

The EPA is unclear on whether the SWL of 106 dB(A) for the vessel, CSL Rhine (NIA Table 13) is fully appropriate and representative of the type of loading/unloading expected. The EPA notes the NIA suggestion that there could be different ships and hence noise emissions:

> *"Hanson advised that they will co-ordinate with the ship operator(s) to ensure that the ship's engine, raw material unloading conveyor mechanism and associated ventilation systems) are minimised where feasible and reasonable to do so" (p.29)*

*The EPA **recommends** that further information be provided in the 'response to submissions report' for this EIS where the proponent;*

(a) assess noise impacts from vessels at berth in accordance with the requirements of the NPfI,

The Glebe Island Multi-User Facility Ship Noise Addendum to the Construction and Operation Noise and Vibration Assessment (Multi-user Addendum) (Spoke Acoustics and AECOM, 2018) outlines the Port Authority's current position on assessing noise from shore based operations and ship based activities and their collaboration with EPA and DP&E on this matter. Some key points are:

The management of ship noise has more in common with aircraft, heavy vehicles and rail locomotive noise than an industrial site. This is because ships:

- Operate in a broader context and travel to other locations in Australia. Like aircraft many ships also operate in an international context; and
- Vary in noise emission between different ships with similar tonnage and also between ships of different tonnage and function.

Comparing noise from shipping and industrial sites, key differences include:

- An industrial site comprises mostly fixed mechanical plant that may be acoustically treated. In contrast, ships are a mobile noise source;
- There are generally greater opportunities to mitigate noise from industrial sites, including potential installation of noise barriers between the source and the receiver. Such options are not feasible for a mobile, on-water shipping noise source;
- Vehicles visiting industrial sites have either NSW, Australian or international design requirements which limit the maximum noise emissions from the vehicle. These design requirements act to minimise noise levels at sensitive or residential receivers. There are currently no similar, consistent design requirements for shipping noise sources. The only international design requirements to manage noise are for the on-board comfort and crew safety; and
- Opportunities to deny a ship to enter a port are currently limited.

Relevant NSW Acts refer to the Maritime Authority for the management of ship and associated shore based noise, however these powers have not been enacted and in some instances the EPA has undertaken this role but not developed specific guidelines for this form of transportation noise.

"Evaluation of ship noise levels against industrial noise criteria is not endorsed by the Port Authority of NSW", however comparisons with industrial noise criteria can be made.

"There is currently no specific guideline in NSW that addresses noise emissions associated with the operations of ships while berthed. The lack of any specific guidelines and criteria for ship noise emissions and impacts on residential receivers in NSW, and the lack of any International or Australian design requirements for noise emission from a ship, makes the management of ship noise complex." Various outcomes have been:

- Ship noise on occasions being assessed using EPA industrial noise criteria, although in most instances, based on previous experience, noise criteria cannot be met.
- Ship noise not being assessed or regulated; and
- Voluntary regulation of ship noise

There are existing processes for managing exceedences of new criteria by existing infrastructure under the NPfI and all superseded approaches. These may be used for noise from the berths at White Bay and Glebe Island which predate all NSW noise policy and guidelines.

In response to noise from existing vessels at Glebe Island, planning controls were in place to protect residences of apartment buildings at Jackson's Landing through building design.

The predicted noise levels from vessels servicing the Multi-User Facility and the Batch Plant are less than historical noise levels.

The Port Authority's attached letter dated 17 December 2018 (Attachment B) outlines work being undertaken to deliver broad noise policy for White Bay and Glebe Island with two new guidelines. The first outlines the Port Authority's approach to manage ship noise and the second guideline will define how shore based noise is managed as a precinct under the EPA's NPfI.

NIA Table 2 and Section 4.3 describe berth activity at GIB1, and recognises that activity as a continued use of the existing port facility. NIA Table 20 already presents the predicted amenity noise levels from the combined berth (GIB1) (typical) activity and the Facility operating.

The EPA (in their submission) have requested that NIA Table 20 be supplemented by presenting the predicted intrusive noise levels from the combined berth (GIB1) typical activity and the Facility operating, as shown in Table 20A.

Table 20A Predicted Berth (GIB1) Typical Activity and Facility Intrusive Noise Levels (dBA re 20 µPa)

Locality	Location	Combined Operation - GIB1 Typical Activity plus the Facility Intrusive LAeq(15minute) Noise Levels		
		Daytime	Evening	Night-time
Balmain	Donnelly Street	47	46	45
	Batty Street / Roberts Road1	48	47	46
Pyrmont	Bowman Street [2]	54-56	53-54	52-53
	Refinery Drive [2]	52-53	51-53	51-52
Glebe	Glebe Point Road	43	42	42

Note 1 The higher noise level from receivers at Batty Street and Roberts Road is shown

Note 2 The range of noise levels to the different floors at multilevel apartment buildings

(b) provide information on SWLs from potential vessels to be used for loading/unloading, and other types of loading/unloading equipment, e.g. crane and bucket, other than the CSL Rhine,

A review of vessel noise levels while delivering bulk goods to Glebe Island and White Bay indicates that the maximum effective sound power level including the unloading mechanism (ie enclosed conveyor or crane and bucket mechanism) is SWL 112 dBA. NIA Table 20 can be further supplemented by presenting the predicted intrusive noise levels from the combined berth (GIB1) maximum activity and the Facility operating, as shown in Table 20B.

Table 20B Predicted Berth (GIB1) Maximum Activity and Facility Intrusive Noise Levels (dBA re 20 µPa)

Locality	Location	Combine Operation - GIB1 Maximum Activity plus the Facility Intrusive LAeq(15minute) Noise Levels		
		Daytime	Evening	Night-time
Balmain	Donnelly Street	48	48	47
	Batty Street / Roberts Road[1]	50	49	49
Pyrmont	Bowman Street [2]	58-59	57-58	57-58
	Refinery Drive [2]	57-58	57-58	57-57
Glebe	Glebe Point Road	48	48	48

Note 1 The higher noise level from receivers at Batty Street and Roberts Road is shown.

Note 2 The range of noise levels to the different floors at multilevel apartment buildings.

The Port Authority is developing a ship noise guideline and operating procedure (refer Attachment B and to the Multi-user Addendum) that draws from industry best practice approaches in managing port activities, and also recognises that managing noise from a vehicle such as a ship is more complex than machinery on an industrial site. A key part of this guideline is a procedure to manage noisy vessels. The guideline aims to identify ships that are noisier than typical vessels and define collaborative actions to review noise emission and reduce noise levels.

The Port Authority's Multi-user Addendum report has identified the range in ship noise levels at Jacksons Landing, Pyrmont since 2010. This range has a median level of 55 dBA and a 90th percentile level of 58 dBA. The Port Authority's development of the proposed guideline is considering this range of noise levels and potential approaches.

It is our understanding the Port Authority's intention is this guideline and operating procedure will be officially adopted prior to the operation of the proposed development. In the interim, Hanson will prepare an operating procedure with which ships visiting the Hanson facility via GIB1 will have to comply. This procedure will align with the forthcoming Port Authority NSW Ports guideline and will ensure that all shipping activity is subject to a consistent management strategy to control noise within the precinct. Noise will be controlled through the introduction of collaborative approaches to manage noise which may result in punitive measures if noise reductions are not implemented on uncharacteristically noisy ships.

> *(c) make clear whether the modelled noise sources from loading/unloading include noise from the vessel, or just the loading/unloading activities, and*

As presented in NIA Section 6.2.1, NIA Table 13 (and Table 13A above) already describes the in service operating condition of the CSL Rhine, where the SWL (typical 106 dBA) is *inclusive of significant noise sources based on 12,000 tonnes vessel capacity* (ie engine, ventilation and the like) and the *ship bow is orientated south, with the discharge conveyor feeding the hopper*.

> *(d) clarify the modelled scenarios by providing noise contour maps of all scenarios in the NIA clearly showing the location of noise sources, buildings, structures, terrain, and receivers.*

NIA Figure 3 presents proposed Facility layout, NIA Table 13 lists the major items of stationary plant (and mobile equipment) and the associated SWLs for the Facility, and NIA Table 12 describes the Facility (daytime, evening and night-time) noise modelling scenarios. The predicted operating intrusive $L_{Aeq(15minute)}$ noise levels from the Facility's three operating scenarios are present in NIA Table 18, the associated noise contours for daytime, evening and night-time are shown in Attachment C.

ATTACHMENT B

Port Authority of NSW Draft Noise Procedure letter dated 17 December 2018

PORT AUTHORITY
OF NEW SOUTH WALES

Andrew Driver
Development Manager
Hanson Construction Materials Pty Ltd
Level 5, 75 George Street
PARRAMATTA NSW 2150

Dear Mr Driver,

Proposed Hanson's Concrete Batching Plant at Glebe Island (SSD 8544) / Port Authority of NSW's Draft Noise Procedure

This letter outlines work being undertaken by the Port Authority to investigate ways of improving noise management at White Bay and Glebe Island. This work has been undertaken in consultation with the EPA and DP&E and aims to:

- Clarify for all stakeholders the noise emission profile of the port and noise criteria
- Facilitate consistent noise assessments and approvals for new projects
- Simplify noise management for the port

An outcome of this work is consideration by the Port Authority in developing two noise guidelines. These would also set noise standards for vessels and shore based activities at each berth.

The purpose of the first guideline would be to manage ship noise. This is consistent with other areas of NSW transportation where the relevant authority has developed specific noise guidelines; for example. Noise guidelines have been developed by the road and rail organisations within the Transport for NSW (TfNSW) cluster.

The guideline would draw from industry best practice approaches in managing port activities, and also recognise that managing noise from a vehicle such as a ship is more complex than machinery on an industrial site. The guideline aims to identify ships that are noisier than typical vessels and define collaborative actions to review noise emission and reduce noise levels.

Preliminary analysis has identified the range in ship noise levels at Jacksons Landing, Pyrmont since 2010. This range has a median level of 55dBA and a 90th percentile level of 59dBA. The development of the guideline would consider the range of noise levels, potential approaches to reduce noise and set a noise standard for vessels. An overview of a process that may be undertaken where noise levels by a vessel exceed the standard is below:

- A vessel specific management plan is developed based on measurements. The management plan outlines operational actions and recommended mitigation to reduce noise levels to the standard or quieter.

YAMBA
PO Box 143
Yamba NSW 2464
T: 61 2 6646 2002

NEWCASTLE
PO Box 663
Newcastle NSW 2300
T: 61 2 4985 8222

SYDNEY
PO Box 25
Millers Point NSW 2000
T: 61 2 9296 4999

PORT KEMBLA
PO Box 89
Port Kembla NSW 2505
T: 61 2 4275 0100

EDEN
PO Box 137
Eden NSW 2551
T: 61 2 66461596

ABN: 50 825 884 846

portauthoritynsw.com.au

- If exceedances remain after 3 vessel visits and the vessel cannot demonstrate improvements via a specific management plan, then night time self-unloading or night time berthing may be restricted so that noise levels from the vessel are less than the standard.

The second proposed guideline is an approach to manage shore based noise in accordance with the Noise Policy for Industry (NPfI) (EPA, 2017). The NPfI has introduced noise management precincts with the aim of simplifying the management of large sites including ports. The proposed noise management precinct would enable the port, with its multiple proponents and users, to operate as a single site where all operators are required to meet common precinct noise amenity criteria.

Consistent with the NPfI, as you are aware, we have requested Hanson to adopt a precinct noise contribution allowance to limit the upper noise level in its environmental assessment for its proposed concrete batching plant. In turn, Port Authority has adopted a precinct noise contribution allowance to limit the upper level of noise in its environmental assessment for the proposed multi-user facility. Equal allowances have currently been allocated to each project so that when combined together, the noise contributions sum to meet the precinct amenity noise level criteria at Pyrmont for shore based activities. In other locations night time noise criteria have been set at a lower level to provide allowances for additional projects which would be located closer to other receivers than these two projects.

Port Authority intends to define the requirements of a noise precinct in its lease documentation with Hanson, its lease documentation with its existing tenants, and any users of the Multi- User Facility. These contracts will define the requirements of the noise precinct so that the combined port noise levels meet the relevant precinct noise amenity criteria in accordance with the NPfI.

Should future port precinct amenity noise levels be projected to exceed criteria, due to future shore based activities from new users, the Lease for the batching plant will further provide the flexibility for the batching plant noise contribution allowance in the noise standard to be reduced. The contribution criteria in the noise standard may be reduced if a new port user is able to identify feasible and reasonable noise mitigation for the batching plant that does not unreasonably interfere with the operation of the batching plant.

The responsibility for monitoring and managing compliance with the noise standard is being reviewed by the Port Authority.

Please do not hesitate to contact Simon Kean (simon.kean@spokeacoustics.com.au) or Christa Sams (csams@portauthoritynsw.com.au) if you have any queries or require additional information.

Yours sincerely,

Brad Milner
EGM, Commercial, Technical & Legal
17 December 2018

ATTACHMENT C

Predicted Daytime, Evening and Night-time Facility Operating Intrusive $L_{Aeq(15minute)}$ Noise Contours

PROJECT:

Glebe Island Concrete Batching Plant

TITLE:

Operating Noise Levels
Daytime
Assessment at 1.5m above ground

MAP NO: 1

Predicted
Noise Level
dBA, Leq

	< 40.0
40.0<=	< 45.0
45.0<=	< 50.0
50.0<=	< 55.0
55.0<=	< 60.0
60.0<=	

Scale 1:6901

0 35 70 140 210 m

Prediction Algorithm: Concawe

Meteorological Category: N/A

Wind: N/A Stability Class: N/A

PROJECT NO.: 610.17533

REPORT NO.:

APPENDIX: A

DATE: 13-08-2018

PREPARED: JS

SLR Consulting Australia

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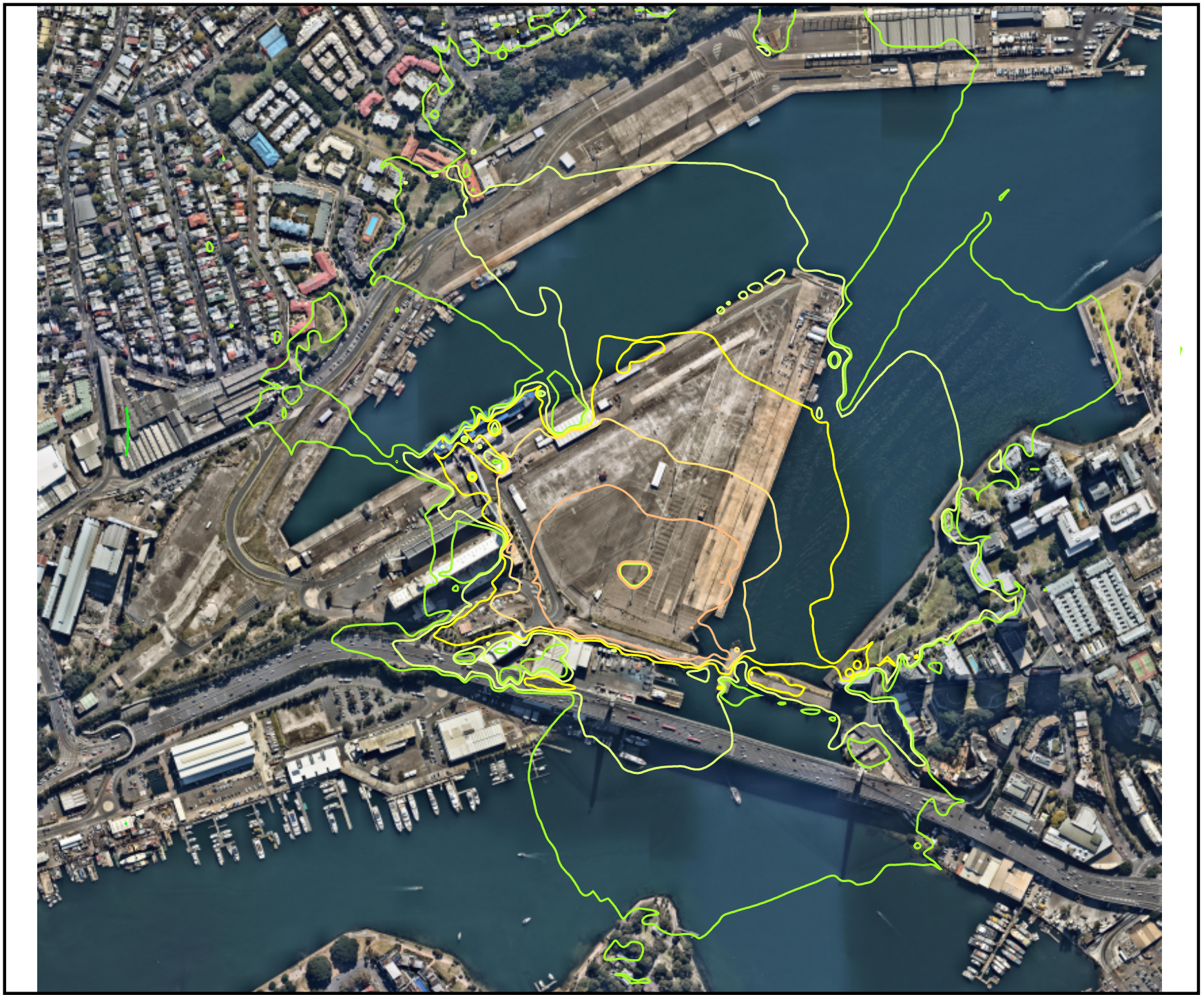
Lane Cove NSW 2066
Tel: 61 2 94288100 Fax: 61 2 94288200



PROJECT:

Glebe Island Concrete Batching Plant

TITLE:

Operating Noise Levels
Evening
Assessment at 1.5m above ground

MAP NO: 1

Predicted
Noise Level
dBA, Leq

	< 40.0
40.0<=	< 45.0
45.0<=	< 50.0
50.0<=	< 55.0
55.0<=	< 60.0
60.0<=	

Scale 1:6901

0 35 70 140 210 m

Prediction Algorithm: Concawe

Meteorological Category: N/A

Wind: N/A Stability Class: N/A

PROJECT NO.: 610.17533

REPORT NO.:

APPENDIX: B

DATE: 13-08-2018

PREPARED: JS

SLR Consulting Australia

ABN 29 001 584 612
2 Lincoln Street
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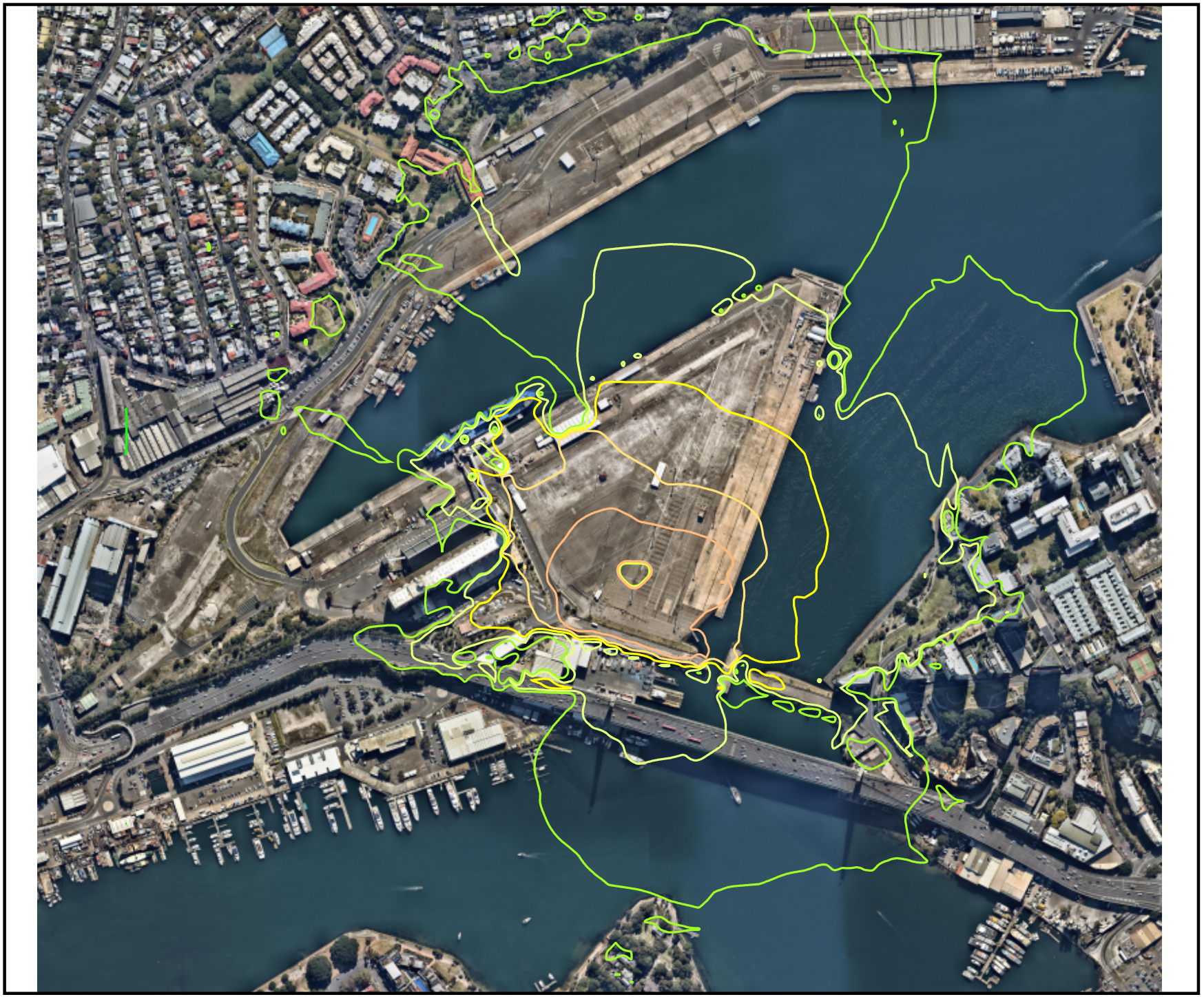

PROJECT:

Glebe Island Concrete Batching Plant

TITLE:

Operating Noise Levels
Night-time
Assessment at 1.5m above ground

MAP NO: 1

Predicted
Noise Level
dBA, Leq

	< 40.0
40.0<=	< 45.0
45.0<=	< 50.0
50.0<=	< 55.0
55.0<=	< 60.0
60.0<=	

Scale 1:6901

0 35 70 140 210 m

Prediction Algorithm: Concawe

Meteorological Category: N/A

Wind: N/A Stability Class: N/A

PROJECT NO.: 610.17533

REPORT NO.:

APPENDIX: C

DATE: 13-08-2018

PREPARED: JS

SLR Consulting Australia

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