



14 October 2018

Mr Dominic Crinnion
Team Leader, Ports and Water Assessments
Department of Planning and Environment

Via email: Dominic.Crinnion@planning.nsw.gov.au

SSI 7734 Mod 1 - Addendum Modification Report

Dear Mr Crinnion,

In July 2018, a Modification Request was made by the NSW Department of Industry (the Department) to modify Operation conditions of the Infrastructure Approval SSI 7734 (Mod 1 Request) concerning air quality and noise amenity. The Mod 1 Request was made in accordance with Section 5.25(2) of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*.

The Mod 1 Request was placed on public exhibition from 12 July 2018 – 27 July 2018 and is currently being assessed by the Department of Planning and Environment (DP&E).

This Addendum Modification Report has been prepared on behalf of the Department to accompany the Mod 1 Request, to seek approval for four days of extended hours during the construction of the marine structures and onshore works (Stage 2 of the SSI).

Project Background

The Eden Breakwater Wharf Extension Project (the Project) was approved by the Executive Director, Priority Projects Assessment of the DP&E (as delegate of the Minister for Planning) on 5 July 2017.

Construction of Stage 1 (dredging) commenced on 4 September 2017 and was completed in April 2018.

Construction of Stage 2 (marine structures and onshore works) commenced on 13 April 2018, as marked by the commencement of survey for scour protection removal in anticipation of pile installation. Piling works also commenced in April and are ongoing. Of the 78 wharf piles, 56 are complete and 22 are partially complete requiring the remaining piles to be drilled and driven or rock socketed. Precast concrete wharf deck plank fabrication is complete and Silane treatment is ongoing. Planning for the required roadworks and line marking is currently underway.

Construction of the Project is generally on schedule. As per Section 5.3 of the Environmental Impact Statement (EIS) prepared for the Project, it is anticipated that Construction of the wharf extension will be complete in February 2019. Subject to the preparation and approval of the Pre-Operation documentation required under the Infrastructure Approval, the wharf extension is expected to become operational by the end of the first quarter of 2019. The first cruise ship to use the wharf extension is scheduled for March 2019.

Report Purpose

The purpose of this report is to provide supporting information to vary the approved hours of Construction under Condition E9 to allow four days of extended hours during the marine structures and onshore works. The supporting information includes:

- a description of the works
- justification for the extended hours



- impact assessment relating to noise amenity
- consultation

Description of the Works

The works to be undertaken during the extended hours are associated with the insitu concrete pour of the wharf deck. Four concrete pours are required of varying volumes between 85m³ - 190m³. The first pour is the largest and concerns have been raised by the contractor regarding achieving the required finishes within the 11 hour working day.

Concession is sought to set-up prior to 7am and finish construction works after 6pm.

The works would involve:

- 6:00am – 7:00am contractor arrives on site to complete prestart, start cards, plant check lists ready for 7am concrete pour
- 6:00pm-10:00pm finishing off surfaces and application of hessian and water as required for water curing

Finishing off the surfaces may require use of a petrol motor powered float. The powered float equipment which would be used is a Flextool power trowel W/B Petrol 40" F04040 (Honda engine GX160). No other significant noise generating tools are required.

The first application of extended hours is scheduled for 25 October 2018, noting that this date is weather dependent. The following applications would occur on a 3-4 week cycle. Whilst the exact dates of the following pours cannot be confirmed at this stage (weather dependent) the works would take place between Monday and Friday inclusive.

Justification for the Extended Hours

The request for extended hours has been identified by the contractor as critical to prevent high and low spots, cracking and achieving the required non-slip surface finish. The main variable being the actual time the concrete takes to move from a plastic to a hardened state, which is generally driven by the ambient weather conditions.

The extended hours also accommodate any unforeseen breakdowns of trucks or pumps or issues at the offsite batching plant that may result in the placement of concrete taking longer than anticipated.

Impact Assessment Relating to Noise Amenity

A noise assessment of the powered float has been carried out by ERM (refer ERM Memo dated 8 October 2018). Noise monitoring data collected during the evening period (6pm to 10pm) during September 2018 is summarised in Table 1. There is currently no construction activity occurring during this period.

Table 1. Current Evening 6pm-10pm Noise Levels

Location	Ambient Noise levels			Background Noise levels		
	L _{Aeq}			L _{A90}		
	Min	Max	Median	Min	Max	Median
Residential (NCA 1) Victoria Terrace	35	54	39	30	45	35
Residential (NCA 2) By Street	37	59	41	30	46	35

The results indicate current ambient noise levels of 39-41 dB(A) and background noise levels of 35 dB(A).



Construction noise management levels are presented in Table 2. Construction noise criteria for the evening period are based on the EIS background noise level (Pacific Environment, 2016) + 5 dB(A). Using the most recent monitoring data for September 2018 (shown in brackets in Table 2) a noise management level of 40 dB(A) would apply.

Table 2. Background Noise Levels and Construction Noise Criteria

Land use	Background Noise level dB(A) L _{A90}	Construction Noise Management Level, L _{Aeq,15min} dB(A)
	Evening	Evening
Residential (NCA 1) Victoria Terrace	33 (35)	38 (40)
Residential (NCA 2) By Street	37 (35)	42 (40)

Notes: Background Noise Levels sourced from Air Quality and Noise Assessment (Pacific Environment 2016). Background levels and noise criteria based on September 2018 monitoring data are shown in (Brackets).

ERM has advised that the powered float motor has a noise emission sound power level of 102 dB(A). Based on the separation distance to the nearest receivers, potential noise levels at the nearest receivers were calculated. The predicted noise levels are presented in Table 3.

Table 3. Predicted Noise Impacts

Distance to Receiver	Noise Criteria	Sound Pressure Level
	Evening	dB(A)
50 m	-	60
100 m	-	54
200 m	-	48
L2, By Street (between 200-220m)	42 (40)	48
L3, Victoria Tce (between 380-400m)	38 (40)	42

Notes: noise criteria based on September 2018 monitoring data are shown in (Brackets).

The noise assessment found:

'During the evening period noise levels are expected to be up to 6 dB (8dB) above the evening criteria (11 dB above background) at BY Street receivers, and 4 dB (2dB) above criteria (9 dB above background) at Victoria Terrace receivers...

It should be noted that the predicted construction noise impacts are within similar ranges to the existing ambient (L_{Aeq}) noise environment and are not expected to result in significant additional noise impacts.'

To minimise impacts on sensitive receivers the following mitigation measures will be employed:

- Site awareness training / environmental inductions that address noise mitigation techniques / measures to be implemented throughout the Project
- Ensuring plant and equipment is well maintained and not generating excessive noise
- Avoid dropping materials and tools or dragging materials across hard surfaces.

Consultation

Consultation and information sharing with the Eden and Snug Cove community continues to be a priority for this Project. The Project's Community Communication Strategy which was developed in



accordance with Conditions B2, B3, B4 and B5 of the Infrastructure Approval, sets out the communications and community liaison activities to be undertaken for the Project in the lead up to work activities, during the work activities and post work activities.

The proposed extended hours, associated works and noise impact assessment results have been discussed with the sensitive receivers specifically identified for this work, as well as with persons who made a submission on the original Modification Request during the public exhibition phase.¹ A summary of the consultation is contained in Table 4. No stakeholder had an issue or objection to the out of hours works.

Table 4. Consultation with Sensitive Receivers and Persons who made Submissions on Mod 1

Sensitive Receivers (identified for the extended hours works)				
Address	Date	Time	Type of Consultation	Response
6 By Street, Eden	10 October 2018	10:45am	Face to Face	No objection
8 By Street, Eden	10 October 2018	11:00am	Face to Face	No objection
10 By Street, Eden	12 October 2018	10:30am	Telephone Conversation	No objection
29 Bramble Street, Eden	12 October 2018	11:41am	Telephone Conversation	No objection
Persons who made submissions on the original Modification Request to Operating Conditions (Mod 1)				
Name	Date	Time	Type of Consultation	Response
John Richardson Bega Valley Shire Ratepayers Association	12 October 2018	9:15am	Telephone Conversation	No objection
Jenny and Arthur Robb	12 October 2018	10:38am	Telephone Conversation	No objection
Gail Ward	12 October 2018	10:39am	Telephone Conversation	No objection
Karen Lott	12 October 2018	10:43am	Telephone Conversation	No objection
Michael and Marge Snjider	12 October 2018	11:30am	Face to Face	No objection
Robert Whiter	12 October 2018	11:00am	Face to Face	No objection

¹ At the time of preparing this submission, Mr P Barber (who made a submission on the original Modification Request) was unable to be contacted. The Department will continue to try to make contact with him to confirm his response to the Addendum Modification Request. It is noted that the submission made by Mr P Barber on the original Modification Request was in support of the modification.



Requested Modification

The current approved hours of Construction for the Project are set out at Condition E9 of the Infrastructure Approval:

Construction (except for dredging and offshore disposal activities) must only be undertaken during the following standard construction hours:

- a) 7:00am to 6:00pm Mondays to Fridays inclusive;
- b) 8:00am to 1:00pm Saturdays; and
- c) at no time on Sundays or public holidays

except in the following circumstances:

- i. *for the delivery of materials required by the NSW Police Force or other authority for safety reasons*
- ii. *where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; and*
- iii. *where different construction hours are permitted or required under an EPL in force in respect of the Construction, in which case those construction hours must be complied with.*
- iv. *(blank)*

It is requested that sub-condition iv (which is currently blank) be amended as follows:

only the works as described in the Addendum Modification Report (Advisian, 14 October 2018) may be carried out between 6:00am to 10:00pm Monday to Fridays inclusive.

Should you require any clarification or further information, please contact me on (02) 8456 7385 or 0407 960 850.

Yours faithfully,

Sofie Mason-Jones
Principal Environmental Planner
Advisian

Attachment: Memo – Proposed Out of House Works – Noise Impacts, Eden (ERM, 8 October 2018)

Memo

Level 15, 309 Kent Street
Sydney NSW 2000
AUSTRALIA

To Robert Davis

Locked Bag 3012, Australia Square
NSW 1215 AUSTRALIA

Copied to

From Aaron Mckenzie

www.erm.com

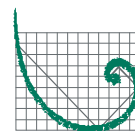
Ref/Job Number 0456918

Telephone: +61 2 8584 8888

Subject Out of Hours works - noise impacts,
Eden

Facsimile: +61 2 9299 7502

Date 8/10/18



ERM

PROPOSED OUT OF HOURS WORKS

ERM understand that Waterway Constructions are seeking approval to undertake works outside of Standard Construction Hours (7am to 6pm Monday to Friday) on an as required basis for concrete pours. This is due to the concrete having to be poured, placed and finished in the same shift, and the potential timelines to complete this. The works likely to take place outside of prescribed hours is concrete floating.

This utilises a petrol motor powered concrete float. No other significant noise generating tools are required.

The out of hours works are expected to take a few additional hours beyond the standard construction period and typically be completed within the Evening noise period.

EXISTING NOISE LEVELS

Noise monitoring data collected during the evening period (6pm to 10pm) during September 2018 is summarised in **Table 1**. There is currently no construction activity occurring during this period.

Table 1: Current (September 2018) Evening 6pm -10pm Noise levels

Location	Ambient Noise levels			Background Noise levels		
	L _{Aeq}			L _{A90}		
	Min	Max	Median	Min	Max	Median
Residential (NCA 1) Victoria Terrace	35	54	39	30	45	35
Residential (NCA 2) By Street	37	59	41	30	46	35

The results indicate current ambient noise levels of 39-41 dB(A) and background noise levels of 35 dB(A).

NOISE CRITERIA

Construction noise management levels are presented in **Table 2**. Construction noise criteria for the out of hours evening period are based on the Environmental Impact Statement (EIS) background noise level (Pacific Environment 2016) + 5 dB(A). Using the most recent monitoring data for September 2018 (shown in brackets, Table 2) a noise management level of 40 dB(A) would apply.

Table 2: Background Noise levels and Construction Noise Criteria

Land use	Background Noise level dB(A) L _{A90}	Construction Noise Management Level, L _{Aeq,15min} dB(A)
	Evening	Evening
Residential (NCA 1) Victoria Terrace	33 (35)	38 (40)
Residential (NCA 2) By Street	37 (35)	42 (40)

Notes: Background Noise Levels sourced from Air Quality and Noise Assessment (Pacific Environment 2016). Background levels and noise criteria based on September 2018 monitoring data are shown in (Brackets).

PREDICTED NOISE IMPACTS

The proposed concrete float motor has a noise emission sound power level of 102 dB(A). Based on the separation distance to the nearest receivers, potential noise levels at the nearest receivers were calculated. The predicted noise levels are presented in **Table 3**.

Table 3: Predicted Noise Impacts

Distance to Receiver	Noise Criteria	Sound Pressure Level
	Evening	dB(A)
50 m	-	60
100 m	-	54
200 m	-	48
L2, By Street (between 200-220m)	42 (40)	48
L3, Victoria Tce (between 380-400m)	38 (40)	42

Notes: noise criteria based on September 2018 monitoring data are shown in (Brackets).

During the evening period noise levels are expected to be up to 6 dB (8 dB) above the evening criteria (11 dB above background) at By Street receivers, and 4 dB (2 dB) above criteria (9 dB above background) at Victoria Terrace receivers. Mitigation measures are recommended in the following section.

It should be noted that the predicted construction noise impacts are within similar ranges to the existing ambient (L_{Aeq}) noise environment and are not expected to result in significant additional noise impacts.

RECOMMENDATIONS

To minimise impacts on sensitive receivers the following mitigation measures are recommended for out of hours works:

- Site awareness training / environmental inductions that address noise mitigation techniques / measures to be implemented throughout the project.
- Ensuring plant and equipment is well maintained and not generating excessive noise.
- Avoid dropping materials and tools or dragging materials across hard surfaces.

Recommendations for additional mitigation measures for out of hours works are detailed in Table 6.12 of the EIS noise assessment (Pacific Environment 2016) these mitigation measures are based on the Transport for NSW Construction Noise strategy (CNS) for out of hours works.

- Noise levels 0-10 dB above background during the evening (6pm to 10pm) period the CNS does not recommend additional mitigation measures.
- For noise levels 10-20 dB(A) above background during the evening (6pm to 10pm) the CNS recommends the notification to residents of the extent and nature of the works with letterbox drops prior.

Where works were to extend into the night time period, the CNS recommends additional measures including noise monitoring of the works.