



SYDNEY GATEWAY

A Joint Venture Project



SB 43 Community Agreement – Validation Monitoring Plan

Project: Sydney Gateway Road Project

Document No: SGWPW-JHSW-NWW-EN-RPT-059258

DOCUMENT APPROVAL

REVISION	DATE	PREPARED BY	REVIEWED BY	APPROVED BY	REMARKS
00	23/01/2023	xxxxx	xxxxx	xxxxx	For Issue

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1.0 Introduction

John Holland Pty Ltd obtained Environment Protection Licence (EPL No. 21524) from the NSW Environment Protection Authority for the Sydney Gateway Project (SSI-9737) on behalf of the John Holland – Seymour Whyte Joint Venture (JHSW-JV). The licence is for construction works relating to Road Construction ($\geq 50,000T$ & road to be constructed $< 10km$) as defined under Schedule 1 of the Protection of the Environment Operations Act, 1997 (POEO Act).

The purpose of this document is to confirm that a community agreement has been received for works outside standard construction hours (OOHW) to deliver and install the planks for the SB43 bridge near Bellevue Street and Swamp Road, St Peters. This agreement has been reached in accordance with conditions E1.1, E1.2 and E1.3.

In addition, this document will outline the Validation Monitoring Plan for the works covered by the community agreement, in accordance with conditions E1.8 and E1.9.

2.0 Works subject to the community agreement

The Sydney Gateway project involves the construction of several bridges over and adjacent to the ARTC rail corridor, including SB43 which is shown in Figure 1 below.



Figure 1 Bridges being constructed

Construction of the SB43 bridge includes delivery and installation of approximately 91 planks, which are up to 19m long and weigh over 17t each. Due to their size, the planks must be delivered on oversized vehicles and stored/prepped in a designated area that is close to the bridges. See Figure 2 which shows the laydown area in relation to the bridge construction area.



Figure 2 Plank laydown area and work zone

The planks can only be lifted, moved, and installed using either two 250t cranes or one 500t crane. Due to the operating height of the cranes, neither can operate during standard construction hours without breaching the Obstacle Limitation Surface (OLS) height limits set by Sydney Airport Corporation. The OLS limits in the area are between 17-18 AHD, while the cranes will be working at approximately 27m AHD. Between the hours of 11pm and 5am, the OLS height limit increases to 44m AHD. See Figure 3 below which shows the OLS and crane heights.

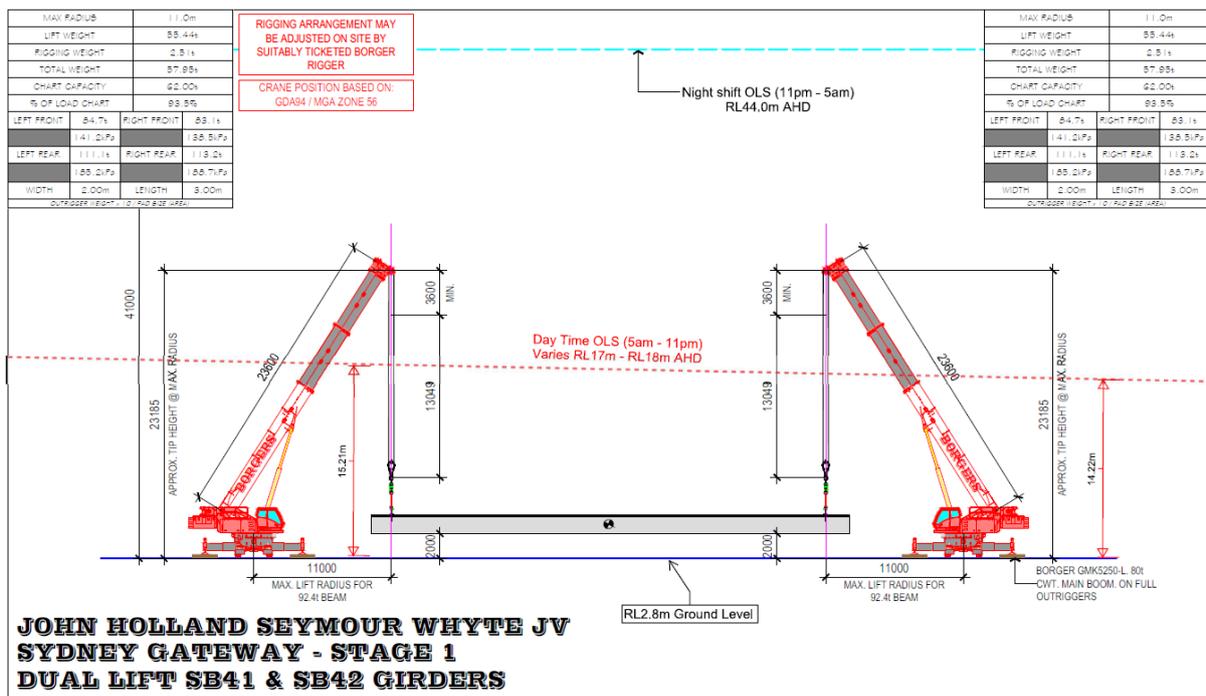


Figure 3 OLS height and Crane height

Based on the above, the following OOHW is required near to Bellevue Street:

- Deliveries of oversized pre-cast concrete planks
- Unloading the planks to the laydown area using two large 250t cranes
- Transferring the planks from the laydown area to the bridge construction area.
- Installing the planks on to the bridge abutments

Works are expected to take a maximum of 4 months to complete, commencing in mid-February 2023 and being completed by late-June 2022.

3.0 Noise modelling and previous monitoring results

The closest portion of the work site is approximately 90m away from the nearest residential receivers (in Bellevue Street, Tempe), with the next closest receivers being over 200m away on the other side of the Princes Highway.

Preliminary noise modelling, undertaken using the RMS noise distance estimator tool (see Appendix B), indicated that the closest residential receiver (? Bellevue Street, Tempe) would be expected to receive worst-case external noise levels of a maximum of 60 dB(A), which is 7 dB(A) above the Noise Management Level (NML).

It is expected that the actual noise level will be lower, which is backed up by the monitoring of the previously completed girder installation for SB41/42 in late-2022 (undertaken under condition L4.7). Noise monitoring for this similar scope of work indicated that actual noise levels from the Sydney Gateway works were typically between 49 to 54 dB(A), with other non-Sydney Gateway noise sources (e.g. Princess Highway and the nearby Qube container terminal) being the more dominant noise source at the receivers. These noise monitoring results were previously reported to the EPL as part of the monthly reporting.

The other residences were not predicted to be impacted, as they were shielded from the noise sources by the closest house.

4.0 Community agreement

Despite only one house modelled to be impacted, JHSW has made contact with number ? and ? Bellevue Street for a community agreement, as these houses share a common wall and boundary. The residents were contacted directly via email by members of the JHSW community team, in accordance with requirements of E1.3, on Tuesday 17 January 2023.

Written support was received from these residents in Bellevue Street on Tuesday 17 January 2023, and Wednesday 18 January 2023. A copy of the agreements from the two residents are provided as an attachment to this report.

Based on this agreement, JHSW is submitting notification to the EPA requesting approval to proceed with the works. Noting that in accordance with condition E1.2 a) the community agreement must be submitted to the EPA for approval 21 calendar days prior to any works subject to the agreement being undertaken, no OOHW are proposed to commence before 13 February 2023.

JHSW will engage with the residents at Bellevue Street on a 4-weekly basis to ensure their continued support for the proposed works and will provide evidence to the EPA, in accordance with condition E1.11.

5.0 Validation Monitoring Plan

In accordance with E1.9, JHSW proposes to undertake validation monitoring at property boundary of relevant Bellevue Street properties on the first two (2) nights of work to confirm that noise levels from the OOHW are within the predicted levels. In addition, validation monitoring will continue monthly and in response to complaints until the completion of works.

If validation monitoring indicates that noise levels are higher than predicted, work practices will be reviewed and modified as required to ensure noise levels at the residential receivers do not exceed the predicted levels.

6.0 Conclusion

JHSW seeks the EPA's approval to commence OOHW from 13 February 2023 to 30 June 2023 near Bellevue Street Tempe based on the agreement from the affected receivers.

Appendix A – Evidence of community agreement

On Tue, 17 Jan 2023 at 10:26 am, xxxxxxx wrote:

Good morning XXXX

And a belated Happy New Year. I hope you have had a good break.

I have just left a message on your phone but am following up with this email. As previously advised, we have another phase of bridge works starting near Bellevue Street this year in mid-February. We are again seeking your assistance to complete this work up to five night a week and are therefore hoping to again get your agreement to do this.

Would you please read the below and if you are happy for us to proceed with this work 5 nights a week please copy and paste the final paragraph of this email and return to me.

Many thanks

XXXXXX

Project Overview

John Holland Seymour Whyte (JHSW) has been contracted by Transport for New South Wales to complete construction of Sydney Gateway Road Project (SSI-9737).

As you are aware following our discussion, construction of the bridges across the Port Botany Rail Line (see map below) is continuing in 2023. Following the installation of girders last year, JHSW is required to get ninety large pre-cast concrete planks delivered and installed and undertake associated concrete pours on this bridge. This requires JHSW to undertake work outside of standard construction hours including at night in line with road, rail, and Airport safety regulations.

As discussed, we are seeking your support to undertake out of hours works **up to 5 nights** a week between **Monday 13 February to Friday 30 June 2023**.

Below is an outline of the details we discussed for consideration in supporting these out of hours activities.



Figure 1: Works location for bridge construction, deliveries, laydown, and concrete pours.

1. The work proposed

JHSW is required to construct a road bridge over the Port Botany Rail Line near Swamp Road / Bellevue Street. Pending approval, the following works are required to occur outside standard construction:

- Deliveries of oversized concrete planks via Bellevue Street
- Unloading of planks off the delivery vehicles to a laydown area near the rail line (see the map) using two large 250t cranes (one at each end of the plank)
- Transfer of the planks from the laydown area to the bridge work area (see the map) for future installation, using two large 250t cranes (one at each end of the plank)
- Installation of the planks on to the previously installed girders using a large 500t crane
- Associated concrete pours

Timing of Works:

- Oversized vehicles can only travel on the roads at night due to RMS regulations.
- Large cranes (e.g., 250t or 500t) can only operate in this area between 11pm and 5am due to height restrictions from Sydney Airport operations
- The installation of bridge planks may take place on night, including weekend nights

2. **Expected impacts.**

Noise and vibration for the project was assessed in Chapter 10 of the EIS (Environmental Impact Statement) which you can access [here](#). JHSW has also carried out additional noise and vibration assessments to predict the likely level of noise/impacts for all works on the project.

The specific noise assessment for these bridge works has predicted that the external noise levels at 3-4 Bellevue Street would be a maximum of 60 dB(A) based on a worst-case assessment, which is 7dBA above the night-time Noise Management Levels. This noise level is equivalent to an air conditioner or normal conversation. However, within your property, works are expected to be largely inaudible.

Monitoring of the previously completed girder delivery and installation, a similar activity, indicated that the actual noise levels were lower than the worst-case predictions. This is expected to be the case with the upcoming works.

3. **Expected duration of works.**

The extended working hours will occur **up to 5 nights a week** between **7:00pm - 7:00am and commence from Monday 13 February and continue until Friday 30 June 2023**. This includes set up activities which should be inaudible, and the main works outlined above which will be undertaken between **11:00pm - 5:00am**.

4. **Mitigation measures**

When undertaking this work, JHSW will make every effort to further reduce noise levels as much as possible by implementing mitigation measures that will include:

- Using non-tonal reversing beepers on machinery
- Using acoustic noise blankets around the work areas wherever feasible and reasonable
- Using material slings on the cranes instead of chains wherever it is safe
- Turning off equipment and vehicles when not in use
- Directing lighting towers away from residences
- Instructing our workers to keep noise to a minimum.

We will also undertake noise monitoring on a regular basis during activities to ensure that noise levels are compliant with what has been predicted and to determine if additional mitigation measures are required.

5. **Expected benefits for the community.**

The key benefit of accepting JHSW working up to 5 nights a week will be a reduction to the total program required to complete this scope of about 3-months, noting that night-time work will be required to complete this bridge construction irrespective of the number of work nights allowed in a week.

6. **Other out of hours works**

No other construction work outside standard construction hours, which would cause additional cumulative noise impacts at your property, are proposed to occur concurrent with these works.

Approval

If you are happy to give permission for JHSW to undertake these works for up to 5 nights a week, would you please copy and paste the below and return to me by email at your earliest convenience.

I have been consulted about the upcoming out-of-hours work required to construct the bridge over the Port Botany Rail Freight Line, including the timing, duration, and likely noise impacts.

I give consent for John Holland Seymour Whyte to complete this activity for up to 5 nights a week between 13 February and 30 June 2023.

I will continue to keep in regular touch with you as the works progress to ensure that you remain supportive of us working up to 5 nights a week.

If you have any questions about this work or any other aspect of the project, please get back to me.

Many thanks for working with us again in this matter

Kind Regards

XXXXXX



A. [10 Bourke Rd, Mascot NSW 2020](#)

E. SydneyGateway@jhs.com.au

M. 1800 654 446

Translating and interpreting service.

*If you need help understanding this information, please contact the translating and interpreting service on **131 450** and ask them to call us on **1800 654 446**.*



From: xxxxxx

Sent: Tuesday, 17 January 2023 10:43 AM

To: xxxxxxx

Subject: Re: FW: Sydney Gateway upcoming out-of-hours work near Bellevue St

Hi xxxx

No issue. Please continue work so that it will finish the soonest possible time.

Regards,

xxxxxx

On Tuesday, January 17, 2023, 10:22, xxxxxxx wrote:

Good morning, xxxxx

And a belated Happy New Year. I hope you have had a good break.

I have just left a message on your phone but am following up with this email. As previously advised, we have another phase of bridge works starting near Bellevue Street this year in mid-February. We are again seeking your assistance to complete this work up to five night a week and are therefore hoping to again get your agreement to do this.

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Kind Regards

xxxxxxx



SYDNEY GATEWAY

INTEGRITY | COMMITMENT | TOGETHER

**JOHN
HOLLAND**

**SEYMOUR
WHYTE**

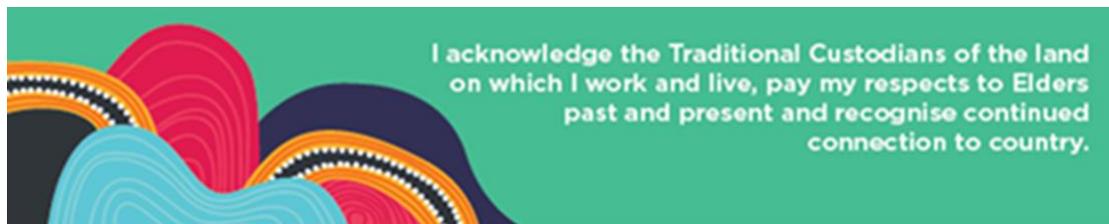
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E. SydneyGateway@ihsw.com.au

M. 1800 654 446

Translating and interpreting service.

*If you need help understanding this information, please contact the translating and interpreting service on **131 450** and ask them to call us on **1800 654 446**.*



From: xxxxxxxx

Sent: Tuesday, 17 January 2023 10:01 PM

To: xxxx

Subject: Re: Sydney Gateway upcoming out-of-hours work near Bellevue St

Hi xxxxx

Can't copy and paste for some reason but happy to approve any works needed to move forward.

Regards, xxxx

Appendix B – RMS noise distance calculations

Predicted noise levels for closest receivers – XXXXXX Bellevue Street



Construction Noise Estimator

Steps:

1. Enter project name (cell C9).
2. Enter scenario name (cell C10).
3. Enter receiver address (cell C11).
4. Select area ground type (cell C12) - water, undeveloped green fields (e.g. rural areas with isolated dwellings) or developed settlements (e.g. urban and suburban areas)
5. Select the type of background noise level input - Representative noise environment (to make assumptions) or user input (where noise monitoring data is available):
 - (a) where representative noise environment is selected - select the appropriate noise area category (cell C16). The worksheet titled 'Representative Noise Environ.' provides a number of examples to help select the noise area category.
 - (b) where user input is selected - enter the measured background noise level for each time period (cells D17 to D19).
6. Is all plant at the same representative distance to the receiver? Select Y or N (cell C24):
 - (a) where Y is selected - enter the representative distance in cell C25.
 - (b) where N is selected - go to step #7
7. For the scenario (e.g. shallow excavation), select plant from the drop-down list in cells A28 to A47 (e.g. dump trucks + excavator).
 - (a) enter quantity for each selected plant in cells D28 to D47.
 - (b) where N is selected from step #6 - enter the distance to receiver for each individual plant in cells E28 to E47.
 - (c) is there line of sight to receiver? select from drop down list in cells F28 to F47. Solid barrier can be in the form of road cutting, solid construction hoarding, acoustic curtain, timber lapped and capped fence, shipping container, site office, etc. Please note that vegetation and trees are not considered to be a form of solid barrier.
8. Identify the level above background and/or noise management level (see rows 57 to 62).
9. Identify and implement standard mitigation measures where feasible and reasonable. Include any shielding implemented as part of the standard mitigation measures by changing the selection in the 'Is there line of sight to receiver' drop-down list.
10. Identify and implement feasible and reasonable additional mitigation measures (see rows 63 to 65).
11. Document a summary report detailing:
 - (a) project description (including location, duration, hours of work, construction methodology, plant, potentially impacted receivers, etc.).
 - (b) background noise levels.
 - (c) noise management levels.
 - (d) predicted noise levels for each time period.
 - (e) sleep disturbance affected distance for night works.
 - (f) mitigation measures.
 - (g) team member responsible for implementing mitigation measures and managing noise and vibration.

(Note that suitable noise management levels for other noise-sensitive businesses not identified in the Construction Noise Estimator should be investigated on a project-by-project basis. Please contact a Roads and Maritime noise specialist for more information)

Please input information into yellow cells

Please pick from drop-down list in orange cells

Project name	Laydown for SB41/42 Construction		
Scenario name	General works - Impacts to residential receivers at night		
Receiver address	Residential receivers on Bellevue Street		
Select area ground type	Developed settlements (urban and suburban areas)		
Select type of background noise level input	User Input		

		Representative Noise Environment	User Input
Noise area category			
RBL or LA90 Background level (dB(A))	Day		64
	Evening		60
	Night		48
LAeq(15minute) Noise management level (dB(A))	Day		74
	Day (OOHW)		69
	Evening		65
	Night		53

Is all plant at the same representative distance to the receiver? Y/N	N
Representative distance (m)	Using Individual Distances!

Type/ model plant (See Sources Sheet)	SWL LAeq (dB(A))	SPL @7m (dB(A))	Quantity	Individual distance to receiver (m)	Is there line of sight to receiver? Y/N	Quantity correction (dBA)	Shielding correction (dBA)	Distance used in calculation (m)	Contribution SPL (dB(A))
Truck (>20tonne)	106	81	1	110	Yes	0	0	110	54
Mobile Crane	106	81	1	90	Yes	0	0	90	57
Mobile Crane	106	81	1	110	Yes	0	0	110	54
Power Generator	94	69	2	90	Yes	3	0	90	48

Total SPL LAeq(15minute) (dB(A))	60
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Residential receiver		
Noise Management Level (dB(A))	Standard hours	74
	Day (OOHW)	69
	OOHW Period 1	65
	OOHW Period 2	53
Level above background (dB(A))	Standard hours	
	Day (OOHW)	
	OOHW Period 1	0
	OOHW Period 2	12
Level above NML (dB(A))	Standard hours	
	Day (OOHW)	
	OOHW Period 1	
	OOHW Period 2	7
Additional mitigation measures	Standard Hours	-
	Day (OOHW)	-
	OOHW Period 1	-
	OOHW Period 2	V, N, R2, DR

Predicted noise levels for next closest receivers – XXXXX (note – shielded from worksite by XXXXX Bellevue Street)



Transport
Roads & Maritime
Services

Construction Noise Estimator

Please input information into yellow cells

Please pick from drop-down list in orange cells

Project name		Laydown for SB41/42 Construction	
Scenario name		General works - Impacts to residential receivers at night	
Receiver address		Residential receivers on Bellevue Street - behind	
Select area ground type		Developed settlements (urban and suburban areas)	
Select type of background noise level input		User input	

		Representative Noise Environment	User Input
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RBL or LA90 Background level (dB(A))	Day		64
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Is all plant at the same representative distance to the receiver? Y/N N

Representative distance (m) Using Individual Distances!

Type/ model plant (See Sources Sheet)	SWL LAeq (dB(A))	SPL @7m (dB(A))	Quantity	Individual distance to receiver (m)	Is there line of sight to receiver? Y/N	Quantity correction (dBA)	Shielding correction (dBA)	Distance used in calculation (m)	Contribution SPL (dB(A))
Truck (>20tonne)	106	81	1	130	No (behind rows of houses)	0	-10	130	42
Mobile Crane	106	81	1	110	No (behind rows of houses)	0	-10	110	44
Mobile Crane	106	81	1	130	No (behind rows of houses)	0	-10	130	42
Power Generator	94	69	2	110	No (behind rows of houses)	3	-10	110	35

Total SPL LAeq(15minute) (dB(A)) 48

		Residential receiver
Noise Management Level (dB(A))	Standard hours	74
	Day (OOHW)	69
	OOHW Period 1	65
	OOHW Period 2	53
Level above background (dB(A))	Standard hours	-
	Day (OOHW)	-
	OOHW Period 1	0
	OOHW Period 2	0
Level above NML (dB(A))	Standard hours	-
	Day (OOHW)	-
	OOHW Period 1	-
	OOHW Period 2	-
Additional mitigation measures	Standard Hours	-
	Day (OOHW)	-
	OOHW Period 1	-
	OOHW Period 2	-

Steps:

1. Enter project name (cell C9).
2. Enter scenario name (cell C10).
3. Enter receiver address (cell C11).
4. Select area ground type (cell C12) - water, undeveloped green fields (e.g. rural areas with isolated dwellings) or developed settlements (e.g. urban and suburban areas).
5. Select the type of background noise level input - Representative noise environment (to make assumptions) or user input (where noise monitoring data is available):
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