

Upper South Creek

Advanced Water Recycling Centre and Pipelines

Community Agreement – Asphalt Trial

EPL 21800

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Introduction

The Upper South Creek Advanced Water Recycling Centre (AWRC) (the project) has been proposed to support the population growth and economic development of the Western Sydney Aerotropolis Growth Area (WSAGA or Aerotropolis), South West Growth Area (SWGGA) and the new Western Sydney International Airport. The project will provide wastewater services to Western Sydney to produce high-quality treated water for non-drinking reuse and for release to local waterways. John Holland has been appointed by Sydney Water to deliver the project works, with detailed design and construction for treating a daily wastewater flow of up to 35ML/day.

John Holland has obtained Environment Protection Licence (EPL 21800) from the NSW Environment Protection Authority for the construction of the project and has prepared the following written report for submission to the EPA as John Holland are seeking to undertake work outside of approved construction hours following community consultation and agreement (EPL condition E1).

Scope of Works and Further Details

In accordance with SSI-8609189 Minister's Conditions of Approval (CoA) E89 and the Sydney Water Project deed, the project is undertaking a sustainability rating under the Infrastructure Sustainability Council (ISC) infrastructure v2.1 rating tool. The project plans to achieve a minimum Infrastructure Sustainability (IS) "Gold" 'Design' and 'As built' rating.

One of the initiatives the project is implementing as part of the ISC rating is a sustainable asphalt mix trial that consists of PAKPAVE fibres, a low carbon polymer modified binder (biobitumen). This sustainable asphalt promotes circular economy and is in line with Upper South Creek's Resource Efficiency Strategy and Action Plan. The PAKPAVE fibres are derived from coffee cups collected through Closed Loop's Simply Cups initiative, Australia's largest paper cup recycling program. Biobitumen is a petroleum-free alternative to bitumen which is made using non-petroleum based renewable raw materials and resulting in energy efficient asphalt with minimised carbon footprint and equivalent engineering performance making it a more sustainable model long term.

The purpose of this Trial Plan is to address the requirements of the Sydney Water Specification and to demonstrate that the proposed sustainable asphalt mix is a fit-for-purpose replacement for the specified Dense Graded 14mm Asphaltic Concrete (AC14) wearing course in the permanent internal roads design for the AWRC. Figure 1 details the area at which the works will take place and Figure 2 details the location of where the trial will happen in regard to the AWRC site.



Figure 1: Location of asphalt trial on the AWRC site



Figure 2: Site Overview

E1 Community Agreement

Condition E1.1

Work outside standard construction hours – community consultation and agreement.

The licensee may work outside standard construction hours (as defined in L4.1) in circumstances other than those permitted under conditions L4.3, L4.4, or any other condition of this licence if the Licensee:

a) undertakes community consultation and agreement as described in E1.2;

- The project has undertaken community consultation with the affected residents that were identified in the noise model.

b) submits to the EPA a written request to work outside the standard construction hours attaching information set out in E1.3; and

- This document details information to work outside the standard construction hours. Specifically, the project is seeking approval to work from 1pm to 6 pm on the 3rd of February 2024, with contingency for the 10th and 17th of February pending any unforeseen delays (i.e., weather).

c) obtains approval by the EPA to work outside standard construction hours. The EPA may, in exercising its discretion to approve the works outside standard construction hours, review whether the licensee has obtained community agreement. Specifically, whether a substantial majority of the individual Noise Sensitive Receivers who together comprise the Community Affected Catchments and were contacted has consented to the planned works out of standard hours.

- John Holland notes that approval must be obtained from the EPA to undertake the work proposed in this community agreement.
- All three residents have consented. Evidence of compliance to be reviewed by the EPA.

Condition E1.2

Requirements for community consultation and agreement

Any community consultation and agreement undertaken with respect to the proposed out of hours works (OOHW) must:

a) be prepared and implemented in accordance with the Interim Construction Noise Guidelines (DEC 2009), the Noise Policy for Industry (EPA, 2017) and AS2436-2010: Guide to noise and vibration control on construction, demolition and maintenance sites;

- The Out of Hour Works Permit and community consultation detailed in Appendix 1 and Appendix 2 respectively has been prepared in accordance with the Project approved Noise and Vibration CEMP sub-plan (CNCSP) which considers the guidelines above.

b) include consultation of all noise sensitive receivers within the Community Affected Catchments. This includes Noise Sensitive Receivers that have declined to participate in previous agreements unless a community member has explicitly requested not to be involved in any future consultation about future OOHW;

- As detailed in the project noise model (Gatewave Renzo Tonin - Appendix 3) three residences were identified as being impacted by the proposed works and are presented in Figure 3
 - 146B CLIFTON AVENUE, KEMPS CREEK, NSW (6 db (A) above NML)
 - 203-229 CLIFTON AVENUE, KEMPS CREEK, NSW (3 db (A) above NML)
 - 230-234 CLIFTON AVENUE, KEMPS CREEK, NSW (2 db (A) above NML)

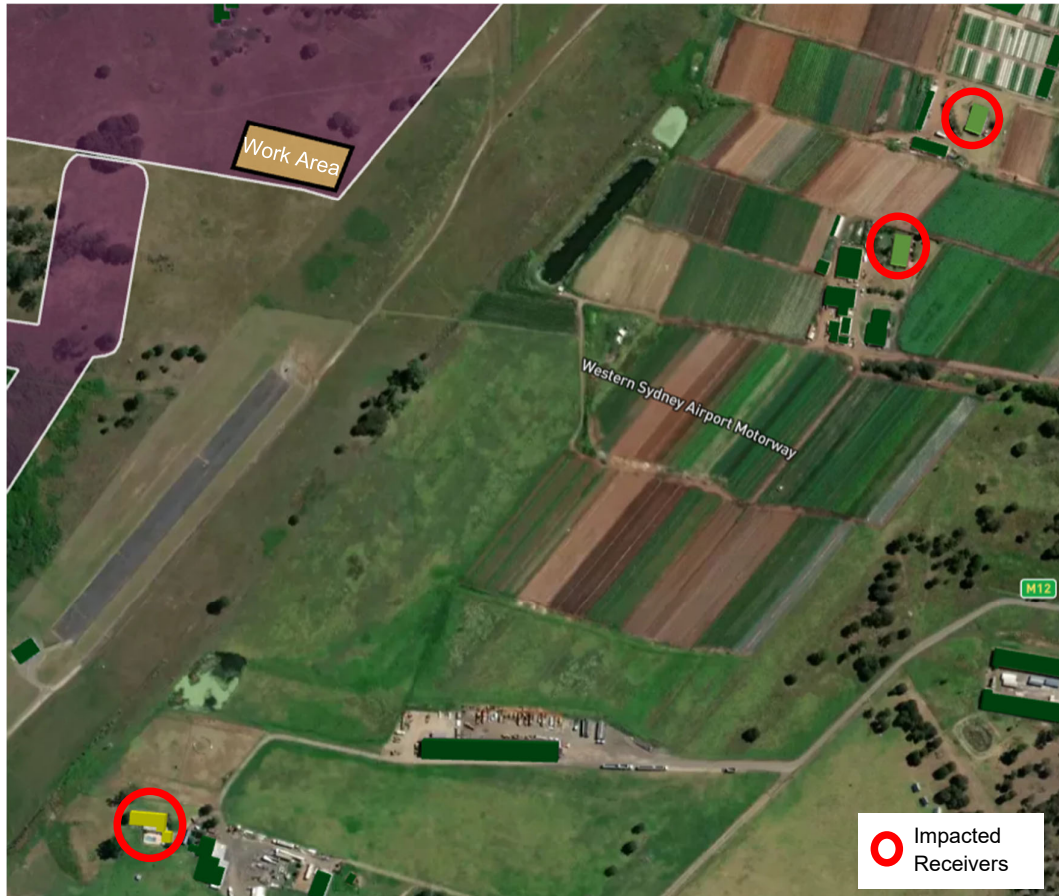


Figure 3: Community Affected Catchment

- All residents have been consulted and have provided their consent for the works to take place. The residents did not raise any objections or issues with the works moving forward. Refer to Appendix 2 for further details.
- c) ensure that the noise sensitive receivers understand the nature of the works and any predicted impacts, including that consideration is made of additional requirements relevant to the needs of culturally and linguistically diverse Noise Sensitive Receivers, and include details for interpreting services for languages other than English where required.*
- The project team has a pre-existing relationship with the three sensitive receivers and there was no requirement for translating and interpreting services to support the conversation about the proposed works. During phone conversations with each sensitive receiver, the proposed works were described and the expected noise output was compared to a common household item (a refrigerator idling).
- d) include in the community consultations with Noise Sensitive Receivers the following information:*
- i. the actual works proposed;*
 - The project is proposing to install and place 50 tonnes of asphalt at the entrance to our site compound laydown area along a small section of the project heavy vehicle haul road (Figure 1 and Figure 2). The equipment required to complete the works will include an asphalt paver, steel drum rollers and a bobcat mill / broom.
 - ii. any expected impacts in clear, plain English based on noise modelling;*

- The works are anticipated to be completed during our approved standard works hours for a Saturday (i.e., 8am to 1pm) as per our Environmental Protection Licence (21800). However, in the event of an unexpected delay the works, may need to be extended until 6pm the same day.
 - In the unlikely event of this occurring, your property has been identified by our noise model as being impacted by the works. Specifically, the noise levels from our model at your property is predicted to be 6 dB(A) above the noise management level (i.e., 40 dB(A)). This is equivalent to comparing the noise of a refrigerator idling vs the noise from moderate rain.
- iii. the expected duration of the works;*
- The works are planned for the 3rd of February 2024 (weather pending). It is planned to start at 8am and to be completed by 1pm. However, in the event of an unexpected delay the works, it may need to be extended until 6pm of the same day.
 - If the works are cancelled due to the weather or unforeseen circumstances, it will be rescheduled for the following Saturday, 10th, or 17th of February 2024.
- iv. any expected benefits for receivers;*
- Not applicable
- v. any other known concurrent OOHW that will be occurring; and*
- Seymour Whyte, who are constructing the M12 project, will potentially be working in the same noise catchment area, however their EPL permits them to work on Saturdays from 8am to 6pm under standard construction hours. Therefore, there are no concurrent OOHW occurring.
- vi. any other OOHW that will be occurring on the nights preceding and following the proposed works or, if the proposed work precedes or follows a weekend period, any other OOHW that will be occurring on the weekend.*
- There is no planned OOHW planned for the nights before or after the planned asphalt works.
 - OOHW may only take place if the temperature exceeds 35°C. The project may plan to conduct concrete pours out of hours (as detailed in the project EPL 21800, condition L5.11)
- e) request consent from the Noise Sensitive Receiver for their responses to be provided to the EPA;*
- Consent has been received by the three residents identified in the noise model and have been detailed in Appendix 2.
- f) ensure that a record is kept when a licensee is unable to contact a noise sensitive receiver after three attempts, including leaving "sorry I missed you" cards explaining the reason for the visit and requesting a return phone call; and*
- Not applicable, all impacted receivers have provided their consent.
 - 146B CLIFTON AVENUE, KEMPS CREEK, NSW. (6 db(A) above NML) Contacted on the 20th December 2023. Provided consent on the same day. Refer to Appendix 2 for details.
 - 203-229 CLIFTON AVENUE, KEMPS CREEK, NSW (3 db(A) above NML). Contacted on the 20th December 2023. Provided consent on the same day. Refer to Appendix 2 for details.
 - 230-234 CLIFTON AVENUE, KEMPS CREEK, NSW (2 db(A) above NML). Contacted on the 20th of December. Provided consent on the 21st of December. Refer to Appendix 2 for details.
- g) demonstrate, where the OOHW is predicted to go on longer than 28 calendar days, that the licensee has consulted the community in relation to re-engagement periods for the purpose of determining agreement from the community is maintained and continuing.*
- Not applicable.

Condition E1.3

The licensee must report to the EPA the community consultation and agreement process that was undertaken with the Community Affected Catchments. This report to the EPA must be:

a) prepared in writing;

- This document

b) detail the steps taken to fulfil the requirements of condition E1.2;

- A noise model was completed to identify the impacts of the works to the nearest residents. The project contacted the residents and provided information and details on the works planned (refer to script in Appendix 2). Residents provided consent for the works to go ahead and the project will update the residents if there are any changes to the planned works.

c) demonstrate that the Noise Sensitive Receivers understood the nature of the works and any predicted impacts, including that consideration was made of additional requirements relevant to the needs of culturally and linguistically diverse Noise Sensitive Receivers;

- The project team has a pre-existing relationship with the three sensitive receivers and there was no requirement for translating and interpreting services to support the conversation about the proposed works. During phone conversations with each sensitive receiver, the proposed works were described, and the expected noise output was compared to a common household item (a refrigerator idling). – refer to the script in Appendix 2

d) provide the script used during the community consultation with Noise Sensitive Receivers;

- Full script included in Appendix 2.
- e) *report community response and consent rates (including where no contact could be made) against the total community affected catchments, and must be broken down into response and consent rates based on sub-catchments that are delineated by affectation levels;*
 - Included in Appendix 2. All three impacted residents provided full consent.
- f) *include a noise validation monitoring plan as required by E1.4; and*
 - Detailed below in Section E1.4.
- g) *be submitted to the EPA at least 15 business days prior to any works that are the subject of the agreement being undertaken unless prior arrangements have been made with the EPA*
 - Submitted on the 12 January 2024

A copy of the report must be:

- a) *kept by the licensee for the duration of this licence including on the premises, and made available to an EPA authorised officer on request; and*
- Acknowledged, a copy of this report will be kept at the premises and for the duration of EPL 21800. A copy of this report will be made available to an EPA authorised officer on request,
- b) *be made available on the licensee's project website or another website approved in writing by the EPA for the duration of the OOHWs permitted under condition E1.1. (Personal details of Noise Sensitive Receivers must be omitted).*
- Acknowledged, a copy of this report (as approved in writing by the EPA) will be made available on John Holland's website for the duration of the OOHW permitted under condition E1.1.

Condition E1.4

Noise Validation Monitoring

A noise validation monitoring plan must be submitted to the EPA for approval as part of the community agreement documentation prior to any OOHW occurring.

- Noise validation monitoring will be done in accordance with the Noise and Vibration CEMP Sub-plan and the CNVIS.
- Noise validation monitoring of construction noise levels will be undertaken as follows:
 - Monitoring will be undertaken at the location which is used as part of noise prediction assessments and is consistent with the project's noise prediction tool, Gatewave;
 - Monitoring will be carried out at the commencement of the activity. This will confirm that actual noise levels are consistent with noise impact predictions and that the management measures that have been implemented are appropriate;
 - Monitoring will be recorded over 15-minute sample intervals, excluding periods of extraneous noise until a representative sample has been obtained.
 - Monitoring will involve the minimum range of noise metrics, including the following A-weighted noise levels: LA90, LAeq, LA10, LA (min) and LA(max).
 - Noise measurements will be timed to ensure operation of the noisiest plant is captured.
 - Measurements will be recorded on a project-specific noise verification record form (Appendix A of the USC Noise & Vibration CEMP sub-plan)

Condition E1.5

Validation monitoring must be undertaken for any OOHW that are the approved under condition E1.1 and must:

- a) *be undertaken in accordance with the monitoring plan prepared under condition E1.4;*
 - Validation monitoring will be undertaken as stated in condition E1.4
- b) *be performed by a Competent Person;*
 - A member of the Upper South Creek Environment Team will be conducting the noise verification monitoring. All members of the team meet the definition of a *Competent Person* in the EPL21800 Special Dictionary (E2.1).
- c) *be performed on at least the first 2 occasions (day, evening, nights) where OOHW will be undertaken and are likely to impact Noise Sensitive Receivers;*
 - Noise monitoring will take place during the day time period (between 8am to 1pm) and day time OOH period one (between 1pm to 6pm). This is dependent on the unlikely event that the works may go past 1pm.
- d) *be performed on any other occasion (day, evening, night) where the nature of the works is likely to cause greater noise impacts than the first 2 occasions;*
 - Not applicable for the nature of the works.

- e) be representative of the impacts in terms of monitoring locations, time and duration of measurements; and
- Monitoring will take place at multiple locations around the site boundary and at the nearest resident (230-234 Clifton Avenue, Kemps Creek) and it will be conducted in 15-minute intervals. It will be done during the noisiest plant which is the smooth drum roller. The project also has SiteHive noise monitors across the site and will be able to capture real-time data throughout the works.
 - Verification at the loudest resident is not accessible for 146B Clifton Avenue. Thus, as discussed with the project Acoustic Advisor, verification monitoring will take place at the project boundary and calculation will be done to identify the noise levels at the resident.
- f) be recorded and provided to an EPA officer upon request.
- Monitoring data will be recorded and can be provided to the EPA upon request.

Condition E1.6

If validation monitoring undertaken under Condition E1.5 shows that noise levels are higher than those predicted by any noise modelling undertaken as part of the community agreement, work practices must be modified immediately so that measured noise levels do not exceed predicted levels.

Where it has been determined that works cannot be modified to achieve the predicted noise levels:

- a) the licensee must report immediately to the EPA; and
- Acknowledged, the project will report to the EPA if the noise levels are above predicted levels.
- b) after considering the circumstances EPA may withdraw its permission under E1.1.
- Acknowledged, the project agrees with this condition.

Condition E1.7

Ongoing community engagement and agreement

a) *For any approval of OOHW under E1.1 predicted to take longer than 28 calendar days to remain valid, the licensee must be able to demonstrate agreement from the community is maintained and continuing.*

- Not applicable

b) *To demonstrate agreement from the community is maintained and continuing the licensee must:*

i. *engage the community to determine if a substantial majority of Noise Sensitive Receivers continue to consent to the OOHW pursuant to the re-engagement period determined under condition E1.2(d);*

- Not applicable

ii. *provide the EPA with a report within 7 calendar days of the end of each re-engagement period summarising the community response including ongoing consent rates of the Noise Sensitive Receiver; and*

- Not applicable

c) *Where the licensee is unable to demonstrate a substantial majority of agreement from Community Affected Catchment is maintained and continuing:*

i. *the licensee must report immediately to the EPA; and*

- Not applicable

ii. *after considering the circumstances EPA may withdraw its permission under E1.1.*

- Not applicable

Conclusion

John Holland seeks the EPA's approval to undertake Out of Hours Work on the 3rd of February based on the agreement from the three affected receivers.

Appendix 1 – OOHW Permit

A. General Details			
Contract:	Upper South Creek (USC) Project		
Contractor:	John Holland Pty. Ltd.		
Application Title:	Asphalt Trial		
Application Number:	A0018		
Application Date:	12/01/2024		
Relevant Planning Approval:	SSI 8609189		
Environmental Protection Licence (EPL):	21800		
Contact Details			
Position	Name	Contact Number	Email
Construction Manager	Jeremy Cadzow	0409 654 791	Jeremy.Cadzow@jhg.com.au
Senior Project Engineer	Samuel Hunt	0419 588 396	Samuel.Hunt@jhg.com.au
Communications Representative	Sheila Maidment	0459 885 912	Sheila.Maidment@jhg.com.au
Environmental Manager / Representative	Alyce Harrington	0409 633 908	Alyce.Harrington@jhg.com.au

B. Details of Proposed Scope of Works	
Proposed Works: • Work methodologies. • List of plant / equipment to be used (worst case scenario).	The works are planned to take place at the AWRC site entrance (NCA T1). The project plans to install and place 50 tonne of asphalt at the entrance to our site compound laydown area along a small section of the project heavy vehicle haul road. The equipment required to complete the works will include an Asphalt Paver, steel drum rollers and a bobcat mill / broom. The works are scheduled to commence at 8am on the 03/12/24 and will be completed at 6pm on the same day.
Justification for OOH	Community Agreement
Proposed Timings	Works outside standard construction hours will be undertaken during the following Out of Hours (OOH) periods: • OOH Period 1 (6 pm- 10pm) • OOH Period 2 (10 pm – 7am)
Worst-case number of consecutive occasions affecting the same receiver:	N/A
Acoustic Assessment attached? ☒ Yes (Refer to Appendix 3) ☐ No	

C. Assessed Noise and Vibration Impacts and Applicable Mitigation Measures		
Refer to Appendix 3 for quantitative Noise and Vibration Impact Assessment for the works.		
Mitigation Measures		
Noise / Vibration Mitigation Measure	Reasonable / Feasible (Y/N/NA)	Comments
Have you considered programming of noisy activities to reduce community impacts?	N/A	These works are scheduled to be completed by 1pm on Saturday the 3 rd of Feb (within standard construction hours). However, there is an unlikely chance that the work may extend after 1pm.
Are there alternative plant or methods that can be used to reduce noise?	N/A	No other alternate plant or methods
Noise barriers/mats to assist noise management for all noisy works where practical	N/A	Noise barriers are not deemed an appropriate noise control for the works due to the negligible noise impacts predicted at the nearest receiver.
Where possible, trucks and vehicles to be parked up between noisy works when operating near sensitive receivers.	N/A	N/A due to the distance of the works to the nearest receiver.
All plant and equipment to minimise reversing where possible and must include the use of non-tonal reversing beepers (or an equivalent mechanism, e.g. 'quackers')	Yes	All mobile plant and equipment on site will have non-tonal reversing alarms equipped.
Staff to be briefed before works - no loud talking, excessive use of radios, music, swearing, be mindful of the community. Turn off equipment when not in use. Do not drop tools, equipment, and materials	Yes	Included in inductions and pre-starts.
Supervisors will make note of, and have removed off site and replaced any equipment item observed to have defective noise controls e.g. defective muffler, loose or missing cowling or engine compartment panels etc	Yes	Defective plant and equipment will be identified during plant inductions and during site inspections. Any defective plant/equipment will be removed and/or replaced.
During high noise impact works 3 hours on 1 hour off must be enforced unless the high noise activity is to be completed before midnight.	N/A	High noise impact works are not proposed to be undertaken as part of this activity.
Can temporary relocation (eg. accommodation) be offered to the adjacent sensitive receivers?	N/A	Low impact noise works will not trigger alternate accommodation
Is minimum distance for cosmetic damage or human comfort triggered	N/A	No vibratory works will be carried out as part of this activity.
Are there any additional measures that could be incorporated to further mitigate any noise impacts?	Y	- All workers are to have completed the project induction and attended the pre-start toolbox. - Pre-start toolbox is to include the requirement for workers to leave the site in a quiet and considerate manner after the completion of works, being mindful of the site's neighbours. - Workers to communicate through walkie talkies when communicating over large distances (no shouting). - Flood lights will be directed down to prevent light spill. - Reversing alarms to be non-tonal only. - Plant not in use to be switched off. - Residential grade mufflers will be fitted. - Air brake silencers will be installed and operational. - No signalling by horns. - No whistles to be used. - No shouting. - No radios.

		- No dropping of materials from height, throwing of metal items and slamming of doors. - No excessive revving of plant and vehicle engines.
Additional Mitigation Measures	Reasonable/Feasible (Y/N/NA)	Comments
Notification (N)	N	A Gatewave Noise model (Appendix 3b) has been developed which models the activity occurring in the work area. The model identified a few residents to be impacted. The residents were consulted and notified prior to works taking place.
Specific Notification (SN)	N	Gatewave noise model has not identified noise exceedances at any receiver who trigger SN
Individual Briefing (IB)	N	Gatewave noise model has not identified noise exceedances at any receiver who trigger IB.
Alternative Accommodation (AA)	N	Gatewave noise model has not identified noise exceedances at any receiver who trigger AA.
Verification of predicted noise (V)	Y	Attended verification noise monitoring will be carried out at the nearest residential receiver during the start of the works (the closest available location). Continuous noise monitors (Site Hives) have been established at the AWRC site and will be operating during the works. Works will be verified during the evening and night-time periods.
Phone Call (PC)	N	Gatewave noise model has not identified noise exceedances at any receiver who trigger PC
Project Specific Respite Offer (RO)	N	Gatewave noise model has not identified noise exceedances at any receiver who trigger RO
Duration Respite (DR)	N	Gatewave noise model has not identified noise exceedances at any receiver who trigger DR

D. Approval Status	
☒ OOHW Approved / Endorsed ☐ OOHW Approved with conditions (see below) ☐ OOHW Rejected	
Conditions for Approval:	

Assessment of Risk Factors: ☒ Low ☐ Medium ☐ High			
Position	Name	Signature	Date
Environmental Manager	Alyce Harrington	<i>alyce harrington</i>	12/01/2024
Senior Project Engineer	Samuel Hunt		12/01/2024
Construction Manager	Jeremy Cadzow		12/01/2024
Community Manager	Sheila Maidment		12/01/2024

Appendix 2 – Community Notification

Upper South Creek Advanced Water Recycling Centre – extended working hours AWRC bio-bitumen community agreement script

Throughout the delivery of the Upper South Creek project, John Holland will implement several sustainability initiatives, including trialling the use of bitumen made from recycled coffee cups on AWRC internal haul roads to test its viability for wider use across Sydney Water sites.

Bio-bitumen trial

On Saturday 3 February 2024, we will lay the bio-bitumen at the AWRC site.

The work will include placing 50 tonnes of asphalt at the entrance to the AWRC site compound and along the internal heavy vehicle haul road.

The equipment will include an asphalt paver, steel drum roller and a bobcat mill/broom.

Work hours

Our standard hours on a Saturday are 8 am until 1 pm.

We are seeking your support to work 5 additional hours on this day to complete the work in one day shift instead of two.

Extended work hours would be 8 am until 6 pm.

If the work is delayed due to weather, we would complete on one of the next two Saturdays – 10 or 17 February 2024.

Noise levels

This work has been noise modelled and is expected to be MODERATE TO QUIET. We would compare this to the sound of a refrigerator idling.

There are no other out of hours work planned for the night before or the day of these works.

Consent

Do you have any questions about this work or the hours we are proposing to work?

Are you ok for me to provide your name and your response to the EPA?

Consultation record

Address	Name	Attempt 1	Attempt 2	Attempt 3
146B CLIFTON AVENUE, KEMPS CREEK, NSW	Justin Railton	Phone call, 20 December, 4.38 pm Consented to extended hours. Knows about the machinery that will be used and stated he is not concerned about the noise. Receiver is aware of the bio-bitumen trial being done by Penrith City Council. Consented to name, address and response being provided to the EPA.	-	-
203-229 CLIFTON AVENUE,	Mary Vella	Phone call, 20 December, 4.35 pm	-	-

KEMPS CREEK, NSW		Received asked for confirmation that the extended hours will be during daylight – the project team confirmed. Consented to extended hours. Consented to name, address and response being provided to the EPA.		
230-234 CLIFTON AVENUE, KEMPS CREEK, NSW	Charlie and Lily Bugeja	Phone call, no answer 20 December 2023 4.29 pm Texted 4.31 pm Hello Lily, its Sheila from the John Holland site next door. I was calling to explain some work to you and ask for some feedback. Would you let me know a time that suits to call you or else drop by? Thank you	Phone call, no answer 21 December 2023 12.29 pm Texted 12.30 pm Hi Lily, is there a time that suits for me to give you a 10 minute call this afternoon or tomorrow morning? Best Sheila	Lily returned phone call 21 December 2023 12.41 pm Consented to extended hours, but asked for a follow-up email so she could discuss with her husband. Consented to name, address and response being provided to the EPA. 21 December 1.01 pm Email sent by project team <i>"Hello Lily and Charlie Lily, thanks for calling me back earlier.</i> <i>Throughout the delivery of the Upper South Creek project, John Holland will implement several sustainability initiatives, including trialling the use of bitumen made from recycled coffee cups on AWRC internal haul roads to test its viability for wider use across Sydney Water sites.</i> <i>On Saturday 3 February 2024, we will lay the bio-bitumen at the AWRC site. The work will include placing 50 tonnes of asphalt at the entrance to the AWRC site compound and along the internal heavy vehicle haul road inside the site. The equipment will include an asphalt paver, steel drum roller and a bobcat mill/broom.</i> <i>Our standard hours on a Saturday are 8 am until 1 pm.</i>

				<i>We are seeking your support to work 5 additional hours on this day to complete the work in one day shift instead of two.</i> <i>Extended work hours would be 8 am until 6 pm.</i> <i>If the work is delayed due to weather, we would complete on one of the next two Saturdays – 10 or 17 February 2024.</i> <i>This work has been noise modelled and is expected to be MODERATE TO QUIET. We would compare this to the sound of a refrigerator idling.</i> <i>There are no other out of hours work planned for the night before or the day of these works.</i> Consent: <i>Do you have any questions about this work or the hours we are proposing to work?</i> <i>Are you ok for me to provide your names and address and your response to the EPA?</i> <i>Thanks Lily and Charlie.</i> <i>Have a wonderful Christmas.</i> <i>Best regards,</i> <i>Sheila”</i> 21 December 2.32 pm Email received from Charlie and Lily providing consent to extended hours: <i>“Yes, please go ahead.”</i>
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Mira Segaran-JHG

From: Sheila Maidment-JHG
Sent: Friday, 12 January 2024 8:18 AM
To: Mira Segaran-JHG
Subject: FW: Proposed extended hours of work at the AWRC - seeking your support

Sheila Maidment
Community & Stakeholder Director
Upper South Creek

**JOHN
HOLLAND**

Clifton Avenue, Kemps Creek
NSW 2178
M. +61 438 878 426
W. johnholland.com.au



From: Sheila Maidment-JHG
Sent: Thursday, December 21, 2023 2:51 PM
To: Lily Bugeja <charlielilybugeja@gmail.com>
Subject: RE: Proposed extended hours of work at the AWRC - seeking your support

Thanks for coming back to me Lily.

Kindest regards,
Sheila

Sheila Maidment
Community & Stakeholder Director
Upper South Creek

**JOHN
HOLLAND**

10 Bourke Road, Mascot
NSW 2020
M. +61 438 878 426
W. johnholland.com.au



From: Lily Bugeja <charlielilybugeja@gmail.com>
Sent: Thursday, December 21, 2023 2:32 PM
To: Sheila Maidment-JHG <Sheila.Maidment@jhg.com.au>
Subject: Re: Proposed extended hours of work at the AWRC - seeking your support

Yes, please go ahead.
Charlie Lily Bugeja
230 - 234 Clifton ave
Kemps Creek
2178
Regards
Charlie Lily

On Thu, 21 Dec 2023 at 1:01 pm, Sheila Maidment-JHG <Sheila.Maidment@jhg.com.au> wrote:

Hello Lily and Charlie

Lily, thanks for calling me back earlier.

Throughout the delivery of the Upper South Creek project, John Holland will implement several sustainability initiatives, including trialling the use of bitumen made from recycled coffee cups on AWRC internal haul roads to test its viability for wider use across Sydney Water sites.

On Saturday 3 February 2024, we will lay the bio-bitumen at the AWRC site. The work will include placing 50 tonnes of asphalt at the entrance to the AWRC site compound and along the internal heavy vehicle haul road inside the site. The equipment will include an asphalt paver, steel drum roller and a bobcat mill/broom.

Our standard hours on a Saturday are 8 am until 1 pm.

We are seeking your support to work 5 additional hours on this day to complete the work in one day shift instead of two.

Extended work hours would be 8 am until 6 pm.

If the work is delayed due to weather, we would complete on one of the next two Saturdays – 10 or 17 February 2024.

This work has been noise modelled and is expected to be MODERATE TO QUIET. We would compare this to the sound of a refrigerator idling. There are no other out of hours work planned for the night before or the day of these works.

Consent:

Do you have any questions about this work or the hours we are proposing to work?

Are you ok for me to provide your names and address and your response to the EPA?

Thanks Lily and Charlie.

Have a wonderful Christmas.

Best regards,

Sheila

Sheila Maidment

Community & Stakeholder Director
Upper South Creek

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Appendix 3 – Gatewave Noise Model

From: Renzo Tonin and Associates via Gatewave

Calculation scenario: **SAS Asphalt Trial AWRC** (Gatewave ID TM588_068)

Upper South Creek – Noise and Vibration Assessment Report

1 Introduction

The Renzo Tonin and Associates web-based construction assessment tool (Gatewave) has been used to prepare this noise and vibration assessment report for John Holland and the Upper South Creek Advanced Water Recycling Centre project (the Project).

The overall noise and vibration impacts from the Project works and associated mitigation measures (e.g. hoardings) have already been addressed in previous Construction Noise and Vibration Impact Statements (CNVIS) in accordance with CoA E48. This tool allows specific work areas and activities to be assessed as construction works progress. It also allows cumulative noise impact from other aspects of the Project or, where relevant noise from other construction projects, to be assessed and managed in accordance with the Construction Noise and Vibration Management Plan (USCP-JHG-MPL-ENV-0007, the 'CNVMP').

2 Assessment methodology

2.1 Construction noise

Results for the assessment of airborne noise were determined using a CadnaA computer noise model developed for the Project. The CadnaA noise model incorporates ground elevation contours, building heights, the built environment and atmospheric conditions to predict construction noise in accordance with the International Standard ISO 9613-2:1996 implementing quality standard ISO 17534-1:2015.

Results from the CadnaA noise model are exported and stored into the Gatewave database which allows for the prediction of the total cumulative noise from all construction activities.

A summary of the noise calculation parameters is detailed in Table 1.

Table 1: Summary of noise modelling parameters

Parameters	Inputs
Calculation method	ISO 9613-2:1996 implementing quality standard ISO 17534-1:2015
Location of noise sources above the local ground	1.5m
Height of receivers	1.5m above ground level to represent 1.5m above ground floor level Additional 3m height for every additional floor assessed (i.e. 4.5m above ground for first floor, 7.5m for second floor etc.)
Sound Power Levels (L_w) of plant and equipment	All L_w data obtained from Renzo Tonin & Associates database Detailed in Section 3
Construction activities	Detailed in Section 3
Ground absorption	Varying from 1 for absorptive surfaces (e.g. park land), 0.5 (e.g. residential areas) to 0 for reflective surfaces (e.g. water, concrete, paving);
Noise barriers and screening	As detailed in Project CNVIS

2.2 Construction vibration

If there are any vibration intensive plant and equipment, the recommended minimum working distances (MWD) are presented in Table 4.

3 Construction activities, work areas and NCAs

3.1 Justification to complete the works OOH

EPL Section 8 Special Conditions. E1 Community Agreements.

3.2 Construction activities

3.2.1 Plant and equipment use

A summary of the plant and equipment operating during each assessment time period is presented in Table 2. Note that Table 2 identifies if a plant/equipment item is used for part or all of the assessment period on a given day, and does not necessarily denote if the plant/equipment are operating concurrently (refer APPENDIX A for details on which plant/equipment are operating together).

Table 2: Proposed construction activities and associated sound power levels

Activity/plant/equipment	Number in use				Sound power level, dB(A)		High impact item	Noise reduction from mitigation measures, dB(A)
	Day	Day (OOH)	Evening	Night	Leq	Lmax		
Asphalt Trial								
Smooth drum roller (13t) - low vibration mode	1	1	1	1	114	113	Yes	-
Smooth drum roller (13t) - low vibration mode	1	1	1	1	114	113	Yes	-
Skid steer / Bobcat (10T)	1	1	1	1	104	109	-	-
Roller (2t) - low vibration mode	1	1	1	1	111	110	Yes	-
Asphalt layer	1	1	1	1	105	111	-	-

Notes:

- 1) Refer APPENDIX A for plant/equipment timings and to identify which items operate concurrently.
- 2) Equipment marked in **orange** are not verified by Renzo Tonin and Associates

The locations of the construction activities are presented in Figure 1.

Figure 1: Construction work areas



4 Construction noise and vibration impacts

4.1 Predicted noise levels

4.1.1 Construction $L_{Aeq,15min}$ assessment

Noise levels were determined by modelling the noise sources, receiver locations, and operating activities, based on the information presented in Table 2.

The noise predictions presented in this report represent a realistic worst-case scenario when construction occurs at the closest location within a specific work area. At each receiver, noise levels will vary during the construction period based on the position of equipment within the work area, the distance to the receiver, the construction activities being undertaken and the noise levels of particular plant items and equipment. Actual noise levels will often be less than the predicted levels presented.

A summary of the results is presented in Table 3. NMLs and predictions for the three worst-affected receivers for each works area are provided in Table 5. Results are presented visually in noise maps in APPENDIX C.

Table 3: Summary of receivers above relevant NMLs

NCA	Day		Day (OOH)		Evening		Night	
	dB(A) above NML	No. of properties	dB(A) above NML	No. of properties	dB(A) above NML	No. of properties	dB(A) above NML	No. of properties
NCA T1	0 to 10	0	0 to 5	2	0 to 5	2	0 to 5	4
	> 10	0	6 to 15	1	6 to 15	1	6 to 15	3
	Over 75 dB(A)	0	16 to 25	0	16 to 25	0	16 to 25	0
			> 25	0	> 25	0	> 25	0
Industrial	0 to 10	0	0 to 5	0	0 to 5	0	0 to 5	0
	> 10	0	6 to 15	0	6 to 15	0	6 to 15	0
	Over 75 dB(A)	0	16 to 25	0	16 to 25	0	16 to 25	0
			> 25	0	> 25	0	> 25	0

4.2 Predicted vibration levels

The recommended MWDs for cosmetic damage and human annoyance are presented in Table 4.

Table 4: Generic minimum working distances for cosmetic damage and human annoyance

Plant item	Reference	Minimum working distance, m			
		Cosmetic damage (screening criteria)		Human comfort (screening limit)	
		Heritage buildings	Non-heritage	Residential ¹	Non-residential ²
Smooth drum roller (13t) - low vibration mode	RTA ROLLER_009	10	5	55	20
Roller (2t) - low vibration mode		5	5	15	5

Notes:

1. Screening limit for residences, night time
2. Screening limit for offices, schools, educational institutions and places of worship (day or night)

4.3 Mitigation measures

4.3.1 Specific reasonable and feasible mitigation measures

- Site inductions will be carried out for all personnel to include potential impacts to sensitive receivers and worker behaviours. At the start of each shift a briefing regarding noise will be included as part of the pre-start to inform all personnel of the noise sensitivities of the area and works.
- Verification monitoring to be carried out at the start of out of hours works for each location to confirm predicted noise levels.
- Noise source observations to be carried out by the Environment Team at the start of the works with any additional mitigation measures or observations to be implemented.
- All equipment to be fitted with non-tonal reversing alarms.
- No swearing or unnecessary shouting or loud stereos/radios/phone calls on speaker on-site.
- No dropping of materials from height, throwing of metal items and slamming of doors
- Light vehicles and plants to be switched off when not in use.

4.3.2 Additional noise mitigation measures

In accordance with the CNVG, where, after application of all reasonable and feasible mitigation measures, the $L_{Aeq(15\text{minute})}$ airborne construction noise levels are still predicted to exceed the NMLs, additional airborne noise mitigation measures can be applied to further limit the risk of annoyance from construction noise.

Figure 2: Additional airborne noise mitigation measures

When is the work being undertaken?	How much does the predicted noise level exceed the ANML by?	Identify additional management measures to be implemented	Additional mitigation measure code
All Hours	75 dB(A) or greater	V, N, PC, RO	AM2
Standard Hours M-F 7am to 6pm Sat 8am to 6pm	0 dB(A)	-	-
	≤ 10 dB(A)	-	-
	10 to 20 dB(A)	V, N	AM1
	> 20 dB(A)	V, N	AM1
OOHW Period 1 M-F 6pm to 10pm Sat 6pm to 10pm Sun/ PH 8am to 10pm	< 5 dB(A)	-	-
	5 to 15 dB(A)	N, R1, DR	AM3
	15 to 25 dB(A)	V, N, R1, DR	AM4
	> 25 dB(A)	V, N, SN, IB, PC, R1, DR	AM5
OOHW Period 2* M-F 10pm to 7am Sat 10pm to 8am Sun/ PH 6pm to 8am	< 5 dB(A)	N	AM6
	5 to 15 dB(A)	V, N, R2, DR	AM7
	15 to 25 dB(A)	V, N, SN, IB, PC, R2, DR	AM8
	> 25 dB(A)	AA, V, N, SN, IB, PC, R2, DR	AM9

Notes: Use the abbreviation codes in the table above to confirm management measures required

* Where OOHW occur in the evening/night shoulder period (10pm to 12am) or the night/morning shoulder period (5am to 7am) apply additional airborne mitigation measures from the OOHW Period 2, excluding AA.

N = Notification (should be issued a minimum of five working days prior to the start of works)

SN = Specific notifications (issued no later than seven calendar days ahead of construction activities)

IB = Individual briefing PC = Phone Call

AA = Alternative accommodation** RQ = Project specific respite offer R1 = Respite period 1

V = Verification of predicted noise DR = Duration respite R2 = Respite period 2

** Where construction activity impacts receiver for more than two consecutive nights. AA is not applicable to shoulder periods.

4.3.3 Noise monitoring plan

Attended noise monitoring is to be undertaken to verify that noise levels resulting from works are in accordance with the levels predicted in this noise and vibration assessment report, subject to obtaining the property owner/occupier's consent to access the property (where required). Noise monitoring should be carried out on or near the property boundary at a location representative of the worst affected location (i.e. in publicly accessible areas on or near the nominated receivers, typically at ground level).

Table 5 identifies potential monitoring locations in each NCA, which are the three worst noise-affected receivers for each NCA from the works.

Note: Gatewave tries to find the most affected receivers in each NCA (up to 3 locations) purely based on the numerical results. These locations will be reviewed for suitability based on safety, accessibility, will provide valid data, etc. If not suitable, alternative suitable locations will be selected for verification monitoring.

If monitoring levels exceed predicted levels, continual improvement and corrective action measures will be implemented, (e.g. investigate cause, review work or activity, scheduling, etc).

Table 5: Nominated verification monitoring locations

Receiver			Noise management levels (NMLs), dB(A)				Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min				Predicted noise levels, dB(A) Lmax
NCA	Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night
NCA T1	146B CLIFTON AVENUE, KEMPS CREEK, NSW	Residential	45	40	40	36	55	65	46	46	46	46	44
NCA T1	203-229 CLIFTON AVENUE, KEMPS CREEK, NSW	Residential	45	40	40	36	55	65	43	43	43	43	42
NCA T1	230-234 CLIFTON AVENUE, KEMPS CREEK, NSW	Residential	45	40	40	36	55	65	42	42	42	42	41

4.3.4 Vibration monitoring

It is noted that the generic MWDs in Table 4 are taken from a database of vibration levels measured at various sites or obtained from other sources (e.g. BS5228-2:2009). They are not specific to these works as final vibration levels are dependent on many factors including the actual plant used, its operation and the intervening geology between the activity and the receiver.

Site specific MWDs for vibration significant plant items must be measured on site where plant and equipment are likely to operate close to or within the generic MWDs for both cosmetic damage and human annoyance. These site specific MWDs will then be included in Gatewave.

If works are likely to be within the generic or site specific MWDs, attended vibration monitoring is to be undertaken to verify that vibration levels comply with the vibration objectives described in the CNVMP.

Additional monitoring for human annoyance from vibration would be carried out proactively and in response to vibration complaints.

Vibration monitoring should follow the procedures outlined in Appendix F of the CNVG.

Important disclaimer

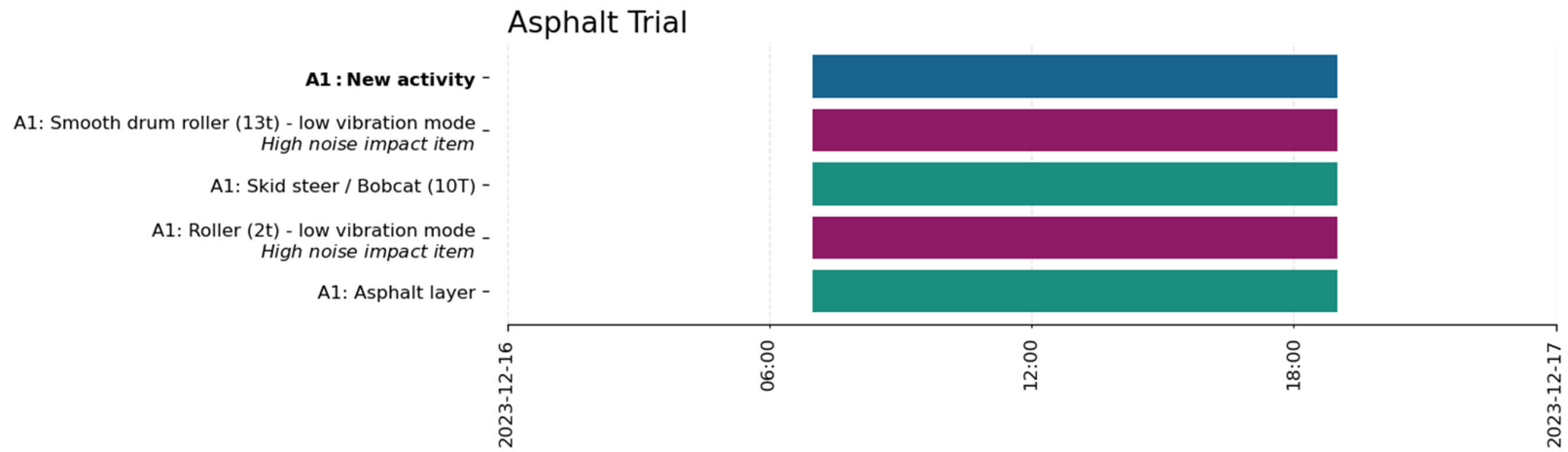
- * This document has been partly automatically generated by Gatewave™, software for prediction, assessment and management of noise and vibration, developed by Renzo Tonin and Associates.
- * This document is uncontrolled. Please contact Renzo Tonin and Associates if you suspect there are any errors in this report.
- * Results in this report are based on the assumptions described in Section 0 and inputs presented in Section 3. Noise and vibration monitoring data will be collected to ensure Gatewave is verified and adjusted, if required.
- * Renzo Tonin and Associates cannot be held liable for the misuse of the software Gatewave™, including any errors that may be contained within the software.

APPENDIX A Summary of works

A.1 Plant and equipment

Table 6: Plant and equipment schedule for work area: **Asphalt Trial**

Equipment	Penalty, dB(A)	Quantity	Intensity	Reduction, dB	Sound power level, dB(A)		Start time	End time
					L _{eq,15min}	L _{max}		
New activity								
Smooth drum roller (13t) 5 - low vibration mode		1	100%	0	114	113	08:00:00	18:00:00
Smooth drum roller (13t) 5 - low vibration mode		1	100%	0	114	113	08:00:00	18:00:00
Skid steer / Bobcat (10T) -		1	100%	0	104	109	08:00:00	18:00:00
Roller (2t) - low vibration 5 mode		1	100%	0	111	110	08:00:00	18:00:00
Asphalt layer -		1	100%	0	105	111	08:00:00	18:00:00



APPENDIX B Noise level above nominated target

Noise level above NML Day (area 1 of 2)



Noise level above NML Day (area 2 of 2)



Noise level above NML Day (OOH) (area 1 of 2)



Noise level above NML Day (OOH) (area 2 of 2)



Noise level above NML Evening (area 1 of 2)



Noise level above NML Evening (area 2 of 2)



Noise level above NML Night (area 1 of 2)



Noise level above NML Night (area 2 of 2)

