



Upper South Creek Advanced Water Recycling Centre – Environmental Mitigation Measures

The following goals for noise, vibration and air quality have been established by the Upper South Creek Advanced Water Recycling Centre (USC AWRC) project for the management of potential impacts from our construction activities:

Noise and Vibration

- Ensure full compliance with the relevant legislative requirements and/or guidelines, CoA and UMMs, specifically:
 - o CoA E40/L5.1 (EPL 21800) (Work Hours) (Table 6 4)
 - CoA E41 L5.2 (EPL 21800) (Highly Noise intensive Work) (Table 6 4)
 - CoA E44 L3.1 (EPL 21800) (Construction noise management measures and vibration criteria)
- Ensure full compliance with the noise management levels defined in Table 6-5, considering the Out-of-Hours Works Protocol of the Noise and Vibration Construction Environmental Management Plan Sub-Plan (NVCSP), and the mitigation measures outlined in the Project Construction Noise and Vibration Impact Statement (CNVIS).
- Mitigation measures specified in the documents listed in Section 8.1 & 8.5 of the project NVCSP must be implemented to minimise the impact of noise and vibration during construction.
- Ensure training and awareness on best practice noise and vibration management is provided to 100% of construction personnel through site inductions and ongoing training and awareness.
- No structural or cosmetic damage to any building or structures during the construction phase.
- At sensitive receiver locations where, minimum working distances are predicted to exceed Human Comfort levels for continuous vibration, community engagement will be undertaken in accordance with the Community and Stakeholder Engagement Plan (CSEP).
- Ensure compliance with USC Project Sustainability Leadership objectives and targets for the construction phase including:
 - Number of significant noise-related incidents per million hours worked is 0
 - Number of significant vibration-related incidents per million hours worked is
 0
 - Number of inspections (weekly) related to noise and vibration as per Section 3.9 of the CEMP



These goals have been developed to be specific, measurable, achievable, relevant and timebound (SMART). They also consider the baseline and modelled data within Appendix S of the project's Environmental Impact Statement (EIS) and the project Ministers Conditions of Approval. These may be subject to change pending approval of the Environmental Protection Licence (EPL) and further development of the project Construction Noise and Vibration Impact Statement (CNVIS).

Air Quality

- Ensure full compliance with the relevant legislative requirements and/or guidelines (Section 4 of Air Quality CEMP Sub-plan (AQCSP)), CoA and UMMs.
- Mitigation measures specified in the documents listed in Section 8 of the AQCSP such as site inspections must be implemented to minimise the emission of dust and other air pollutants to reduce air quality impacts and improve human health throughout the duration of construction.
- Ensure full compliance with USC Project Sustainability Leadership Objectives and targets for the construction phase including:
 - o Number of significant air related incidents per million hours worked is 0.
 - Number of inspections (weekly) related to air quality as per section 3.9 in the Construction Environment Management Plan (CEMP).
 - Ensure training and awareness on best practice air quality management is provided to 100% of construction personnel through site inductions.
 - Potential impacts related to odour and emissions from cogeneration engines at the AWRC during operation are not relevant to this plan. Associated operational air quality SMART targets are included in the Sustainability Management Plan (SMP).

The detailed results of noise and vibration modelling undertaken by the project and used to identify relevant mitigation measures will be uploaded and available on Sydney Water Talk.

Mitigation Measures

The USC AWRC project proposes to implement a number of mitigation measures to minimise the noise, vibration and air quality impacts of our construction work on the community, where feasible. The table below summarises the project mitigation measures and the resulting outcome to nearby homes and businesses, for community consideration. The project encourages our surrounding community to review the project goals, mitigation measures and outcomes and provide feedback to the project.

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Environmental Factor	Control/Mitigation	Outcome
Noise / Vibration	Selection of machinery that has a lower noise and vibration output	Reduce our impacts on surrounding residents, businesses and sensitive receivers
Noise / Vibration	Specific notification to directly impacted properties	Provide greater certainty to residents and businesses on the methodology, timing and impacts of our works
Noise / Vibration	Noise and Vibration monitoring	Confirm (verify) the actual noise and vibration levels are in line with the predicted levels and subsequent appropriate mitigations are implemented. Alert the team when noise and vibration levels are close to exceeding approved limits
Noise	Restricting highly noise intensive works to between the hours of 8am to 6pm Monday to Friday and 8am to 1pm Saturday	Limit the impact of noisy works on residents, businesses and sensitive receivers
Noise/ Vibration	Undertake any high noise impact works before 12:00 am (midnight) where reasonable and feasible	Limit the impact of noisy and vibratory works on residents, businesses and sensitive receivers
Noise	Providing a one-hour break from highly noise intensive activities after three hours	Provide respite for affected receivers and reduce our impacts on affected receivers
Noise / Vibration	Avoiding scheduling highly noise and vibration intensive works during sensitive periods, such as religious holidays, exam periods or nap times (i.e. daycare centres)	Minimise project impacts during sensitive periods
Noise / Vibration	Specific notifications, phone call and individual briefings to inform affected stakeholders of relevant information	Provision of detailed information and tailored advice for those highly affected to provide greater clarity and understanding of the proposed works and mitigation measures in place and available to the receivers.
Noise	As much as possible, programming required night works for no more than two consecutive nights or three nights in a week, and no more than 10 nights in a month	Provide respite for residents, businesses and sensitive receivers through scheduling
Noise	Carrying out the noisiest tasks at the beginning of a night shift, or before midnight, where possible	Avoid sleep disturbance for affected receivers where feasible and reasonable
Noise	Using sound blankets/curtains to enclose temporary work areas or noise emitting equipment such as generators, as required	Reduce noise impacts by 5-8 decibels
Noise	Turning machinery off when not in use and fitting equipment with devices to minimise noise, particularly non-tonal reversing beepers	Reduce our noise impacts on surrounding residents and businesses and sensitive receivers
Noise	Switching off all truck radios (commercial) upon arrival at site and use truck communication radios with truck cabin doors closed	Reduce our noise impacts on surrounding residents, businesses and sensitive receivers
Noise	Arranging the work site to minimise the use of movement alarms on vehicles and mobile plant and keep truck reversing to a minimum	Reduce our noise impacts on surrounding residents, businesses and sensitive receivers



Environmental Factor	Control/Mitigation	Outcome
Noise	No unnecessary loud noises (e.g. talking loudly, slamming doors) and taking extra care to minimise noise while loading or unloading trucks with materials or equipment (e.g. avoid dropping materials from height and metal to metal contact)	Reduce our noise impacts on surrounding residents, businesses and sensitive receivers
Vibration	Providing pre and post-construction property condition surveys to identified properties, free of charge	If an owner notices a change in their property during or after the work, they are able to refer to the pre-construction report
Vibration	Meetings with affected residents and stakeholders to explain the work and how we will minimise impacts	Provide greater certainty to residents and businesses on the timing, impacts and methodology of our works
Dust	Wetting down work areas and haul roads with water carts, sprinklers, misters or hoses, as required	Reduce dust impacts to surrounding receivers
Dust	Wheel wash bays or equivalent, as required	Reduce dust impacts to surrounding receivers
Dust	Visual inspections will be undertaken weekly to record the weather conditions, the construction activities and comments about air-quality impacts. The Environmental Representative will inspect the site regularly, including the status and effectiveness of any air quality control measures	Ensure dust levels are within expected limits and assess the effectiveness of mitigation measures
Dust	Visual monitoring will be be undertaken of potential dust generating activities such as stockpile management, haul road maintenance and works such as saw-cutting or drilling with the potential to generate dust	Ensure dust levels are within expected limits and assess the effectiveness of mitigation measures
Dust	Covering or stabilising stockpiles and stabilising temporary access tracks	Minimise dust generation to surrounding receivers
Dust	Completing temporary restoration as soon as practically possible after construction and testing of the pipeline	Minimise dust generation to surrounding receivers
Dust	Utilisation of soil binder on exposed soil or stockpiles, compaction of haul roads, wind breaks and boundary screening implemented in areas with close proximity to sensitive receivers where feasible and reasonable	Minimise and reduce dust generation to surrounding receivers
Dust	All vehicles transporting spoil must stay on designated routes, with spoil covered and trucks exiting clean and free of spoil	Minimise and reduce dust generation to surrounding receivers

For an extensive list of all Project noise, vibration and air mitigation measures please visit https://www.sydneywatertalk.com.au/uppersouthcreek where all project environmental plans are available for information.

Regular updates will be distributed to the community as the work progresses, with households that may be highly impacted by noise or vibration or planned night works to receive specific notifications about these activities.

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