



Environment and Heritage Expertise

Technical Guideline

# TG 0875.53 – Noise and vibration

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**Confidentiality:** OFFICIAL



**Government of  
South Australia**

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## Significant/major changes incorporated in this edition

Not applicable - this is the first edition of the Technical Guideline.


## Document controls

### Version history

Version	Date	Author	Comments
1.0	28 August 2025	Various	Issued for Use

Template: Technical Guideline Version 8.1, 30 September 2024

### Approvers

Approver Name	Approver Role	Signature
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### Reviewers

Name	Role	Version	Review Date
Environment and Heritage Expertise Team	Team review of guidelines.	1.0	28-08-2025

# 1 Introduction

This guideline relates to the assessment and management of temporary or ongoing noise and/or vibration which may occur because of construction, operational or maintenance activities which may occur because of construction, operational or maintenance activities.

It forms part of the TG 0875 - Environment and Heritage Technical Guidelines and is designed to provide insight into regulatory obligations associated with vegetation, as well as suggested approaches to manage risk.

Note the guideline is not exhaustive, and additional requirements may be necessary based on project- or site-specific activities, geographical location, or approval conditions.

## 1.1 Environment and Heritage Technical Guidelines Suite

The SAWG-ENV-0875 Environment and Heritage Technical Guidelines suite includes:

- TG 0875.00: General requirements
- TG 0875.11: Aboriginal heritage and Native Title
- TG 0875.12: Non-Aboriginal heritage
- TG 0875.21: Vegetation
- TG 0875.22: Fauna
- TG 0875.23: Weed hygiene
- TG 0875.24: Phytophthora
- TG 0875.31: Surface water
- TG 0875.32: Groundwater
- TG 0875.33: Recycled water
- TG 0875.34: Sediment, erosion and stormwater
- TG 0875.35: Dewatering, dredging and earthworks drainage
- TG 0875.41: Site contamination
- TG 0875.42: Acid sulfate soils
- TG 0875.43: Hazardous substances
- TG 0875.51: Dust
- TG 0875.52: Odour
- **TG 0875.53: Noise and vibration (this guideline)**
- TG 0875.61: Spoil management
- TG 0875.62: Recycling
- TG 0875.63: Waste management

This guideline must be read in conjunction with TG 0875.00: General requirements

## 1.2 General requirements

TG 0875.00: General requirements apply to all aspects of the work:

1. Purpose
2. Application
3. Scope
4. Statutory obligations
5. Strategic alignment
6. Terms and abbreviations

## 2 Noise and vibration

### 2.1 Overview

MANAGEMENT	
<b>Commitment</b>	Noise and vibration should not create unreasonable community or environmental disturbance, and be restricted to appropriate hours wherever possible. Construction and industrial noise will be managed in line with relevant legislation.
<b>Strategic objective</b>	<ul style="list-style-type: none"> <li>Environment Corporate Strategy:               <ul style="list-style-type: none"> <li>Our culture creates empowerment, increased accountability for environmental decisions and demonstrates proactive leadership.</li> </ul> </li> <li>Asset Management Corporate Strategy:               <ul style="list-style-type: none"> <li>An integrated approach enables the sustainability outcomes our customers, community and owner expect.</li> </ul> </li> </ul>
<b>Key Performance Indicator</b>	<ul style="list-style-type: none"> <li><b>KPI 1:</b> No complaints from nearby stakeholders in relation to nuisance noise or vibration.</li> <li><b>KPI 2:</b> No uncontrolled damage to third party property caused by vibration.</li> <li><b>KPI 3:</b> No uncontrolled impacts to native fauna or native vegetation because of noise or vibration.</li> </ul>
<b>Legislation</b>	<ul style="list-style-type: none"> <li><a href="#">Environment Protection (Commercial and Industrial Noise) Policy 2023 (SA)</a></li> <li><a href="#">Planning, Development and Infrastructure Act 2016 (SA)</a></li> </ul>
<b>Regulatory approvals</b>	<ul style="list-style-type: none"> <li>EPA Authorisation</li> <li>Development Approval</li> </ul>
<b>Statutory obligations</b>	<ul style="list-style-type: none"> <li><i>Environment Protection Act 1993 (SA)</i>, Section 25: A person must not undertake an activity that pollutes, or might pollute, the environment unless the person takes all reasonable and practicable measures to prevent or minimise any resulting environmental harm.</li> </ul>
<b>Reference material</b>	<ul style="list-style-type: none"> <li>AS 1055: Acoustics - Description and measurement of environmental noise</li> <li>AS 2436: Guide to noise and vibration control on construction, demolition and maintenance sites</li> <li><a href="#">EPA (SA): Noise Information Sheet EPA 424/23: General environmental noise</a></li> <li><a href="#">EPA (SA): Noise Information Sheet EPA 425/23: Construction noise</a></li> <li><a href="#">EPA (SA): Indicative noise factor guidelines for the Environment Protection (Commercial and industrial Noise) Policy 2023</a></li> <li><a href="#">EPA (SA): Guidelines for the use of the Environment Protection (Commercial and Industrial Noise) Policy 2023</a></li> <li><a href="#">PlanSA: Planning and Design Code</a></li> </ul>
<b>Related guidelines</b>	<ul style="list-style-type: none"> <li>TG 0875.11: Aboriginal heritage and Native Title</li> <li>TG 0875.12: Non-Aboriginal heritage</li> <li>TG 0875.22: Fauna</li> </ul>



## 2.2 Planning and design

MITIGATION MEASURES	STAKEHOLDERS
Assess for the presence of sensitive receivers for noise (i.e. human - residences, schools, hospitals, and fauna) as well vibration (i.e. heritage structures) to determine potential noise and vibration risks. These may also be prescribed in any existing EPA licences, licence conditions or development approval conditions.	Environmental Officer Project Manager Design Manager
Options to minimise noise and vibration impacts must be identified through options selection and decision making i.e. consider differences in construction methodologies, site layout including adequate buffers.	Design Manager Environmental Officer Project Manager
Where there is a significant risk of operational or construction noise and vibration impacting sensitive receivers that requires further investigation, a Detailed Noise and/or Vibration Assessment is required and must be undertaken by a suitably qualified consultant.	Design Manager Environmental Officer Project Manager
Recommendations of the Detailed Noise and/or Vibration Assessment must be incorporated into design, which may include modifications to the design or implementation of noise barriers.	Design Manager Environmental Officer Project Manager
Where vibration presents a risk to existing structures, conduct a dilapidation survey and asset condition assessment prior to undertaking works which have potential to damage existing structures.	Environmental Officer Project Manager
Ensure ongoing operational noise and vibration levels have been quantified, and that appropriate attenuation measures (i.e. building materials, insulation, etc) are included in the design, where required	Design Manager Environmental Officer Project Manager

## 2.3 Construction

MITIGATION MEASURES	STAKEHOLDERS
Ensure engagement and communication protocols recognise sensitive noise and vibration receivers and provide information regarding the nature of works, the expected noise impacts, approved hours of work, duration, complaints handling and contact details	Contractor
Ensure management plans have taken reasonable steps to minimise potential noise impacts on sensitive noise receivers, including the need for, and appropriate timing of, respite periods (e.g. times identified that are less sensitive to noise or vibration).	Contractor
Ensure management plans include noise/vibration modelling and monitoring program where required.	Contractor
Ensure management plans include incident notification protocols, including a noise complaint handling procedure.	Contractor
All works should be undertaken within the normal project work hours of Monday to Saturday, 7 am to 7 pm, unless alternative arrangements have been authorised by the Project Manager.	Contractor

MITIGATION MEASURES	STAKEHOLDERS
No work to be conducted outside of normal project work hours (including loading or unloading of plant or equipment) without prior written authorisation from the Project Manager.	Contractor
For approved works that will be undertaken outside of normal project work hours, implement a Noise Management Plan approved by SA Water's Project Manager.	Contractor
Site planning and management: Where possible, design site layouts and works areas to achieve separation distances between noise sources and sensitive receivers.	Contractor
Select appropriate plant or equipment, and fitted controls, for each task to minimise the noise and vibration impacts (e.g. using fitted silencers on plant or equipment).	Contractor
Avoid operating (including warming up) plant or equipment near identified Sensitive Receivers before the nominated working hours and using engine brakes to enter or leave work sites.	Contractor
Inspect and maintain plant and equipment to ensure optimum operation to minimise the generation of noise and vibration.	Contractor
Consider the use of existing (landforms, mounds, building structures) or installed noise barriers to reduce nuisance noise for identified sensitive receivers.	Contractor
Consider less vibration-intensive methodologies where practicable and use appropriately sized and powered equipment to minimise vibration risk.	Contractor
Ensure management plans include appropriate detail on the type and location of all control measures to be implemented to manage noise and vibration risk.	Contractor

## 2.4 Monitoring requirements

DESCRIPTION	METRIC	FREQUENCY	ACCOUNTABILITY
Review effectiveness of noise mitigation controls.	Visual	Daily	Contractor
Review complaints / incidents register for lessons learnt or repeat items.	Visual	Daily	Contractor
Install noise monitoring devices where practicable to quantify noise levels, considering EPA baseline criteria for Leq, Lmax, L90 etc.	Decibels	Continuous or at specific intervals	Contractor
Install vibration monitoring devices where practicable to quantify vibration levels, considering suitable vibration thresholds for different structural integrities e.g. residential vs commercial vs heritage.	Velocity (millimeters per second)	Continuous or at specific intervals	Contractor