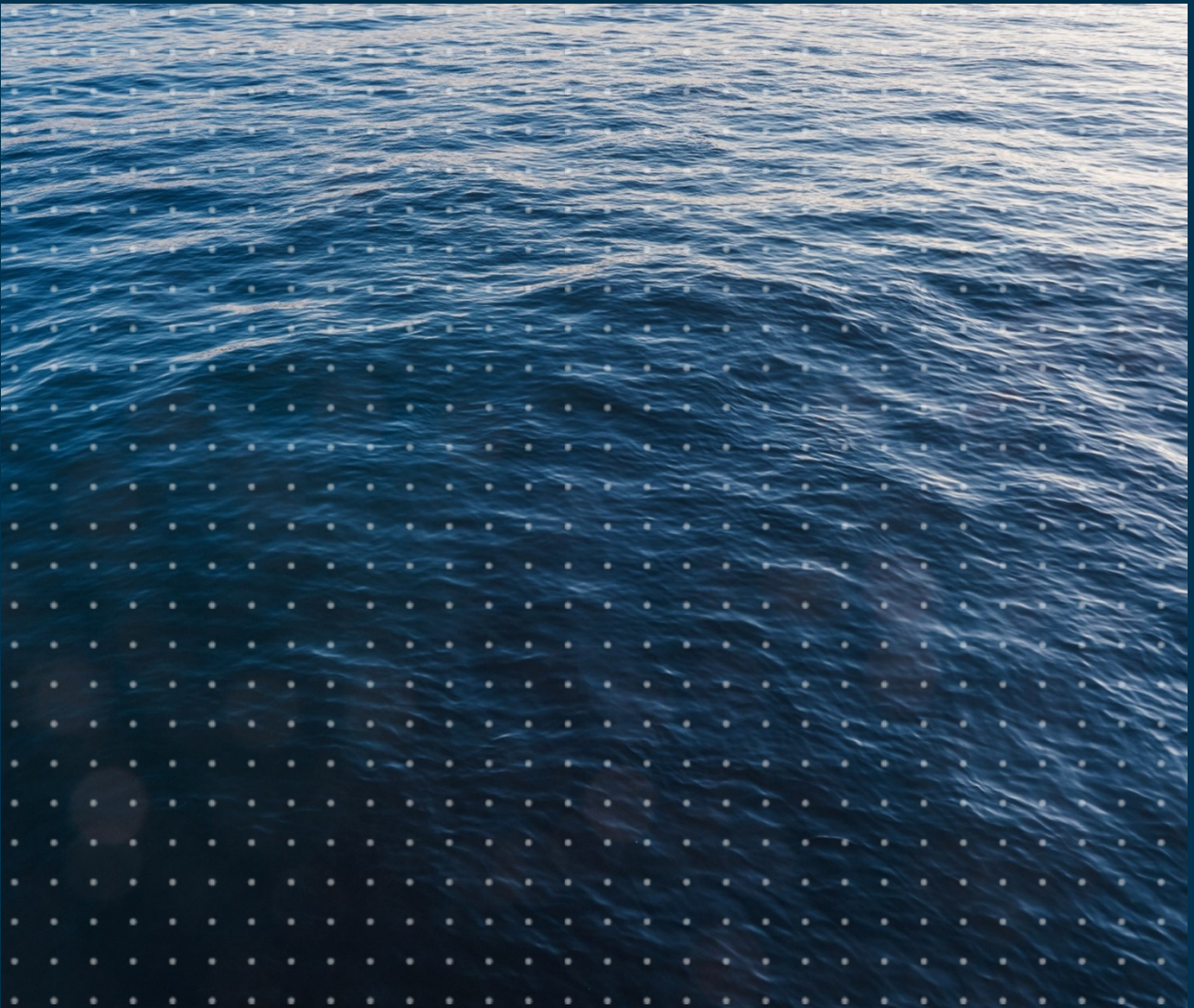


Environment Protection Authority

Noise Guide for Local Government

Draft for consultation



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Overview

This *Noise Guide for Local Government* provides practical guidance to council officers on day-to-day management of common neighbourhood noise problems. This guide focuses on the Regulation, assessment and management of neighbourhood noise issues, which generally are managed by councils. (The term ‘neighbourhood noise’ is used in this guide to describe noise regulated by council.) This guide is not a statutory document but may assist councils when determining how to respond to noise issues in their area.

This guide gives:

- advice on legislation and the role of land-use planning to avoid or minimise noise from land-use conflict
- advice on the role of noise policies and guidelines to assess and manage noise
- technical advice, including an overview of acoustics, good-practice noise measurement and management of community expectations.

Councils are encouraged to use this guide to develop policies to deal with noise issues relevant to local circumstances, including community complaints handling.

While this guide necessarily focuses on regulatory options to manage neighbourhood noise issues, in the first instance councils should consider non-regulatory interventions to resolve noise issues.

This guide is not a substitute for gaining a thorough understanding of the legislation that officers administer, receiving appropriate training or obtaining independent legal advice.

This document replaces the 2013 version of the *Noise Guide for Local Government*. Council officers should also refer to the EPA’s *Powers and Notices Guideline for Authorised Officers and Enforcement Officers* (EPA, 2021) for detailed guidance on their powers and how to issue notices.

Council’s role and responsibilities

Individuals who are dissatisfied with how their council has responded to their noise complaint may refer to this guide to understand the role and responsibility of the council in managing neighbourhood noise issues.

However, this guide is not a statutory document. Councils, as autonomous authorities, will take into account relevant matters when responding to complaints and making decisions. Other government agencies, including the NSW Environment Protection Authority (EPA), cannot direct councils on how to manage noise issues.

This guide can help councils manage community expectations by providing the following information:

- a description of who is responsible for managing noise from different sources (refer to Table 1)
- an explanation of the regulatory framework in NSW to manage noise
- an outline of the options available to councils to investigate and manage noise issues.

Councils can also refer individuals affected by noise to information published on the [EPA’s Noise webpage](#).

This guide also provides for councils to use mediation and cooperation to help people affected by noise. Individuals who are affected by noise and feel their council has not resolved the issue adequately have the option to seek the assistance of the NSW Ombudsman.

Councils have an important role in managing a range of noise issues, so this guide is necessarily detailed and lengthy and seeks to provide guidance on:

- the regulatory framework for noise control
- the range of regulatory and non-regulatory options available to manage noise in different circumstances
- other pieces of supplementary information to enhance councils' knowledge.

So this information is easily accessible, this guide has been structured in three main parts:

- Part 1 provides an overview of the key considerations when managing noise from different sources. It is a quick starting point to navigate a neighbourhood noise issue as it helps councils identify whether they are the appropriate regulatory authority. It also gives an overview of the regulatory and non-regulatory options available to manage noise through a range of flow charts and fact sheets. If more detailed information is needed refer to Parts 2 and 3.
- Part 2 provides a comprehensive overview of the legal framework for noise control in NSW. The advice is general in nature, so council officers may need to seek independent legal advice on a case-by-case basis.
- Part 3 provides technical and supporting information (including an overview of acoustic principles and noise measurement and noise control advice) and non-regulatory options to manage noise.

It is recommended that councils refer to Part 1 to seek advice on specific noise issues, and to Parts 2 and 3 only where further information is needed to gain a more detailed understanding of how to implement the advice given in Part 1. Part 1 is essentially a ready reckoner for council related noise issues.

There may be circumstances where councils must consider noise from industrial and construction activities and from new or redeveloped transport infrastructure (road and rail) in their area. The following noise policy and guidance documents can assist:

- The *Noise Policy for Industry* (EPA 2017) provides guidance on assessing noise impacts from industrial development.
- The *Interim Construction Noise Guideline* (DECC 2009) describes how to assess and manage noise from construction activities.
- The *NSW Road Noise Policy* (DECCW 2011) and the *Rail Infrastructure Noise Guideline* (EPA 2013) provides guidance to manage noise from new or redeveloped transport infrastructure projects and developments that generate additional traffic on existing transport infrastructure.

These policies and guidelines are specifically aimed at major developments that are typically regulated by the EPA under the *Protection of the Environment Operations Act 1997* and by authorities when making decisions about developments under the *Environmental Planning and Assessment Act 1979*. The advice in these policies and guidelines can be used for smaller-scale developments, which typically are managed by councils. Further advice on how these policies and guidelines should be applied in this context is given in Part 3.

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Part 1

Managing noise



In this part:

Section 1 provides figures and tables to assist council officers decide on the appropriate course of action to manage noise.

Section 2 provides topic-based information that summarises the key steps, including regulatory options, to manage common neighbourhood noise sources.

1. How to manage noise: an overview

An overview of the key pathways to manage noise are set out in Figures 1 to 4 to assist councils identify the most appropriate course of action for the circumstances.

Table 1 provides a summary of who is responsible for regulating noise from a specific source or circumstance and an overview of the regulatory options available to manage the noise.

Table 2 discusses the advantages and disadvantages of the regulatory options available under the *Protection of the Environment Operations Act 1997* and the Protection of the Environment (Noise Control) Regulation 2017 to assist officers in choosing the best course of action for a particular situation.

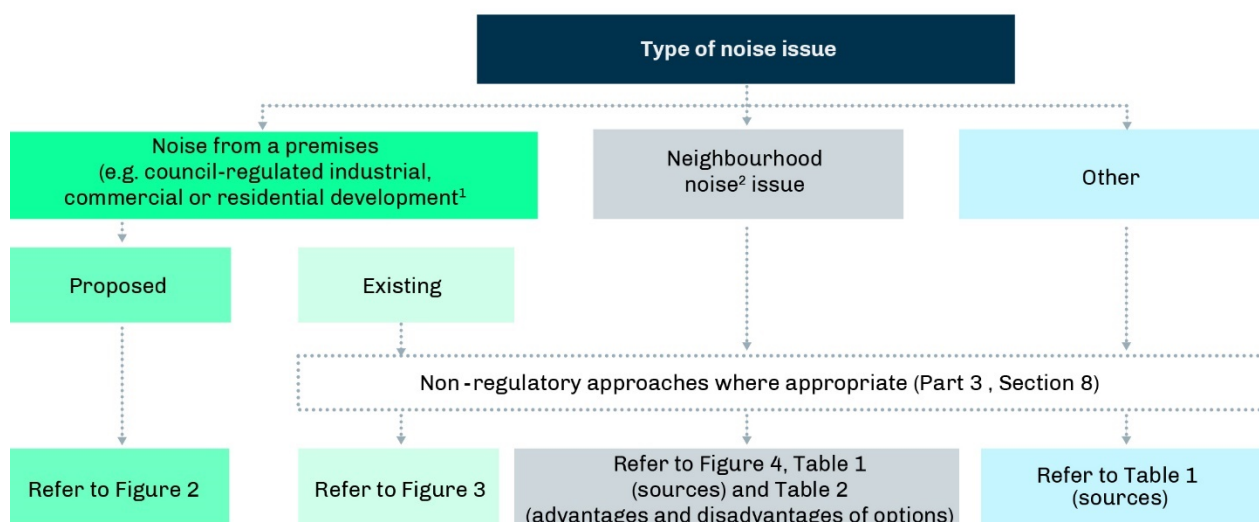
1.1. Where do I start?

Figure 1 provides an overview of the key management pathways that apply to different types of noise issues.

There are three pathways in this flowchart:

- noise matters that are dealt with by council via the planning system under the *Environmental Planning and Assessment Act 1979* (EP&A Act), including noise issues from proposed or existing development.
- noise from a range of sources in neighbourhoods that can be dealt with via the *Protection of the Environment Operations Act 1997* (POEO Act) and other relevant legislation
- identification of other noise sources not managed by councils. Officers may use this path primarily to check which agency is responsible for a particular noise source.

Part 2 gives detailed information on regulatory options to manage noise. Non-regulatory approaches should also be considered, and advice on these is given in Part 3.



1. In this context, noise from residential development refers to potential noise impacts to neighbours due to construction and operation of noisy fixed plant (e.g. air conditioning plant, lift motors etc) as well as potential impacts on future residents of the development from nearby existing noise-producing industry and infrastructure.
2. In this context, neighbourhood noise refers to the many sources of noise made by neighbours that may cause disturbance to other neighbours.

Figure 1 Overview of noise management pathways

1.2. Managing noise from development that requires planning approval

Figure 2 provides an overview of the key steps in managing noise from a proposed new council-regulated development that may or may not require planning approval. Such proposals can include the construction and operation of industrial and commercial premises, local roads, as well as residential development (or other noise-sensitive development) that require planning approval.

It summarises the development consent process under the EP&A Act and statutory instruments (such as state environmental planning policies) as well as regulatory options available under the POEO Act to develop appropriate noise conditions.

The process covers two situations:

- the assessment of noise **from** proposed noise-generating development (e.g. a proposed industrial development near a residential area)
- noise impacts **on** a proposed new noise-sensitive development (e.g. where a residential development is proposed near a major road or noisy industry).

Detailed information is given in Sections 4, 5 and 7.

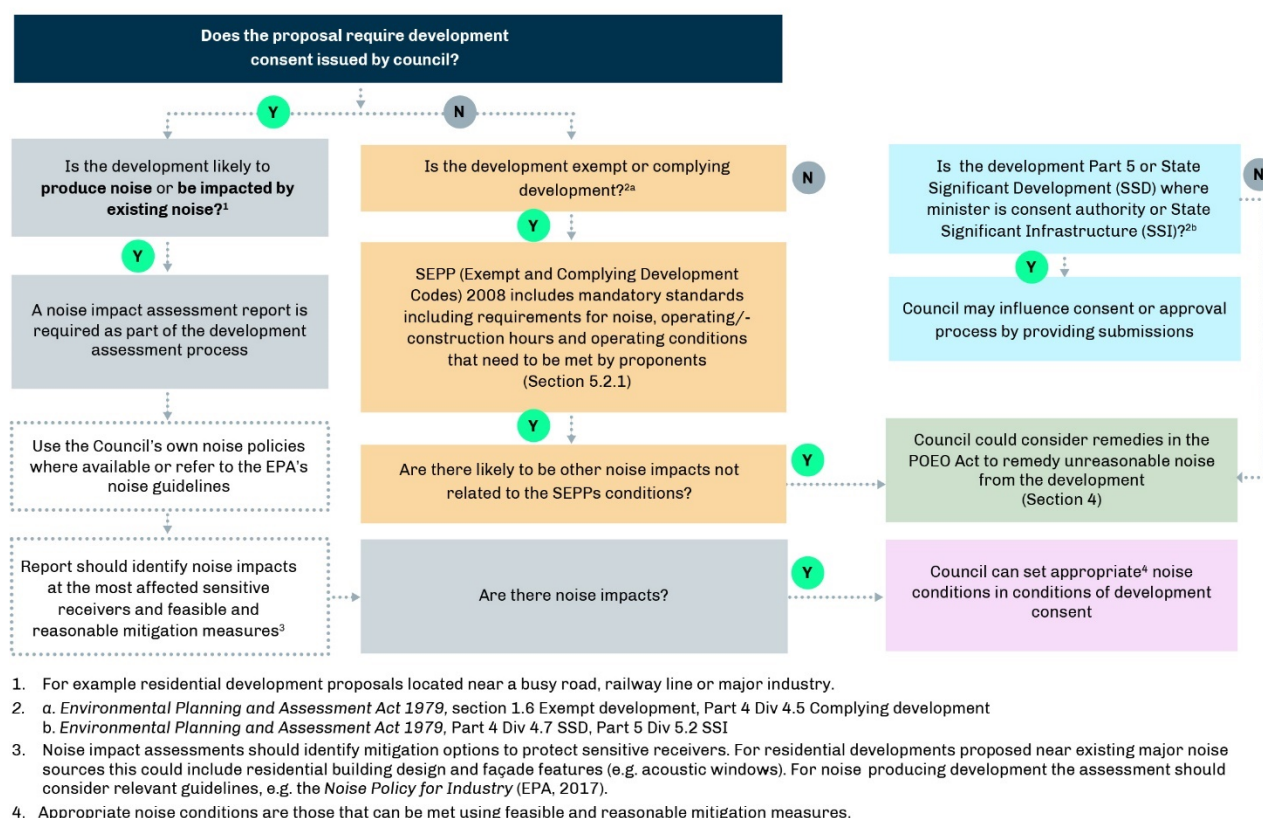


Figure 2 Managing noise from a proposed development

1.3. Managing noise from existing development that may have appropriate planning approval

Figure 3 outlines steps to manage noise from existing developments under the EP&A Act where the development:

- has conditions of consent
- is exempt or a complying development
- cannot be described in the two points above (e.g. a development with existing use rights or a development that does not require consent).

The first two noise situations may be addressed via the planning system. The POEO Act may be used to address noise in the third situation.

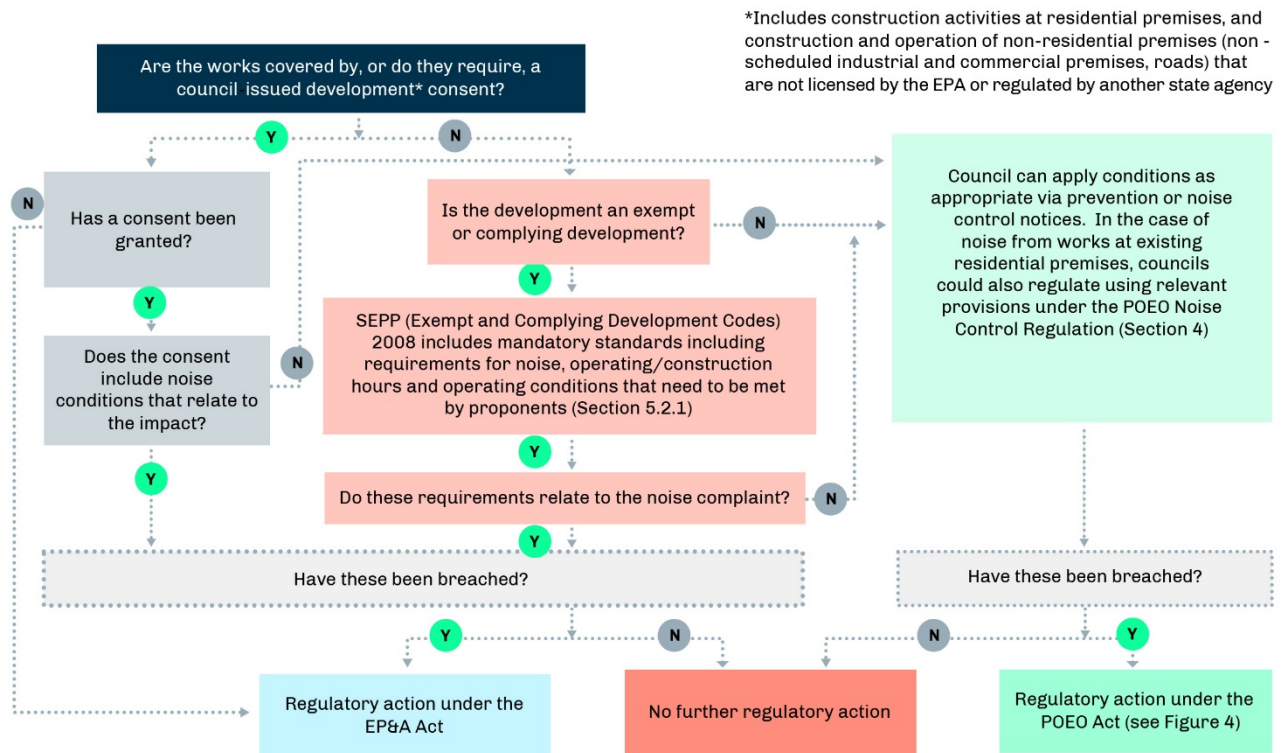


Figure 3 Managing noise from an existing development

1.4. Managing noise from neighbourhood noise sources

Regulatory options to manage neighbourhood noise issues under the POEO Act and the Protection of the *Environment Operations (Noise Control) Regulation 2017* (POEO Noise Control Regulation) are described in Figure 4.

The POEO Act contains broad provisions to address noise issues, while the POEO Noise Control Regulation includes specific provisions to manage common neighbourhood noise issues.

Figure 4 assumes a general understanding of the noise related provisions in the POEO Act and the POEO Noise Control Regulation. The figure should be read in conjunction with Sections 4.2 and 4.3 of this guideline.

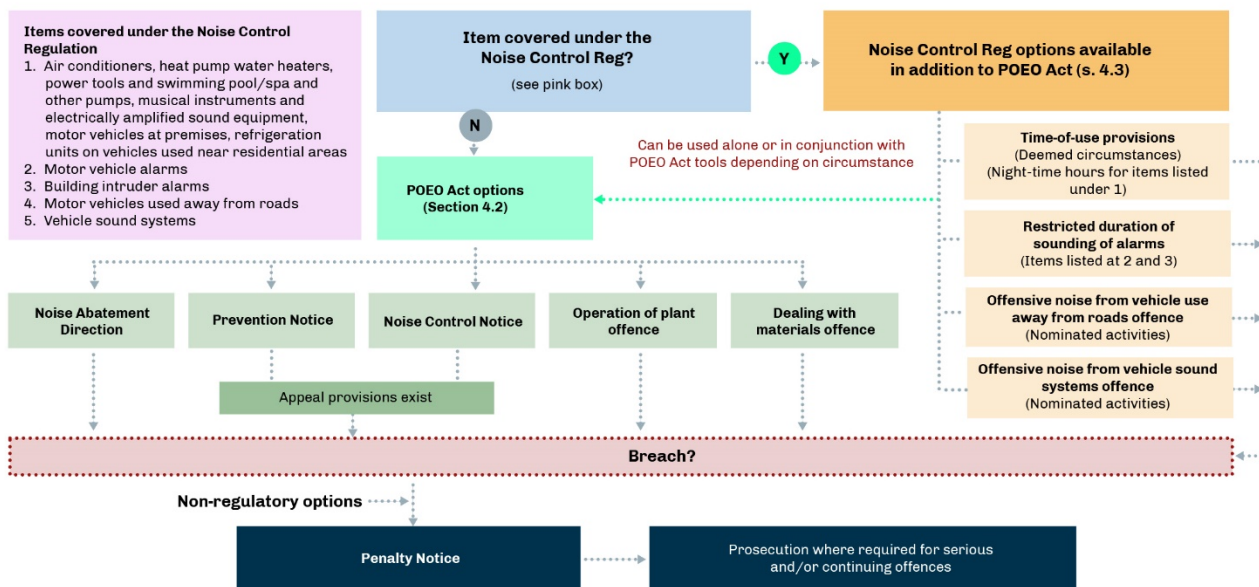


Figure 4 Regulatory tools* available to council officers for managing neighbourhood noise (*Only use in the absence of any consent or planning approval conditions that already relate to the noise in question and after non-regulatory approaches have been tried)

1.5. Responsibility and regulatory options for managing noise

Table 1 identifies the ‘appropriate regulatory authority’ (ARA) within the meaning of the POEO Act s.6 for different sources of noise, available regulatory options to manage noise from that source and where to find further information. Activities required to hold an environment protection licence may be identified with reference to the POEO Act, Schedule 1. The [EPA’s public register](#) may also be consulted to determine if a premises or activity holds an environment protection licence.

Table 2 discusses the advantages and disadvantages of using different regulatory options to manage noise from different noise sources, and provides examples of how they can be used in different circumstances. This information is provided to help councils understand and evaluate what options might be applicable. It can be used alongside the fact sheets to identify the most appropriate solution to noise issues on a case-by-case basis. The advice in this part should not be regarded as a recommendation or the only way to manage a specific noise issue. Instead, councils must consider all relevant factors, including the advice in Part 2 of this guide, as well as non-regulatory options (see Part 3).

Table 1 Responsibilities for managing noise in NSW, by noise source

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
Agriculture						See Fact sheet 1 for a case study example.
Farm machinery (e.g. tractors and harvesters) on private farms	Council (ARA)	Yes	No	Yes	Yes	Negotiate implementation of feasible and reasonable best practices. Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.
Frost fans	Council (ARA)	Yes	No	Yes	Yes	Negotiate implementation of feasible and reasonable best practices. See example guideline: EPA Victoria, <i>Noise from Frost Fans</i> (2012) (publication 1043.1). Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.
Gas scare guns	Council (ARA)	Yes	No	Yes	Yes	Negotiate implementation of feasible and reasonable best practices. See example guidelines: <ul style="list-style-type: none">EPA Victoria, <i>Noise Control Guideline</i> (2008), chapter 12 (publication 1254)EPA South Australia, <i>Environmental Noise Guideline: Audible Bird Scaring Devices</i> (2007). Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.
Intensive agriculture premises listed in the POEO Act Schedule1	EPA (ARA)	Yes	No	Yes	Yes	Councils should refer complaints/concerns to the EPA. The EPA would manage noise impacts through environment protection licence requirements.

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
Intensive agriculture (e.g. poultry grower farms, piggeries and feedlots) not required to hold an environment protection licence issued by the EPA	Council (ARA)	Yes	No	Yes	Yes	Negotiate implementation of feasible and reasonable best practices. Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.
Airports and aircraft						
Aircraft in flight and Commonwealth-owned airports	Commonwealth: Airservices Australia	No	No	No	No	Councils should refer complaints/concerns to Airservices Australia. Relevant legislation: <ul style="list-style-type: none"> <i>Air Navigation Act 1920</i> Air Navigation (Aircraft Noise) Regulations 2018
Aircraft when landing, taking off or taxiing at: <ul style="list-style-type: none"> airports owned and leased by the Commonwealth airports not owned and leased by the Commonwealth 	Commonwealth: Airservices Australia	No	No	No	No	Councils should refer complaints/concerns to Airservices Australia. Relevant legislation: <ul style="list-style-type: none"> <i>Airports Act 1996</i> Airports (Environment Protection) Regulations 1997 <i>Air Navigation Act 1920</i> Air Navigation (Aircraft Noise) Regulations 2018
Aircraft on the ground at airports owned and leased by the Commonwealth (e.g. noise from aircraft engines being tested or when aircraft are parked at a gate or in a designated aircraft parking area)	Commonwealth Department of Transport, Infrastructure, Cities and Regional Development. Relevant airport lessee company under the <i>Airports Act 1996</i>	No	No	No	No	Councils should refer complaints/concerns to the Commonwealth Department of Transport, Infrastructure, Cities and Regional Development or the relevant airport lessee company under the <i>Airports Act 1996</i> . Airport environment officers employed by the Commonwealth Department of Infrastructure, Transport, Cities and Regional Development have regulatory powers. Relevant legislation: <ul style="list-style-type: none"> <i>Airports Act 1996</i>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
						<ul style="list-style-type: none"> Airports (Environment Protection) Regulations 1997. <p>Four airports in NSW are Commonwealth owned and leased:</p> <ul style="list-style-type: none"> Sydney (Kingsford Smith) Airport – Sydney Airport Corporation Ltd Bankstown Airport – Bankstown Airport Ltd Camden Airport – Camden Airport Ltd Gold Coast Airport (part only) – Queensland Airports Ltd.
Military aviation operations and air traffic control at airports with a shared civil and military use	Department of Defence	No	No	No	No	Councils should refer complaints/concerns to the Department of Defence.
Privately operated airports (e.g. aircraft on the ground undergoing excessively noisy engine maintenance)	Council (ARA)	Yes	No	Yes	Yes	<p>Noise from aircraft on the ground not taxiing, taking off or landing can be directly controlled through the POEO Act provisions. This means that noisy aircraft engine maintenance activities on the ground can be controlled by, for example, specifying permitted hours and/or noise limits at affected residences and negotiating alternative times for engine testing and specifying acceptable hours.</p> <p>See EPA NSW, <i>Noise Policy for Industry</i> (2017).</p>
Airports operated by NSW public authorities, such as local councils (e.g. aircraft on the ground undergoing excessively noisy engine maintenance)	EPA (ARA)	Yes	No	Yes	Yes	<p>Councils should refer complaints/concerns to the EPA.</p> <p>Options may include negotiating alternative times for engine testing and specifying acceptable hours.</p> <p>See EPA NSW, <i>Noise Policy for Industry</i> (2017).</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
Helicopter premises not covered by POEO Act Schedule 1 (e.g. aircraft on the ground undergoing excessively noisy engine maintenance)	Council (ARA)	Yes	No	Yes	Yes	<p>Options may include negotiating alternative times for engine testing and specifying acceptable hours.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p> <p>Airservices Australia is responsible for noise from aircraft in flight and aircraft movements (taxiing, taking off and landing). The POEO Act provisions cannot be applied to these activities. This includes conditions specifying, for example:</p> <ul style="list-style-type: none"> • noise limits that apply to aircraft in flight and aircraft movements • the permitted hours for movements • the permitted number of movements • permitted aircraft models (e.g. models certified to meet a certain noise level in certain specified test conditions). <p>See EPA NSW, <i>Noise Policy for Industry</i> (2017).</p>
Helicopter premises covered by POEO Act Schedule 1 (e.g. aircraft on the ground undergoing excessively noisy engine maintenance)	EPA (ARA)	Yes	No	Yes	Yes	<p>Councils should refer complaints/concerns to the EPA.</p> <p>Options may include negotiating alternative times for engine testing and specifying acceptable hours.</p> <p>As above, Airservices Australia is responsible for noise from aircraft in flight and aircraft movements (taxiing, taking off and landing) and POEO Act provisions cannot be applied to these activities.</p> <p>See EPA NSW, <i>Noise Policy for Industry</i> (2017).</p>
Animals						See Fact sheet 2.
Barking dogs	Council (ARA)	Yes	No	No	No	<p>See:</p> <ul style="list-style-type: none"> • <i>Companion Animals Act 1998</i>, ss 32A and 32B • EPA NSW brochure 'Dealing with barking dogs'.
Dog kennels	Council (ARA)	Yes	No	No	Yes	An option may include negotiating a noise management plan.

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
						<p>See EPA Victoria, <i>Noise Control Guideline</i> (2008), chapter 4 (publication 1254).</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>
Other animal noise	Council (ARA)	Yes	No	No	Yes	<p>An option may include negotiating a reduction of noise level and the development of a noise management plan.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>
Commercial premises						See Fact sheet 13.
Commercial premises: noise from fixed plant, deliveries, garbage collection, public address systems, intruder alarms etc. at shops or offices	Council (ARA)	Yes	Yes (Cl. 42)	Yes	Yes	<p>Negotiate implementation of feasible and reasonable best practices.</p> <p>See EPA NSW, <i>Noise Policy for Industry</i> (2017).</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>
Construction and building works						
General residential/commercial building construction	Council (ARA)	Yes	Yes (Cl. 51 residential premises only)	Yes	Yes	<p>See Fact sheets 12a, 12b and 12c.</p> <p>An option may be to negotiate changes to work practices.</p> <p>Address via the <i>Environmental Planning and Assessment Act 1979</i> if the construction noise is in breach of the planning approval.</p> <p>See:</p> <ul style="list-style-type: none"> DECC, <i>Interim Construction Noise Guideline</i> (2009)

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	(s. 140) ⁴	POEO (s. 139) ⁵	
						<ul style="list-style-type: none"> City of Sydney, <i>Code of Practice: Construction Hours/Noise within the CBD</i> (1992). <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>
Major public infrastructure construction	EPA (ARA)	Yes	No	Yes	Yes	<p>Councils should refer complaints/concerns to the EPA.</p> <p>The EPA would manage noise impacts through environment protection licence requirements.</p> <p>See DECC, <i>Interim Construction Noise Guideline</i> (2009).</p>
Educational facilities						
Private childcare centres, schools, colleges and universities	Council (ARA)	Yes	Yes (Cl. 42)	No	Yes	<p>Negotiate changed times for activities.</p> <p>See:</p> <ul style="list-style-type: none"> Fairfield City Council, <i>Fairfield City Wide Development Control Plan</i>, chapter 13 Child Care Centres (2013) Association of Australasian Acoustical Consultants (AAAC), <i>Guideline for Child Care Centre Acoustic Assessment</i> (2013). <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>
Public schools and TAFEs, council childcare centres	EPA (ARA)	Yes	No	No	Yes	Councils should refer complaints/concerns to the EPA.
Public university activities	EPA (ARA)	Yes	No	No	Yes	Councils should refer complaints/concerns to the EPA.
Entertainment activities						
Loud music, patron noise etc. from hotels and liquor licensed	Department of Customer Service	No	No	No	No	While Council can take action under the POEO Act as the ARA, Councils should refer complaints/concerns to the Department of Customer Service (Liquor

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
premises (not including noise from equipment, such as air conditioners and coolers.)	(Liquor and Gaming NSW) Council (ARA) Consent authority (under EP&A Act)					and Gaming NSW) in the first instance to ensure any regulatory action is coordinated. See Fact sheet 3. If conditions in the development consent relating to noise have been breached, council could take action under the <i>Environmental Planning and Assessment Act 1979</i> .
Pyrotechnic displays other than by the State or a public authority	Department of Customer Service (SafeWork NSW) Council (ARA)	Yes	No	Yes	No	A fireworks or pyrotechnician's licence is required from SafeWork NSW under the <i>Explosives Regulation 2013</i> . The licensee must notify council and SafeWork NSW seven days prior to the proposed event and notify Police, Fire Brigade and Rural Fire Service two days prior to the event. Guidelines under s23A of the <i>Local Government Act 1993</i> for councils are available on the Office of Local Government's website: https://www.olg.nsw.gov.au/ (search for 'Guidelines for council when notification of an intention to use fireworks is received')
Outdoor concerts, festivals and cinematic or theatrical events. sporting events using sound amplification equipment with 200 or more people at venues designated under cl. 90 of the POEO General Regulation.	EPA (ARA)	Yes	No	No	Yes	Councils should refer complaints/concerns to the EPA. Clause 90 of the POEO General Regulation declares the EPA the appropriate regulatory authority for this noise source at the: <ul style="list-style-type: none"> • trust lands within the meaning of the <i>Royal Botanic Gardens and Domain Trust Act 1980</i> • trust lands within the meaning of the <i>Centennial Park and Moore Park Trust Act 1983</i> • Darling Harbour area within the meaning of Part 3 of the <i>Sydney Harbour Foreshore Authority Regulation 2006</i> • trust lands within the meaning of the <i>Parramatta Stadium Trust Act 1988</i> • Venues NSW land within the meaning of the <i>Sporting Venues Authorities Act 2008</i>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
						<ul style="list-style-type: none"> Opera House within the meaning of the <i>Sydney Opera House Trust Act 1961</i>.
Entertainment activities at Sydney Olympic Park carried on by the State or a public authority	EPA (ARA)	Yes	No	No	Yes	<p>Councils should refer complaints/concerns to the EPA.</p> <p>Clause 90A of the POEO General Regulation makes the EPA the ARA for activities carried on by the State or a public authority for this noise source.</p> <p>Also refer to the <i>Sydney Olympic Park Authority Act 2001</i>.</p>
Entertainment activities at Sydney Olympic Park not carried on by the State or a public authority	Department of Planning, Industry and Environment (Sydney Olympic Park Authority – SOPA)	Yes	No	No	Yes	<p>Councils should refer complaints/concerns to SOPA.</p> <p>Clause 90A of the POEO General Regulation makes SOPA the ARA for activities not carried on by the State or a public authority for this noise source.</p>
Entertainment facilities, such as amusement parks or public concerts (other than those noted above or where undertaken by the State or a public authority)	Council (ARA)	Yes	No	No	Yes	<p>Negotiate implementation of feasible and reasonable best practices.</p> <p>See Fact sheet 4.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p> <p>Note: The POEO General Regulation makes the Luna Park site exempt from Part 4.3 (noise), section 139 and Part 8.6 of the POEO Act and the <i>Luna Park Site Act 1990</i> prevents civil, criminal or noise abatement action against any person with respect to the emission of noise from the Luna Park site that does not exceed the maximum permissible noise level, except action under the <i>Environmental Planning and Assessment Act 1979</i> (other than by a development control order)</p>
Industry						
Activities listed in cl. 92 of the POEO General Regulation	EPA (ARA)	Yes	No	Yes	Yes	<p>Councils should refer complaints/concerns to the EPA.</p> <p>The EPA to negotiate implementation of feasible and reasonable best practices.</p>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
						<p>Because these activities are considered low risk, an environment protection licence is not required. However, the EPA remains the ARA for these activities.</p> <p>See EPA NSW, <i>Noise Policy for Industry</i> (2017).</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>
Large industrial complexes required to hold an environment protection licence issued by the EPA	EPA (ARA)	Yes	No	Yes	Yes	<p>Councils should refer complaints/concerns to the EPA.</p> <p>The EPA would manage noise impacts through environment protection licence requirements.</p> <p>Relevant activities/premises are listed in Schedule 1 of the POEO Act.</p>
Small factories, commercial premises and backyard workshops (e.g. noise from plant and equipment, reversing alarms, public address systems, deliveries, building intruder alarms, motor vehicles or garbage collection)	Council (ARA)	Yes	Yes (Cls 6 and 42)	Yes	Yes	<p>Negotiate implementation of feasible and reasonable best practices.</p> <p>See Fact sheet 13.</p> <p>See EPA NSW, <i>Noise Policy for Industry</i> (2017).</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>
Motor vehicles						
Road traffic noise on local roads and privately managed motorways	Council (ARA)	Yes	No	No	No	See DECCW, <i>NSW Road Noise Policy</i> (2011).
Road traffic noise on freeways, tollways and main roads managed by Roads and	EPA (ARA)	Yes	No	No	No	<p>Councils should refer complaints/concerns to the EPA.</p> <p>New and redeveloped roads are subject to planning approval or determinations under the <i>Environmental Planning and Assessment Act 1979</i>. The EPA's input</p>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
Maritime Services or the state						<p>into the planning assessment process for new and redeveloped roads is informed by the <i>NSW Road Noise Policy</i> (DECC, 2011).</p> <p>The EPA liaises with Transport for NSW (RMS) on particular noise issues.</p> <p>For existing roads, Transport for NSW (RMS) administers the Noise Abatement Program that seeks to resolve acute noise issues (See the RMS website for more information about the program.)</p>
Motor vehicle on residential premises causing offensive noise at any time, or unnecessary noise during the night or early morning	Council (ARA) Police	Yes	Yes (Cls 6 and 8)	No	No	<p>Negotiate for activity to cease using non-regulatory approaches.</p> <p>See Fact sheet 5b.</p> <p>See EPA NSW brochure <i>Managing vehicle noise</i>.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test) and regulatory options in Table 2.</p>
Motor vehicle (including trail bikes) off road on private property and public land, such as parks and reserves	Council (ARA) Police	Yes	Yes (Cl. 6)	No	No	<p>Options may include negotiating for the activity to cease, fitting appropriate mufflers and conducting the activity well away from sensitive receivers, such as residences.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test) and regulatory options in Table 2.</p> <p>Police have the power to stop, inspect and test motor vehicles.</p> <p>See Fact sheet 5a.</p> <p>See EPA NSW brochure <i>Managing vehicle noise</i>.</p>
Motor vehicle engine/exhaust noise on roads, verges and car parks	EPA Police	Yes	Yes (Cls 5, 11, 14 and 17)	No	No	<p>Councils should refer complaints/concerns to the EPA or the Police.</p> <p>EPA authorised officers and police officers have the power to stop, inspect and test motor vehicles.</p> <p>Under the Noise Testing and Anti-tampering Scheme, the EPA has established a network of approved inspection stations across NSW.</p>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
						<p>Transport for NSW (RMS) also has responsibility for noise from heavy vehicles.</p> <p>See EPA NSW brochure <i>Managing vehicle noise</i>.</p>
Motor vehicle alarms sounding	Council (ARA) Police Department of Planning, Industry and Environment – DPIE (Place Management NSW)	Yes	Yes (Cls 24 and 25)	No	No	<p>Identify the owner and arrange for the alarm to be deactivated.</p> <p>Councils should liaise with their Police Local Area Commands regarding the management of alarms.</p> <p>Council authorised officers have the power to turn off or disable alarms that have been sounding for longer than the permitted time (POEO Act s. 198A).</p> <p>DPIE (Place Management NSW) is responsible for vehicle alarms sounding around the Sydney Harbour Foreshore.</p> <p>See Fact sheet 5c.</p> <p>See EPA NSW brochure <i>Managing noise from intruder alarms</i>.</p>
Motor vehicle refrigeration units	Council (ARA) Police	Yes	Yes (Cl. 9)	No	No	<p>An option may be to negotiate for the vehicle to be moved to a location that would not result in noise impact.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test) and regulatory options in Table 2.</p> <p>See Fact sheet 5b.</p> <p>See EPA NSW brochure <i>Managing vehicle noise</i>.</p>
Motor vehicle sound systems	Council (ARA) Police	Yes	Yes (Cl. 31)	No	No	See EPA NSW brochure <i>Managing vehicle noise</i> .
Neighbourhood activities						
Air conditioner use on residential premises	Council (ARA) Police	Yes	Yes (Cl. 45)	No	Yes	<p>An option is to negotiate a reduction of noise level (e.g. the resident can move equipment away from affected neighbours, install acoustic shielding or install a quieter model).</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and</p>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
						<p>efficient manner) and regulatory options in Table 2.</p> <p>Although police officers may issue noise abatement directions and penalty notices for noise from air conditioners, noise issues are likely to be ongoing in nature and best addressed by councils as the ARA.</p> <p>See Fact sheet 6.</p>
Amplified music, musical instruments on residential premises	Council (ARA) Police	Yes	Yes (Cls 57 and 58)	No	No	<p>An option is to negotiate a reduction of volume.</p> <p>Mediation may be an option, either informally or through a community justice centre (see Section 9.5).</p> <p>See Fact sheet 7.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p> <p>Police are typically the main agency for control of noise from late-night parties, or where the safety of council officers may be a concern or where council officers may not be available.</p> <p>Council authorised officers may at any premises lawfully entered, seize offending equipment if the officer has reasonable grounds for believing is connected with an offence (POEO Act s. 198). Police may seize equipment being used to contravene a noise abatement direction after being warned (POEO Act s. 282) (see Section 4.2.4 of this guide).</p> <p>The State government is developing planning rules and a code of conduct for management of short-term rental accommodation (e.g. Airbnb). See the website of the Department of Planning, Industry and Environment for more information.</p>
Building intruder alarms sounding	Council (ARA) Police	Yes	Yes (Cl. 42)	No	Yes	<p>Councils should liaise with their NSW Police Local Area Commands regarding management of noise from alarms in their area. Council authorised officers have the power to turn off or disable</p>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
						<p>alarms that have been sounding for longer than the permitted time.</p> <p>A search warrant is required before an authorised officer may exercise power to enter any part of premises used only for residential purposes unless the occupier has not granted permission. Council officers may seek assistance in carrying out their functions in this regard (POEO Act, ss. 197 and 198A–199A).</p> <p>Identify the owner/occupier and arrange for the alarm to be deactivated.</p> <p>See Fact sheet 8. See EPA brochure <i>Managing noise from intruder alarms</i>.</p>
Electric power tools, powered garden equipment use on residential premises	Council (ARA) Police	Yes	Yes (cl. 51)	No	Yes	<p>An option is to negotiate a reduction of noise level (e.g. by using quieter equipment, changing times of use, closing doors or moving equipment away from neighbours).</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p> <p>See Fact sheet 9.</p> <p>Police may become involved when council officers are not available.</p> <p>Council authorised officers may at any premises lawfully entered, seize offending equipment if the officer has reasonable grounds for believing is connected with an offence (POEO Act s. 198). Police may seize equipment being used to contravene a noise abatement direction after being warned (POEO Act s. 282) (see Section 4.2.4 of this guide).</p>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
Heat pump water heaters on residential premises	Council (ARA) Police	Yes	Yes (Cl. 53)	No	Yes	<p>Some options to negotiate a reduction of noise level are to move equipment away from neighbours, install acoustic shielding or install a quieter model.</p> <p>Although police officers may issue noise abatement directions and penalty notices for noise from this equipment, issues are likely to be ongoing in nature and best addressed by the council as the ARA.</p> <p>Some of the guidance relevant to air conditioners may also be applied to heat pump water heaters.</p> <p>See Fact sheet 6.</p>
Model vehicles, boats and aircraft	Council (ARA) Police	Yes	No	No	Yes	<p>Negotiate a reduction of noise level by operating the equipment at a different time or relocating the activity.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p> <p>The EPA does not consider models to be included within the definitions of motor vehicles, vessels and aircraft for the purposes of making other agencies (other than councils) the ARA for noise issues related to these items.</p> <p>Council authorised officers may at any premises lawfully entered, seize offending equipment if the officer has reasonable grounds for believing is connected with an offence (POEO Act s. 198). Police may seize equipment being used to contravene a noise abatement direction after being warned (POEO Act s. 282) (see Section 4.2.4 of this guide).</p>
Pumps used on residential premises (e.g. rainwater pumps, swimming pool pumps, spa pumps and water cooler pumps)	Council (ARA) Police	Yes	Yes (cl. 52)	No	Yes	<p>Some options to negotiate a reduction of noise level include moving the equipment away from neighbours, installing acoustic shielding or installing a quieter model.</p> <p>Where non-regulatory approaches are unsuccessful, consider relevant regulatory trigger points (e.g. the noise fails the offensive noise test or plant is not being operated in a proper and efficient manner) and regulatory options in Table 2.</p>

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	(s. 140) ⁴	POEO (s. 139) ⁵	
						Although police officers may issue noise abatement directions and penalty notices for noise from this equipment, noise issues are likely to be ongoing in nature and best addressed by the council as the ARA. See Fact sheet 6.
Public authorities						
Activities undertaken by or on behalf of public authorities (e.g. State government agencies and local councils)	EPA (ARA)	Yes	No	Yes	Yes	Councils should refer complaints/concerns to the EPA.
Rail						
Inner West Light Rail	EPA (ARA)	Yes	No	Yes	Yes	Councils should refer complaints/concerns to the EPA.
Rail noise	EPA (ARA)	Yes	No	Yes	Yes	The EPA would manage noise impacts through environment protection licence requirements.
Sports events						
Motorboat racing (other than by the State or public authority, on licensed premises or in a marine park)	Transport for NSW (RMS) (ARA)	Yes	No	No	Yes	Transport for NSW (RMS) typically control motorboat racing through marine safety licences under the <i>Marine Safety Act 1998</i> .
Motor sports on private land (e.g. Eastern Creek)	Council (ARA)	Yes	No	No	No	See Fact sheet 10. Special legislation may be in place exempting certain events from the noise provisions of the POEO Act and Noise Control Regulation, such as s. 30 of the <i>Motor Racing (Sydney and Newcastle) Act 2008</i> and s. 12 of the <i>Mount Panorama Motor Racing Act 1989</i> .
Motor sports – on road	Council (ARA) Police	Yes	No	No	No	The Commissioner of Police is responsible for issuing approvals to authorise a race, speed record attempt or speed trial under s. 115 of the <i>Road Transport Act 2013</i> .
Outdoor sporting events involving sound	EPA (ARA)	Yes	No	Yes	Yes	Councils should refer complaints/concerns to the EPA.

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
amplification equipment for 200 or more people at venues designated under clause 90 of the POEO General Regulation						Clause 90 of the POEO General Regulation declares the EPA the ARA for this noise source at the following premises: <ul style="list-style-type: none">the Royal Botanic Gardensthe DomainCentennial ParkMoore ParkParramatta StadiumVenues NSW land including Sydney Cricket and Sports Ground (i.e. Sydney Cricket Ground and Sydney Football Stadium and Driver Avenue), and the Army Engineer's Depot, Moore Parkthe Opera HouseDarling Harbour.
Entertainment activities at Sydney Olympic Park carried on by the State or a public authority	EPA (ARA)	Yes	No	Yes	Yes	Clause 90A of the POEO General Regulation makes the EPA the ARA for activities carried on by the State or another public authority for this noise source. <i>Also see Sydney Olympic Park Authority Act 2001.</i>
Entertainment activities at Sydney Olympic Park not carried on by the State or a public authority	Department of Planning, Industry and Environment (Sydney Olympic Park Authority – SOPA) (ARA)	Yes	No	Yes	Yes	Councils should refer complaints/concerns to the Department of Planning, Industry and Environment (DPIE). Clause 90A of the POEO General Regulation makes DPIE (SOPA) the ARA for activities not carried on by the State or another public authority for this noise source.
Private gun, rifle and/or pistol clubs	Council (ARA)	Yes	No	Yes	Yes	See POEO Noise Control Regulation, Cl 70 and Schedule 2: Determining Noise Levels from Shooting Ranges. Additional guidance can be obtained from <i>Target Shooting Ranges: Application Note for Assessing Noise Compliance</i> (EPA, July 2015).
Sporting facilities/events (other than as noted above)	Council (ARA)	Yes	No	Yes	Yes	See Fact sheet 4.

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	

Vessels

Naval vessels	Department of Defence	No	No	No	No	Councils should refer the complaint to and/or liaise with the Department of Defence.
Vessels berthed at a port facility that is subject to an environment protection licence that covers vessels berthed at the facility	EPA (ARA)	Yes	No	Yes	Yes	The EPA would manage noise impacts through environment protection licence requirements.
Vessels related to activities carried on by the State or a public authority	EPA (ARA)	Yes	Yes	No	Yes	Councils should refer complaints/concerns to the EPA. Clauses 34, 35, 37–9, 59, 63 and 64 of the POEO Noise Control Regulation (vessel sirens, offensive noise from vessels, vessel noise control equipment, sound systems on vessels, defective vessel notices and labels) may apply.
Vessels in a marine park other than those for which the EPA is the ARA	Marine Parks Authority Marine Authority Transport for NSW (RMS) Port Authority of New South Wales Police Council EPA	Yes	Yes	No	Yes	Clauses 34, 35, 37–9, 59, 63 and 64 of the POEO Noise Control Regulation (vessel sirens, offensive noise from vessels, vessel noise control equipment, sound systems on vessels and defective vessel notices and labels) may apply. In addition, the following agencies have various powers: <ul style="list-style-type: none"> The Minister administering the <i>Ports and Maritime Administration Act 1995</i> or Transport for NSW (Marine Authority) is the designated ARA for the purposes of issuing noise control notices for vessels in navigable waters and for premises used in connection with vessels and situated adjacent to, or partly or wholly over, navigable waters. An authorised officer or employee of the Marine Authority, an authorised officer and the Police are the designated authorised persons for the purpose of issuing noise abatement directions. A member of staff of the Port Authority of New South Wales or Transport for NSW (RMS) and Police

Noise source	Responsibility ¹	Regulatory options quick guide					Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	(s. 140) ⁴	POEO (s. 139) ⁵	POEO	
							<p>officers are enforcement officers for the purposes of issuing penalty notices under clauses 34, 35, 37–9, 63 and 64 of the POEO Noise Control Regulation.</p> <ul style="list-style-type: none"> A member of staff of a council or and the EPA (or DPIE for Kosciuszko National Park) are enforcement officers for the purposes of issuing penalty notices under clauses 34, 35 and 39 of the POEO Noise Control Regulation.
Non-pilotage vessels ⁶ in navigable waters (non-scheduled activities), excluding activities by the State or public authorities or in marine parks.	Transport for NSW (RMS) (ARA) Marine Authority Port Authority of New South Wales Police Council EPA	Yes	Yes	Yes	Yes		<p>Clauses 34, 35, 37–9, 59, 63, and 64 of the POEO Noise Control Regulation (vessel sirens, offensive noise from vessels, vessel noise control equipment, sound systems on vessels, defective vessel notices and labels) may apply. As the ARA, Transport for NSW (RMS) is the main agency for noise control. In addition, the following agencies have various powers:</p> <ul style="list-style-type: none"> The Marine Authority (Minister administering the <i>Ports and Maritime Administration Act 1995</i> or Transport for NSW) is the designated ARA for the purposes of issuing a noise control notice for vessels in navigable waters. An authorised officer or employee of the Marine Authority, an authorised officer or a Police officer are designated authorised persons for the purpose of issuing noise abatement directions. A member of staff of the Port Authority of New South Wales or Transport for NSW (RMS) and Police officers are enforcement officers for the purposes of issuing penalty notices under clauses 34, 35, 37–9, 63 and 64 of the POEO Noise Control Regulation. A member of staff of a council and/or the EPA (or OEH in Kosciuszko National Park) are enforcement officers for the purposes of issuing penalty notices under clauses 34, 35 and 39 of the POEO Noise Control Regulation. i.e. sirens, offensive noise and sound systems.

Noise source	Responsibility ¹	Regulatory options quick guide					Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	(s. 140) ⁴	POEO (s. 139) ⁵	POEO	
							<ul style="list-style-type: none"> Designated ports are Newcastle Eden, Sydney Harbour, Botany Bay, Port Kembla and Yamba. Vessels declared exempt from the pilotage requirements (s75 of the <i>Marine Safety Act 1998</i>).
Vessels subject to pilotage requirements under the <i>Marine Safety Act 1988</i> at a designated port	EPA (ARA) ⁷ Council (ARA) ⁷ Marine Authority Transport for NSW (RMS) Port Authority of New South Wales Police Council EPA	Yes	Yes	No	Yes		<p>Clauses 34, 35, 37–9, 59, 63 and 64 of the POEO Noise Control Regulation (i.e. vessel sirens, offensive noise from vessels, vessel noise control equipment, sound systems on vessels, defective vessel notices and labels).</p> <p>The following agencies have various powers:</p> <ul style="list-style-type: none"> The Marine Authority (Minister administering the <i>Ports and Maritime Administration Act 1995</i> or Transport for NSW) is designated as the ARA for the purposes of issuing noise control notices for vessels in navigable waters. An authorised officer or employee of the Marine Authority, an authorised officer or a Police officer are designated authorised persons for the purpose of issuing noise abatement directions. A member of staff of a Port Authority of New South Wales or Transport for NSW (RMS) and Police officers are enforcement officers for the purposes of issuing penalty notices under clauses 34, 35, 37–9, 63 and 64 of the POEO Noise Control Regulation. A member of staff of a council and/or the EPA (or OEH in Kosciuszko National Park) are enforcement officers for the purposes of issuing penalty notices under clauses 34, 35 and 39 of the POEO Noise Control Regulation. i.e. sirens, offensive noise from vessel, and sound systems. Designated ports are Newcastle Eden, Sydney Harbour, Botany Bay, Port Kembla and Yamba.
Wind farms							

Noise source	Responsibility ¹	Regulatory options quick guide				Comments/Broad management options/Further information (non-exhaustive)
		POEO Act ²	POEO NCR ³	POEO (s. 140) ⁴	POEO (s. 139) ⁵	
Wind farms covered by Schedule 1 of the POEO Act (e.g. wind farms that are State significant developments)	EPA (ARA)	Yes	No	Yes	Yes	See: <ul style="list-style-type: none"> relevant environment protection licences (available for viewing on the EPA public register) Department of Planning and Environment, <i>Wind Energy Guideline: For State Significant Wind Energy Development</i> (2016).
Wind farms not covered by Schedule 1 of the POEO Act	Council (consent authority)	Yes	No	Yes	Yes	The planning approval should be the primary regulatory tool. See Department of Planning and Environment, <i>Wind Energy Guideline: For State Significant Wind Energy Development</i> (2016).

Notes:

1. This column may include the appropriate regulatory authority (ARA) or authorised officer or person (depending on the regulatory option used under the POEO Act), the consent authority under the EP&A Act or enforcement officers for penalty notice offences under the POEO Act (Section 3.1.3 in Part 2 of this guide).
2. POEO Act options used to regulate noise include prevention notices, noise control notices and noise abatement directions (Section 4.2 in Part 2 of this guide). Where the EPA is the ARA, environment protection licences are an additional noise regulation option.
3. POEO Noise Control Regulation options include deemed circumstance provisions (i.e. the commission of an offense if deemed circumstances have been met) and nominated activity provisions (i.e. the commission of an offense if offensive noise is generated from nominated activities). Deemed circumstance and nominated activity provisions are more fully explained in Sections 4.2 and 4.3. A "Yes" in this column does not indicate that all POEO Noise Control Regulation options will apply to the source of noise. Different provisions will apply depending on the source. For example, the provisions relating to the use of a noise source at a residential premises will not apply to a noise source at a commercial premises.
4. Refers to s. 140 of the POEO Act relating to the operation of plant (Section 4.2.5 in Part 2 of this guide).
5. Refers to s.139 of the POEO Act relating to dealing with materials (Section 4.2.5 in Part 2 of this guide).
6. A non-pilotage vessel is defined in the POEO General Regulation at cl. 84. Typically, a pilotage vessel is a large vessel (over 30m in length) that is required under the *Marine Safety Act 1998* to operate under the conduct of a licensed pilot when in a designated port.
7. The ARA for vessels subject to pilotage requirements in designated ports is the council if the vessel is operating on navigable waters within the council's area, but the EPA if operating on navigable waters not within a council area.

Table 2 Advantages and disadvantages of regulatory options for controlling noise under the POEO Act and the POEO Noise Control Regulation and situation context

Noise management regulatory options	Advantages	Disadvantages	Situations you may consider using this for (only used where existing consent conditions, if present, do not address the noise in question)
POEO ACT			
Noise abatement direction (ss. 275–99)	<ul style="list-style-type: none"> It can be used to require a person to promptly stop the emission of offensive noise (without reasonable excuse) upon being given the direction and applies for up to 28 days thereafter. It can be used to address offensive noise occurring at any time of the day. Authorised persons (the ARA and the Police) have a range of powers available to enforce noise abatement directions, ranging from requiring persons to provide their name and address to entering premises and seizing equipment. It can be used to manage multiple noise sources from a premises whereas regulatory options under the POEO Noise Control Regulation are designed to manage specific sources during certain times. It can be used to address noise from non-residential premises that are regulated by council that are not already regulated by consent conditions relating to noise. 	<ul style="list-style-type: none"> It is a responsive option and cannot facilitate a solution to a long-term noise issue. Determining whether offensive noise is occurring will require consideration of several factors and must be made by an authorised officer/person or enforcement officer. Information on determining offensive noise is in Section 4.2.1 in Part 2. 	<p>Where immediate cessation of noise is required</p> <p>Useful for one-off situations that can be readily rectified</p> <p>For example, a noisy activity at one residential premises affecting another, such as a noisy party or use of garden tools or musical instruments</p>
Noise control notice (ss. 263–7B)	<ul style="list-style-type: none"> It can facilitate a long-term solution to a noise problem by specifying a definitive noise level that should not be exceeded at a specified location and during specified times. 	<ul style="list-style-type: none"> Determining compliance will require undertaking noise measurements. There will be a delayed response if the noise occurs outside of council's operating hours as the noise control notice would 	<p>Where a long-term solution to an existing or potential noise problem is required including where a number of measures are required to reduce overall noise to a particular level</p>

Noise management regulatory options	Advantages	Disadvantages	Situations you may consider using this for (only used where existing consent conditions, if present, do not address the noise in question)
	<ul style="list-style-type: none"> • It can be issued for noise occurring at any time of the day. • It can manage multiple noise sources from a premises whereas regulatory options under the POEO Noise Control Regulation are designed to manage specific sources during certain times. • It can set an overall noise level to be met by an entire premises when measured at a specified point in the notice by regulation of specified activities or the use of specified articles at the premises. • The emission of offensive noise is not a prerequisite. • It can be used to address noise from non-residential premises regulated by council. • It can be issued as a proactive measure to prevent excessive noise from being emitted from a proposed activity. • There are cost-recovery options available to ARAs: an administrative fee for issuing the notice and compliance cost notice for monitoring or ensuring compliance with the notice. 	<ul style="list-style-type: none"> • have to be issued the following day after first visiting the site and collecting evidence from the complainant. • It may be more time consuming to prepare and issue compared to other regulatory options because it must be issued in writing and specify a noise level at a defined location and during defined times, which will require investigation. • The principles of procedural fairness may apply, so a person should ordinarily be advised of the proposed noise control notice before issue for comment and opportunity to resolve the issue. Therefore, this approach may delay a quick resolution of the issue. • Police officers are not authorised to issue noise control notices. • It should not be used for noise sources that vary in noise level, are mobile and/or occur at different times as it will be difficult to specify in a noise control notice and difficult to enforce. • The person being served a noise control notice may need to pay an administrative fee and compliance costs. • A person may appeal against a noise control notice within 21 days of issue. However, the noise control notice applies until the Land and Environment Court rules to stay the notice. 	<p>For example, to limit noise from installation of a new air conditioner at residential premises or noisy plant at commercial premises.</p>

Noise management regulatory options	Advantages	Disadvantages	Situations you may consider using this for (only used where existing consent conditions, if present, do not address the noise in question)
Prevention notice (ss. 95–100)	<ul style="list-style-type: none"> It can facilitate a long-term solution to a noise problem as it can specify a range of actions to manage noise, including preparing and carrying out a plan of action to control, prevent or minimise noise and cease the use of plant or activity. It can be used to address noise occurring at any time of the day. It can apply to an entire premises (that is all sources at a premises) or just an activity being conducted. It can be used to manage noise from non-residential premises regulated by council. It can be used to manage other environmental issues in addition to noise (e.g. air, water and waste) in the one notice. There are cost-recovery options available to ARAs: an administrative fee for issuing the prevention notice and compliance cost notice for monitoring or ensuring compliance with the notice. Higher maximum penalties are available for breaches of this provision compared to a noise control notice, a noise abatement direction and provisions under the POEO Noise Control Regulation. 	<ul style="list-style-type: none"> While the emission of offensive noise is not a prerequisite, in those cases where this is the basis for the notice, this will require consideration of several factors and must be made by an authorised officer. Information on determining offensive noise is in Section 4.2.1 in Part 2. The principles of procedural fairness apply, that is the person should ordinarily be given an opportunity to comment on the proposed notice before it is issued. Therefore, this can delay a quick resolution of an issue. Police officers are not authorised to issue prevention notices. Administratively, a prevention notice takes longer to prepare and issue as it must be issued in writing. This also results in a delay in action and may not be suitable to provide immediate respite from noise. The person served a prevention notice may need to pay an administrative fee and for the cost of compliance activities. A person may appeal against the issue of a prevention notice within 21 days of being issued the notice. However, the prevention notice applies unless and until the Land and Environment Court rules to stay the notice. 	<p>Where a short-term or long-term solution to a noise problem is required.</p> <p>Where more knowledge is required about the noise problem to find the best solution.</p> <p>Where many noise sources are involved.</p> <p>Where a number of environmental issues require action.</p> <p>For example, noise from a council-regulated industrial or commercial premises without noise conditions in their consents.</p>
Operation of plant ¹ offence (s. 139)	<ul style="list-style-type: none"> A formal judgement of offensive noise is not required. 	<ul style="list-style-type: none"> Proof whether the noise is caused by plant not being maintained in an efficient condition or operated in a 	<p>Premises-based² operations where the only noise problem is because a plant item has not been</p>

Noise management regulatory options	Advantages	Disadvantages	Situations you may consider using this for (only used where existing consent conditions, if present, do not address the noise in question)
	<ul style="list-style-type: none"> This provision provides for a direct offence for noise that is emitted due to plant items at premises not being maintained in an efficient condition or operated in a proper and efficient manner. Higher maximum penalties are available for breaches of this provision compared to a noise control notice, a noise abatement direction and the provisions under the POEO Noise Control Regulation. No appeal provisions apply. 	<ul style="list-style-type: none"> 'proper and efficient manner' may be difficult to establish. Requires the issuing of a penalty notice or prosecution proceedings. Police officers cannot issue penalty notices. Not useful for managing noise from other sources at the site. 	<p>maintained or used properly.</p> <p>For example, a piece of machinery with worn bearings that causes a high pitch squeal or the operation of worn conveyor belts causing noise as the loose belt is drawn through the drivers.</p>
Dealing with materials ³ offence (s. 140)	<ul style="list-style-type: none"> A formal judgement of offensive noise is not required. Direct offence for noise due to materials not being dealt with in a proper and efficient manner. Higher maximum penalties are available for breaches of this provision compared to a noise control notice, a noise abatement direction and the provisions under the POEO Noise Control Regulation. No appeal provisions apply. 	<ul style="list-style-type: none"> Proof of whether materials are being dealt with in a 'proper and efficient manner' may be difficult to establish. Requires the issuing of a penalty notice or prosecution proceedings. Police officers cannot issue penalty notices. This approach is not useful for managing noise from other sources at the site. 	<p>Premises² based operations where the only noise problem is materials not being dealt with in a proper and efficient manner.</p> <p>For example, throwing or dumping empty glass bottles into steel drums or containers or the noisy movement of stockpiles.</p>
Power to disable intruder alarms (ss 197, 198A–199A)	<ul style="list-style-type: none"> Council authorised officers have the power to turn off or otherwise disable building or motor vehicle intruder alarms that have been sounding for longer than the permitted time, thereby ceasing the noise impact. 	<ul style="list-style-type: none"> Councils should liaise with their NSW Police Local Area Commands regarding management of noise from alarms in their area. A search warrant is required to enter any part of premises used only for residential purposes unless permission has 	<p>Building intruder alarms sounding for longer than the prescribed time and causing noise impacts in the local area.</p>

Noise management regulatory options	Advantages	Disadvantages	Situations you may consider using this for (only used where existing consent conditions, if present, do not address the noise in question)
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been granted by the occupier.

- Council officers may require assistance in carrying out their functions in this regard. (ss 197 and 198A–199A POEO Act)

POEO NOISE CONTROL REGULATION

Deemed circumstances⁴ provisions (cls 8, 9, 45, 51–3, 57, 58). Use of the following on residential premises during certain hours: motor vehicles, refrigeration units fitted to motor vehicles, air conditioners, power tools, pumps, heat pump water heaters, musical instruments and electrically amplified sound equipment.

- These provisions are easy to apply as they restrict times of use.
- There is no need to make a judgement that the noise is offensive before action can be taken.
- Prior to issuing a warning, the complainant's diary of noise events or statement can also be relied upon by the authorised or enforcement officer to confirm that the noise is audible and occurred during the restricted hours.

- The provisions only apply during night-time periods and situations specified in the POEO Noise Control Regulation.
- The provisions require proof that the person 'caused' or 'permitted' the use of the item. This may be difficult to establish.
- The provisions require a warning to be given first.
- The provisions could result in delayed action due to the need for a warning, but they may be used with a noise abatement direction to ensure prompt action.
- The provisions are a reactive option and will not facilitate a solution to a long-term noise issue.

Residents affected by noise from the following items used at neighbouring residences during night time hours⁵:
air conditioners, heat pump water heaters, power tools and swimming pool/spa and other pumps, musical instruments and electrically amplified sound equipment, motor vehicles at residential premises, refrigeration units on motor vehicles near residential areas.

Nominated activity⁴ (cl. 6): offensive noise from motor vehicle used away from roads offence.

- Council authorised officers and the Police may issue penalty notices.

- Determining whether offensive noise is occurring will require consideration of several factors and must be made by an authorised officer. Information on determining offensive noise is in Section 4.2.1 in Part 2.
- The provision requires proof that the person 'caused' the use of the vehicle.
- While not specifically required by the legislation, a warning providing the potential offender with natural justice is desirable.

For addressing noisy use of motor vehicles at places other than roads or road-related area⁶ only (e.g. motor vehicles or trail bike use in parks).

Noise management regulatory options	Advantages	Disadvantages	Situations you may consider using this for (only used where existing consent conditions, if present, do not address the noise in question)
Nominated activity ⁴ (cl. 31): Offensive noise from vehicle sound systems offence.	<ul style="list-style-type: none"> Council authorised officers and the Police may issue penalty notices. 	<ul style="list-style-type: none"> Determining whether offensive noise is occurring will require consideration of several factors and must be made by an authorised officer. Information on determining offensive noise is in Section 4.2.1 in Part 2. The provision requires proof that the person 'caused' the use of the vehicle. While not specifically required by the legislation, a warning providing the potential offender with natural justice may be warranted. 	For addressing offensive noise from motor vehicle sound systems.
Nominated activity ⁴ (cl. 35): Offensive noise from vessels on navigable waters offence.	<ul style="list-style-type: none"> Council, the Police, Transport for NSW (RMS) and Port Authority of New South Wales officers may issue penalty notices. However, Transport for NSW (RMS) and Port Authority of New South Wales officers are often better placed to do this due to their on-water presence. 	<ul style="list-style-type: none"> Determining whether offensive noise is occurring will require consideration of several factors and must be made by an authorised officer. Information on determining offensive noise is in Section 4.2.1 in Part 2. Table 1 outlines the relevant ARA for vessels depending on size and jurisdiction. The provision requires proof that the person 'caused' the use of the vessel. While not specifically required by the legislation, a warning providing the potential offender with natural justice may be warranted. 	For addressing offensive noise from vessels on navigable waters.
Nominated activity ⁴ (cl. 39): Offensive noise from the use of musical instruments or sound systems on vessels.	<ul style="list-style-type: none"> Council, the Police, Transport for NSW (RMS) and Port Authority of New South Wales officers may issue penalty notices. However, RMS and Port Authority of New South Wales officers are often better placed to do this 	<ul style="list-style-type: none"> Determining whether offensive noise is occurring will require consideration of several factors and must be made by an authorised officer. Information on determining offensive noise is in Section 4.2.1 in Part 2. Table 1 outlines the 	For addressing offensive noise from the use of musical instruments and sound systems.

Noise management regulatory options	Advantages	Disadvantages	Situations you may consider using this for (only used where existing consent conditions, if present, do not address the noise in question)
	due to their on-water presence.	<p>relevant ARA for vessels depending on size and jurisdiction.</p> <ul style="list-style-type: none"> The provision requires proof that the person 'caused' the use of the musical instrument or sound system. While not specifically required by the legislation, a warning providing the potential offender with natural justice may be warranted. 	
Noise from motor vehicle intruder alarms that sound for longer than prescribed times (cl. 25).	<ul style="list-style-type: none"> Council, police and other enforcement officers (EPA and DPIE) may issue penalty notices. Council authorised officers have the power to turn off or disable alarms that have been sounding for longer than the permitted time and may have someone there with them to assist. (See above 'Power to disable intruder alarms (s.197, 198A–199A POEO Act)'). An offence occurs where an alarm sounds for longer than the time permitted by the Regulation unless this was because a window or windscreen in the motor vehicle is broken or removed or the motor vehicle is involved in an accident or the motor vehicle is illegally broken into or there is an illegal attempt to break into the motor vehicle. Penalty notices may be issued to the owner if identified, or if not, by affixing to the motor vehicle. 	<ul style="list-style-type: none"> The issue of a penalty notice will not stop the alarm sounding. The provision requires proof that the person 'caused' or 'permitted' the alarm to sound although there are provisions which assist in proof of 'cause': see cl25(3) It can be difficult to locate the owner to deactivate the alarm. Council officers may need to seek assistance from relevant professionals in order to gain access to deactivate the alarm. Police are not allowed to enter motor vehicles to deactivate the alarm but may accompany council officers, who are authorised to do this. A warrant is needed to enter any premises used solely for residential purposes unless the occupier has granted permission (s. 197 POEO Act). 	Motor vehicle alarms sounding longer than prescribed times in the Regulation.

Noise management regulatory options	Advantages	Disadvantages	Situations you may consider using this for (only used where existing consent conditions, if present, do not address the noise in question)
	<ul style="list-style-type: none"> The amount of the penalty notice fine increases with increasing sounding time of the alarm. 		
Noise from building intruder alarms that sound for longer than prescribed times (cl. 42).	<ul style="list-style-type: none"> Council officers and the police officers may issue penalty notices. Council authorised officers have the power to turn off or disable alarms that have been sounding for longer than the permitted time and may have someone there with them to assist. (See above 'Power to disable intruder alarms (ss. 197, 198A–199A)'). An offence occurs where an alarm sounds for longer than the time permitted by the Regulation and the alarm is audible within a room in any other residential premises that is not a garage, storage area, bathroom, laundry, toilet or pantry. Penalty notices may be issued to the occupier. The amount of the penalty notice fine increases with increasing sounding time of the alarm. 	<ul style="list-style-type: none"> The issue of a penalty notice will not stop the alarm sounding. Assessment location is within any room (other than a garage, storage area, bathroom, laundry, toilet or pantry) in a neighbouring residence. It may be difficult for an authorised officer to prove whether the noise would have been audible in these areas from outside observations or measurements, for example when access to the rooms is not available. The permitted period depends on when the building alarm was installed. The officer may not know when the alarm was installed. It can be difficult to locate the occupier to deactivate the alarm. Council officers may need to seek assistance from relevant professionals (including the Police) to gain access to deactivate the alarm. A warrant is needed to enter any part of premises used solely for residential purposes unless the occupier has granted permission (POEO Act s. 197). 	Building intruder alarms sounding longer than prescribed times in the Regulation.

Notes:

1. Plant means any plant, equipment, apparatus, device, machine or mechanism, and includes any vessel, dredge, unit of rolling stock or crane, but does not include a motor vehicle (POEO Act Dictionary).
2. Premises includes (a) a building or structure, (b) land or a place (whether enclosed or built on or not) and (c) a mobile plant, motor vehicle, vessel or aircraft (POEO Act Dictionary).

3. Deal with materials means process, handle, move, store or dispose of the materials. Materials includes raw materials, materials in the process of manufacture, manufactured materials, by-products, or waste materials (s. 140 POEO Act).
4. POEO Noise Control Regulation options include deemed circumstance (i.e. the commission of an offense if deemed circumstances have been met) and nominated activity provisions (i.e. the commission of an offense if offensive noise is generated from nominated activities). Deemed circumstance and nominated activity provisions are more fully explained in Section 4.3 in Part 2 of this Guide.
5. See individual clauses in the POEO Noise Control Regulation for prescribed night-time hours.
6. Road-related area means (a) an area that divides a road, (b) a footpath or nature strip adjacent to a road, (c) an area that is open to the public and is designated for use by cyclists or animals, (d) an area that is not a road and that is open to or used by the public for driving, riding or parking motor vehicles, (e) a shoulder of a road and (f) any other area that is open to or used by the public and that has been declared under section 18 of the *Road Transport Act 2013* to be an area to which specified provisions of that Act or the statutory rules apply. (POEO Noise Control Regulation Definitions).

2. Assessing and managing noise

2.1. Agricultural noise

2.1.1. Context

- Farming activities can result in noise that may affect surrounding land-use. Activities can include the following
 - the use of farm vehicles and machinery (eg. tractors, harvesters, pumps)
 - frost fans used to protect crops against frost
 - gas scare guns used to protect fruit crops against birds and bats
 - collections and deliveries from heavy vehicles (particularly at night)
 - industrial equipment such as noise generated by fans, pumps, generators used to support intensive agriculture such as poultry farms, piggeries, and feedlots.
- As well as typical day-to-day activities, some agricultural noise is seasonal, may occur during night-time, early morning or during the evening, and generally over a relatively short time period in response to market demands. It is important to consider these factors when investigating options to manage noise impacts.
- Noise impacts can also occur due to land-use conflict, for example as rural and suburban areas become more densely settled and/or where noise-sensitive development encroaches onto agricultural land. Council planners should be mindful of the potential for land use conflicts when considering rezoning or subdivision proposals.
- The EPA publication, *NSW Noise Policy for Industry* (2017) provides guidance on managing noise from commercial and industrial activities, including a case study on how it applies to existing intensive primary industry.

2.1.2. Appropriate regulatory authority (ARA)

Council is the appropriate regulatory authority (ARA) for agricultural noise that affects a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, S.6).

Police officers have powers to issue and enforce noise abatement directions.

Further information on appropriate regulatory authorities is provided in figure 5 and at Part 2, section 3.5 of this guide. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.1.3. Options to resolve the problem

When dealing with agricultural noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of the officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply. If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:

- seek to regularize the activity consistent with the consent or relevant planning provision
- issue orders requiring compliance with planning legislation or the requirements of a consent
- agree to an enforceable undertaking
- issue a penalty infringement notice
- initiate a prosecution for more serious breaches.

The *Protection of the Environment Operations Act 1997* provides generic regulatory instruments that can be applied in this context. General advice on using the POEO Act to manage noise is provided in Part 2 section 4.2 of this guide.

It is an offence for noise to be emitted from premises because the occupier has failed:

- to maintain plant in an efficient condition (section 139), or
- to operate plant or deal with materials in a proper and efficient manner (section 140).

An offence occurs without the need for a prior warning and a penalty infringement notice may be issued by a council officer (or a prosecution initiated) for this offence.

- If the noise is determined to be 'offensive noise' (see Part 2 section 4.2.1 of this guide), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, 'environmentally unsatisfactory manner' means the activity is:
 - *"carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,]", or,*
 - *"not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or*
 - *it is not carried on in accordance with good environmental practice"* (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice or a prevention notice, an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6 of this guide. Guidance on the advantages and disadvantages associated with these tools is in table 2.

2.1.4. Case study

Council has received complaints from residents of a new suburb located next to farmland about the use of a tractor and other farming equipment late into the night. Some of the complainants state the farmer has told them night work is necessary for harvesting of perishable crops that must be delivered fresh to the market each morning. Council is the appropriate regulatory authority for this activity.

How can council respond?

- Based on the information available, the council officer decides that further investigation is necessary and learns the activity does not require development consent.
NOTE: If the activity or premises was subject to a development consent the officer could determine if the matter could be resolved through enforcement of consent conditions. If the activity/premises were subject to an environment protection licence under the POEO Act, then the EPA would be the appropriate regulatory authority.
- Visiting the site and observing the activity at (or near) the complainant's residences can provide perspective to inform the investigation. Noise measurements can be taken to support an officer's observations.
- As the first point of investigation, the farmer's reported claim that harvesting must be done at night in order to preserve the freshness of the crop should be investigated to confirm that the claim is genuine and that there is no feasible alternative. In this case the officer decided to consult the NSW Farmers Association and also undertook an internet search.
- The council officer's investigation reveals that:
 - the farm is a permitted land-use in the area
 - the need for evening/early night-time harvesting is necessary
 - the noise emitted by tractors and other harvesting equipment would not be considered 'offensive' when considered against the advice provided at Part 2 section 4.2.1 of this guide
 - the noisy harvesting activities are inherently short-term and will conclude within days, thereby bringing an end to the noise problem for the time being; in this context, it would be unreasonable to expect the farmer to abandon the current harvest
 - the officer has discussed with the farmer possible mitigation actions that could be implemented in the short-term, and the farmer has indicated that it would be possible to start earlier in the evening and finish before midnight. Discussion has not identified any feasible and reasonable actions that would mitigate noise from the harvesting activity itself (i.e. controlling noise from the machinery/equipment used for the harvest).
 - unless the farmer changes the crop to one that does not require night-time harvesting, the noise problem is likely to recur in future years.
- This reasoning leads the officer to conclude that although the noise is disturbing some members of the community, it is not offensive noise, and there is therefore no reason for council to take immediate action to restrict the farmer's capacity to complete the current harvest.
- The officer believes that the issue can be managed without regulatory action. The officer sends a letter to the complainants summarising the findings of the investigation, explaining the harvest period will end in a few days' time, and explaining that the farmer will adjust the hours of work for the rest of the harvest.

What if the council officer determined that regulatory action was necessary?

If the officer's formal determination had been that the farmer's activities were being carried out in an 'environmentally unsatisfactory manner' within the meaning of the POEO Act, and were likely to

be repeated in future harvests, he could take regulatory action under section 96. The grounds on which the officer would make this determination are that the activities are “*not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or [...] not carried on in accordance with good environmental practice*” (section 95). This determination is the basis for issuing a prevention notice.

This notice could require the farmer to develop and submit for council approval a plan to mitigate or avoid noise from the activity. The farmer would be given a reasonable period of time to develop this plan, and once a plan of feasible and reasonable mitigation actions had been endorsed by council, a second prevention notice could be issued to formally require implementation of the actions identified in the plan.

2.2. Barking dogs and other animals

2.2.1. Context

- The *Companion Animals Act 1998* (see below) provides a specific remedy for managing noise from a dog or a cat. Noise from other animals - including birds - can be dealt with under the generic provisions of the *Protection of the Environment (Operations) Act 1997* (POEO Act).
- Dog kennels or 'pounds' are particularly susceptible to barking because of the concentration of dogs. Good kennel design and certain management techniques can reduce the incidence of barking and mitigate its effects. However, some dogs are prone to barking, regardless of mitigation, and may prompt other dogs to bark.
- Where it occurs, barking at kennels and pounds is usually most pronounced when animals are dropped-off or collected. Barking can be minimised by setting defined drop-off and collection times.

2.2.2. Appropriate regulatory authority (ARA)

Generally, council is the appropriate regulatory authority (ARA) for managing noise from domesticated animals that affects a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, S.6).

Councils are also the ARA for noise arising from cats and dogs under the *Companion Animals Act 1998*. Councils should appoint authorised officers to give effect to these powers.

Police officers have powers to issue, and enforce, noise abatement directions. Police officers can also be appointed as authorised officers under the *Companion Animals Act 1998*.

Further information on 'appropriate regulatory authorities' is provided in figure 5 and at Part 2, section 3.5 of this guide. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.2.3. Options to resolve the problem

When dealing with animal noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of the officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is at Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

- If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:
 - seek to regularise the activity consistent with the consent or relevant planning provision, or
 - issue orders requiring compliance with planning legislation or the requirements of a consent, or
 - agree to an enforceable undertaking, or
 - issue a penalty infringement notice, or

- initiate a prosecution for more serious breaches.

The *Companion Animals Act 1998 (CAA)* provides a specific regulatory response to noisy cats or dogs

- With regard to noise, the CAA declares that a dog is a nuisance dog if it “makes a noise, by barking or otherwise, that persistently occurs or continues to such a degree or extent that it unreasonably interferes with the peace, comfort or convenience of any person in any other premises” (section 32A1b).
- With regard to noise, the CAA declares that a cat is a nuisance cat if it “makes a noise that persistently occurs or continues to such a degree or extent that it unreasonably interferes with the peace, comfort or convenience of any person in any other premises” (section 31(1)a).
- Once a determination has been made that a dog or cat is a nuisance, a nuisance order may be issued but only after a notice advising the dog or cat owner of council’s intention to issue a nuisance order. An owner issued with a notice has seven (7) days to object to the proposed order. The notice must state the requirements that the owner must comply with if the order is made. If the person who receives notice does not object, the order can be made. The effect of a nuisance order is not limited to a particular time of day or night. A nuisance order may be issued by either a council officer or a police officer who is authorised under the CAA.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied in this context

General advice on using the POEO Act to manage noise is provided at Part 2, section 4.2.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1 of this guide), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - *“carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,],” or,*
 - *“not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or*
 - *it is not carried on in accordance with good environmental practice”* (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is at table 6 of this guide. Guidance on the advantages and disadvantages associated with these tools is in Table 2.
- The POEO Act 1997 defines 'activity' to include the keeping of an animal.

2.2.4. Case study

Council receives multiple calls from residents complaining about a dog that barks during the day when its owner is away at work. Several complainants note that they have spoken to the dog's owner about this issue, but that he has refused to accept that it is a problem. Council is the ARA for this source of noise.

How can council respond?

- A council noise officer contacts two of the complainants and asks them to keep a simple record - for a two-week period - of the dates and times when the dog barks, and the duration of each incident of barking. At the end of the two-week period, the officer contacts the complainants and is informed that the problem is still current. The officer visits the complainants and notes that their records show multiple episodes of daytime barking for periods up to 30 minutes at a time. She notes that the barking dog can be heard clearly both inside and outside the complainants' homes. As requested, the complainants supplied their diary entries to the council officer together with a statement indicating that they would be willing to attend court if necessary, to give evidence. The council officer requests that the complainants continue to keep records of the dog's barking.
- Based on records kept by neighbours and her own observations, the council officer determines that the dog's barking is persistent, regular, ongoing and affecting a number of people. These are all characteristics that support a determination that the noise is 'nuisance noise' under the *Companion Animals Act 1998*. Because this act provides a specific response to barking dogs, the officer decides to use this option instead of relying on environmental legislation.
- As the initial step in issuing the nuisance dog order, the officer gives the owner formal notice in writing that the council intends to issue an order. The notice sets out the requirements that the dog owner will be required to comply with if the order is issued. It also advises the owner of his right to object to issuing of the order.
- The officer decides to hand deliver the notice which provides an opportunity to suggest that the owner research possible reasons for the dog's behaviour and options for controlling it, such as animal behaviour training. Through an internet search, the owner discovers that boredom and lack of exercise are common reasons for a dog barking when it is alone. The owner resolves to walk his dog before and after work each day and buys some toys from a pet store to help distract it during the day when he is absent. The council officer advises the dog owner that they may object to the issue of an order within seven days.
- After seven days, the council officer contacts the complainants to find out whether there has been a change. The complainants advise that the dog's barking has not changed. The council officer again obtains copies of the complainants' diary records together with a statement of willingness to attend court if required.
- The officer is satisfied that the dog's barking is still consistent with the definition of a nuisance dog under the *Companion Animals Act 1998* and because the owner has not objected to the proposed order, the officer proceeds to issue the order as planned. Doing so means that council can respond to non-compliance with the order by taking further action such as imposing a fine (by issuing a penalty infringement notice), or, in serious cases, initiating court action.

What if the barking was being made by dogs accommodated in a commercial kennel or pound?

Commercial kennels and dog pounds typically operate under a council development consent. The officer's first action would be to consult council records to identify any noise conditions that may apply. A visit to the facility would allow the officer to determine whether it is complying with these conditions. Evidence that the facility was non-compliant could lead to regulatory action under the *Environmental Planning and Assessment Act 1979* as set out in 'Regulatory Options' above.

What if the officer determined that a better outcome could be achieved using the POEO Act instead?

- In either of the above circumstances – a single dog on residential premises or a commercial kennel – the option of issuing a prevention notice under the POEO Act could also be a viable option. Before doing so, the officer would have to reasonably suspect that the “activity” – keeping a dog or the operation of a commercial kennel – was being ‘carried out in an environmentally unsatisfactory manner’ (section 96). The POEO Act provides that an activity is being carried out in an environmentally unsatisfactory manner when it is not being carried out by such practicable means as may be necessary to prevent, control or minimise pollution or the emission of any noise (section 95).
- If the officer can identify an action that could be taken to prevent, control or minimise offensive noise, a prevention notice can be issued. Measures that might be effective in these circumstances include:
 - introducing physical barriers to the transmission of noise
 - in the case of a kennel or a pound, incorporating internal sound absorption to reduce noise emanating from noisy indoor areas
 - managing the dog (or the kennel's operations) differently, such as:
 - exercising and feeding times
 - housing dogs together, or apart
 - providing alternative stimulation to distract dogs from barking
 - checking the health of the dogs to rule out ill-health as the cause of barking
 - ensuring that dogs are adequately fed, watered, and exercised
 - preventing the dogs from having direct sight of persons or activities or other dogs that might be the cause of barking, and
 - arranging for a dog to have daytime companionship.
- It isn't necessary that a prevention notice specify the measures to be introduced; if the context does not permit the officer to identify suitable measures, the notice could simply require the dog's owner to prepare and implement a plan of action to prevent, control or minimise noise. The notice could require the owner to submit this plan for council approval, using a second prevention notice to require implementation of the endorsed measures.

What if the noisy animal was a rooster that crows at sunrise every morning?

- In this case, the *Companion Animals Act 1998* does not apply. Council officers can use the generic regulatory instruments of the POEO Act to manage the animal noise.
- The officer would take the same steps described above to investigate the complaint and compile evidence that the noise is a problem – i.e. contacting the complainants and the bird's owner, asking complainants to record incidents of problem noise, times of these incidents, and so on.
- If the officer determines that the activity is being carried out in an environmentally unsatisfactory manner, she can issue the owner of the bird with a prevention notice. The notice

could specify measures the owner must take to ensure that the activity is carried on in an environmentally satisfactory manner. If the council officer is not able to identify any feasible and reasonable mitigation measures for listing in the notice, the notice could simply require the bird owner to develop, and submit for council approval, a plan to manage (ie. control, prevent or minimise) the noise in future.

2.3. Music venues

2.3.1. Context

- This section relates to venues such as public bars, clubs, hotels and restaurants where musical instruments and amplified music may be played for entertainment of patrons.
- Music venues can be a source of noise from the following:
 - musical instruments and amplified music, and/or
 - 'patron noise' (loud voices, shouting, or other noisy behavior).
- Noise from music venues can emerge as a problem as the settlement pattern of the surrounding residential area changes e.g. settlement could become 'denser'. Both the occupier of the venue and neighbouring residents have rights that must be considered.
- Music venues typically operate at night or on weekends, times when residents have a reasonable expectation of peace and quiet. Music venues are also typically commercial ventures and council's response must take into account that action to mitigate noise impacts may have financial consequences for the occupier. If a feasible mitigation – necessary to sound-proof a venue – is prohibitively expensive, it would be unreasonable to expect the occupier to implement it. This means that 'feasible and reasonable mitigation' may not fully mitigate a noise impact.
- Council's response to noise from a music venue will also depend on the context. An isolated rural venue that has music entertainment infrequently and ending before midnight is likely to require a different response to a city venue that operates every night and into the early morning.
- The occupier of a music venue can influence the behaviour of patrons while they are on the premises by the location of exits, displaying signs to remind patrons to consider the neighbours, and so on.
- Music venues operate under a council consent that may include noise conditions. If the noise emitted by the activity does not exceed a level laid down in a consent or takes place at a time of day that does not contravene the consent, this would need to be taken into consideration in any determination of 'offensive noise'.

2.3.2. Appropriate regulatory authority (ARA)

Three NSW public authorities have some responsibility for regulating noise emitted by music venues including: councils, the NSW Police Force, and Liquor and Gaming NSW (the state government agency responsible for liquor licensing):

Council is the ARA for noise from musical instruments and amplified music that affects a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, S.6).

Councils also have responsibility for development consent and can impose noise conditions on venues and events.

Police officers have powers to issue and enforce noise abatement directions. Because the NSW Police Force is responsible for public order, police officers are best positioned to take the lead role where noise issues may be connected with anti-social behaviour or have the potential to become a public order problem. Whether council or police respond to a complaint involving a music venue depends on the circumstances and may be guided by any local agreement that may exist between the two agencies.

Liquor and Gaming NSW has a role in managing noise from licensed premises such as pubs, clubs and hotels (for loud music or patron noise). Following disturbance complaints, Liquor and Gaming NSW can impose noise conditions on licences in order to reduce noise impacts. Liquor and Gaming NSW is best positioned to investigate and respond to complaints about music and patron noise emitted from premises licensed under the Liquor Act. This does not mean that Liquor and Gaming NSW is the ARA under the POEO Act.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5 of this guide. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.3.3. Options to resolve the problem

When dealing with noise issues involving a music venue, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

- If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:
 - seek to regularise the activity consistent with the consent or relevant planning provision, or
 - issue orders requiring compliance with planning legislation or the requirements of a consent, or
 - agree to an enforceable undertaking, or
 - issue a penalty infringement notice, or
 - initiate a prosecution for more serious breaches.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context.

General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2 of this guide:

- If the noise is determined to be 'offensive noise' (see Part 2, section 4.2.1 of this guide), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, 'environmentally unsatisfactory manner' means the activity is:
 - "carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,]", or,

- “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
- it is not carried on in accordance with good environmental practice” (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6 of this guide. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.3.4. Case study

Council receives multiple calls from residents complaining about late-night noise from a street-level music venue and BYO restaurant located in the main shopping street of a suburb. Complaints allege that residents of the units across the street are disturbed during the evening by loud music and patron noise from the venue. Council is the ARA for this source of noise.

How can council respond?

- The council officer is aware that the venue is not licensed under the Liquor Act. This means that Liquor and Gaming NSW has no role in regulating noise emitted from the venue.
- The council officer contacts complainants to confirm the information submitted with their complaints and to find out about their experience of noise emitted from the venue. He is told that the venue appears to put on a range of different styles of music and that the principal times of disturbance are typically on Thursdays through to Sunday evenings. The officer is told that loud music and patron noise often goes on to midnight on these days. The complainants indicate a range of disturbances ranging from not being able to watch TV, having to yell to communicate, not being able to concentrate on tasks and not being able to go to sleep.
- As part of the investigation, the officer first examines the venue’s development consent. He determines that the consent does not include objective noise limits but does include a general requirement that the venue’s operation “*may not result in the generation of offensive noise*”. The consent does not specifically restrict music. The consent stipulates operating hours of 7am to midnight seven days per week and has a capacity restriction of 100 patrons.
- The officer arranges to visit the site during the evening and is granted permission by three of the complainants to enter their homes to determine whether music and/or patron noise can be heard in the living rooms or bedrooms of those premises. He confirms that music is clearly audible in all three of the residences visited. While the consent does not include numerical noise limits, the officer decides to take noise measurements at the boundary of the nearest affected residence and records a level of LAeq,15min 78dB(A) which is clearly the result of amplified music and external patrons singing along to an ABBA song. The measurement was taken at 11:15pm.
- The officer notes that the venue has both an indoor area and outdoor seating – roughly equal in size/capacity – that can be separated by bi-fold doors. There is a small, raised stage at one end of the indoor space that is being used for an acoustic performance with small speakers also located in the external space. The seating does not exceed the capacity restrictions in the consent and his enquiries do not suggest that the venue is breaching the stipulated hours of operation.

- Based on the officer's investigations, observations and evidence from complainants, he forms the opinion that the operation of the venue is resulting in the generation of 'offensive noise', especially resulting from activities that are occurring after 10pm because residents have a reasonable expectation of quiet at that time. (See Part 2, section 4.2.1 of the guide for a discussion on what constitutes offensive noise). This determination means that the venue is potentially not complying with its consent, but the officer determines that regulation under the POEO Act would be more appropriate in this situation as the solution will likely require agreed operational changes to the venue's operations.
- After discussions with the venue owner, the council officer issues a prevention notice requiring the occupier to develop a plan of management to address the noise issues affecting her venue and to submit this plan for council endorsement.
- The venue owner engages an acoustic consultant to advise her on this plan of management and the consultant prepares a plan that proposes a number of mitigation actions:
 - Amplified music to external areas will be volume restricted using agreed amplifier settings and will cease at 10pm.
 - The bi-fold doors separating the internal and external spaces will be closed after 10pm to restrict the emission of music and patron noise from the venue. All internal amplified music will cease at 11pm.
 - The internal layout of the venue will be altered so that music from the performance stage, loudspeakers and audience seating is directed away from the street side of the venue.
 - Acoustic absorption material will be positioned in the venue to reduce reverberation (echo) within the space. The consultant advises the owner that this will both reduce noise being emitted from the venue and provide a benefit to patrons communicating.
 - The venue will erect signage and encourage patrons to leave the venue in a neighbourly fashion.
- The venue owner submits the plan of action to council and indicates that it has already been voluntarily implemented. If these actions are endorsed by council, a second prevention notice could be used to provide additional surety that the plan will remain in place and could be enforced by council if necessary.

What if the restaurant was licensed under the *Liquor Act 2007*?

In this case, council has the option of referring complainants to Liquor and Gaming NSW, the State Government's liquor-licensing agency. Liquor licences can include noise conditions. Liquor and Gaming NSW is best positioned to investigate and respond to complaints about music and patron noise emitted from premises licensed under the Liquor Act.

What if the complaints allege that licensed premises are emitting noise from sources other than music and patrons?

Council has a responsibility to respond to noise from these other sources. It is recommended that council officers who are responding to noise complaints about music venues that are also licensed under the Liquor Act should contact Liquor and Gaming NSW to discuss the possibility of coordinated action.

2.4. Outdoor entertainment activities

2.4.1. Context

- Outdoor entertainment activities can create noise disturbance from:
 - musical instruments and sound amplification equipment (including public-address systems)
 - ‘patron noise’ (shouting, cheering, clapping and singing).
- Typical outdoor entertainment activities include: concerts, music festivals, film, theatre and sporting events, or rehearsals and ‘sound checks’ for any of these types of events.
- Outdoor events are more likely to give rise to noise complaints than indoor events because there are fewer physical barriers to noise transmission and noise mitigation is likely to be expensive or unfeasible.
- It is not possible to state a general noise limit for outdoor entertainment events that can be applied in all circumstances. The appropriate noise limit will depend on the particular circumstances of the venue and the type of entertainment event. Unless the venue is very remote, it is not possible to establish noise limits that will prevent annoyance at every neighbouring residence. However, setting a noise limit can prevent the noise levels emitted from an event from being any higher than necessary. Noise limits will be site-specific and reflect what is achievable in practice. Where noise limits are specified, they should be set at the maximum limit allowable and event operators should be required to operate as far below this maximum as possible.
- Outdoor events may also be associated with a liquor licence. Regulatory responsibility for noise emitted at outdoor events that are also liquor licensed is currently shared by councils and the state government agency, Liquor and Gaming NSW. When investigating a noise complaint involving licensed premises, council officers should consider liaising with Liquor and Gaming NSW with a view to coordinating their actions.
- Because venues used for outdoor entertainment events are not ‘residential’ premises, the provisions of the POEO Noise Control Regulation (clauses 57 and 58) dealing with musical instruments and electrically amplified sound equipment emitted from residential premises do not apply.
- Outdoor entertainment events may be undertaken for commercial or charitable purposes (i.e. fund-raising). Restrictions placed on the form or scope of such events will impact directly on the commercial or fundraising success of the event. These considerations have to be balanced against the reasonable expectations of residents not to be subjected to ‘offensive noise’.
- Outdoor events may be held at night or on weekends, when residents have a reasonable expectation of peace and quiet. They are also more likely to be held in warmer weather, when neighbouring dwellings will typically have doors and windows open, thereby increasing the probability that noise emitted from a venue will impact the surrounding community.
- Councils may have a policy that sets out requirements for outdoor entertainment events, including noise conditions. A policy might state rules for the duration of events, closing times, maximum noise levels and requirements for measurement (how and where on the site), mitigation measures, etc.
- Outdoor events are held in venues that are likely to be the subject of a development consent that includes noise conditions. In addition, the event itself may be the subject of a separate consent. For some major venues, the Department of Planning, Industry and Environment (or Minister) may be the consent authority. It is recommended that councils identify any major venues in their area where the Department is the consent authority. For other venues, council is the consent authority.
- Events that are held at a venue owned by council and made available under a lease agreement would be subject to any noise conditions in that agreement. Council has the option of varying noise conditions to suit the circumstances of particular venues or uses. Where a council relies

on a lease agreement to regulate an activity it should ensure that the agreements are binding and enforceable.

- Audience satisfaction with performances at large outdoor music events often depends on the achievement of sustained high volumes throughout the performance. A balance needs to be struck between a level that is fit for purpose at the venue and the noise impacts on the surrounding community. This should be considered at the planning stage for the event.
- Low frequency sound – commonly associated with bass noise emissions – is known to be particularly intrusive, to fluctuate widely, and to be difficult to measure accurately. However, limits that seek to control low frequency noise are desirable.
- Topographical features and weather conditions can result in residents further away from the venue being more exposed to music noise than those located closer to the source. This needs to be considered in designing requirements for compliance monitoring.
- The presence of large numbers of spectators at some outdoor entertainment events may give rise to audience noise that can be intrusive, particularly during evenings. It is difficult, if not impossible to control such emissions. The only feasible mitigation may involve establishing buffer zones between these venues and surrounding receivers where spatial separation is available, for example in rural settings.

2.4.2. Appropriate regulatory authority (ARA)

Council is the ARA for noise from outdoor entertainment activities that affect a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, S.6).

Police officers have powers to issue and enforce noise abatement directions.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5 of this guide. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.4.3. Options to resolve the problem

When dealing with noise issues involving an outdoor entertainment event, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:

- seek to regularise the activity consistent with the consent or relevant planning provision, or
- issue orders requiring compliance with planning legislation or the requirements of a consent, or
- agree to an enforceable undertaking, or
- issue a penalty infringement notice, or

- initiate a prosecution for more serious breaches.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2 of this guide:

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [, , ,]”, or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [. . .], or
 - it is not carried on in accordance with good environmental practice” (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice, an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.4.4. Case study

Council has a long-standing arrangement with a prominent national charity for use of a sports field as the venue for its annual fundraising event. This year, council receives multiple calls from residents of the surrounding suburb complaining about use of the public-address system, vehicle noise and loud voices from this venue after midnight. Because they are broadly supportive of the work that this charity does, callers are careful to distinguish between the amplified music and spectator noise they have come to expect from this event during the day and into the evening, and the ‘spill over’ of noise into the period after midnight.

Council does not have a formal policy for managing outdoor entertainment events, but it has adopted the practice of requiring lease agreements for events of this kind, held on council-owned land, to include three requirements:

- that the activities cease at midnight;

- that the L_{Amax} noise level emitted by the event not exceed 65dB(A)¹ at the nearest residential boundary; and
- that the organisers give prior notice of the event to residents of surrounding homes and provide them with the number of a telephone 'hotline' that will operate during the event.

Council's standard lease agreement is accompanied by a brochure it developed to inform event organisers about simple mitigation measures to minimise noise impacts at council venues (e.g. the location and orientation of stages and loudspeakers, the need for a complaints-handling mechanism, and so on). Council is the ARA for this source of noise (a privately-run event on council-owned land).

How can council respond?

- The fact that noise complaints have been received about an event covered by a council lease agreement does not mean that the lease conditions have been breached, nor that the lease conditions are inappropriate, however these aspects should be evaluated. It is worth noting that the use of outdoor venues and indeed the method to regulate their use is often a compromise between the legitimate use of public lands and assuring reasonable amenity for the surrounding community.
- The event is a major contributor to this national charity's fundraising. The event has a long history at this venue and enjoys strong community support. Any regulatory action that may impact the event needs to be carefully considered.
- While the event is now over, this is a recurring annual event at this venue – likely to be repeated next year. If no action is taken to improve control of the public-address system and audience noise at future events, it is likely that complaints will recur.
- A council officer's initial actions will be focused on gathering information about the noise experienced by complainants with the aim of determining (1) whether 'offensive noise' was emitted from the event; and (2) whether the organisers adhered to the noise conditions in the lease agreement with council. (Guidance on application of the term 'offensive noise' is at Part 2, section 4.2.1 of the guide).
- If the officer is not familiar with the area surrounding the venue, she should visit the locality to inform herself about the physical layout and about distances between the venue and the residential premises occupied by the complainants.
- The officer contacts each complainant to confirm the information they have provided about the noise source and the impact on them from noise emitted from the venue. The complainants confirm that the public-address system for the event was used intermittently between midnight and 1:30am and that vehicle noise and loud voices were audible up to 3am. The major impact reported by complainants was an inability to fall sleep and/or stay asleep.
- The officer contacts the head office of the charity to find out whether there have been complaints about the event. She is advised that a number of complaints have been received and will be investigated by the charity's staff under its complaint-handling procedure. The officer confirms that the event made use of a public-address system, supplied and operated by a specialist contractor. She also establishes that although the event itself ceased at midnight, dismantling and removal of infrastructure, equipment, materials and waste took place from midnight onwards.
- Based on the information obtained, the officer concludes that the event organiser allowed the activity to extend beyond the lease requirement of midnight, and that noise from the event after midnight, including the use of the public-address system, vehicle noise and loud voices, was likely to be 'offensive noise'. The officer correctly identifies that retrospective action is not

¹ Council identified this noise level through a review of the literature on noise and outdoor events and the noise management plans, regulatory notices and noise monitoring results for events of this kind.

available or appropriate, and that the paramount concern is ensuring that future events do not generate offensive noise and comply with council's lease requirements.

- Future events. As the representative of residents who may be affected by noise at future events held at this venue by this organisation, council has to balance the need for protection from noise disturbance against the clear public benefit that flows from permitting this national charity to carry on its fund-raising activities at this venue.
- The most straightforward way for council to control noise emitted from this venue in future is through the lease agreement. The officer could consider the need for additional clauses to address the particular issues revealed in complaints and confirmed by her investigation. These are:
 - The organiser has permitted the public-address system to be used after midnight. A simple 'fix' for this would be a clause in the lease that requires the public-address system to be physically disabled at midnight so that there is no possibility that it could be used.
 - The organiser has scheduled post-event activities for the period after midnight. The lease could stipulate that "bump out" type activities be delayed till daylight (or even later) so that there is no possibility that these activities could cause noise disturbance for residents.
 - Alternatively, if it is determined that this activity must take place at night the organiser could be required to prepare a comprehensive noise management plan that details all of the measures that will be used to minimise noise impacts from "bump out" activities. A plan of this kind could include training for the staff involved, better supervision of this activity by the event organiser, shielding of this activity so that noise is better contained, and so on.
 - If the plan is acceptable to council, it would be incorporated into the lease agreement as a binding and enforceable provision.

What if the officer preferred to regulate using an instrument provided by the POEO Act?

- An alternative to amending the lease would be to issue a prevention notice covering future events held at this venue by this organisation. Before doing so, the officer would have to reasonably suspect that the activity had been 'carried out in an environmentally unsatisfactory manner' (section 96). The Act provides that an activity is being carried out in an environmentally unsatisfactory manner when it is 'not being carried out by such practicable means as may be necessary to prevent, control or minimise pollution' (section 95). If the officer can identify an action that could be taken to prevent, control or minimise 'offensive noise', a prevention notice can be issued.
- The prevention notice could impose specific noise management measures similar to those that might be included in a lease agreement, such as:
 - maximum permissible noise levels
 - maximum power levels of equipment
 - number, location and orientation of speakers
 - restricting times of use for the facility or for use of the PA system
 - measures to contain or reduce noise
 - use of a sound-level 'limiter' as part of the amplification system
 - stipulating that a named person control the volume setting of equipment
 - commissioning of a noise impact study
 - requiring that the community be notified
 - establishing a community complaint phone number
- Alternatively, a prevention notice could require the event organiser to develop a comprehensive plan to manage noise emitted by the event. A requirement of the notice could be that this plan be submitted for council endorsement before it is implemented.

- If a prevention notice is the preferred instrument, council should issue it well in advance of the event so that the organiser has a reasonable period in which to undertake the work involved. The notice would remain in force until it is revoked or amended; if no end date was specified, the notice would be available to regulate noise emitted by this organisation at this venue indefinitely.

What if council had capacity to respond promptly to noise complaints while an outdoor entertainment event was in progress?

- In this circumstance, the council officer could attend the residences of complainants and make an on-the-spot assessment of the noise as it occurs (i.e. in real time). If the officer was able to determine that the event was emitting 'offensive noise', she could issue a noise abatement direction requiring the organiser to take steps to cease or mitigate the noise. A decision that 'offensive noise' was being emitted would be made using the guidance provided in Part 2, section 4.2.1 of this guide.
- The noise abatement direction would require the organiser to cease the activity giving rise to offensive noise. If the source of noise is amplified music or a public-address system, the likely solution would be to switch this off. If the noise source was vehicle operation or loud voices, the solution may require that these activities cease altogether. Note that a noise abatement direction requires that the 'offensive noise' cease; it does not require that no noise be emitted.
- A noise abatement direction is not subject to appeal. Failure to comply with a direction could lead to council imposing a fine by issuing a penalty infringement notice, or, in serious cases, to prosecution.

What if the activity taking place at the outdoor venue was an event carried on by the council or an agency of the state government?

In this case, the EPA is the ARA and would receive and investigate any noise complaints arising from the event. Council would not be involved in complaint-handling but may be asked to assist the EPA to carry out its investigation.

What if the outdoor entertainment had more than 200 attendees and took place at one of the six major Sydney venues designated in clause 90 of POEO General Regulation 2009?

In this case, the EPA would be the ARA. The relevant Sydney councils would not be involved in complaint-handling but may be asked to assist the EPA to carry out its investigation.

2.5. Noisy motor vehicles used ‘off-road’

2.5.1. Context

- Motor vehicles used ‘off-road’ (i.e. away from roads and road-related areas) can be a source of noise disturbance for neighbouring residents.
NOTE: Motorcycles are included in the definition of ‘motor vehicle’ under both environmental protection and road legislation.
- Because driver licence requirements do not apply off-road, motor vehicles used off-road may be in the control of a person under 18 years of age. Special considerations apply where a public official:
 - interviews a child, or
 - issues a penalty infringement notice for the behaviour of a child, or
 - initiates court action involving a child.
- Investigation of noise complaints involving a motor vehicle used off-road may be complicated by difficulty in identifying or speaking to the occupier of premises or potential offenders. The POEO Act defines the ‘occupier’ of premises as “*the person who has the management or control of the premises*”. Where there is doubt about whether a person is an occupier, council officers should seek legal advice on this issue.

2.5.2. Appropriate regulatory authority (ARA)

Council is the appropriate regulatory authority (ARA) for noise from motor vehicles used off-road that affects a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA, or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, S.6).

Police officers have powers to issue and enforce noise abatement directions. Police officers also have other powers – including the power to stop, inspect and test vehicles.

The Department of Planning, Industry and Environment has powers in relation to motor vehicles in national parks under the National Parks and Wildlife Regulation 2009.

Further information on appropriate regulatory authorities is provided in figure 5 and Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.5.3. Options to resolve the problem

When dealing with motor vehicle noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer’s discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

The Protection of the Environment (Noise Control) Regulation 2017 provides a specific regulatory response to this context:

- It is an offence to use a vehicle ‘off-road’ in a way that emits offensive noise (clause 6). (‘Offensive noise’ is discussed in Part 2, section 4.2.1). The owner and driver of a motor vehicle are each guilty of an offence under clause 6 if any person causes the motor vehicle to be used

off-road in such a manner that it emits offensive noise (clause 7). However, the Regulation makes provision for an owner who was not in the vehicle at the time the offence was committed to identify the person who was in charge of the vehicle at the time.

- If an offence has been committed, a fine can be imposed by issuing a penalty infringement notice, or, if the issue is serious enough and there is adequate evidence, council can proceed directly to initiate court proceedings.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- If the noise is determined to be 'offensive noise' (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, 'environmentally unsatisfactory manner' means the activity is:
 - "carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,]", or,
 - "not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice" (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice, an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.5.4. Case study

Council receives multiple calls from residents complaining about noise emitted by off-road motorcycles being ridden at the weekend on a block located at the edge of town. The complainants allege that noise is emitted all day and 'well into the evening' and that attempts to persuade the young people involved to cease making noise have no effect. The complaints indicate that this is becoming a regular occurrence.

Council is the ARA for this source of noise. NSW Police are also able to respond to noise of this kind, especially if public order is an issue.

How can council respond?

- On Monday, the council officer visits the block that the motorcycle noise is alleged to have come from to familiarise himself with the layout and to speak to the occupier, if available. Speaking to the occupier, he learns that the riders were all school-age young people visiting the block at her invitation. The occupier tells the officer that she was not aware that neighbours had been disturbed by motorcycle noise or that complainants had attempted to persuade the young persons to cease making noise.
- The officer must establish that there has been a noise impact before considering what action to take. If he'd been present at the weekend while the activity was in progress, he would have been able to decide whether or not 'offensive noise' had been emitted. Because the activity is no longer in progress, the officer must rely on information provided by complainants and the occupier in assessing the noise impact. The officer's assessment would draw on guidance about 'offensive noise' provided at Part 2, section 4.2.1 of this guide.

The officer has a number of options for dealing with noise in this context using provisions of the POEO Noise Control Regulation and the POEO Act:

Option one:

- If he determines that an offence has been committed, i.e. offensive noise was caused from a motor vehicle operating other than in a road or road related area (clauses 6 & 7), the officer could impose a fine by issuing a penalty infringement notice. In this case, the notice could be directed to the motor vehicle owner or driver. However, it may be difficult to establish conclusively who the owners of the motorcycles or the riders are. Note: It is recommended that officers seek legal advice before considering issuing a penalty infringement notice to any person who appears to be aged under 18 years.

Option two:

- If the officer determines that 'offensive noise' has been emitted, he could issue a noise abatement direction requiring the occupier or the person believed to be making or contributing to the offensive noise to cease that activity (section 276 POEO Act).
- If the person who is issued with the direction breaches it within 28 days of issue, council could impose a fine by issuing a penalty infringement notice. If further breaches occur, council has the power to seize the offending motorcycle, issue further penalty infringement notices, or take the offender to court. A consideration that would influence the officer's decision to issue a noise abatement direction is the relatively short duration – 28 days – of this regulatory instrument. The officer might form the view that it is necessary to impose a restriction that has a longer duration.

Option three:

- If the officer determines that the activity had been 'carried out in an environmentally unsatisfactory manner', the officer could issue a prevention notice to the occupier or to the person carrying on the activity (section 96 POEO Act). The notice would specify actions to be taken to reduce the impact of noise, and/or it could specify activities that are prohibited. In this case, the notice could specify:
 - time periods during which the bikes may be used (or not used)
 - the maximum number of hours per day or per week the bikes may be used
 - the maximum number of bikes that may be used at any one time
 - the distance the bikes may be used from the property boundary, or
 - that the bikes be fitted with appropriate mufflers.

The notice applies indefinitely unless a date is specified.

- If the prevention notice is breached, council could impose a fine by issuing a penalty infringement notice. If further breaches occur, council could issue further penalty infringement notices or initiate court action.
- Issuing a prevention notice would allow council to recover costs incurred in taking regulatory action. An administration fee could be charged when the prevention notice is issued, and compliance cost notices could be issued to recover the cost of monitoring compliance with the prevention notice.

What if there is no residence on the block, and the officer is not able to speak to an occupant about the noise emitted?

- The POEO Act defines the occupier of premises as the person who has ‘the management or control of premises’ (POEO Act dictionary). The Act does not define any other relationship to premises, which means that regulatory action could be focused on the legal owner, a tenant, a lessee, etc. depending on circumstances. Where the legal occupier of land is not immediately apparent, council officers should seek legal advice to assist in determining who the occupier might be for purposes of regulation under the POEO Act.
- If land does not have a physical occupant, the officer could take steps to identify the owner of the land. This could be done by consulting the council’s register of ratepayers or by asking neighbours. If the owner is an absentee, this person may be unaware that their property is being used in this manner.
- The officer has the option of contacting the legal owner of the land to inform this person that their property has been used by persons making noise and to explain that the POEO Act makes provision for regulation of this noise. This may be enough to prompt the owner to take steps to prevent a recurrence of noise disturbance.

What if the officer is not able to identify the persons causing noise?

- The officer would make enquiries to identify the motorcycle riders, but it may be impossible to do so if they are not known to the occupier, the (absentee) landowner, or any of the neighbours. Local police may be able to assist if a report was made to police as a result of this noise incident.
- If the noise incident is a ‘one-off’, the officer may be justified in not pursuing the identity of the persons causing noise. However, if noise disturbance from this block is a regular occurrence, the officer should consider further investigation.

What if the motorcycle was being controlled by a person other than the owner of the motorcycle?

The POEO (Noise Control) Regulation provides that the owner of a motor vehicle and the driver (or rider) are both guilty of an offence if the vehicle is used off-road in a manner that emits ‘offensive noise’. However, an owner who was not in charge of the vehicle when the offence was committed may avoid liability by providing the name and address of the person who **was** in charge of the vehicle at that time.

What if the council officer is able to attend the block while the noise is being emitted?

- In this case, the officer would be able to assess the noise impact of this activity using his own observations (instead of relying on information provided by complainants or the occupier). The officer would draw on guidance provided at Part 2, section 4.2.1 of this guide in coming to a conclusion as to the offensiveness of noise emitted.
- If the officer determined that ‘offensive noise’ had been emitted he could respond using the offence provision in clause 6 and 7 of the POEO Noise Control Regulation, imposing a fine on the offenders by issuing a penalty infringement notice. Alternatively, the officer could issue a noise abatement direction requiring the occupier or the person believed to be making or contributing to offensive noise to cease the activity giving rise to noise (section 276 POEO Act).

- If the officer determined that the activity had been ‘carried out in an environmentally unsatisfactory manner’, the officer could issue a prevention notice to the occupier or to the person carrying on the activity. The notice would specify actions to be taken to reduce the impact of noise, and/or it could specify activities that are prohibited.
- Because the activity giving rise to noise is in progress when the officer attends the property, there is the additional option available to him of issuing an official **warning** to the persons-causing-noise that they are offending and that they risk a fine if they do not cease, as an alternative to taking regulatory action. The officer would only do so, however, if, in his judgement, it was likely that the warning would be heeded.

What if the motor vehicle was being used on public land (eg. a state forest, a national park or a council reserve)?

- If the council officer is able to attend the site while the activity is in progress, he would have direct access to the information needed to assess noise impact. The officer would refer to guidance provided at Part 2, section 4.2.1 when considering this information.
- If the officer determined that ‘offensive noise’ is being emitted, he could apply the offence provision in clause 6 and 7 of the POEO Noise Control Regulation or he could issue a noise abatement direction to the persons involved requiring that the activity cease.
- If the council officer was able to respond to a complaint only after the activity had ceased, his investigation would be hampered because he does not have access to an occupier of the land or a vehicle owner or driver. Without definite information as to the identities of the persons involved, it may not be possible for council to make an effective response to this incident.
- The officer has the option of contacting the public authority that owns the land to inform this body that its property has been used by persons making noise and to seek its involvement in preventing a recurrence.

2.6. Motor vehicle noise on residential premises

2.6.1. Context

- Motor vehicle noise – generally understood to be noise emitted from the engine and exhaust – when a vehicle is operating on residential premises, or from refrigeration units fitted to a motor vehicle (when operating on residential premises or otherwise), can be a source of noise disturbance for the residents of neighbouring premises.
- The POEO Act and Regulations provide specific remedies for noise from these sources during certain times.

2.6.2. Appropriate regulatory authority (ARA)

Council is the ARA for motor vehicle noise on residential premises that affects a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA, or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, S.6).

Police officers have powers to issue and enforce noise abatement directions.

Further information on appropriate regulatory authorities is provided in figure 5 and at Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.6.3. Options to resolve the problem

When dealing with motor vehicle noise issues on residential premises, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is at Part 3, section 9.

The Protection of the Environment (Noise Control) Regulation 2017 provides a specific regulatory response to this context

- Noise from a motor vehicle on residential premises may be deemed to be an offence in certain circumstances (clause 8). Noise from a refrigeration unit fitted to a motor vehicle (whether operating on residential premises or not) may also be deemed to be an offence in certain circumstances (clause 9).
- In both of these cases, an offence occurs if, within 28 days of receiving an official warning, noise from a motor vehicle is heard within any room in any other residential premises (that is not a garage, storage area, bathroom, laundry, toilet or pantry) whether or not any door or window to that room is open:
 - (i) before 8am or after 8pm on a Saturday, Sunday or public holiday, or
 - (ii) before 7am or after 8pm on any other day.

Note: These hours are often referred to as restricted hours.

- A fine may be imposed by issuing a penalty infringement notice. For serious, repetitive offences where there is adequate evidence, council has the option to initiate court proceedings.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided at Part 2, section 4.2.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,]”, or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice” (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.6.4. Case study

Council receives a number of complaints from the neighbours of a resident who allegedly ‘idles’ a motor vehicle engine for up to 15 minutes at a time around 6:30am on weekdays, disturbing sleep. The issue has only recently emerged since the resident bought a sports car. Several complainants report that they have spoken to the vehicle owner, without achieving a change in behaviour. Council is the ARA for this noise source.

How can council respond?

- The council officer makes contact with complainants to check the dates and times at which they have been woken by the idling motor vehicle. She establishes that none of the complainants has thought to keep a written record of these disturbances. Because the officer knows that taking action on a noise complaint will require evidence, she asks the complainants whether they would be willing to keep a noise ‘diary’ – a record of the dates and times when

they experience disturbance from motor vehicle noise – or make a statutory declaration², or testify in court (should this become necessary). While some complainant's express reluctance to do any of these things, three residents agree to keep a noise diary and attend the local court to be questioned on this record if necessary. The officer visits each of these persons to assist them to understand how this recording should be done.

- A week later, the officer collects the three noise diaries and examines them looking for a pattern of activity. She notices immediately that the three diaries match; they record a consistent pattern of weekday motor vehicle noise that starts and ends at the same times on all five days and continues for at least 15 minutes each day. The officer knows that 15 minutes is excessively long for a motor vehicle to be 'warmed-up' regardless of the age of the vehicle or the temperature at that time of morning. (It would be reasonable for an older vehicle to be idled for a few minutes before it leaves the premises, especially on cold mornings).
- For reasons of natural justice, the officer visits the house in question one evening to speak to the driver of the vehicle. She is met by a resident who admits that he is the owner of the vehicle in question. He explains that his son is the person who is responsible for idling the vehicle on recent weekday mornings. Asked to explain why the vehicle is idled for what appears to be an unnecessary length of time, neither the owner nor his son are able to provide the officer with an explanation that could be considered reasonable in the circumstances.
- Based on the information contained in noise diaries, the officer determines that (1) motor vehicle noise has been emitted, (2) on residential premises, (3) that can be heard in the bedrooms and living rooms of neighbouring residential premises before 7am on a weekday.
- Based on this determination, the officer proceeds to issue a formal warning to the vehicle owner's son – the person who caused the vehicle to be used – as provided for in clause 8 of the POEO Noise Control Regulation – not to emit noise during the protected times, for a period of 28 days. The warning is served by registered post.

What if further complaints are received alleging that the motor vehicle was being idled on residential premises, during the times protected by clause 8 of the POEO Noise Regulation, during the 28-day period covered by the warning?

If the council officer was able to determine that this allegation is correct, and that the person who caused the vehicle to be used is the person who was issued with the earlier warning, the officer would be justified in determining that this person had contravened clause 8 of the POEO Noise Control Regulation. The officer would have grounds to impose a fine on this person by issuing a penalty infringement notice.

² A statutory declaration is a written statement which a person swears, affirms or declares to be true in the presence of an authorised witness — usually a Justice of the Peace, lawyer or notary public.

2.7. Motor vehicle intruder alarms

2.7.1. Context

- Motor vehicle intruder alarms are a highly disturbing form of neighbourhood noise, particularly when they sound for long periods. For this reason, it is recommended that councils develop guidelines for staff dealing with noise complaints in order to streamline and standardise council's response to this source of noise. Guidelines should incorporate any negotiated agreement made between council and local police on a joint approach to responding to intruder alarms.
- Because there is an expectation that council will act to de-activate an intruder alarm sounding from a vehicle in a residential neighbourhood for which there is no person in attendance, it would be prudent for council to determine what assistance noise officers will need for this purpose. This may include being accompanied by a police officer as well as engaging the services of a locksmith/intruder alarm technician.
- Council could be liable to pay compensation for any damage caused by an officer while exercising a power of entry. Council may also be liable for damage that may occur to a vehicle as a result of entry or disarming of the intruder alarm.

2.7.2. Appropriate regulatory authority (ARA)

Council is the ARA for noise from motor vehicle intruder alarms that affect a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, S.6).

Council officers may seek assistance to enter (s. 196 POEO Act) and/ or disable the alarm (s. 199A POEO Act).

Police officers have powers to issue and enforce noise abatement directions. Because the NSW Police Force is responsible for investigating possible criminal behaviour, police officers may also become involved in responding to a noise incident.

Place Management NSW also has powers in relation to motor vehicle alarms sounding around the Sydney Harbour foreshore.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.7.3. Options to resolve the problem

When dealing with a motor vehicle intruder alarm, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is at Part 3, section 9.

The Protection of the Environment (Noise Control) Regulation 2017 provides a specific regulatory response to this context:

- It is an offence (clause 25) if a motor vehicle alarm sounds for longer than the permitted time:

- if the vehicle was manufactured before 1 September 1997: for more than 90 seconds, or
- if the vehicle was manufactured on or after 1 September 1997: for more than 45 seconds.
- Penalties for this offence vary according to the length of time for which the alarm sounds. For the purposes of determining the ‘duration of sounding’, intervening periods when the alarm is silent are disregarded. The offence occurs without the need for a prior warning. A fine can be imposed by issuing a penalty infringement notice, or, if the issue is serious enough and there is adequate evidence, council can proceed directly to initiate court proceedings.

Note: The date of manufacture of a vehicle is located on a metal plate mounted in the vehicle’s engine compartment. If there is doubt about the date of manufacture of a vehicle, it is recommended that the earlier date is assumed, and the longer time period applied.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided at Part 2 section 4.2.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution. A noise abatement direction is not a suitable option where the offender is not present.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [, ,]”, or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [. . .], or
 - it is not carried on in accordance with good environmental practice” (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6. Guidance on the advantages and disadvantages associated with these tools is at Table 2.

Powers of authorised officers to enter vehicles and disable intruder alarms

If no person is available to switch off or disable a sounding alarm, or if the person in charge of the vehicle does not cooperate with an authorised offer, the law provides authorised officers with specific powers:

- The authorised officer's powers of entry and inspection apply to motor vehicles as they are deemed "premises" within the meaning of the Act. The authorised officer must ensure that entry to the vehicle is lawful before exercising further powers. Note: Where a vehicle is suspected of being used as a residence, it would be prudent to obtain a search warrant before entering the premises.
- The officer can use reasonable force to enter a vehicle and can request the assistance of Police officers or other persons.
- The officer can switch off or otherwise disable a vehicle intruder alarm but only where the officer has lawfully entered the vehicle and the alarm is sounding in contravention of the POEO Act or Regulations (POEO Act, s.198A).
- The officer can seize anything (including a sounding alarm) connected with an offence.

Note: Summary information on the key powers of council authorised officers and police officers in the context of noise regulation is in table 4.

2.7.4. Case study

Council's 'environment hotline' receives a number of complaints from residents about a vehicle intruder alarm that has been sounding continuously for 20 minutes or more in an adjacent supermarket carpark. The incident takes place late at night, when the supermarket is shut. There are no other vehicles in the carpark. The carpark remains open to the public outside of trading hours. Council is the ARA for this source of noise. There may be a role for police officers if circumstances suggest that a crime may have been committed, but the primary responsibility to respond to noise issues lies with council.

How can council respond?

- Council has a 24-hour service to respond to noise complaints. Because noise emitted by an intruder alarm is highly intrusive and a large number of persons appear to be affected by it, the council's environment team prioritises its response to these complaints. The rostered after-hours team member drives to the street. On arrival, the officer is immediately aware that the intruder alarm is sounding continuously, and at a high pitch.
- Because it is immediately apparent to the officer that this is a late-model car (i.e. manufactured after 1997), he is confident that the 45-second limit applies. Because the alarm has sounded continuously since the officer arrived at the site, he is able to determine that an offence has been committed under clause 25 of the POEO Noise Control Regulation. Before taking action, however, the officer examines the vehicle to confirm that it has not been vandalised or broken into or involved in an accident.
- Note that this check (i.e. whether the car has been vandalised or broken into or involved in an accident) is a formality in this case because the officer is confident that the vehicle was manufactured well after 2009, which means that the exemption provided for in clause 25(2) of the POEO Noise Control Regulation could not apply in this case.
- While the officer is able to determine that an offence has occurred, he cannot take any of the actions provided for in legislation until he is able to identify the person who has 'caused or permitted' this offence to occur. The officer must investigate further to identify the vehicle's owner so he can establish who parked the vehicle in the supermarket carpark before a penalty infringement notice can be issued to this person.
- An urgent task for the council officer is to arrange for the alarm to be de-activated. If no-one is in attendance at the vehicle, the officer must first attempt to contact the owner. He phones the local area command to seek the owner's details which are provided. The owner is not local to the area and resides some distance away. A telephone directory search fails to provide a contact phone number for the owner.
- The vehicle is a sedan and the officer quickly establishes that there is no likelihood the vehicle is used as a residence. The officer has the power of entry under POEO Act s.199 and has the

power to turn off or otherwise disable the alarm under s.198A. While the powers under s.198A are only contingent on the alarm sounding in contravention of the Act or Regulations, the officer determines that the use of the power is reasonable in these circumstances because of the impact the alarm is having on the community.

- In accordance with council's procedures, the officer seeks the assistance of a nominated 24hr locksmith to disable the door lock and disable the alarm. As a precaution against the vehicle being stolen, the officer arranges for the locksmith to lock the vehicle before he and the council officer leave the site. Because the officer suspects that the alarm may be faulty, he does not arrange for the alarm to be re-set.
- The officer places a business card on the wind screen requesting that the person in charge of the vehicle contacts the officer.
- Although council has incurred expenses in dealing with this sounding alarm, the POEO Act provides for cost recovery only where a prevention notice or a noise control notice has been issued.
- The issue of a penalty infringement notice for the alarm sounding in contravention of the Act and Regulations under POEO (Noise Control) Regulation cl.25 would depend on the circumstances after making contact with the person who left the vehicle unattended in the carpark.

What if a police officer is present on the site?

The presence of a police officer does not change the council officer's ability to act to stop an alarm sounding in contravention of the Act or Regulations. A police officer may accompany a council officer carrying out their functions.

What if the council officer formed the view that a crime had been committed?

- If, on arrival at the carpark, the council officer noticed anything – for example: a broken window, a missing radio – that suggested a crime may have been committed, he would report this to the police. The officer should not attempt to disable the sounding alarm until given permission to do so by the attending police officers to ensure potential evidence is not disturbed.
- For vehicles manufactured before 1 March 2009, the POEO Noise Control Regulation (clause 25(2)) provides that it is not an offence if the alarm sounds for longer than the specified time where:
 - a window or windscreen in the motor vehicle is broken or removed, or
 - the motor vehicle is involved in an accident, or
 - the motor vehicle is illegally broken into or there is an illegal attempt to break into the motor vehicle.

In these circumstances, no offence would have been committed.

2.8. Garbage collection vehicle operation

2.8.1. Context

- The operation of garbage collection vehicles typically involves a combination of motor vehicle and other mechanical noise sources. Because garbage collection vehicles must share the road with ordinary traffic, there are reasonable 'health and safety' and traffic disruption considerations that would prompt an operator to schedule the service at night when traffic volumes are lower than daytime.
- Specialised garbage collection vehicles operate as part of an essential public service and the need for these services must be balanced against the right of residents to not be subjected to unreasonable noise disturbance.
- A garbage collection service may be provided by the council directly, i.e. using its own vehicles and employees, or it may be operated by a company under contract to the council. In some cases, garbage collection is a service provided by a company to a commercial or industrial business without council involvement. Persons who are affected by noise emitted during garbage collection by a commercial operator should first complain directly to that entity.
- The rapid growth of internet-based commerce has led to an increase in delivery operations in residential neighbourhoods in which engine, mechanical and tonal noise may be emitted. Delivery vehicles share some of the characteristics of garbage collection vehicles (size, reversing alarms) and, if used at night, may give rise to similar noise disturbance in residential areas.

2.8.2. Appropriate regulatory authority (ARA)

Council is the ARA for noise from operation of garbage vehicles that affect a residential neighbourhood that are not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (electrical distribution).

If the garbage collection is undertaken by council directly or via a contractor engaged by the council, the EPA is the ARA.

Police officers have powers to issue and enforce noise abatement directions.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.8.3. Options to resolve the problem

When dealing with garbage collection vehicle noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided at Part 2, section 4.2.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,],” or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice” (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.8.4. Case study

Council receives complaints from residents about noise disturbance from garbage collections at the local supermarket in the early hours of the morning. The complaints refer to the following noises: squealing brakes, reversing alarms, ‘hydraulic noise’ (from the mechanism that lifts the large garbage bins), mechanical noise from the operation of the vehicle’s compactor, and the impact of empty bins hitting the ground. Because this is a commercial garbage collection – not the council’s domestic garbage collection service, council is the ARA.

How can council respond?

- The council officer’s initial response is to seek to better understand the noise impact of the garbage collection service. She does this by contacting the complainants, who confirm that the noise is loud for the time of morning. It is intrusive, being composed of machinery and motor noise. Complainants confirm that the noise disturbs sleep. Collection is reported to take place twice weekly, and while the noise has become usual/predictable for the time and place, it is not a typical night-time suburban noise. The fact that this collection has only recently given rise to complaints suggests that there may have been a recent change in the way the service is delivered.

- Next, the council officer contacts the supermarket operator to ask about the arrangements for collection of its garbage. She learns that the service is provided by a contractor, under an agreement that has recently come into effect. The supermarket is open to customers till midnight, and garbage collection has been scheduled for early morning when the supermarket's carpark is empty of vehicles and pedestrians, for safety considerations.
- After assessing this information in the light of guidance provided at Part 2, section 4.2.1, the officer concludes that there were good grounds for deciding that the noise emitted by operation of this garbage collection service is 'offensive noise' under the POEO Act 1997.

Based on this conclusion, the officer has a number of options available to her for resolving this issue.

Option one:

- The officer could prompt the supermarket to renegotiate its contract with the garbage collection service provider by explaining that there are grounds for regulatory action if the supermarket does not act to reduce noise impact. (Council does not have legal power to compel the parties to renegotiate this contract but making the supermarket operator aware that there are grounds for regulatory action may encourage this response). The officer would not be a direct participant in this renegotiation, but she could support the process with suggestions based on her experience. Changes that could be introduced include:
 - scheduling collection to take place before 10pm or after 7am
 - relocating the collection site
 - constructing a permanent noise barrier for the collection area
 - using improved machinery/equipment that may be less noisy to operate
 - more frequent maintenance of collection vehicles and equipment, and
 - training drivers/operators to work quietly.
- Note: The supermarket operator may be unwilling to voluntarily renegotiate this arrangement if the current contract includes financial disincentives for early termination or changes. It would be unreasonable to expect the supermarket operator to risk incurring such penalties.

Option two:

- If the officer's informal approach fails to persuade the supermarket to renegotiate the contract, she could issue an official written warning stating that council will consider regulatory action if contract renegotiation does not start (or conclude successfully) by a certain date.

Option three:

- If the official warning did not have the desired effect, or if the officer believed that a regulatory response is warranted by the circumstances of this case, she could serve a prevention notice on the occupier on the grounds that the activity is being undertaken in an environmentally unsatisfactory manner (POEO Noise Control Regulation, Cl. 95). The notice could require:
 - a study to be carried out to quantify the noise impact and identify feasible and reasonable mitigation measures to reduce noise to an acceptable level
 - specific actions to be taken to prevent, control or minimize the emission of noise pollution (see the points listed under option one above)
 - a review of the situation after a specified period of operation or if further complaints are received, or
 - that noise considerations be included in future garbage collection contracts.
- If the notice required that the recommended mitigation measures be referred to council for approval before being implemented, a second prevention notice would be used to require implementation.

What if the garbage collection operation that is the source of complaints is the council's domestic service provided by the council directly or through a contractor?

- The EPA is the ARA for the activities of public authorities such as councils. If noise complaints arising from the operations of the council's domestic garbage collection service were received by the EPA, the EPA would investigate and respond. The EPA is likely to address the noise problem by encouraging council to take mitigating actions along similar lines to the approach outlined in option one above. If the service is being provided by a contractor, the EPA is likely to encourage council to enforce the noise conditions of its contract with the service provider.
- If noise complaints about the operations of the council's domestic garbage collection service were received by the council itself, it is likely that council would investigate and respond without involving the EPA.

What if the vehicle noise is emitted by a delivery vehicle operating late at night or in the early morning in a residential neighbourhood?

- The council's response to noise from delivery vehicles operating late at night could use elements of the approach described above for garbage collection operations. The council officer investigating noise complaints involving a delivery vehicle would seek to identify the firm operating the service – delivery vehicles may be identifiable through company logos, etc. – or by contacting the residents who have complained. Once identified, the council officer could approach the delivery company to find out why it is operating in a residential neighbourhood outside regular business hours. A delivery firm is unlikely to be able to argue successfully that it is performing an essential public service that should override residents' reasonable expectation of quiet during the night.
- The officer could issue a prevention notice that specifies noise mitigation measures to be applied by the delivery firm and its drivers when operating in residential neighbourhoods at night so the activity can be carried out in an environmentally satisfactory manner. If particular actions are not easily identified, she could require the delivery firm to prepare a proposal that includes recommended actions and to submit that for council approval.

2.9. Air conditioners, heat pump water heaters and pool/spa and other pumps

2.9.1. Context

- The operation of air conditioning units, heat pump water heaters and pumps (rainwater, swimming pool, spa, etc) on residential premises can be a source of mechanical noise disturbance in residential neighbourhoods. The noise impact of this equipment is determined by the noise emitted, distance from and orientation to neighbours, the shape and composition of any barriers, and the presence of surfaces that reflect sound.
- The POEO (Noise Control) Regulation provides specific regulatory responses where the source of noise is an air conditioning unit, heat pump water heater, or a pump. Installation of this type of equipment may require development consent unless they meet certain development standards in the State Environment Planning Policy (Exempt and Complying Development Codes) 2008 – see below.

2.9.2. Appropriate regulatory authority (ARA)

Council is the ARA for noise from air conditioners, heat-pump water heaters and pumps that affect a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (electrical distribution).

Police officers have powers to issue and enforce noise abatement directions.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.9.3. Options to resolve the problem

When dealing with air conditioner, heat pump water heaters and pumps and other mechanical noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*. They may

- seek to regularise the activity consistent with the consent or relevant planning provision, or
- issue orders requiring compliance with planning legislation or the requirements of a consent, or
- agree to an enforceable undertaking,
- issue a penalty infringement notice, or
- initiate a prosecution for more serious breaches.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 includes noise related development standards for installation of air conditioners, heat pump water heaters, and pumps on domestic premises:

Noise-related standards for the installation of this equipment include:

- Domestic air conditioning units (clause 2.6(f1)), and heat pump water heaters (clause 2.46b(a1)) installations should be designed so as not to operate:
 - at a noise level that exceeds 5 dB(A) above the ambient background noise level measured at any property boundary during ‘peak time’³, or
 - at a noise level that is audible in habitable rooms of adjoining residences during ‘off-peak time’¹.
- Pumps associated with rainwater tanks (clause 2.64(2)) must be housed in a soundproofed enclosure.
- Council has a key role in ensuring that development standards are met.

The Protection of the Environment (Noise Control) Regulation 2017 provides a specific regulatory response to this context.

- Where the source of noise is an air conditioning unit, heat pump water heater or a pump, that noise may be deemed to be an offence in certain circumstances.
- An offence occurs if, within 28 days of receiving an official warning, noise is heard within any room in any other residential premises (that is not a garage, storage area, bathroom, laundry, toilet or pantry) whether or not any door or window to that room is open:
 - for air conditioners (clause 45) and heat pump water heater (clause 53):
 - before 8am or after 10pm on any Saturday, Sunday or public holiday,
 - before 7am or after 10pm on any other day, and
 - for pumps (clause 52):
 - before 8am or after 8pm on any Saturday, Sunday or public holiday or
 - before 7am or after 8pm on any other day.

NOTE: These hours are often referred to as “restricted hours”.

- A fine may be imposed by issuing a penalty infringement notice. For serious repetitive offences where there is adequate evidence, council has the option to initiate court proceedings.
- These provisions are useful for restricting the times air conditioners, heat pump water heaters and pumps are used where they can be heard inside other residential premises. While they may motivate the owner to reduce noise from this equipment so it can be used during the restricted times, the use of these provisions does not directly facilitate such action like a noise control notice, or a prevention notice would.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution. This could be used to require a

³ Peak time means: between 8am and 10pm Saturday, Sunday or public holiday; and between 7am and 10pm on any other day. Off peak is all other times.

person to turn the air conditioner off, however this is unlikely to be a suitable solution in the long term.

- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation. This tool is well suited to a noise source such as an air conditioner or pump that emits a constant noise level, if it is straightforward for a council officer to determine a suitable noise limit to be met.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, 'environmentally unsatisfactory manner' means the activity is:
 - "carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,]", or,
 - "not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice" (section 95).
- An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation. This tool is useful if the council officer does not feel confident in specifying a suitable noise limit to be met and feels that a noise study is needed to adequately quantify the noise impact and the possible mitigation measures.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.9.4. Case study

Scenario A: Council receives a complaint about late night operation of a neighbour's recently installed air conditioner. The complainant's sleep is disturbed by this noise, but she is not affected by the air conditioner during the day or evening.

How can council respond?

- Before the council officer takes action, he must establish that the complaint is justified (i.e. that there is a noise impact). The officer contacts the complainant to find out if she has kept a record of the dates and times she has been disturbed by air conditioner noise, what rooms the noise is audible in, how the noise impacts on her, and so on. If the complainant hasn't thought to keep a record, the officer would try to compile this information by questioning the complainant. This information is needed to ensure that the officer has a thorough understanding of the situation, particularly the noise impact, so that council's response is appropriate and proportionate to the impact.
- The officer arranges to visit the complainant's home after 10pm to make an on-the-spot assessment. He enters the living room and a bedroom to assess whether the air conditioner can be heard in those rooms. Because (1) this time falls within the restricted hours period, and (2) the officer can hear the air conditioner noise when standing in both the main living room and a bedroom, the officer is confident that he can apply clause 45 of the POEO Noise Control Regulation to this situation. Under this provision, once the appropriate warning has been given,

use of the air conditioner so that it can be heard in these rooms during the restricted hours, is an offence.

- Because there appeared to be someone awake next door, the officer knocked and spoke to the occupier. He explained that his investigation of a noise complaint had established that there were grounds for issuing a warning as provided for in clause 45 of the Noise Control Regulation. He went on to explain that once a warning is given, and the air conditioner is again heard in a living room or bedroom of another residence, during the following 28 days, an offence would be committed and a fine could be imposed by means of a penalty infringement notice.
- During the officer's conversation with the occupier, the occupier agreed to not use the air conditioner after 10pm in future. Because the officer had formed the view that the occupier was likely to respond favourably to an official warning, the officer gave the warning verbally and left the premises. No further complaints were recorded about use of an air conditioner at this address and the officer was able to close off the complaint.

What if the occupier operated the air conditioner during the restricted hours at any time in the next 28 days (i.e. while the warning was in effect)?

The council officer could respond in either of two ways once the operation of the air conditioner during restricted hours was confirmed:

- **One:** the officer could issue a penalty infringement notice imposing a fine on the occupant as provided for in clause 45(c) of the Noise Control Regulation. If the occupant repeated the offence, the officer could impose another fine by issuing a second penalty infringement notice, or initiate court action.
- **Two:** the officer could use a prevention notice to require the occupant to comply with the POEO Act on the grounds that her use of the air conditioner is an activity that: *"is carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, [or] the regulations"* (clause 95(a)). The notice could list the actions the occupier is required to take, or it could require the occupier to engage a suitably qualified acoustic consultant to develop a plan to deal with this noise. If the latter, a second prevention notice could be issued to require the occupier to implement the approved plan. If the occupier subsequently breached the conditions of the prevention notice – for example, by failing to implement one of the actions described in the approved plan – the officer could impose a fine by issuing a penalty infringement notice or, if warranted, by initiating a prosecution.

Scenario B: Council receives a complaint about the operation of a neighbour's recently installed air-conditioner. The complainant alleges that she is disturbed by this noise both during the day and at night.

How can council respond?

- Before the council officer takes action, he must establish that the complaint is justified (i.e. that there is a noise impact). The officer contacts the complainant to find out if she has kept a record of the dates and times she has been disturbed by air conditioner noise, what rooms the noise is audible in, how the noise impacts on her, and so on. If the complainant hasn't thought to keep a record, the officer would try to compile this information by questioning the complainant. This information is needed to ensure that the officer has a thorough understanding of the situation, particularly the noise impact, so that council's response is appropriate and proportionate to the impact.
- Because the air conditioner has been recently installed, the officer would first check that the installation complies with relevant planning requirements. If it did not, the officer would seek to rectify the matter using relevant planning legislation and provisions. For the purposes of this case study, potential remedies under POEO Act and Regulation are further examined.

- The officer's next step is to consider whether the air conditioner operating noise contravenes a provision of the POEO Act or its associated regulations. The officer undertakes two kinds of assessment:
- **One:** to address possible contravention of the 'restricted hours' provision created under clause 45 of the POEO Noise Control Regulation, the officer arranges access to the complainant's premises to undertake an audibility test. The officer determines that the air conditioner noise is clearly audible when standing in the main living room and a bedroom. The officer is therefore confident he can apply clause 45 to this situation.
- **Two:** to address the possibility that the air conditioner is emitting 'offensive noise' outside the restricted hours, the officer considers the factors discussed in Part 2, section 4.2.1. Some of the considerations that influence the officer in coming to a determination that offensive noise is being emitted in this context are that:
 - air conditioners have become more widespread in suburbs over the years so it could not be argued that air conditioner noise is 'unusual for the area'. However, the development standards in the SEPP (Exempt and Complying Development Codes) 2008 assist the officer in judging what an acceptable and usual level would be for such an activity.
 - the air conditioner is located close to the neighbouring property with little or no shielding to reduce noise. There are other locations on the property for the air conditioner to reduce noise impacts. The officer concludes that not all practicable measures were applied to mitigate noise from the air conditioner.
 - the officer considered the noise from the air conditioner to be loud and annoying when standing at the boundary of the property which is close to neighbour's windows.
 - the officer also undertook noise measurements to determine whether the noise could be judged as intrusive using the technique of determining whether the air conditioner noise exceeds the prevailing background noise by more than 5dB(A) at the residential boundary. The officer determines that the operation of the air conditioner unit is exceeding the prevailing background noise by 17dB(A) during the day and 19dB(A) during the evening.
- Based on these considerations/measurements, the officer concluded that the air conditioner is emitting offensive noise during times not covered by the restricted hours provision of clause 45.
- The officer then visited and spoke to the occupier of the premises about the air conditioner. The officer explained the relevant legislation and that his assessment indicated that operation of the air conditioner at night could be in breach of a provision of the POEO Noise Control Regulation 2018 and that the noise from the air conditioner was also judged to be "offensive noise" at other times of the day. The officer explained the implications of his assessment.
- The officer went on to explain that he was obliged to issue a warning that if the air conditioner is again operated at night (i.e. during restricted hours of Cl. 45), within 28 days of the date of this warning, a penalty infringement notice could be issued. In response, the occupier indicated that she would not operate the air conditioner at night. However, she questioned why she should have to do anything about the noise during the day and evening, indicating it would be unreasonable.
- Faced with the occupier's unwillingness, the officer believes that regulatory action is inevitable. Two regulatory instruments would be required:
 - **One:** Because the officer has determined that 'offensive noise' is being emitted, he issues a noise abatement direction as the means of achieving an immediate solution. The direction requires the occupier to switch the air conditioner off because, in the circumstances, this is the only feasible action the officer believes could be taken to avoid emission of offensive noise. However, a noise abatement direction has effect for 28 days which means that – on its own – it is unlikely to be the means of achieving a permanent solution to this noise problem.
 - **Two:** To prompt the occupier to seek a more permanent (i.e. longer than 28 days) solution to the offensive noise problem, the officer issues a prevention notice. The grounds for

issuing a prevention notice are that the occupier's use of the air conditioner is being undertaken in an environmentally unsatisfactory manner (POEO Noise Control Regulation, Cl. 95). The notice requires the occupier to engage a suitably qualified acoustic consultant to develop a plan to deal with this noise. The occupier is also required to submit the plan for council approval.

- The plan submitted to council recommended that the unit's external component be moved from its current location facing the neighbouring property to a suitable alternative location that changed its orientation and significantly increased the distance between the unit and the neighbouring property. The report indicated this would remedy the emission of offensive noise and enable the unit to operate without being audible in neighbouring properties. The council noise team recommended a number of minor changes based on team members' collective experience of solutions to air conditioner noise problems. The team used a second prevention notice to formally require the occupier to implement the revised plan. When the occupier provided council with evidence that the plan had been implemented, the officer chose to visit the complainant's premises to confirm that operation of the air conditioner was not audible inside the neighbouring residence and that the noise would not be judged to be offensive. The complaint was then closed off.

What if the council officer was confident that an appropriate noise limit (i.e. maximum permissible noise level) could be identified for operation of the air-conditioner?

The officer could issue a noise control notice specifying this noise limit and nominating an appropriate point for measurement of noise levels. (Typically, this point would be the boundary of the neighbouring property).

What if the source was a heat pump water heater or a pump (rainwater, swimming pool, spa) instead of an air conditioner?

The council officer can follow the same approaches used above noting the different night-time restrictions that apply to heat pump water heaters and pumps (clauses 53 and 52 of the POEO Noise Control Regulation).

2.10. Amplified music and parties at residential premises

2.10.1. Context

- House parties held at residential premises can give rise to noise in the form of musical instruments, amplified music, loud voices, shouting and anti-social noisy behaviour, which may disturb neighbouring residents. Legislation provides a specific remedy for noise from musical instruments and electrically amplified sound in certain circumstances (see below).
- Because house parties are often associated with alcohol consumption, responding to noise from a house party can present a risk to the health and safety of council officers. Councils should take account of this risk to staff when developing its overall response to noise issues.
- The NSW Police Force manages a party registration website. This is an information tool established to provide police officers with advance notice of suburban house parties. Party Safe Tips are available on the NSW Police website
https://www.police.nsw.gov.au/online_services/party_safety/safe_party_tips

2.10.2. Appropriate regulatory authority (ARA)

Council is the ARA for amplified music from parties that affects a residential neighbourhood where the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, S.6).

Police officers have powers to issue and enforce noise abatement directions. In instances where the legislation empowers both the police and local authorities to use powers under the Act and Regulation to resolve noise issues, generally the police are best positioned to take the lead role where the issue may be connected with, or have the potential to become a public order issue or where the issue requires immediate resolution during hours that council staff may not be available. Outside of these circumstances, typically the local authority would be the lead agency.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.10.3. Options to resolve the problem

When dealing with noise issues involving amplified music and parties, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

The Protection of the Environment (Noise Control) Regulation 2017 provides a specific regulatory response to this context:

- Where the source of noise is a musical instrument (clause 57) or electrically amplified sound (clause 58), that noise may be deemed to be an offence in certain circumstances.
- An offence occurs if, within 28 days of receiving an official warning, this noise is heard within any room in any other residential premises (that is not a garage, storage area, bathroom, laundry, toilet or pantry) whether or not any door or window to that room is open:

(i) before 8am or after midnight on any Friday, Saturday or day immediately before a public holiday, or

(ii) before 8am or after 10pm on any other day.

NOTE: These hours are often referred to as “restricted hours”.

- A fine may be imposed for this offence by issuing a penalty infringement notice. For serious repetitive offences where there is adequate evidence, council has the option to initiate court proceedings.
- These provisions are useful for restricting the times musical instruments and electrically amplified sound are used where they can be heard inside other residential premises. They do not address other noise sources at a party like people noise.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution. It can be used to ensure all party noise is ceased or reduced if determined offensive – this includes noise from party attendees as well as music noise.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation. This tool is useful for facilitating a long-term solution to an issue that is likely to be a regular occurrence.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,]”, or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice” (section 95).
- An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.10.4. Case study

Around 5 o'clock on a Friday afternoon, council's complaints hotline receives calls from the residents of a suburb complaining about loud music and other party noise from a house party. Council is the ARA for noise from neighbourhood parties.

How can council respond?

- Council has a noise policy that prioritises responses to complaints of this kind because they typically impact a large number of people. Officers are available to respond immediately and because situations of this kind can pose a risk to the safety of officers, council policy requires at least two officers to attend.
- Before going to the address provided by complainants, the officers contact local police to check whether police have information about the party.
- The officers go to the address to make an assessment. The music is loud, and there are a number of people milling about on the property and also in the street. Although there is no indication that public order is threatened by the behaviour of these persons, the council officers understand that an apparently peaceful situation can quickly change.
- The officers collect information to assist them to better understand the impact of the noise on the neighbourhood. They visit the homes of several complainants and compile the following information:
 - the main noise source is electrically amplified sound, but there is also occasional shouting or shrieking from the attendees who appear to be older teenagers 'in high spirits'.
 - the noise is loud, intrusive, and continuous, characterised by deep bass 'thumping'.
 - the occupants of neighbouring residences tell the officers that they are unable to concentrate on their usual activities because the sound system intrudes. The officers are informed that a number of families have decided to sleep elsewhere while the party is in process. (Note that there is no way for the officers to verify these claims).
 - conversations with complainants located up to 200 metres from the party reveal that the impact of party noise is felt at some distance from the event.
 - the officers are consistently informed by neighbours that the amplified music has been sounding since mid-afternoon, without a break.
 - they are invited into both adjoining houses and are able to verify for themselves that the amplified music can be clearly heard in all rooms of both houses.
 - none of the complainants the officers speak to has attempted to request the party organisers to reduce the volume, citing a lack of success when making this request during previous parties held at this address. (Note that the officers have no way to verify these claims).
- The officers draw on guidance provided at Part 2, section 4.2.1 to assess the potential for the noise emitted from this address to be 'offensive noise'. Because the noise is so loud and intrusive, and because the noise impact is so widespread, the officers determine that the noise is 'offensive' within the meaning of the POEO Act 1997.
- Based on the reported unwillingness of the party organiser to cooperate when neighbours have complained about the volume of noise on previous occasions, the officers conclude that the organiser is unlikely to respond favourably to a non-regulatory warning. (Council noise policy encourages officers to try to resolve neighbourhood noise problems without using regulatory instruments wherever possible).
- The officers locate the party organiser (who is also the occupant of the premises) and issue a noise abatement direction. The direction states that the organiser must cease making 'offensive noise' by reducing the volume control on the sound system to a specified setting. This volume setting is determined after considering the characteristics of the equipment, the context, and the time of night. The officers note the volume setting that has been specified for

the stereo system in the notes they make while at the incident. The direction also includes a reminder to the organiser that clause 58 of the POEO Noise Control Regulation places restrictions on noise from amplified sound systems after 12am on a Friday and Saturday.

- When the officers are confident that the party organiser understands that he must not operate the sound system above the agreed volume level, they leave the site, calling at the two adjoining residences to explain the action they have taken.
- Further regulation of this issue may be likely if the party organiser decides to turn up the sound system again. When the officers get back to the council offices, they inform local police, through the channel that has been established for this purpose, that a noise abatement direction has been issued to the occupant of that address. They also advise the after-hours council rangers who are now on duty that a noise abatement direction has been issued, including a stipulated volume setting that must not be exceeded.
- Around 8pm, the complaints begin again. From the information recorded by council's complaints hotline, it seems that the noise from amplified music is again being emitted from this address. Before they respond to these complaints, the council's after-hours rangers contact the local police station to request that police officers accompany them to the address.
- After speaking to the complainants, reviewing the information gathered by colleagues earlier that evening, and considering the guidance provided at Part 2, section 4.2.1, the officers determine that 'offensive noise' is again being emitted from these premises.
- When the officers attend the party premises, they discover that the volume setting on the sound system is well above the setting prescribed in the noise abatement direction issued earlier that day by their colleagues. The party organiser claims that he is unable to prevent guests from interfering with the volume control. Because this is not a relevant consideration, the officers determine that the organiser has not complied with the noise abatement direction and proceed to impose a fine by issuing a penalty infringement notice. The attending police officers also issue a formal warning to the party organiser that the sound system will be confiscated if he again contravenes the council's noise abatement direction.
- Just before midnight, the council hotline records a third group of complaints about this party. When the duty officers contact local police to arrange for police attendance, they are advised that police officers are already on the scene, responding to reports from neighbours concerned about the risk to public order.
- When the council officers contact the police officers on the scene, they are informed that the crowd has been ordered to disperse and the officers have disabled the sound system by confiscating the amplifier. Because the police action has effectively dealt with the noise issues, there is no reason for council staff to attend the address.

2.11. Building intruder alarms

2.11.1. Context

- Building intruder alarms are a highly disturbing source of noise in residential neighbourhoods, particularly where the alarm sounds for a prolonged period. For this reason, it is recommended that councils develop guidelines for staff dealing with noise complaints in order to streamline and standardise council's response. Guidelines should incorporate any negotiated agreement made between council and local police on a joint approach to responding to intruder alarms.
- POEO legislation includes provision that authorises action by council officers to deactivate a building intruder alarm sounding in contravention of the law. There may also be an expectation in the wider community that council officers will take the necessary steps to do so where this is the only way to stop an alarm from sounding for long periods because there is no occupant available to deactivate it. Councils should consider the need for a policy to support noise officers to know when and how to take this step. The policy could clarify the circumstances in which a council noise officer should be accompanied by a police officer and/or arrange for the services of a locksmith/intruder alarm technician.
- Council could be liable to pay compensation for any damage caused by an officer in exercising a power of entry, unless the occupier obstructs or hinders the officer in the exercise of that power. Council may also be liable for damage that may occur to premises or property as a result of entry or disarming of the intruder alarm.

2.11.2. Appropriate regulatory authority (ARA)

Council is the ARA for noise from building intruder alarms that affects a residential neighbourhood and where the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (see POEO, s.6).

Police officers have powers to issue and enforce noise abatement.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.11.3. Options to resolve the problem

When dealing with building intruder alarm noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is at Part 3, section 9.

The Protection of the Environment (Noise Control) Regulation 2017 provides a specific regulatory response to this context:

- Where the source of noise is a building intruder alarm (clause 42), that noise may be deemed to be an offence in certain circumstances.
- An offence occurs if noise is heard within any room in any other residential premises (that is not a garage, storage area, bathroom, laundry, toilet or pantry) whether or not any door or window to that room is open, unless the alarm automatically ceases:

- i. Within 10 minutes of being activated (if installed before 1 December 1997), or
- ii. Within five minutes of being activated (if installed on or after 1 December 1997)
- Penalties associated with this offence vary according to the length of time for which the alarm sounds. For the purposes of determining the ‘duration of sounding’, intervening periods when the alarm is silent are disregarded. The offence occurs without the need for a prior warning.
- A fine may be imposed by issuing a penalty infringement notice. For serious repetitive offences where there is adequate evidence, council has the option to initiate court proceedings.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- If the noise is deemed to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [, , ,]”, or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [. . .], or
 - it is not carried on in accordance with good environmental practice” (section 95).
- An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice or a prevention notice, an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

Powers of authorised officers to enter premises and disable intruder alarms:

- If no occupant is available at the premises to switch off or disable a sounding alarm, or if the occupant does not cooperate with an authorised officer, the law provides authorised officers with specific powers:
 - i. The POEO Act 1997, part 7.4 provides authorised officers with specific powers of entry and search of premises. An officer can enter residential premises only with the permission of the occupier or after obtaining a search warrant. Summary information on the use of these powers is in Part 2, section 3.1.4.

- ii. The POEO Act 1997, section 198A gives authorised officers the power to turn off or otherwise disable a building intruder alarm (or a motor vehicle intruder alarm) that is or has been sounding in breach of this Act or the regulations.
- The authorised officer must ensure that entry onto premises is in all cases lawful and in accordance with powers conferred under legislation.

Note: Summary information on the key powers of council authorised officers and police officers is in table 4.

2.11.4. Case study

Council's environment 'hotline' receives a number of phone calls from the residents of a street about a neighbour's building intruder alarm. The immediate neighbours inform the council that the resident is away on holiday and no arrangement appears to have been made with neighbours for a house key to be available for use in emergencies. The incident takes place during the day. Council is the ARA for this source of noise.

How can council respond?

- Council receives complaints about an intruder alarm sounding at residential premises. Council policy prioritises responses to this noise source because the noise is highly intrusive and there is the potential for a large number of persons to be affected by it. However, competing priorities means that council's environment team is only able to respond approximately six hours after the first complaint was recorded.
- On arrival, the council officer observes that the alarm is sounding and makes a note of his arrival time. The officer knocks at the door of the residence but is not able to speak to an occupier.
- To inform his assessment of the impact this noise is having on the neighbourhood, the officer contacts the two adjoining neighbours and with their permission, enters these properties and establishes that the alarm can be heard in the bedrooms and living rooms of both residences. Statements obtained from both neighbours indicate that the alarm has been sounding continuously for approximately six hours. Both neighbours also indicate they do not have contact details for the owner/occupier and are unaware of how they could be contacted.
- It takes the officer 20 minutes to complete this initial assessment. Because this exceeds the times laid down in clause 42 of the POEO Noise Control Regulation, and based on the statements provided by the neighbours, the officer is able to determine that an offence has occurred.
- While the officer may later consider issuing an infringement to the occupier for a breach of the POEO Noise Control Regulation, cl.42, the first priority is to attempt to stop the impact of the sounding alarm.
- Because the alarm has been sounding all day and there is no immediate prospect of the occupier being available to deactivate the alarm, the officer resolves to use the legal power available to him for this purpose. Before doing so, however, the officer attempts to solve the problem without using regulatory powers. He notices a sticker fixed to the inside of a window stating that the house is protected by a named security company. He reasons that the security company may have a key to the premises and may be willing to bring the key to the site, unlock the premises and disable the alarm. Unfortunately, when the officer contacts the company, he is advised that the premises are no longer protected by this company and standard operating policy prevents it from retaining keys for premises it does not protect.
- The officer has established that the residence is owner-occupied. If the occupant had been a tenant, and if the officer had been able to identify a real estate agent, it might have been possible to arrange for the agent to open the premises and disable the intruder alarm using keys held by the agency. Note that it would be unlawful for the council officer to enter the premises in this way.

- The officer knows that council has a service agreement with a local locksmith to respond quickly where council requires entry to premises for the purpose of disabling an alarm. Because it is a weekday, the officer attends the local court and obtains a warrant to enter the residential premises. He arranges for the locksmith to attend, and watches the locksmith enter the premises and disable the alarm. Note that not all locksmiths would also be able to deactivate an alarm system.
- Because entry to the premises was made by a professional locksmith, there is no damage to the door or locking mechanism. Similarly, the locksmith deactivates the alarm without damage. If either had been damaged, council would be liable in law to make good the damage or pay for repairs. If this isn't done, and the property is subsequently damaged further or stolen, council could be held liable for that as well. It would be prudent for the officer to take pictures of the door and alarm to record the absence of damage before leaving the site.

What if the alarm was reported at night and the council was able to respond at night?

If council was able to respond quickly to an alarm sounding at night, that response would depend on the availability of both a court official to issue the warrant to enter premises and a locksmith to unlock the premises and deactivate the alarm.

2.12. Gardening equipment and other power tools

2.12.1. Context

- Power tools used on residential premises can be a highly disturbing source of noise in residential neighbourhoods, particularly if used for extended periods of time or at an inappropriate hour.
- Clause 51 of POEO Noise Control Regulation contains time restrictions on the use of power tools on residential premises. A power tool is defined as “*any tool actuated by an additional power source and mechanism other than manual power and includes any of the following:*
(a) a powered garden tool (that is, a tool powered by a petrol engine or an electric motor), including a lawn mower, a lawn trimmer, a blower or sweeper, a garden mulcher, an edge-cutter or a chipper or shredder,
(b) an electric power tool (including battery-operated power tools),
(c) a pneumatic power tool,
(d) a chainsaw,
(e) a circular saw,
(f) a gas or air compressor.”
- Use of power tools or powered gardening equipment for activities such as hobbies, home maintenance, or minor construction projects would not typically require development consent. However, when power tools are being used for residential construction purposes, noise and acceptable hours of use would typically be governed by relevant planning provisions.
- Noise from powered tools used for small-scale industrial/commercial activities near residential premises would be regulated as ‘industrial’ noise. See separate fact sheet in this guide and the EPA publication: *Noise Policy for Industry* (EPA, 2017).

2.12.2. Appropriate regulatory authority (ARA)

Council is the ARA for noise from powered tools that affects a residential neighbourhood where the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, s.6).

Police officers have powers to issue and enforce noise abatement directions.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.12.3. Options to resolve the problem

When dealing with power tool noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer’s discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:

- seek to regularise the activity consistent with the consent or relevant planning provision, or
- issue orders requiring compliance with planning legislation or the requirements of a consent, or
- agree to an enforceable undertaking, or
- issue a penalty infringement notice, or
- initiate a prosecution for more serious breaches.

The Protection of the Environment (Noise Control) Regulation 2017 provides a specific regulatory response to the use of power tools where they are used on residential premises:

- Where the source of noise is a power tool used on residential premises (clause 51), that noise may be deemed to be an offence in certain circumstances.
- An offence occurs if, within 28 days of receiving an official warning, power tools used on residential premises can be heard within any room in any other residential premises (that is not a garage, storage area, bathroom, laundry, toilet or pantry) whether or not any door or window to that room is open:
 - before 8am or after 8pm on any Sundays or public holidays or
 - before 7am or after 8pm on any other day.

Note: These hours are often referred to as 'restricted hours'.

- A fine may be imposed by issuing a penalty infringement notice. For serious repetitive offences where there is enough evidence, council has the option to initiate court proceedings.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to the use of power tools used on residential or non-residential premises. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- If the noise is determined to be 'offensive noise' (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, 'environmentally unsatisfactory manner' means the activity is:
 - "carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,]", or,
 - "not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice" (section 95).
- An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be

implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in Table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.12.4. Case Study

Council receives a complaint from a resident about a new neighbour who mows his backyard on Sunday mornings before 8am.

How can council respond?

- On the following workday, a council officer contacts the complainant to confirm information submitted with the complaint. He is told that the problem has emerged only recently, since a new neighbour has come to live at this address. The neighbour appears to believe that it is necessary to mow weekly and chooses to do so early on Sunday for reasons that are not clear to the complainant. The complainant advises that she has not attempted to explain to the neighbour that she finds this activity disturbing because she is anxious about his possible response.
- The officer calls at the next-door property to speak to the occupier. After informing the occupier that a complaint has been received, the officer explains that clause 51 of POEO Noise Control Regulation prohibits use of a power tool on residential premises before 8am on a Sunday – a ‘restricted hours’ period – *“if it can be heard within any room in any other residential premises (that is not a garage, storage area, bathroom, laundry, toilet or pantry) whether or not any door or window to that room is open”*. The officer explains that although he has not witnessed this for himself, he is satisfied that a lawnmower used before 8am on a Sunday would be heard in the relevant rooms of the adjoining houses.
- During his interaction with the occupier, the officer forms the view that the behavior may be the result of simple lack of consideration. The occupier acknowledges that his behavior might be unreasonable but insists that (1) he is not the only person mowing at this time of day and (2) he does it at this time to avoid the heat later in the day.
- The officer explains that, in the circumstances, neither of these arguments provides a defense against the requirements of the regulation. Because the occupier appears to accept that he is at fault, and seems willing to change his behavior accordingly, the officer decides not to issue a warning under clause 51 of the Regulation. After leaving, the officer calls on the complainant to explain that he believes the problem has been dealt with informally.
- The result of this intervention is that the occupier delays the onset of his weekly mowing till 8am and there are no further complaints about this activity.

What if the occupier continued to mow his lawn before 8am on a Sunday (or at any other time covered by clause 51)?

- If council received a second complaint about this activity at the same address, the response could be that the officer issues the occupier with an official warning – as provided for in clause 51 of the Regulation. The warning would be worded to inform the occupier that an offence would be committed if the lawnmower was heard in any of the relevant rooms of another residential premises during restricted hours. The warning could be issued either verbally or in writing.
- Issuing the warning might be enough of a deterrent for the occupier to change his behavior. If, however, the activity was repeated, and a council officer was able to determine that the activity had occurred in contravention of the earlier warning and within 28 days, council could impose a

fine by issuing a penalty infringement notice. If the officer did not witness the offence directly, he could rely on a signed statement supplied by the complainant outlining the full details of the lawn mowing event/s; the times and dates at which they occurred; that the lawn mowing activity was audible inside their residence and a willingness to attend court to provide evidence if required.

2.13. Motor sport events

2.13.1. Context

Motor sport events held on privately-owned land (such as the Eastern Creek International Raceway), and the practice sessions for these events, can be a source of noise disturbance for neighbouring residents.

Some motor sport events are not regulated under the *Protection of the Environment (Operations) Act 1997* because they are dealt with under separate legislation, for example: the *Motor Racing (Sydney and Newcastle) Act 2008* (section 30), and the *Mount Panorama Motor Racing Act 1989* (section 12).

2.13.2. Appropriate regulatory authority (ARA)

Council is the ARA for noise from motor sport events that affect a residential neighbourhood where the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (electrical distribution).

Police officers have powers to issue and enforce noise abatement directions. Motor sport events held on public roads require the written approval of the Commissioner of Police (*Road Transport Act 2013*, section 115).

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in Table 4.

2.13.3. Options to resolve the problem

When dealing with motor sport noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:

- seek to regularise the activity consistent with the consent or relevant planning provision, or
- issue orders requiring compliance with planning legislation or the requirements of a consent, or
- agree to an enforceable undertaking, or
- issue a penalty infringement notice, or
- initiate a prosecution for more serious breaches.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,],” or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice” (section 95).
- An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in Table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.13.4. Case study

Council receives inquiries about a proposal to establish a motor racing facility, to host both drag racing and circuit racing, on a site outside a large country town. Council is the ARA for motor sport facilities on private land.

How can council respond?

- Council advises the proponent that any proposal for such a facility would require a noise assessment, predicting noise impact from the proposed development. The assessment would address two purposes:
 - To inform site development (location, siting and orientation of the facility); and
 - To assess noise impacts of the facility’s operations.
- The noise assessment should:
 - identify the sound power levels of the different types of racing vehicle
 - describe the number and type of events planned for the facility (e.g. drag racing, motocross, circuit racing, speedway or go-karts)
 - describe the number and location of racing cars on the circuit and in any pit or warm-up areas

- provide the results of modelling to illustrate the potential noise impact of different racing vehicle numbers and types
- assess potential weather effects on noise generation
- assess noise impacts in the surrounding area, and
- investigate noise mitigation strategies to reduce the noise impact.
- Specific mitigation options the proponent could investigate include the following:
 - On-site noise mitigation options:
 - Orienting the track to use existing topography to reduce noise at noise-sensitive receivers.
 - Locating the noisiest uses furthest from noise-sensitive receivers and orienting them to minimise noise.
 - Using earth mounds and other barriers.
 - Noise source controls:
 - Using effective mufflers on racing vehicles and requiring all vehicles to meet Confederation of Australian Motor Sport noise specifications.
 - Implementing a program for testing racing vehicles to ensure they meet these racing limits.
 - Operational noise controls:
 - Restricting the duration of events and practice sessions.
 - Interspersing races with respite periods on event days.
 - Limiting the number and type of events and banning events on certain days.
 - If warranted, council might consider requiring the proponent to consider noise controls at receiver locations. These could include the following:
 - Noise insulation for nearby houses.
 - Encouraging the proponent to acquire affected property.
- Council also requires the proponent to develop a noise management plan that would take effect during operation of the proposed facility. The plan should cover: race day mitigation strategies, noise monitoring, community liaison before and during the event, complaint-handling procedures including a dedicated complaint telephone number and an event schedule.
- The event schedule is a tool that sets out the maximum number of events of different types that a venue is permitted to host each year. Working to a notional total annual noise 'load', and identifying different types of motor sport events, e.g. super tourers, drag racing, motorcycles, each with a known noise level, the tool yields a schedule of the number of events of each type permitted at the venue each year. The expected loudness of the different types of motor sport event can be obtained from the relevant motor sport literature. The schedule would include curfew provisions that restrict events at the facility to specified days of the week and times of day.
- The event schedule is a practical way of balancing a proponent's need for certainty about the events that can be held at the new facility with the public's right to be protected from unreasonable exposure to noise. The schedule would be drafted by the proponent and submitted to council for approval and annual review.
- A factor that will influence the council's review of the event schedule submitted by the proponent is the known sensitivity of communities to a new source of noise (e.g. from a new sporting facility at a greenfield site) compared with noise from existing facilities at the same noise level. It is likely therefore that the consent will approve fewer events for this new facility than might have been approved for an existing facility of comparable size and proximity to residences.

What if complaints are received about noise from a motor sport facility that is the subject of an existing consent (that includes noise conditions)?

- Council officers would check that the event organiser (or the managing body of the facility) has complied with these conditions. If investigation reveals that the organiser has not complied, a breach of the consent would have occurred, and action could be taken for breach of the EP&A Act 1979.
- Similarly, if the venue is council-owned and is the subject of a lease agreement that includes noise conditions, the council could consider taking action for breach of the lease agreement. If the noise conditions of the current lease were demonstrated to be inadequate to controlling noise, council would consider strengthening these conditions in subsequent lease agreements.

What if complaints were received about noise from a motor sport facility that is not subject to noise conditions of any kind (either through a development consent or a lease)?

Council officers would consider using the regulatory instruments provided by the POEO Act:

- A noise control notice could be used to impose noise limits on the facility. It would do this by setting a noise limit (ie. a maximum noise level not to be exceeded) and specifying how and where on the site or at neighbouring noise receivers that maximum noise level was to be measured for the purposes of determining compliance. The noise control notice applies indefinitely unless a date is specified. A noise control notice should not be used to apply a limit that is not practically achievable.
- A noise abatement direction could be used to prohibit further noise-making activities at the facility for a period of 28 days. However, a direction to cease the noise-making activity is likely to impact directly and immediately on the capacity of the facility to host motor sport events.
- A prevention notice could be used to instruct the event organiser to take certain mitigating actions or to avoid certain noise-making activities. Requirements that might be appropriate to the circumstances of a motor sport facility include the following:
 - That the event organiser develops a noise impact study and/or a noise management plan
 - That maximum noise limits are not exceeded
 - Limiting the number of events that can take place
 - Limiting the times of the event or of practice sessions
 - Requiring that the community be notified
 - Establishing a community complaint phone number
- A prevention notice could be issued without an end-date and this would have a permanent impact on the noise-generating activities at the facility, but it would do so without obliging the facility to cease operations altogether.

2.14. Outdoor shooting ranges

2.14.1. Context

Target shooting at outdoor ranges emits a highly disturbing noise the impact of which is affected by distance, wind speed and direction, the type of cartridge used, and the orientation of the range to receptors. Shooting ranges may operate in the evenings and at weekends, when residents have a reasonable expectation of peace and quiet.

Outdoor shooting ranges are typically open to the surroundings, and there may be few structural measures that can be applied to mitigate noise impact.

Schedule 2 of the Protection of the Environment (Noise Control) Regulation 2017 specifies the methods that must be used when measuring noise from shooting ranges for a purpose under the POEO Act.

The EPA publication: *Target shooting Ranges: Application Note for Assessing Noise Compliance* (EPA, July 2015) provides clarification on EPA practice for assessing compliance with noise limits at shooting ranges.

2.14.2. Appropriate regulatory authority (ARA)

Council is the ARA for noise from outdoor shooting ranges that affects a residential neighbourhood where the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, s.6).

Police officers have powers to issue and enforce noise abatement.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.14.3. Options to resolve the problem

When dealing with noise issues involving outdoor shooting ranges, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is at Part 3 Section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:

- seek to regularise the activity consistent with the consent or relevant planning provision, or
- issue orders requiring compliance with planning legislation or the requirements of a consent, or
- agree to an enforceable undertaking, or
- issue a penalty infringement notice, or
- initiate a prosecution for more serious breaches.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,]”, or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice” (section 95).
- An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

- In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.
- Summary information on POEO regulatory instruments is in Table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.14.4. Case study

Council receives complaints about shot noise from a long-established outdoor shooting range located in the upper reaches of a valley. The complaints are made by residents of a suburb that has been developed in stages in the lower reaches of the valley over the preceding three years. Council is the ARA for this source of noise.

How can council respond?

- Because the range has been in existence for decades, it is currently operating under a development consent that has no noise conditions. This is because the surrounding land was unoccupied when the range was established. It is not open to council to arbitrarily alter this consent. However, council planners should be mindful of the potential for land use conflicts when considering rezoning or subdivision proposals for this development in the future.
- The range is owned, freehold, by the shooting club that manages it. This means that council does not have the option of controlling noise by varying the lease conditions.

- By visiting the suburb on a day on which shooting is taking place, the officer notes that the shot noise is loud in the bedrooms and living rooms of all the dwellings whose residents have complained. The number of complaints recorded suggests that a large number of people are affected. However, the noise does not occur often – the range is used at weekends, and in daylight only – and the length of time for which the range has been operating means that shot noise cannot be considered to be unusual for the locality. The officer concludes that it would be unreasonable to determine the shot noise emitted from this range to be offensive noise. (See Part 2, section 4.2.1 for advice on what constitutes ‘offensive noise’). On this basis the officer concludes that immediate action, for example a noise abatement direction, is not warranted in this instance.
- A representative of the shooting club tells the officer that the club has never implemented (or even considered) measures to limit the emission of noise, largely because its development consent makes no provision for noise impact. During her site visit, she notes a number of possible actions that the club could take to mitigate the impact of noise on the adjacent residences. The officer concludes that the activity is not being carried on by such practicable means as may be necessary to prevent, control or minimise pollution (section 95c POEO Act). She therefore resolves to issue a prevention notice requiring the club to develop a plan of management to determine practical, feasible and reasonable noise mitigation measures that could be implemented to reduce noise impacts
- The shooting club responds to the notice with a plan of management that identified the following physical and operational measures to reduce the impact of the noise:
 - structures that enclose the firing positions and/or barriers set up between the firing positions and the suburb that have the effect of attenuating noise levels
 - re-orientation of the range so that noise is emitted in the opposite direction to residential receivers
 - timing restrictions that limit shot noise to particular times and/or days
 - restrictions on the overall number of shots fired per day, or on particular days
 - publishing the club’s activities on a website so that the surrounding community receives forewarning of events, etc.
- The council requires implementation of the plan of management by issuing a second prevention notice. The shooting club is told that some of the physical measures required planning approval and the notice included provision for staged implementation of the measures consistent with required lead-in times to secure planning approval and financial resources.
- Council could consider imposing a requirement to measure shot noise before and after the implementation of the physical measures to determine the effect of the measures.

What if the range was the subject of an existing development consent with noise conditions?

The council could investigate to determine whether the range had emitted noise at a level or at a time (assuming that a noise limit and time restrictions had been imposed) that contravenes the consent. The noise level would be measured using the method laid down in the consent or, if no method was prescribed, using the method in the POEO Noise Control Regulation, 2017, Schedule 2. Depending on the seriousness of the breach, council could impose a fine by issuing a penalty infringement notice, seek court orders requiring compliance with the consent, or initiate prosecution for contravention of the *Environmental Planning and Assessment Act 1979*.

What if the shooting club made a development application to vary its use of the range?

It is likely that council’s assessment process for this application would include a requirement that the proponent engage a suitably qualified noise consultant to recommend options for mitigating noise from the range. Council would draw on this report in stipulating noise conditions for the consent. These could include:

- Times of use for particular days of the week e.g. 9am to 6pm, Monday to Saturday

- Maximum number of shots per daily session
- Maximum A-weighted sound levels, measured at defined measurement points
- Prescribed method for measuring shot noise level
- Measurement during prescribed wind conditions e.g. when wind is blowing towards receivers.

2.15. Residential construction in a residential neighbourhood

2.15.1. Context

Construction works carried out on residential property can give rise to noise disturbance because it typically involves use of power tools and other mechanical equipment, as well as handling of materials.

2.15.2. Appropriate regulatory authority (ARA)

Council is ARA for residential construction noise that affects a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (See POEO Act, s.6).

Police officers have powers to issue and enforce noise abatement directions.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in Table 4.

2.15.3. Options to solve the problem

When dealing with residential construction noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

- If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:
 - seek to regularise the activity consistent with the consent or relevant planning provision, or
 - issue orders requiring compliance with planning legislation or the requirements of a consent, or
 - agree to an enforceable undertaking, or
 - issue a penalty infringement notice, or
 - initiate a prosecution for more serious breaches.
- If the consent conditions do not cover noise, council could:
 - if the noise involves power tools and occurs after 8pm, apply clause 51 of the Protection of the Environment (Noise Control) Regulation 2017 (see below); or
 - in other circumstances, use a noise abatement direction or apply conditions via a prevention notice under the POEO Act. The conditions could be drawn from any of the following:
 - the standard construction hours recommended by the EPA in: *Interim Construction Guideline* (EPA, 2009):
 - Monday to Friday 7am to 6pm
 - Saturday 8am to 1pm

- no construction on Sunday or a public holiday, or
- the hours prescribed for 'complying development' (see below), or
- the hours council may prescribe in its local environmental plan (LEP).

Where the works are complying development, the works must be conducted in accordance with *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

- Schedule 6, part 2 specifies 'Conditions applying during the works: Hours for construction'. These are:
 - Construction may only be carried out between 7am and 5pm Monday to Saturday.
 - No construction is to be carried out at any time on a Sunday or a public holiday.
 - Non-compliance with this condition could lead to action under the *Environmental Planning and Assessment Act 1979*, including an order to comply, or imposition of a fine through issuing of a penalty infringement notice, or (in serious cases) to prosecution.
- In all other circumstances (i.e. circumstances in which there are no noise conditions prescribed for the development that is the source of noise complaints), council could:
 - if the noise involves power tools and occurs after 8pm, apply clause 51 of the POEO (Noise Control) Regulation (see below); or
 - in other circumstances, use the regulatory instruments provided by the POEO Act (i.e. noise abatement direction, prevention notice, or noise control notice - see below).

The Protection of the Environment (Noise Control) Regulation 2017 provides a response to circumstances where noise from power tools (clause 51) is deemed to be an offense.

- An offence occurs if, following an official warning, power tools used on residential premises can be heard within any room in any other residential premises (that is not a garage, storage area, bathroom, laundry, toilet or pantry) whether or not any door or window to that room is open:
 - before 8am or after 8pm on any Sundays or public holidays or
 - before 7am or after 8pm on any other day.

Note: These hours are often referred to as 'restricted hours'.

A fine may be imposed by issuing a penalty infringement notice. For serious repetitive offences where there is adequate evidence, council has the option to initiate court proceedings.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- If the noise is determined to be 'offensive noise' (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, 'environmentally unsatisfactory manner' means the activity is:

- “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,],” or,
- “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
- it is not carried on in accordance with good environmental practice” (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.

Summary information on POEO regulatory instruments is in Table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.15.4. Case study

A resident has recently received development consent for a major refurbishment of his home. The works are being executed under an owner-builders permit and the homeowner is doing the bulk of the works himself. Because the owner works during the day, he is attempting to do some of the works in the early morning and then after his day job in the evening. Often the works involve the use of power tools and other noisy activities.

Several neighbours have complained to council about regular early morning construction activities often starting as early as 5:30am and then evening construction activities sometimes continuing until 10pm weekdays. Works often occur all Saturdays and Sundays.

The development consent issued for the works includes a condition restricting construction hours to:

Monday to Friday: 7am to 6pm

Saturday: 8am to 1pm

No works on Sundays or public holidays

How can council respond?

- The council’s development control officer (DCO) determines that evidence should first be gathered to confirm that construction activities are in fact happening in contravention on the development consent. He also consults with council records and calls the owner of the premises (who is also the proponent to the consent) and leaves a message requesting a return phone call.
- Because the works are allegedly being executed outside standard hours, the DCO arranges for a council ranger to undertake early morning and evening surveillance over a couple of days. The council rangers report that construction noise is audible on the street outside the premises and provides the DCO with a diary of times and dates that construction noise was heard.
- The DCO then attends the premises and leaves a business card requesting that the owner calls him as soon as possible.
- The following day the DCO receives a phone call from the owner and explains that council has received complaints about construction work outside of standard hours and that council officers have confirmed this.

- The owner explains that he is an owner builder and that he works during the day so he must get some work done early in the morning and into the evening. He explains he thought that the hours in the consent only applied to very noisy works.
- The DCO explains the hours in the consent apply to all construction activities and that the consent is a legal document that must be adhered to. He explains that fines may apply if the consent is breached. The owner indicates he would restrict his building activities to within the hours stipulated in the consent.

What if the consent did not stipulate permitted construction times?

- The officer could take action using the general provisions of the POEO Act. If he is able to determine that 'offensive noise' has been emitted, the officer could issue a noise abatement direction. The officer would consider the possibility that 'offensive noise' has been emitted using the guidance provided at Part 2, section 4.2.1.
- A noise abatement direction would direct the person causing noise to stop making 'offensive noise' during a 28-day period. Note that a noise abatement direction does not prohibit the emission of noise that is not 'offensive noise', which means that the direction could be worded to specifically restrict the activity giving rise to 'offensive noise'. An offence would only occur if the activity started again within 28-days and resulted in offensive noise.

What if the owner reverted to out of standard hours works after the noise abatement direction ceased to take effect and a more enduring solution is required?

- If the council authorised officer was satisfied that certain construction activities were being undertaken in an environmentally unsatisfactory manner, a prevention notice could be considered. The POEO Act 1997, Section 96 indicates that a prevention notice can, among other things, restrict an activity to particular times. The prevention notice could restrict noisy activities using power tools and equipment to between standard construction hours if it was determined that they were being used in an environmentally unsatisfactory manner. An offence would only occur if the activity started again. Before any action was taken it would be prudent for the authorised officer to obtain evidence that the activity both started again and was undertaken in an environmentally unsatisfactory manner.

What if the power tools were being used for the purposes of a hobby or home renovation works not associated with residential construction?

- The general provision in the POEO Act '97 relating to remedying situations of offensive noise would be available, including Noise Abatement Directions and Prevention Notices.
- Additionally, the POEO Noise Control Regulation, Clause 51 provides restrictions on the use of power tools on residential premises. These provisions have been described above.

What if the council officer's intervention led to the parties agreeing to participate in mediation?

- It is not the council officer's function to resolve this dispute by arranging for mediation. However, he could suggest that the parties try mediation and provide information to assist the parties to make contact with a mediation body such as Community Justice Centre (CJC).
- One of the objects of mediation is to assist the parties to understand that they may both need to adjust their expectations so that the other party can achieve some of its goals. The mediator is likely to point out that the legitimate right to carry on a noisy activity does not override the other party's legitimate right to enjoy a reasonable level of amenity.
- For council, successful mediation of a noise issue means that further council involvement in handling this complaint may become unnecessary.

What if the works are complying development?

- Initial responsibility for regulating complying development works lies with the appointed Principal Certifying Authority or PCA. The PCA would investigate the complaint and, if

regulatory action appeared to be necessary, would issue written directions, notices or orders according to its enforcement powers. Typically, a PCA has the power to issue a notice to the owner or builder to comply with the conditions of a complying development certificate or rectify non-compliance. The certifier must then give a copy of this notice to the council (if not the PCA), which has legal power to enforce the notice if required.

- If a noise complaint about a complying development is made to council (and council is not the PCA), council may deal with significant breaches of the legislation or the development consent directly. Matters that do not require immediate action could be referred to the PCA for resolution.

2.16. Industrial noise in a residential area

2.16.1. Context

Activities associated with small-scale industrial or commercial enterprises can give rise to noise impacts for neighbouring residents. This is because:

- these activities typically require use of noise producing mechanical plant and equipment, and other activities
- some mechanical noises have particularly annoying characteristics, for example tonal noise
- equipment may be located on roofs or high up on facades, where effective screening is difficult to achieve
- most industrial and commercial operations will require deliveries (in or out) which introduces noise from vehicle movements
- some industrial facilities operate '24/7' or outside typical business hours which may give rise to evening/night and weekend noise impacts.

Industrial facilities may include noise sources scattered across the site which means that it may be necessary to identify and assess the impact of more than one noise source. The presence of multiple noise sources will typically generate cumulative noise impacts.

Where industrial/commercial activities take place outside typical business hours, noise measurement may need to include daytime, evening, night-time and weekend periods (as appropriate) in order to capture the time of greatest potential impact.

Industrial and commercial activities typically operate under development consents issued by planning authorities including councils. These may have been granted many years ago and may not reflect contemporary approaches to noise management. A consent is an enduring instrument that cannot be modified by a consent authority to reflect changed circumstances or context, unless an application to modify the consent is made by the proponent. Regulatory tools under the POEO Act are however dynamic and can be used to resolve impacts arising from changed circumstances or context when it is reasonable to do so.

The NSW EPA publication: *Noise Policy for Industry* (2017), is a source of guidance for councils in their management of noise issues from commercial/industrial sources.

2.16.2. Appropriate regulatory authority (ARA)

Council is the ARA for industrial/commercial noise where it affects a residential neighbourhood and the noise source is not:

- used on premises or for activities that require an EPA licence or for which the EPA is declared the ARA or
- part of activities carried on by the state or a public authority or an authorised network operator (electrical distribution).

Police officers have powers to issue and enforce noise abatement directions.

Further information on appropriate regulatory authorities is provided in figure 5 and in Part 2, section 3.5. Information on the key statutory powers of council authorised officers and police officers for noise-related enforcement is in table 4.

2.16.3. Options to solve the problem

When dealing with industrial noise issues, council officers should consider whether the matter could be effectively resolved through communication, education, negotiation, and use of an officer's discretion. In some circumstances, a warning may be appropriate to resolve the issue in

lieu of regulatory action. The over-riding goal of regulatory intervention is to resolve the noise issue quickly and permanently by achieving a balance between different interests. Guidance on responding to noise without using regulatory options is in Part 3, section 9.

If the activity is subject to a development consent issued by council, the conditions in the consent apply.

- If there is a breach of consent condition(s), council officers may take the following actions under the *Environmental Planning and Assessment Act 1979*:
 - seek to regularise the activity consistent with the consent or relevant planning provision, or
 - issue orders requiring compliance with planning legislation or the requirements of a consent, or
 - agree to an enforceable undertaking, or
 - issue a penalty infringement notice, or
 - initiate a prosecution for more serious breaches.

The *Protection of the Environment (Operations) Act 1997* provides generic regulatory instruments that can be applied to this context. General advice on using the POEO Act to manage noise is provided in Part 2, section 4.2.

- It is an offence for noise to be emitted from premises because the occupier has failed:
 - to maintain plant in an efficient condition (section 139), or
 - to operate plant or deal with materials in a proper and efficient manner (section 140).

An offence occurs without the need for a prior warning and a penalty infringement notice may be issued by a council officer (or a prosecution initiated) for this offence.

- If the noise is determined to be ‘offensive noise’ (see Part 2, section 4.2.1), a noise abatement direction (section 276) may be issued by council or police officers. An offence occurs if the person does not promptly cease making the offensive noise or makes the offensive noise again within 28 days of the date of issue of the direction. A noise abatement direction is typically used in situations where the immediate cessation of offensive noise is required. It is useful for dealing with one-off situations that can be readily rectified. It is unlikely to be suitable for a situation that occurs regularly and needs a long-term solution.
- A noise control notice (section 265) may be issued by a council officer to prohibit an activity or the use of equipment from emitting noise above a specified noise level when measured at a specified point. An offence occurs if the noise control notice is breached. A noise control notice is typically used where it is possible to specify a noise level for an activity, and accurately and consistently measure noise being emitted. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.
- A prevention notice (section 96) may be issued by a council officer for an activity that has been or is being carried on in an environmentally unsatisfactory manner. In relation to noise, ‘environmentally unsatisfactory manner’ means the activity is:
 - “carried on in contravention of, or in a manner that is likely to lead to a contravention of, this Act, the regulations [,,,]”, or,
 - “not carried on by such practicable means as may be necessary to prevent, control or minimise pollution, the emission of any noise [...], or
 - it is not carried on in accordance with good environmental practice” (section 95).

An offence occurs if the prevention notice is breached. A prevention notice can be used to require a noise impact study to be carried out to determine appropriate noise levels, or to specify reasonable, practicable and effective noise mitigation measures that must be implemented. It is useful for dealing with regular activities and a longer-term solution is needed. It is not a suitable option for a one-off situation.

NOTE:

In the case of a noise abatement direction, a noise control notice, or a prevention notice an offence does not occur unless the notice or direction is contravened.

Summary information on POEO regulatory instruments is at table 6. Guidance on the advantages and disadvantages associated with these tools is in Table 2.

2.16.4. Case study

Council receives a complaint from a resident about noise from an industrial exhaust fan located at the back of a takeaway shop on the main shopping street of a suburb. The takeaway operates from 11am to 1am, which is consistent with the development consent for the premises. The complainant informs council that it is the noise of the exhaust fan operating at night that is the problem. Council is the ARA for this source of noise.

How can council respond?

Situation A – The consent includes a noise condition

- A council officer is assigned to respond to the complaint and starts his investigation by consulting council records to find out whether the consent for the premises includes noise conditions. The officer discovers that the consent is approximately 15 years old and includes the following condition:
- Condition 29 - The $L_{Aeq,15\text{minute}}$ dB(A) noise level from the operation of mechanical plant associated with the development must not exceed the $L_{A90,15\text{minute}}$ dB(A) noise level, in the absence of noise from the subject premises by more than 5dB(A) when assessed at the nearest residential boundary.
- The officer visits the site during the afternoon when the exhaust system is operating and notes that it is loud and has a distinct hum. The visible parts of the system appear to be old, and some of the ducting is loose-fitting and rattles when the fan is in operation.
- The officer's preferred response is to require the noise limits laid down in the development consent to be met. In order to do so, the officer must arrange to measure the noise levels emitted by the exhaust system (day and night) and to compare these with background levels (i.e. when the exhaust system is not operating). In order to be a valid comparison, the background and operating measurements must be taken under similar circumstances.
- For daytime, the officer returns to the site before the takeaway opens at 11am and measures the noise level at a location on the boundary with the complainant's property which is the nearest residential boundary. Shortly after 11am, the officer measures the daytime operating noise level. For night-time, the officer takes measurements shortly before (i.e. fan operating), and shortly after, 1am (i.e. background noise after the takeaway's closing time). All measurements are taken using the noise descriptors stipulated in the consent i.e. $L_{Aeq,15\text{minute}}$ dB(A) and $L_{A90,15\text{minute}}$ dB(A).
- By comparing operating measurements for day and night with the background - i.e. the non-operating measurements - the officer concludes that the exhaust system is emitting noise well above background, both during daytime and at night.
- The officer recommends that a notice of intention to issue a Development Control Order pursuant to the *Environmental Planning and Assessment Act 1979*, Division 9.3 be issued to the owner (i.e. the person entitled to act on the planning approval). The notice indicates the proposed terms of the order, i.e. to comply with condition 29 of the consent, the proposed time for compliance and that the person may make representations. The notice of intent is issued.
- The owner contacts the council officer and indicates that a mechanical services consultant has been engaged to assess the mechanical exhaust system and recommend upgrades to satisfy the consent requirements. The owner asks that the notice be held in abeyance for 21 days.
- After two weeks the owner contacts the council officer and indicates that works have been completed to change the exhaust fan and ducting, and that noise readings made by the

mechanical consultant are available to show that the system now complies with the consent condition.

- The council officer asks for the noise readings made by the mechanical services consultant and takes measurements which confirm the reduced noise levels as being compliant with the consent requirements. Based on the action taken by the shop owner, the council officer advises him that council will not be issuing a development control order.

Situation B – The consent contains no noise conditions

- A council officer is assigned to respond to the complaint and starts his investigation by consulting council records to find out whether the consent for the premises includes noise conditions. The officer discovers that the consent does not include any noise conditions. The officer's response will therefore rely on provisions of the POEO Act, if regulatory action is required.
- The officer visits the site during the afternoon when the exhaust system is operating and notes that the exhaust fan is loud and has a distinct hum. The visible parts of the system appear to be old, and some of the ducting is loose-fitting and rattles when the fan is in operation.
- The officer resolves to measure the noise levels emitted by the exhaust system (day and night) and to compare these with the background level (i.e. when the system is not operating). In order to be a valid comparison, the background and operating measurements must be taken under similar circumstances.
- For daytime, the officer returns to the site shortly before the takeaway opens at 11am and measures the noise level at a location on the boundary with the complainant's property (the nearest residential boundary). This is the background noise level. Shortly after 11am, the officer measures the daytime operating noise level at the same location. For night-time, the officer takes measurements shortly before (i.e. fan operating), and shortly after, 1am (background noise after the takeaway's closing time). All measurements are taken using the noise descriptors stipulated in the consent i.e. $L_{Aeq,15minute}$ dB(A) and $LA_{90,15minute}$ dB(A).
- By comparing operating measurements for day and night with the background - i.e. the non-operating measurements - the officer concludes that the exhaust system is emitting noise well above background, both during daytime and at night.
- To regulate noise emitted by the exhaust system, the officer issues a noise control notice to the occupier that reflects the council's standard noise condition for industrial/commercial premises. This is worded as follows:

The $L_{Aeq,15minute}$ dB(A) noise level from the operation of mechanical plant associated with the development must not exceed the $LA_{90,15minute}$ dB(A) noise level, in the absence of noise from the subject premises by more than 5dB(A) when assessed at the nearest residential boundary.

- The notice is worded to have effect in one month to give the occupier time to make changes to the exhaust system and without an end date which means that it will be in force until it is rescinded. It also explains that the person served has 21 days in which to appeal to the Land and Environment Court. The noise control notice is issued.
- The operator contacts the council officer and indicates that a mechanical services consultant has been engaged to assess the exhaust system and recommend upgrades to allow the system to satisfy the requirements of the noise control notice.
- After two weeks the owner contacts the council officer and indicates that works have been completed to repair or replace parts of the exhaust system, and that noise readings made by the mechanical consultant are available to show that the system now complies with the notice condition.
- The council officer asks for the noise readings made by the mechanical services consultant and takes measurements which confirm the reduced noise levels as being compliant with the notice requirements. Because the condition set down in the noise control notice is the only current noise-related requirement acting on the takeaway operator, the council officer does not

take steps to withdraw the notice. This means that the operator has a continuing obligation to ensure that the takeaway's exhaust system does not exceed the noise limit.

What if the takeaway is transferred to the control of a different operator?

The noise control notice issued to the previous operator would cease to have effect. If noise emitted by the exhaust system does not subsequently become an issue, council would have no reason to take regulatory action against the new operator. If complaints were received, however, council would investigate and, if a noise problem involving the exhaust system was confirmed, council would consider imposing a noise control notice with similar content and effect.

What if the officer had used the provision in section 139 of POEO Act?

The officer has the option to regulate the exhaust system as 'plant' under section 139 of the POEO Act, fining the occupier because the exhaust system is emitting noise as a result of not being maintained properly. However, natural justice considerations suggest that the officer should advise the occupier that an offence is being committed and give him a reasonable period in which to take action. Under the circumstances, the action taken by the council officer under the EP&A Act 1979 has delivered an appropriate and reasonable outcome. The power created under section 139 remains available for use if the proprietor does not respond appropriately.

Part 2

Legislative framework



In this part:

Section 3 provides an overview of the legislative framework for noise control.

Section 4 discusses regulatory options for managing noise under POEO legislation.

Section 5 describes how noise can be managed most effectively through strategic land use planning.

3. Legal framework for noise control

The *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (Noise Control) Regulation 2017* provide the principal legal framework for managing environmental noise in NSW.

The *Environmental Planning and Assessment Act 1979* is the principal legislation for regulating land use and managing potential land use conflict.

The *Liquor Act 2007* and *Companion Animals Act 1998* have specific provisions to manage noise from liquor-licensed premises and from barking dogs, respectively.

3.1 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act), together with the *Protection of the Environment Operations (Noise Control) Regulation 2017* (POEO Noise Control Regulation), establishes the framework for noise control in NSW. A key objective of the POEO Act is to protect, restore and enhance the quality of the NSW environment. In relation to noise, the POEO Act:

- broadly identifies appropriate regulatory authorities for regulating noise
- provides for the regulation of noise from activities listed in Schedule 1 of the POEO Act via environment protection licences issued by the Environment Protection Authority (EPA)
- provides a range of regulatory options to manage noise, including noise control notices, prevention notices, noise abatement directions and noise abatement orders. Failure to comply with these regulatory options is an offence under the POEO Act (see Section 4)
- defines ‘noise pollution’ and ‘offensive noise’ (see Section 4)
- makes it an offence to sell certain articles and vehicles that do not comply with requirements prescribed in the POEO Noise Control Regulation
- makes it an offence to operate plant at premises in such a manner as to cause the emission of noise due to failure to maintain the plant in an efficient condition or operate it in a proper and efficient manner
- makes it an offence to deal with materials in such a manner as to cause the emission of noise due to failure to deal with the materials in a proper and efficient manner
- provides for the making of regulations where required that will assist in providing more specific noise management options for certain situations.

The POEO Noise Control Regulation is made under the POEO Act. The Regulation prescribes specific controls for common neighbourhood noise sources, as well as noise control and use provisions for motor vehicles and marine vessels and the means to determine sound levels from shooting ranges.

The POEO Act is supported by the *Protection of the Environment Operations (General) Regulation 2009* (POEO General Regulation), which:

- provides for the EPA’s administration of environment protection licences (Chapter 2 POEO General Regulation)

- identifies appropriate regulatory authorities for specific activities and locations (Chapter 7, Part 1 POEO General Regulation) – summarised in Section 3.5
- identifies the enforcement agencies responsible for issuing penalty notices for provisions in the POEO Act and the POEO Noise Control Regulation and specifies the penalty amounts payable (Chapter 6 and Schedule 6 POEO General Regulation)
- exempts activities at Luna Park from certain noise provisions of the POEO Act where they are already covered by and complying with specified development consents (Chapter 7, Part 2 POEO General Regulation).

The *Protection of the Environment Administration Act 1991* establishes and sets out the objectives and general responsibilities of the EPA. This includes setting performance targets for public authorities in relation to the environment and the ability to direct public authorities to contribute to environment protection or to cease doing anything affecting the environment.

3.1.1. Broad allocation of responsibility: concept of ‘appropriate regulatory authority’

There is a broad allocation of responsibilities for managing noise between the EPA, local councils and other public authorities under Section 6 of the POEO Act. Different ‘appropriate regulatory authorities’ (ARAs) are responsible for managing noise from different types of activities and premises. The EPA is the regulatory authority for:

- activities listed in Schedule 1 to the Act and the premises where they are carried out
- activities carried out by a state or public authority
- other activities in relation to which an environment protection licence applies (e.g. a licence regulating water pollution).

In most other instances, the council for the area is the ARA.

Under the POEO General Regulation, in certain circumstances other public authorities are the ARAs for noise, as listed in Section 3.5. Figure 5 provides a quick ARA identification guide.

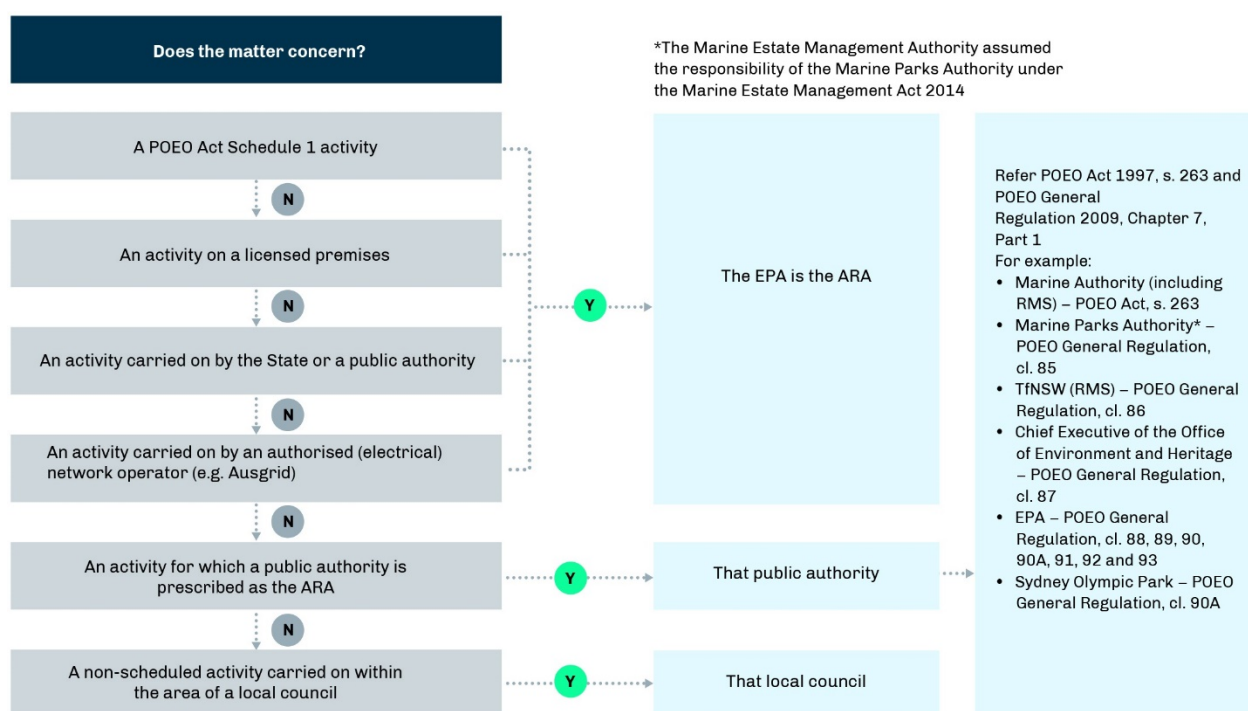


Table 1 in Section 1.5 summarises who is responsible for regulating noise from particular sources or circumstances.

3.1.2. Environment protection offences under the POEO Act

The POEO Act has a three-tier regime of offences:

- While not relevant to noise emissions, a Tier 1 offence relates to the wilful or negligent
 - disposal of waste
 - leakage, spillage or escape of a substance
 - emission of ozone-depleting substancethat harms or is likely to harm the environment.
- Noise pollution offences are Tier 2 offences. They are generally categorised as strict liability offences, which means the prosecution does not need to prove intent. Tier 2 offences carry a maximum penalty of \$1 million for corporations and \$250,000 for individuals. For continuing offences, there are further daily penalties of up to \$120,000 and \$60,000, respectively.
- Tier 3 offences are Tier 2 matters that the POEO General Regulation has designated as capable of being dealt with by a penalty notice. The penalty amount may not exceed the maximum penalty that can be imposed by a court for the offence. Schedule 6 of the POEO General Regulation sets out the penalty notice amounts for offences under the POEO Act, the POEO Noise Control Regulation and other POEO legislation.

The EPA and certain other public authorities can appoint officers who can issue penalty notices, as set out in Section 3.1.3.

3.1.3. Authorised officers, authorised persons and enforcement officers

The POEO Act provides for the appointment of authorised officers and enforcement officers to, among other things, investigate compliance with the POEO Act or Regulations or any environment protection licence, notice or requirement issued or made under the Act. Information about their appointment is provided below. More detailed information about their appointment is available in *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, January 2021). The POEO Act also identifies a class of officers termed ‘authorised persons’, who have specific functions in relation to noise abatement directions.

Section 189 of the Act requires that any authorised officer or enforcement officer who is not a police officer be provided with an identification card. This card must be produced if requested by any person affected by the exercise of the officer’s functions. Similarly, police officers must produce their identification.

Authorised officers

Section 187 of the POEO Act permits ARAs to appoint persons or classes of persons (members of staff) to the role of authorised officer. Authorised officers can act on an ARA’s behalf in investigating alleged environmental problems relating to activities/premises under the ARA’s jurisdiction. Authorised officers have a range of investigative powers, as outlined in Section 3.1.4. The provision also enables a local council to appoint officers and employees of other local councils (as well as its own officers and employees) as authorised officers for the purposes of the Act, in relation to its area. This is to facilitate investigations under the Act that require action across local government boundaries.

Authorised persons

Section 275 defines certain officers as authorised persons for the sole purpose of issuing and enforcing noise abatement directions. These include:

- police officers
- people who have been made authorised officers under s. 187 of the POEO Act
- in relation to vessels in navigable waters, Marine Authority officers or employees whom the authority has authorised to issue and enforce noise abatement directions.

Enforcement officers

Enforcement officers can issue penalty notices for certain offences under the Act if authorised by the relevant agency listed in cl. 81 of the POEO General Regulation. Table 3 lists all the enforcement officers for noise offences. There are different classes of enforcement officers depending on which organisation has authorised the enforcement officer. Schedule 6 of the POEO General Regulation sets out which classes of enforcement officers can issue penalty notices for a particular offence. Usually an ARA will appoint a person to be both an authorised officer and an enforcement officer. Occasionally an ARA may decide it is appropriate to appoint a person as one but not the other. Enforcement officers may be appointed by organisations other than the ARA, such as NSW Police, the Port Authority, the Marine Estate Management Authority and the Department of Planning, Industry and Environment (DPIE or DPIE – Place Management NSW for certain offences).

The POEO Act (Part 8.2, Division 2) outlines which authority can initiate court proceedings instead of issuing a penalty notice for a breach of the POEO Act or the POEO Noise Control Regulation. A person who has been issued with a penalty notice can also elect to have the matter heard by the court.

Table 3 Enforcement officers for noise related provisions under the POEO Act and POEO Noise Control Regulation

Provision	Enforcement officer/s (refer to cl. 81 and Schedule 6 of the POEO General Regulation)
POEO Act	
Prevention notices – s. 97	<ul style="list-style-type: none">• Local authority or EPA or DPIE (for Kosciuszko)• EPA• Authorised officer within the meaning of the <i>Marine Estate Management Act 2014</i>• Regulatory authority of the <i>Water NSW Act 2014</i>• Transport for NSW (RMS)
Sale of articles of prescribed class (other than a motor vehicle horn or motor vehicle intruder alarm) – s. 136	<ul style="list-style-type: none">• EPA
Sale of articles to be fitted with noise control – s. 137	<ul style="list-style-type: none">• Local authority or EPA or DPIE (for Kosciuszko)• EPA
Noise pollution operation of plant – s. 139	<ul style="list-style-type: none">• Local authority or EPA or DPIE (for Kosciuszko)• EPA• Transport for NSW (RMS)

Provision	Enforcement officer/s (refer to cl. 81 and Schedule 6 of the POEO General Regulation)
Noise pollution dealing with materials – s. 140	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) EPA Transport for NSW (RMS)
Failure to comply with investigation powers under chapter 7 – s. 211(1)	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) EPA Port Authority of New South Wales Police officer Regulatory authority under the <i>Water NSW Act 2014</i> Transport for NSW (RMS) Transport Service of New South Wales referred to in the <i>Transport Administration Act 1988</i>
Failure to comply with noise control notice or to pay associated fee – ss 265 and 267A(7)	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) EPA Port Authority of New South Wales Transport for NSW (RMS)
Noise abatement directions – ss 277(1)(a)(b) and (2)(a)(b)	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) EPA Port Authority of New South Wales Police officer Department of Planning, Industry and Environment (Place Management NSW) Transport for NSW (RMS)
POEO Noise Control Regulation	
Cause or permit use of vehicle in excess of prescribed level by certain amounts – cl. 5	<ul style="list-style-type: none"> EPA
Offensive noise vehicle use away from roads – cl. 6	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) EPA Police officer
Offensive noise vehicle use on residential premises – cl. 8(1)	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) Police officer
Offensive noise from refrigeration units on vehicles near residential premises – cl. 9	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) Police officer
Sale of used vehicles with defective control equip – cl. 10	<ul style="list-style-type: none"> EPA
Driving or using vehicles with defective noise control equipment – cl. 11	<ul style="list-style-type: none"> EPA

Provision	Enforcement officer/s (refer to cl. 81 and Schedule 6 of the POEO General Regulation)
	<ul style="list-style-type: none"> Police officer
Modification or repair of vehicles causing defective noise control – cl. 12	<ul style="list-style-type: none"> EPA
Sale of used vehicles with unauthorised temporary noise reduction packing – cl. 13	<ul style="list-style-type: none"> EPA
Use of used vehicles with unauthorised temporary noise reduction packing – cl. 14	<ul style="list-style-type: none"> EPA Police officer
Repair or modification of vehicles with unauthorised temporary noise reduction packing – cl. 15	<ul style="list-style-type: none"> EPA
Sale of used vehicles with unauthorised temporary noise reduction equipment – cl. 16	<ul style="list-style-type: none"> EPA
Use of used vehicles with unauthorised temporary noise reduction equipment – cl. 17	<ul style="list-style-type: none"> EPA Police officer
Modification or repair of used vehicles with unauthorised temporary noise reduction equipment – cl. 18	<ul style="list-style-type: none"> EPA
Sale of vehicle intruder alarms with dual, variable or rising tones or with panic or override switch – cls 20–23	<ul style="list-style-type: none"> EPA
Use of alarms with panic or override switch – cl. 24	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) EPA Police officer
Cause or permit use of audible vehicle intruder alarm for various times – cl. 25(1)	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) EPA Police officer Department of Planning, Industry and Environment (Place Management NSW)
Use of vehicle alarm not designed and constructed as specified – cl. 26(1)	<ul style="list-style-type: none"> EPA
Attaching and use of certain motor vehicle horns – cls 27–28	<ul style="list-style-type: none"> EPA
Use of vehicle sound systems emitting offensive noise – cl. 31	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) EPA Police officer
Drive or use vehicle sound systems emitting offensive noise on roads – cl. 33(1)	<ul style="list-style-type: none"> EPA Police officer
Sirens and offensive noise from vessels – cls 34–35	<ul style="list-style-type: none"> Local authority or EPA or DPIE (for Kosciuszko) Port Authority of New South Wales Police officer Transport for NSW (RMS)

Provision	Enforcement officer/s (refer to cl. 81 and Schedule 6 of the POEO General Regulation)
Vessel noise control equipment to be maintained – cl. 37(1)	<ul style="list-style-type: none"> • Port Authority of New South Wales • Police officer • Transport for NSW (RMS)
Remove or render less effective vessel noise control equipment – cl. 38	<ul style="list-style-type: none"> • Port Authority of New South Wales • Police officer • Transport for NSW (RMS)
Sound systems on vessels – cl. 39	<ul style="list-style-type: none"> • Local authority or EPA or DPIE (for Kosciuszko) • Port Authority of New South Wales • Police officer • Transport for NSW (RMS)
Cause or permit use of audible building intruder alarm to sound for more than specified times – cl. 42(2)	<ul style="list-style-type: none"> • Local authority or EPA or DPIE (for Kosciuszko) • EPA • Police officer
Use of air conditioners on residential premises – cl. 45	<ul style="list-style-type: none"> • Local authority or EPA or DPIE (for Kosciuszko) • Police officer
Use of power tools on residential premises – cl. 51(1)	<ul style="list-style-type: none"> • Local authority or EPA or DPIE (for Kosciuszko) • Police officer
Use of pumps on residential premises – cl. 52(1)	<ul style="list-style-type: none"> • Local authority or EPA or DPIE (for Kosciuszko) • Police officer
Use of heat pumps on residential premises – cl. 53(1)	<ul style="list-style-type: none"> • Local authority or EPA or DPIE (for Kosciuszko) • Police officer
Use of musical instruments on residential premises – cl. 57	<ul style="list-style-type: none"> • Local authority or EPA or DPIE (for Kosciuszko) • Police officer
Use of electrically amplified equipment on residential premises – cl. 58(1)	<ul style="list-style-type: none"> • Local authority or EPA or DPIE (for Kosciuszko) • Police officer
Use of vehicle in breach of defective vehicle notice – cl. 62(1)	<ul style="list-style-type: none"> • EPA • Police officer
Use of vessel in breach of defective vessel notice – cl. 63(1)	<ul style="list-style-type: none"> • Port Authority of New South Wales • Police officer • Transport for NSW (RMS)
Remove, obscure or deface defective vessel label – cl. 64(5)	<ul style="list-style-type: none"> • Port Authority of New South Wales • Police officer • Transport for NSW (RMS)
Use of vessel where a defective vessel label has been removed, obscured or defaced – cl. 64(6)	<ul style="list-style-type: none"> • Port Authority of New South Wales

Provision	Enforcement officer/s (refer to cl. 81 and Schedule 6 of the POEO General Regulation)
	<ul style="list-style-type: none"> • Police officer • Transport for NSW (RMS)

3.1.4. Investigation provisions and powers

The POEO Act provides authorised officers with powers to:

- require information or records (Part 7.3 POEO Act)
- enter and search premises, do certain things including turning off or disabling building and motor vehicle intruder alarms that have been sounding for longer than the permitted time (Part 7.4 POEO Act)
- seek the aid of other authorised officers or police officers as considered necessary to enter premises and with the use of reasonable force (s. 196(3) POEO Act)
- be accompanied and have the assistance of a person the officer considers is capable of same in the exercise of their functions to enter premises (s. 199A POEO Act)
- require persons whom the authorised officer suspects on reasonable grounds to have knowledge of matters in respect of which information is reasonably required for the purposes of this Act to answer questions in relation to those matters (s. 203 POEO Act)
- require a person whom the authorised officer suspects on reasonable grounds to have offended or to be offending against this Act or the regulations or to whom a noise control notice or noise abatement direction may be issued, to state his or her full name and residential address (s204 POEO Act).

There are also provisions concerning the inspection and testing of vehicles, vessels and articles under Part 7.6 of the POEO Act:

- authorised officers appointed by the EPA have the power to stop, inspect and test motor vehicles (ss 205, 206 and 208 POEO Act) and to test and inspect articles and also to take possession of same for testing so as to measure noise levels or noise emission characteristics (ss 207 and 209)
- NSW Police officers have the power to stop, inspect and test motor vehicles (ss 205, 206 and 208 POEO Act).
- marine park rangers authorised by the Marine Estate Management Authority and officers authorised by marine authority have the power to stop, inspect and test vessels (ss 205, 206 and 208 POEO Act).

It is recommended that authorised officers familiarise themselves with the POEO Act and/or seek legal advice on their investigative powers prior to taking any action as appropriate.

In relation to penalty notice offences, an enforcement officer can use all the investigatory powers of an authorised officer except the following:

- the power to require a person to give their name and address in relation to a proposed noise control notice or a noise abatement direction (s. 204(2) POEO Act)
- powers with respect to vehicles, vessels and other articles (Part 7.6 POEO Act).

Table 4 summarises key powers of authorised officers and the Police for serving or enforcing noise provisions under the POEO Act and the POEO Noise Control Regulation.

More detailed information about each power and how they are used is available in *Powers and notices Guideline for authorised officers and enforcement officers - Protection of the Environment Operations Act 1997* (EPA, 2021).

Table 4 Summary of key powers of authorised officers and the police under the POEO Act

Power	When the power may be used	Detail
Authorised officer		
Enter non-residential premises without a warrant (s.196)	At any time when the officer reasonably suspects that offensive noise has been occurring, is occurring or is likely to occur or where industrial, agricultural or commercial activities are being carried out; or at any other premises at any reasonable time.	Entry can relate to a period prior to issuing a notice or direction or when a breach of a notice or direction has occurred. Authorised officers may seek the aid of other authorised officers or police to gain entry.
Enter residential premises with a search warrant (s.197)	As indicated in the search warrant	An authorised officer may apply to an authorised officer within the meaning of the <i>Law Enforcement (Powers and Responsibilities) Act 2002</i> for the issue of a search warrant if they believe on reasonable grounds that the POEO Act and/or POEO Noise Control Regulation have been or are being contravened at the premises or if there is a matter or thing that is connected with an offence that is in or on the premises (s. 199 POEO Act).
Require person to state name and residential address (s. 204)	If the authorised officer suspects on reasonable grounds that the person has offended or to be offending against the Act or the regulations or that a noise control notice or a noise abatement direction may be issued under Part 8.6 against the person	It is an offence for a person not to provide their name and address or to give knowingly false or materially misleading information, with a maximum penalty of 100 penalty units (at the time of publication \$11,000 (\$110 per penalty unit as set by s. 17 of the <i>Crimes (Sentencing Procedure) Act 1999</i>). Failure to provide proof of name and address is not an offence (s. 204(2A) POEO Act).
Do things at premises, including seizing things (s. 198)	After premises are lawfully entered	An authorised officer may do what they feel is necessary to investigate or enforce noise provisions, including seizing anything that the authorised officer has reasonable grounds to believe is connected with an offence against the Act or the regulations such as a breach of a notice or direction. This includes items causing the breach and items that will afford evidence of the offence.
Disabling a building intruder alarm or motor vehicle alarm (s. 198A)	Alarm that is sounding or has been sounding in breach of the POEO Act and/or POEO Noise Control Regulation	An authorised officer may turn off or otherwise disable the offending alarm. An authorised officer may seek assistance to enter (s. 196 POEO Act) and/or disable the alarm (s. 199A POEO Act).
Police officers		
Enter premises with warrant (s. 280)	Following issue of the search warrant by a magistrate	A police officer can enter premises (with a warrant) to give a noise abatement direction or

Power	When the power may be used	Detail
		<p>to investigate whether a direction has been contravened (s. 280(1) POEO Act).</p> <p>A magistrate can issue a warrant following a complaint by a police officer, if the police officer has been denied entry to a premises and:</p> <ul style="list-style-type: none"> believes that offensive noise is being or has been emitted from the premises in the past seven days and it is necessary for the officer to enter the premises immediately to issue a noise abatement direction for offensive noise or to investigate whether a direction has been contravened. <p>The POEO General Regulation (cl. 102 and Schedule 7) provides the prescribed forms for the magistrate and the police officer to record details of the case and the information that must be provided to the occupier of the premises where the warrant is being executed.</p>
Power to require name and address (s. 281)	After entry under warrant where offensive noise is being or has in the last seven days been emitted from any premises	<p>If a person is causing or contributing to offensive noise or has been, a police officer can require the person to provide:</p> <ul style="list-style-type: none"> their name and address or the name and address of the occupier of the premises if that person is not the occupier. <p>The person must first have been warned that they are obliged to provide this information.</p> <p>It is an offence not to provide this information or to knowingly give false or materially misleading information, with a maximum penalty of 30 penalty units (s. 281(3) POEO Act).</p>
Power to seize equipment (s. 282)	When a person is contravening a noise abatement direction	<p>A police officer can seize or secure any equipment that is being used to contravene the direction. The person must be warned that the continued use of the equipment may lead to it being seized. If equipment is seized, a receipt needs to be issued to the person. Equipment must be returned or released within 28 days.</p>

3.2 Protection of the Environment Operations (Noise Control) Regulation 2017

The POEO Noise Control Regulation supplements the general powers provided in the POEO Act by prescribing more specific restrictions and controls for managing common noise sources in neighbourhoods.

The provisions of the POEO Noise Control Regulation are primarily directed at residential activities and equipment, motor vehicles and vessels, rather than commercial or industrial premises.

The POEO Noise Control Regulation has three main parts.

- Part 2 provides for the control of noise from individual motor vehicles operating on public roads and road-related areas as well as off road, including on private property, and noise from motor

vehicle accessories, such as alarms and sound systems. Police officers, council, the EPA and Place Management NSW enforcement/authorised officers have powers in relation to particular provisions.

- Part 3 deals with noise from marine vessels, such as powerboats, personal watercraft and sailing vessels. This part mainly applies to Roads and Maritime Services and Port Corporation enforcement officers and the Water Police, but council enforcement/authorised officers also have powers in relation to some provisions.
- Part 4 deals with common neighbourhood noise problems, such as the times of use of air conditioners, heat pump water heaters, swimming pool pumps, gardening equipment, building intruder alarms and sound systems. This part mainly applies to council enforcement/authorised officers and police officers, but EPA enforcement/authorised officers also have powers in relation to some provisions.

It is possible to broadly categorise the neighbourhood noise provisions in the POEO Noise Control Regulation in one of two ways:

- 'Nominated activities' – The regulation nominates certain activities where it is an offence to emit offensive noise.
- 'Deemed circumstances' – The regulation nominates certain activities where under deemed circumstances (for example activities that are audible in habitable rooms) during defined hours, the activity is deemed to be an offence. In some cases, an offence does not occur unless the person making the noise has been warned and continues to make noise.

These provisions offer a streamlined solution to manage common neighbourhood noise issues.

The POEO Noise Control Regulation also:

- prohibits the selling of certain articles that emit noise above prescribed levels, such as lawn mowers, edge cutters, string trimmers and brush cutters.
- requires labelling for sale of certain other noise-emitting articles, such as chainsaws, air conditioners, air compressors, pavement breakers and garbage compactors.
- provides methods for determining noise levels of vehicles and articles covered by the Regulation

and prescribes the method for determining noise levels from shooting ranges.

3.3 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the principal NSW legislation regulating land use development and activities. It sets out processes to assess and manage the environmental impacts of land use development and activities in NSW.

The EP&A Act:

- permits the making of planning instruments to manage the relationship between development and the environment, control development through development standards, reserve land for specific purposes, protect the environment and ecosystems and control certain other activities
- provides for public participation at both the local plan-making stage and in the determination of whether proposals may go ahead
- sets out the procedure for assessment of the environmental impact of a proposal as part of an application under the Act for certain types of land-use development. The outcome may result in approvals or conditional consents, including conditions to manage noise impacts.

Strategic planning processes provide an opportunity to avoid noise impacts that can occur when noise-producing activities are located in close proximity to residential areas or other noise-sensitive receivers.

The *Environmental Planning and Assessment Regulation 2000* contains provisions and processes that councils must follow when assessing development applications (DAs). It contains key operational provisions for the NSW planning system, including those relating to:

- planning instruments, including requirements and procedures for planning proposals and procedures for making and amending development control plans
- procedures relating to development applications and applications for complying development certificates
- existing uses
- integrated and designated development
- requirements for environmental assessment under Part 5 of the EP&A Act and applications for state significant infrastructure
- environmental impact statements
- building regulation and subdivision certification
- fees and charges, including fees for DAs, building certificates and other planning services
- development contributions, including the preparation of contributions plans
- planning certificates, which provide information about land
- other miscellaneous matters, including amounts for penalty notices (or fines) that may be issued for breaches of the EP&A Act and the Regulation, provisions for planning bodies (the Planning Assessment Commission and Independent Hearing and Assessment Panels), development by the Crown, and record-keeping requirements for councils.

Note: the Regulation was under review at time of publication⁴

See Section 5 for more information on the role of strategic and land use planning to manage noise.

3.4 Other legislation

Other legislation that may be used to manage specific noisy situations include the:

- *Companion Animals Act 1998*, which provides for Nuisance Dog Orders (ss 32A and 32B) and Nuisance Cat Orders (ss 31 and 31A) requiring the owner to prevent nuisance behaviour for six months
- *Liquor Act 2007*, which provides for noise control of liquor-licensed premises
- *Local Government Act 1993* (s. 124) Order No 18, which requires an occupier of a premises to keep animals, including birds, in an appropriate manner specified in the order
- *Local Government Act* (s. 125), which enables a council to abate a public nuisance or order a person responsible for a public nuisance to abate it
- *Strata Schemes Management Act 2015*, which provides for various notices, orders for breaches of strata by-laws, and disputes resolution processes between neighbours in strata title schemes. (See Section 3.4.2)

This guide focuses on the use of powers under the POEO legislation. The Office of Local Government, Department of Planning, Industry and Environment may give advice on the appropriate use of other powers.

Noise can often be managed in a number of ways. Selecting the appropriate course of action will depend on the individual circumstances of each case and the officer's judgement. It may be helpful

⁴ www.planning.nsw.gov.au/Policy-and-Legislation/Under-review-and-new-Policy-and-Legislation/EPA-Regulation-review

for council officers to discuss the statutory options available for addressing noise with a senior manager or the council's legal officer.

3.4.1 Liquor legislation

Under the *Liquor Act 2007*, police, local councils and residents can make a disturbance complaint in relation to hotels and other licensed venues, including registered clubs, to the Secretary of the Department of Customer Service. A complaint can be made when the “quiet and good order” of a neighbourhood is unduly disturbed by the way the licensed premises is conducted and/or the behaviour of patrons leaving the premises (including, but not limited to, alcohol-related violence or antisocial behaviour).

A disturbance complaint must be in writing and verified by statutory declaration by:

- three or more residents affected by the disturbance
- the Commissioner of police
- a person authorised by the local consent authority
- a person who satisfies the Secretary that their financial or other interests are adversely affected by the licensed premises by the undue disturbance.

A disturbance complaint form is available from the Liquor and Gaming NSW website alongside a guide for residents affected by noise from a licensed venue.

Under the *Liquor Act 2007*, the Secretary can deal with disturbance complaints by:

- imposing a condition on the liquor licence
- varying or revoking an existing condition on the liquor licence
- issuing a warning or
- taking no further action.

Types of conditions that can be imposed on a liquor licence include:

- noise emission restrictions
- trading restrictions, such as lockouts or curfews
- restrictions on the sale or supply of liquor
- requiring security, or additional security patrols, in and around licensed premises
- requiring a licensee to participate in a local liquor accord.

Further information is available from the Liquor and Gaming NSW website.

Generally, where noise from a licensed venue is due to mechanical equipment (such as extractor fans) it falls outside the responsibility of the Liquor, Gaming and Racing Division of the Department of Customer Service. Instead it may be managed by the council through existing development consent conditions or through regulatory options available under the POEO Act.

3.4.2 Strata schemes

Under the *Strata Schemes Management Act 2015* strata schemes must have by-laws. This can include a by-law relating to noise, similar to the following model by-law provision in the Strata Schemes Management Regulation 2016 that states:

“An owner or occupier of a lot, or any invitee of an owner or occupier of a lot, must not create any noise on a lot or the common property likely to interfere with the peaceful enjoyment of the owner or occupier of another lot or of any person lawfully using common property.”

Owners and occupiers in a strata scheme, including tenants, are obliged to comply with the scheme's by-laws. If the owners' corporation is satisfied an owner or occupier of a lot has

contravened a by-law, the owners' corporation can serve a notice requiring the owner or occupier to comply with the by-law. If the person to whom the notice is issued contravenes the notice, the owners' corporation can apply to the NSW Civil and Administrative Tribunal (NCAT) for the person to be fined up to \$1,100. If NCAT has already fined the owner or occupier within the last 12 months for a breach of the same by-law, the penalty imposed by NCAT can double to a maximum of \$2,200. In this case, the owners' corporation does not have to issue another notice to comply before applying to NCAT to impose the fine.

Where there is a noise issue within a strata scheme, in some situations council may consider it appropriate for the strata corporation to act through their by-laws before council resorts to action under POEO legislation.

The following noise impact scenarios in relation to a strata scheme are generally dealt with under the POEO Act or POEO Noise Control Regulation:

- Noise from one lot affecting neighbouring residential properties that are not within the same strata scheme. In this case, the person responsible for the noise would be the occupier or owner of the strata lot causing the noise.
- Noise from common property of the strata scheme affecting neighbouring residential properties. In this case, the party responsible for the noise would be the person making the noise or the owners' corporation of the strata scheme unless the common property had been transferred or leased.

Common property in a strata scheme constitutes residential premises unless used for some non-residential purpose. The POEO Noise Control Regulation clauses deal with the impact of noise on a room in any other residential premises other than a garage, storage area, bathroom, laundry, toilet or pantry. Most common property areas (including entranceways, stairways and landings) would generally not constitute a room in a residential premises. However, common property rooms such as games rooms or lounge rooms, would.

3.5 Determining who is responsible for managing noise

As outlined in preceding sections, the POEO Act and the POEO General Regulation make certain agencies the appropriate regulatory authority (ARA) responsible for managing noise from various premises and activities. The ARA can issue, for example, prevention notices, noise control notices and compliance cost notices related to the premises and activities for which it is the ARA.

Broadly, councils are responsible for the regulation of:

- neighbourhood noise from residences, vehicles used off road, vehicle alarms and sound systems
- noise from commercial and industrial operations that are not required to hold an environment protection licence (defined in Schedule 1 of the POEO Act) issued by the EPA.

Councils are also responsible for responding to complaints about barking dogs under the *Companion Animals Act 1998*.

The police have powers to deal with neighbourhood noise. They typically respond to noise from late-night parties, and where there may be public order issues or safety concerns or where council officers are not available.

The EPA regulates noise from activities that are licensed or carried out by public authorities, including a public authority's contractors. Activities that require environment protection licences are listed in Schedule 1 of the POEO Act and are typically large-scale industrial operations.

The POEO General Regulation also makes the EPA the ARA for certain non-scheduled activities:

- on the route of the Inner West Light Rail (cl. 89)
- outdoor entertainment activities held on specified lands (cl. 90)

- entertainment activities at Sydney Olympic Park that are carried out by the state or a public authority (cl. 90A)
- other activities, such as large plants that mix crushed rock with bituminous materials, large concrete-batching plants and certain mobile plants (cl. 92).

The Sydney Olympic Park Authority regulates entertainment activities at Olympic Park that are not regulated by the EPA.

The EPA, the Police and Transport for NSW (Roads and Maritime Services – RMS) all have roles in controlling noise from motor vehicles. These agencies periodically conduct joint campaigns that include targeting noisy motor vehicles. Transport for NSW (RMS) is primarily responsible for regulating noise from heavy vehicles.

Councils also have a role in controlling motor vehicle noise. They can deal with offensive noise from motor vehicle sound systems and noise from motor vehicles on private property.

Transport for NSW (RMS) regulates noise from motor vessels in navigable waters and premises used in conjunction with vessels that are situated adjacent to, or partly or wholly over, navigable waters. In addition, the Port Authority of New South Wales officers are enforcement officers for issuing penalty infringement notices under the POEO Noise Control Regulation.

The Marine Authority is the designated ARA for the purpose of issuing noise control notices in relation to:

- vessels in navigable waters
- premises used in connection with vessels that are situated adjacent to or partly or wholly over, navigable waters.

The Marine Estate Management Authority manages noise from activities and premises in marine parks other than those regulated by the EPA.

The Liquor, Gaming and Racing Division of the Department of Customer Service administers the operation of liquor-licensed premises under the *Liquor Act 2007*, including handling noise complaints and setting noise conditions on licences.

The Australian Government is responsible for managing aircraft noise and manages noise from its own sites, such as Sydney Airport and Commonwealth Defence facilities. The following Commonwealth authorities have general responsibility for aircraft noise:

- Airservices Australia is responsible for managing air traffic and aircraft noise complaints and works closely with the Aircraft Noise Ombudsman to improve responses to community concerns about air traffic. It is also responsible for noise certification of aircraft.
- The Civil Aviation Safety Authority is responsible for licensing of aircraft and pilots and regulating airspace.
- The Department of Defence is responsible for military aviation operations and air traffic control at airports with a shared civil and military use.

Where council is the ARA, they are an autonomous body and may manage the various noise issues in their area depending on the particular circumstances. The EPA is the ARA for activities carried out by public authorities, such as councils, but this does not mean the EPA can direct councils on how to manage noise matters. Also, the EPA cannot intervene on behalf of people affected by noise when the council is the ARA.

3.5.1 Responsible authorities: quick reference guide

Table 1 provides a quick reference guide to identify who is responsible for managing noise and some broad management options. Although this noise guide is primarily for councils, information about all the ARAs is noted in the table to provide context. The last column notes additional reference material that may be useful.

The agency listed as the ARA has primary responsibility for the noise source and can issue, for example, prevention notices or noise control notices and initiate court proceedings or issue noise abatement directions or penalty notices as appropriate. For certain noise sources the table lists other agencies, including the police. These agencies may be able to issue penalty notices where appropriate. The police may also issue noise abatement directions as appropriate. Other agencies, such as the police, may be able to take regulatory action, but are unlikely to do so if an ARA is clearly defined for a noise source.

In some circumstances, such as where the activity is being undertaken by or on behalf of a public authority, the EPA would be the ARA. The POEO Act (s. 6) and POEO General Regulation (Chapter 7, Part 1) should be consulted (or legal advice sought) in relation to the activity in question to determine the ARA for that activity.

4. Regulatory options for managing noise under POEO legislation

This part discusses regulatory options for managing noise available under the *Protection of the Environment Operations Act 1997* and the Protection of the Environment Operations (Noise Control) Regulation 2017.

Council officers should consider the most appropriate noise management option on a case-by-case basis. These include non-regulatory options, which are discussed in Section 9.

4.1. How the POEO Act deals with noise

The POEO Act seeks, among other things, to “protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development” and “to reduce risk to human health and prevent the degradation of the environment”.

It seeks to do this by including mechanisms that promote pollution prevention and, therefore, noise management.

The POEO Act Dictionary provides the following meanings in relation to noise:

- *Noise* includes sound and vibration.
- *Pollution* includes noise pollution.
- *Noise pollution* means the emission of offensive noise.
- *Offensive noise* means noise that, by reason of its level, nature, character or quality, or the time at which it is made, or any other circumstances:
 - is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or
 - interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted.
 - that is of a level, nature, character or quality prescribed by the regulations or that is made at a time, or in other circumstances, prescribed by the regulations.

However, the POEO Act does not prohibit the emission of offensive noise generally.

4.2. Using the POEO Act to manage noise

A range of notices, directions and orders can be issued under the POEO Act in relation to noise. The POEO General Regulation outlines penalties for a contravention.

Depending on the circumstances, councils may use a range of POEO Act options to manage noise, including the following:

- *prevention notice* (ss 95–100) – can be applied where activities are carried out in an environmentally unsatisfactory manner, which includes where they are not carried on by such practicable means as may be necessary to prevent, control or minimise pollution or the emission of any noise or in accordance with good environmental practice

- *noise control notice* (ss 263–267B) – can be used to prohibit a specified activity being carried out or a specified article being used or operated at a premises in such a manner as to cause the emission of noise (see provisions for dealing with plant and materials below) at all times, on specified days, between specified times on all days or on specified days in excess of a specified noise level when measured at a specified point
- *noise abatement direction* (ss 275–279) – can be used where offensive noise is being emitted from premises as has been at any time within the past seven days
- provisions for dealing with plant and materials offences (ss 139–140) – can be used where the emission of noise occurs due to failure to maintain plant in an efficient condition or operate the plant or deal with materials in a proper and efficient manner.

The POEO Act also gives people affected by noise the opportunity to take action independent of the council. A noise abatement order (ss 268–273 POEO Act) may be granted by a Local Court to an occupier of a premises affected by offensive noise if the court is satisfied, on the balance of probabilities, that offensive noise exists or is likely to recur. (More detail on this option is provided in Section 10.2.)

Table 6 provides a summary of the statutory instruments for controlling noise under the POEO Act. Case studies outlining how these instruments can be used are outlined in Part 1.

Which instrument to use will depend on the circumstances of the case. It may be helpful for council officers to discuss the statutory options available for addressing noise with a senior manager or the council's legal officer. When issuing these instruments, officers should comply with the principles of procedural fairness. (See Section 4.3 of the *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, 2021).

4.2.1. Offensive noise

The dictionary of the POEO Act's definition of offensive noise is based on evaluating whether noise is (or is likely to be) harmful or interferes unreasonably with comfort or repose where this is due to the (noise) level, its nature, character or quality; or the time at which it was made, or in other circumstances.

This means that offensive noise could occur under a broad range of circumstances. An authorised officer, authorised person or enforcement officer must be able to establish that offensive noise is occurring before issuing a notice, direction or order.

The question of what offensive noise means has been considered by the Land and Environment Court in a number of cases and different circumstances.

Offensive Noise Case Studies

The following case studies are a guide only and do not constitute legal advice. The cases referred to may be superseded by other cases at any time. Readers should seek their own legal advice in relation their specific circumstances.

Meriden School v Pedavoli [2009] NSWLEC 183 (22 October 2009)

The focus of the case was on whether noise above 'typical' school operations is offensive noise. In the circumstances of the case it was determined not to be offensive noise. In arriving at this judgement Justice Pain considered whether the noise:

- was loud in an absolute sense and whether this was intrusive
- had annoying characteristics
- occurred at times when people expect peace and quiet
- was atypical for the area
- was considered by previous development consents and whether there was evidence of non-compliance

- caused harm in an objective sense. Justice Pain used an objective test for harm and considered whether a 'reasonable' person's rest and repose would be affected both inside and outside their house.

ROI Properties Pty Ltd v Council of the City of Sydney [2010] NSWLEC 1096 (30 April 2010)

The focus of this case in relation to noise was whether the increased noise, associated with proposed alterations to a mixed-use development, would fall under the definition of offensive noise. Commissioner Brown was not satisfied the noise was likely to be offensive. In arriving at this conclusion Commissioner Brown considered that the:

- noise assessment complied with the relevant requirements in the Industrial Noise Policy
- increased noise would occur during the operation of the approved uses of the existing site and any noise outside these hours could be adequately addressed
- increased noise could not be considered excessive in an absolute sense considering that the proposal was consistent with approved uses on the site.

Sessions v Penrith City Council [2017] NSWLEC 1328 (6 December 2017)

This case investigated whether the issue of a prevention notice was appropriate and specifically whether noise from weights dropping on a gym floor was offensive to residents living above the gym. In arriving at a decision of offensive noise Commissioner Gray considered that the:

- noise assessment showed exceedance of acceptable levels
- noise was loud at the site inspections
- noise interfered unreasonably with residents' comforts and repose as they carried out ordinary residential use of their units
- noise caused sleep disturbance and, therefore, harm
- gym owners were not using practicable means to prevent, control or minimise the noise – a requirement for the issue of a prevention notice.

Sydney Tools Pty Ltd v Oxford [2018] NSWLEC 134 (30 August 2018)

This case investigated whether a noise abatement order against a warehouse and distribution centre should be stayed or varied. In this regard, Justice Pepper was not satisfied the noise was likely to be offensive. In arriving at this decision, Justice Pepper considered:

- that subjective statements from residents alone were not enough to show that the noise was harmful or offensive

the noise assessment, which included monitoring, did not find noise from the site to be offensive.

Table 5 provides the matters that may be helpful when determining whether a particular noise is offensive and considers matters identified in the Land and Environment Court cases mentioned above.

Table 5 Factors to be considered for assessing offensive noise

Definition part	Non-exhaustive list of considerations
Offensive noise means noise that, by reason of its:	
• level, nature, character or quality or	Does the noise level exceed noise level conditions on consents or approvals? or Is the noise level extremely loud in an absolute sense? Its volume alone may be annoying, such as music being played at a volume so high that it can be heard, for example, over construction work. or

Definition part	Non-exhaustive list of considerations
	<p>Is the noise level extremely loud in a relative sense, that is very loud in comparison with the background noise? An example is loud activity occurring during the dead of night. Measurements can help to determine how loud the noise is relative to the background noise level in an area.</p> <p>or</p> <p>Does the noise occur for a long period of time?</p> <p>or</p> <p>Does the noise occur often? Noise can be more annoying when it occurs frequently. Examples might be a leaf blower used every morning or a band that practises frequently without regard to the impact on neighbours.</p> <p>or</p> <p>Is the nature of the noise source extremely annoying, for example screeching, squealing, high pitched, whining, a low-frequency rumble or intermittent? The presence of tones, impulses or fluctuations in volume can make people more likely to react to the noise. These can be judged subjectively, but noise measurements will help to quantify the extent of these characteristics. Assessment against relevant government policies may assist.</p> <p>or</p>
<ul style="list-style-type: none"> time at which it is made, or 	<p>Is the noise present at night when people are trying to sleep? Noise that regularly disturbs sleep is likely to be considered offensive by complainants.</p> <p>or</p> <p>Is the noise present during the evenings or weekends when people expect to enjoy peace and quiet? Is the noise making it difficult to have a conversation, study, read or watch TV?</p> <p>or</p>
<ul style="list-style-type: none"> any other circumstances 	<p>Is the noise atypical for the area? Is the activity in alignment with the zoning of the area? Where noise from an activity that is causing nuisance is new or unusual for an area, people are more likely to react. Look at the typical uses of the area and determine whether the activity is consistent with the local environmental plan. An example might be a community event with amplified music affecting a residential area that has not traditionally been affected by such events.</p> <p>or</p> <p>Is the activity producing noise that is unnecessary due to:</p> <ul style="list-style-type: none"> the possibility of it being easily mitigated (for example plant/equipment operated in a proper and efficient manner, conducted at a more appropriate time or conducted away from residents), or it being frivolous (for example use of noisy tools for activities that can be accomplished without the use of tools or making noise for the sake of making noise) <p>or</p>

Definition part	Non-exhaustive list of considerations
<ul style="list-style-type: none"> is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted. 	<p>Is there evidence of harm?</p> <p>Note: It is unlikely that environmental noise would result in direct physiological harm, for example hearing loss. However, harm may take the form of extreme annoyance, distress, frustration, fatigue etc. In some cases, a complaint may have supporting evidence from a medical practitioner. However, it needs to be borne in mind that a clear and transparent link between the noise and any adverse health outcome may be difficult to establish with certainty.</p> <p>or</p> <p>If a noise study has been conducted, consider the findings of the study.</p> <p>or</p> <p>Is the complainant's response to the noise typical of the broader community and reasonable? Are there other residents who are subjected to the same noise levels but are not affected by the noise? Are there other complainants? Only one person needs to be harmed by the noise for it to be offensive. However, talking to other neighbours likely to be exposed to the same noise about how it affects them may assist in deciding whether it is likely to be harmful and whether the evidence from the individual is able to be corroborated.</p> <p>or</p> <p>Is the noise maker reasonable? Can the activity be easily accomplished in a much quieter manner or can the noise be easily mitigated?</p>

Offensive noise is noise that is	
<ul style="list-style-type: none"> of a level, nature, character or quality prescribed by the regulations or 	<p>Does the noise level comply with the POEO Noise Control Regulation?</p> <ul style="list-style-type: none"> cl. 5 – Use on roads of motor vehicles capable of emitting noise in excess of the prescribed level <p>Is the noise's nature and character in contravention of the regulations:</p> <ul style="list-style-type: none"> cl. 25 – Use of alarms that sound in excess of prescribed length of time cl. 26 – Design and construction of alarms that contravene the regulations cl. 27 – Attaching certain motor vehicle horns cl. 28 – Use of certain motor vehicle horns
<ul style="list-style-type: none"> made at a time, or in other circumstances, prescribed by the regulations. 	<p>Is the noise in contravention of the time-of-use provisions in the POEO Noise Control Regulation?</p> <ul style="list-style-type: none"> cl. 8 – Use of motor vehicles on residential premises cl. 9 – Use of refrigeration units fitted to motor vehicles near residential premises cl. 51 – Use of power tools on residential premises cl. 52 – Use of pumps on residential premises cl. 53 – Use of heat pump water heaters cl. 57 – Use of musical instruments cl. 58 – Use of electrically amplified sound equipment

Definition part	Non-exhaustive list of considerations
	<p>Is the noise due to other circumstances prescribed in the POEO Noise Control Regulation?</p> <ul style="list-style-type: none"> • cl. 11 – Driving or using vehicles with defective noise control equipment • cl. 14 – Use of vehicles with unauthorised temporary noise reduction packing • cl. 17 – Use of vehicles with unauthorised temporary noise reduction equipment • cl. 24 – Use of alarms with panic or override switches • cl. 62 – Use of a motor vehicle in breach of a defective vehicle notice • cl. 63 – Use of a vessel in breach of a defective vessel notice • cl. 64 – Use of a vessel in breach of a defective vessel label

The considerations in Table 5 provide a framework to assist council take a consistent approach to evaluating whether offensive noise is occurring or has occurred. It can also help justify any resulting regulatory action.

Regulatory authorities should also take into account the public interest and apply their discretion, particularly as to whether a complainant is vexatious and as to the individual circumstances of the situation.

Offensive noise considerations when there are consent conditions

Complaints may be received about noise from premises with consent conditions. The following should be considered when determining the most appropriate regulatory response.

- If noise from the premises exceeds noise limits (and/or emits noise outside permitted hours of operation) set out in the consent, enforcement provisions under the EP&A Act can be used to remedy the situation.
- Where noise emissions from the premises comply with noise conditions in the consent, council may deem that offensive noise is occurring in circumstances where
 - changes to the noise-causing activity or equipment that were not considered when developing noise conditions in the DA have altered the level or character of noise emissions, or
 - changes to land uses have required a more contemporary examination of feasible and reasonable noise mitigation measures.

A noise abatement direction, prevention notice, noise control notice or other means under the POEO Act is generally not appropriate where the premises complies with contemporary objective noise conditions in a consent made under the EP&A Act. This is because quantitative noise limits within consents are usually developed following an assessment using appropriate noise policies and guidelines – for example the *Noise Policy for Industry* (EPA, 2017).

Legal precedent indicates that where a premises or venue is complying with noise requirements set through a relevant planning approval process or other mechanism, such as a liquor licence, it is unlikely to be regarded as offensive.

4.2.2. Prevention notices

Scope

A prevention notice (ss 95–100 POEO Act) is used to control activities that are conducted in an ‘environmentally unsatisfactory manner’. The notice requires an occupier or person conducting the

noisy activity to take specified actions within a specified period (if required) to ensure the activity is carried on in an environmentally satisfactory manner.

A prevention notice may be useful where:

- there is a complex activity with many noise sources, and changes to operational practices are needed
- it may be difficult or unreasonable to specify an acceptable noise level that must be met
- a number of environmental issues require action, such as noise, air, water and waste problems. A single prevention notice can be used to manage all these problems for a site or activity.

Section 96(3) of the POEO Act provides some examples of actions that a prevention notice can require. These include requiring an operator to develop a plan of action. A prevention notice can require an operator to apply good environmental practice to an activity.

The prevention notice is oriented towards finding ways to control the noise. It cannot be used simply to ban an activity.

Defining ‘environmentally unsatisfactory manner’

The meaning of ‘environmentally unsatisfactory manner’ is defined in Section 95 of the POEO Act. The most relevant parts in relation to noise states an activity is being carried out in an ‘environmentally unsatisfactory manner’ if it is not carried on:

- by such practicable means as may be necessary to prevent, control or minimise pollution [noting that the emission of offensive noise is pollution], the emission of any noise or the generation of waste (ss 95(c)), or
- in accordance with good environmental practice (ss 95(d)).

The term ‘practicable means’, used in ss 95(c), is not defined in the POEO Act Dictionary. The *Macquarie Dictionary* defines ‘*practicable*’ as ‘*capable of being put into practice, done or effected especially with the available means or with reason or prudence; feasible*’. If there is practicable action that can be taken to prevent, control or minimise the emission of noise, then a prevention notice may be issued. However, where offensive noise is being generated and an authorised officer reasonably suspects that there are ‘practicable means’ that could be considered, a prevention notice could be used to require investigation and information as to the current environmental performance of the premises (see *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, 2021)). The case study on ‘what is reasonable action’ (Box 3.2) provides further advice.

If the ‘emission of any noise’ is used as the basis to issue a prevention notice, it is recommended an objective noise criteria be developed having regard to appropriate policies, for example the *Noise Policy for Industry* (EPA, 2017) and used to determine whether impacts from the premises warrant intervention.

Issuing a prevention notice

A prevention notice must be issued in writing. A template for a prevention notice is available in the *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, 2021).

Councils can issue prevention notices for activities for which they are the ARA. The police do not have the power to issue prevention notices.

They may be issued to the:

- occupier of the premises, or
- person who is carrying on the activity (whether or not at the premises).

It may be that the prevention notice is issued to the occupier but the occupier is not the person carrying on the activity. In such instances, the occupier has a duty to take all available steps to cause the action/s specified in the prevention notice to be taken (s. 96(4) POEO Act).

A prevention notice must specify what actions are required to control the noise, for example the actions the operator should take to ensure the activity is carried out in an environmentally satisfactory manner, Section 96(3) of the POEO Act lists examples.

In some circumstances there is uncertainty regarding the noise source and/or what noise control measures are available or suitable. In such cases a prevention notice can require the operator to undertake a study and/or develop a plan of action to investigate and identify measures to manage noise. For example the prevention notice may require the:

- preparation of a plan of action, including a noise impact assessment, by a suitably qualified and experienced person
- identification of all potential noise sources, which can include the requirement to determine noise in accordance with relevant standards, policies or guidelines
- measurement and monitoring of the subject noise and background noise
- identification and assessment of control measures capable of managing the noise, such as relocating or enclosing equipment or changing operating times or any other feasible and reasonable mitigation measure
- implementation of noise-management recommendations that are reasonable, enforceable and practical to implement
- timeframes for completion of any required mitigation or other actions.

There could also be a requirement that the plan of action be submitted to council for approval before any action to manage noise is implemented. Where this is the case, a second prevention notice can be drafted to require implementation of approved measures. Management options developed to reduce the noise should be feasible and reasonable.

Offence

A person who fails to comply with a prevention notice is guilty of an offence under s. 97 of the POEO Act.

If a person has not complied with the prevention notice, the ARA (or its employees, agents or contractors) can take action to cause the notice to be complied with (s. 98 POEO Act). The ARA may then require the person concerned to pay for all or any reasonable costs and expenses the ARA incurred in taking that action (s. 104(4) POEO Act). This cost-recovery mechanism is in addition to any prosecution that may be undertaken.

Penalties

A breach of a prevention notice can be prosecuted in the Land and Environment Court, with maximum fines of \$1,000,000 for a corporation and \$250,000 for an individual. There are also daily penalties if the offence continues.

Alternatively, an enforcement officer can issue a penalty notice for a breach of a prevention notice. This provides for fines of \$8,000 for a corporation and \$4,000 for an individual, which can be issued 'on the spot' where this is practicable.

Cost-recovery options for a prevention notice

Cost-recovery options for prevention notices include an administrative fee for serving the notice and a compliance cost notice.

Administrative fee

An administrative fee is intended to cover the costs of preparing and giving a prevention notice.

The administrative fee amount is prescribed by cl. 99 of the POEO General Regulation. The fee must be paid within 30 days of receiving the notice. Where the notice is appealed, payment of the fee is suspended until 30 days after the court has confirmed the notice (if that is the case).

ARAs have discretionary power to waive the administrative fee or extend the period for payment (s. 100(3) POEO Act).

Compliance cost notice

A compliance cost notice can be served by the ARA in writing to recover the costs incurred by the ARA for monitoring action under, and ensuring compliance with, a prevention notice (s. 104(3) POEO Act) or for taking action to satisfy the prevention notice when it has not been complied with (104(4) POEO Act). It is issued by the ARA to the person who was issued with the prevention notice. There is no right of appeal under the POEO Act.

The compliance cost notice does not include the cost of preparing and issuing a prevention notice, which is covered by the administrative fee described above. Officers need to keep accurate records of the time spent ensuring compliance with the prevention notice and determine an hourly fee charge for the purpose of issuing compliance cost notices.

The compliance cost notice should specify a time for payment. The notice should also indicate that if the payment is not received by a specified date then the ARA may take steps to recover the unpaid amount.

Compliance cost notices may be registered with the Registrar-General, creating a charge over any land owned by the person who is the subject of the notice (s. 106 POEO Act).

This charge will cease to have effect (s. 107 POEO Act) on one of the following:

- payment to the ARA or public authority of the amount concerned
- sale or other disposition of the property with the written consent of the authority
- sale of the land to a purchaser in good faith who, at the time of the sale, has no notice of the charge.

Compliance cost notices can be registered with the Registrar-General if attempts to recover the costs have not been successful.

A template for a compliance cost notice is included in the *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, 2021).

Administrative fee for registering compliance cost notices in relation to prevention notices

The ARA may require the person concerned to pay for all or any reasonable costs and expenses it incurred in the lodgement or registration of the notice and any resulting charge, including the costs of discharging the charge. The ARA may also take steps to recover any unpaid amounts specified in the notice in court (s. 107(8) POEO Act).

4.2.3. Noise control notices

Scope

A noise control notice (ss 263–267B POEO Act) may be used to prohibit an activity, or the use or operation of equipment, in such a manner as to cause the emission from premises of noise above a specified noise level when measured at a specified location. It can also specify the times when the limits apply, if required.

It is issued either to the occupier of the premises, to a person who carries on or proposes to carry on an activity or to a person who uses or operates an article at the premises. For example, it can

be used to define acceptable noise levels from a proposed activity such as a motor sport event or an outdoor concert.

A noise control notice remains in force until the ARA revokes it.

Noise does not need to be offensive for a noise control notice to be issued. However, the council should be able to show that the provision's use was justified and reasonable.

A noise control notice is particularly useful to manage noise from well-defined sources, for example those that are static and have a fairly constant noise level (such as pumps, fans or other industrial plant), making them relatively easy to measure compared with mobile and intermittent noise sources.

A noise control notice would not be appropriate to use in cases where it may be difficult or unreasonable to specify an acceptable noise level. A prevention notice may be more appropriate to use in these situations as it can require a noise study to be conducted to determine the acceptable noise level.

Issuing a noise control notice

A noise control notice must be issued in writing. A template for a noise control notice is available in the *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, 2021).

Councils can issue noise control notices for activities for which they are the ARA. The Marine Authority can issue noise control notices in relation to vessels in navigable waters and premises used in conjunction with vessels and adjacent to, or partly or wholly over, navigable waters. The police do not have the power to issue noise control notices.

A noise control notice must clearly describe the following to ensure the notice can be enforced:

- a specified (acceptable) noise level (see Section 7)
- the noise measurement location/s
- the activity or article that is to be controlled
- the days and times when the specified noise level applies.

If the notice does not specify the hours during which the noise limit applies, then the noise limit applies to the whole 24-hour period (s. 264 POEO Act).

Limitations

A noise control notice cannot require or specify works, for example, the preparation of an acoustic report or the implementation of noise mitigation measures. If works are required, a prevention notice is more appropriate.

Offence

It is an offence to contravene a noise control notice (s 265 POEO Act). An offence occurs if the activity or article emits noise above the noise limit specified in the notice during the relevant times or days. However, an offence does not occur where the noise is not able to be detected or perceived outside the premises without the aid of an instrument, machine or device. Penalties for breach of a noise control notice are shown in Table 6.

The ARA may require the person concerned to pay for all or any reasonable costs and expenses the ARA incurred in monitoring and ensuring compliance with the notice (see section below).

Penalties

A breach of a noise control notice can be prosecuted in the Land and Environment Court, with maximum fines of \$60,000 for a corporation and \$30,000 for an individual. There are also daily penalties if the offence continues.

Alternatively, an enforcement officer can issue a penalty notice for a breach of a noise control notice. This provides for fines of \$1,500 for a corporation and \$750 for an individual, which can be issued 'on the spot' where this is practicable. Under s. 694 of the *Local Government Act 1993*, councils receive the bulk of any fines imposed by the court or by a penalty notice.

Cost-recovery options for a noise control notice

Cost-recovery options for noise control notices include an administrative fee for serving the notice and a separate compliance cost notice for monitoring action under and ensuring compliance with the notice and any other associated matters.

Administrative fee

An administrative fee is intended to cover the costs of preparing and giving a noise control notice.

The administrative fee amount is prescribed by cl. 99 of the POEO General Regulation. The fee must be paid by the person given the notice within 30 days. Where the notice is appealed, payment of the fee is suspended until the court has decided the appeal and is payable within 30 days after that.

ARAs have discretionary power to waive the administrative fee or extend the time for payment (s. 267A POEO Act).

Compliance cost notice

This can be served to recover the costs incurred by the ARA for monitoring action under and ensuring compliance with a noise control notice (s. 267B POEO Act). This may include such things as travel to the site to do follow-up inspections and any measurements an officer may take to ensure that the terms of the notice are being complied with.

It is issued by the ARA to the person who was given the noise control notice. There is no right of appeal against a compliance cost notice.

The compliance cost notice does not include the cost of preparing and issuing a noise control notice, which is covered by the administrative fee described above. Officers need to keep accurate records of the time spent in ensuring compliance with the noise control notice and determine an hourly fee charge for the purpose of issuing compliance cost notices.

The compliance cost notice should specify a time for payment. The notice should also indicate that if the payment is not received by a specified date then the ARA may take steps to recover the unpaid amount. The ARA may recover any unpaid amounts specified in the notice as a debt in a court.

A template for a compliance cost notice is included in the *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, 2021).

4.2.4. Noise abatement directions

Scope

A noise abatement direction (ss 275–279 POEO Act) can be issued if it appears to an authorised person (Section 3.1.3) that offensive noise:

- is being emitted, or
 - has been emitted at any time within the past seven days,
- from any premises.

Noise abatement directions are useful for quickly dealing with temporary noise problems, such as loud music, where the noise can reasonably be reduced or stopped. A direction is an official

instruction that offensive noise must cease. A direction can be issued within seven days of the offensive noise occurring and lasts for up to 28 days.

Issuing a noise abatement direction

A template for a noise abatement direction is included in *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, 2021).

The authorised person need not have heard the offensive noise before issuing a noise abatement direction. It is enough if it appears to the authorised person that offensive noise has occurred in the past seven days based on appropriate evidence. In these cases, it is good practice for the authorised person to obtain signed statements from witnesses about the noise and its effect on them sufficient to satisfy the officer of the elements of the definition of 'offensive noise'.

A noise abatement direction can be issued verbally or in writing to the person who the authorised person believes to be one or both of the following:

- the occupier of the premises from which the offensive noise originates
- any person making or contributing to the noise.

Where further action may be required, it is recommended that a written direction be provided so there is clear evidence of its details. This is helpful for both the regulator and the person receiving the direction.

A noise abatement direction should specify the offensive noise concerned, for example 'cease making offensive noise from the use of the concrete saw at the premises'.

There is no right of appeal against a noise abatement direction under the POEO Act. Noise abatement directions remain in force for up to 28 days, unless a shorter period is specified in the direction. A direction may be revoked by the person who gave the direction or by another authorised person (s. 279 POEO Act).

Noise abatement directions, other than a direction given by an authorised officer of the EPA, may not be given to:

- the state or a person acting on its behalf
- a public authority
- a person acting as an employee or member of the public authority
- a person prescribed by the regulations.

Unless the noise abatement direction is given by an authorised officer of the EPA, the direction has no force if it affects:

- any activity carried out by the state or a public authority
- any activity carried on by an authorised network operator (within the meaning of the *Electricity Network Assets (Authorised Transactions) Act 2015*)
- a scheduled activity
- an activity subject to an environment protection licence
- an activity prescribed by the regulations (none at the time of publication).

Offence

To be guilty of an offence a person must, without reasonable excuse, have failed to cause the emission of the offensive noise to cease promptly or to cause or permit the emission of the offensive noise during the period of 28 days after that or such short period specified in the notice. A noise abatement direction does not mean that all noise from the premises must stop, only offensive noise.

Penalties

A breach of a noise abatement direction can be prosecuted in the Land and Environment Court with a maximum penalty of 30 penalty units. At the time of publication, the maximum penalty is \$3,300, that is \$110 per penalty unit as set by s.17 of the *Crimes (Sentencing Procedure) Act 1999*.

Alternatively, an enforcement officer can issue penalty notices for failing to comply with a noise abatement direction, with fines of \$600 for a corporation and \$300 for an individual.

Powers of authorised persons for serving or enforcing noise abatement directions

Authorised persons have a number of powers that may be relevant in connection with the issuing of noise abatement directions, including entering premises, requiring certain information and seizing equipment as outlined in Table 4 in Section 3.1.4. However, those powers are limited in relation to any part of premises used only for residential purposes without the consent of the occupier or under the authority of a search warrant.

4.2.5. Noise pollution from operating plant and dealing with materials (ss. 139–40 POEO Act)

The POEO Act provides for two general offence provisions for noise from premises in ss 139 and 140, which relate to the operating plant and dealing with materials, respectively.

Operating plant causing noise (s. 139 POEO Act)

Where council is the ARA, an authorised council officer can prosecute or issue a penalty notice to the occupier of premises where noise from the premises is being caused by the operation of plant that is poorly maintained or not operated properly. This is where the occupier has failed to:

- maintain the plant in an efficient condition (s. 139(a)), or
- operate the plant in a proper and efficient manner (s. 139(b)).

An example is the operation of worn conveyor belts causing noise as the loose belt is drawn through the drivers.

No warning must be given before issuing a penalty notice or proceeding with a prosecution for a breach of s. 139 of the POEO Act. However, before doing so it would be good regulatory practice to advise the occupier of the offence to provide natural justice and the opportunity to resolve the issue quickly and efficiently.

Dealing with materials causing noise (s. 140 POEO Act)

Where a council is the ARA, an authorised officer can prosecute or issue a penalty notice to the occupier of a premises where the noise is emitted because the occupier has failed to deal with materials in a proper or efficient manner on that premises.

For the purposes of this section of the Act:

- 'deal with' means process, handle, move, store or dispose of
- 'materials' include raw materials, materials in the process of manufacture, manufactured materials, waste materials or by-products.

An example is the practice of throwing or dumping empty glass bottles into steel drums or containers, thereby making noise.

No warning must be given before issuing a penalty notice or proceeding with a prosecution for a breach of s. 140 of the POEO Act. However, before doing so it would be good regulatory practice to advise the occupier of the offence to provide natural justice and the opportunity to resolve the issue quickly and efficiently.

Penalties for breaches of ss. 139 and 140 POEO Act

A breach of ss. 139 and 140 of the POEO Act can be prosecuted in the Land and Environment Court with a maximum penalty of \$1,000,000 for a corporation or \$250,000 for an individual. There are also daily penalties in the case of a continuing offence.

Alternatively, an enforcement officer can also issue penalty notices for failing to comply with ss. 139 or 140 of the POEO Act with fines of \$1,500 for a corporation or \$750 for an individual.

Table 6 Summary of statutory provisions for controlling noise under the POEO Act

When the provision may be used, purpose of provision and example	Appeal period and time in effect	Maximum penalty for prosecution	Penalty notice fine as of February 2020
Prevention notice (ss 95–100 POEO Act)			
<p>An activity is being carried out in an environmentally unsatisfactory manner as defined by s. 95.</p> <p>The purpose is to specify action that must be undertaken to reduce noise. This notice can also address other pollution or waste problems.</p> <p>Example: Prepare, by a certain date, an action plan to reduce noise from the site and submit it to the ARA.</p>	<p>The notice can take effect immediately or on a later date as specified in the notice.</p> <p>It remains in force until revoked or varied by the ARA.</p> <p>A person served with a notice may, within 21 days of being served, appeal to the Land and Environment Court.</p> <p>Lodging an appeal does not stay the notice unless the Land and Environment Court directs otherwise.</p>	<p>Failure to comply with notice:</p> <ul style="list-style-type: none"> • corporation \$1,000,000, and for each day offence continues \$120,000 • individual \$250,000, and for each day offence continues \$60,000 <p>(s. 97 POEO Act)</p> <p>Failure to pay administrative:</p> <ul style="list-style-type: none"> • 200 penalty units² 	<p>Failure to comply with notice:</p> <ul style="list-style-type: none"> • corporation \$8,000¹ • individual \$4,000¹ <p>Failure to pay administrative fee:</p> <ul style="list-style-type: none"> • corporation \$1,000 • individual \$500
Noise control notice (ss 263–267B POEO Act)			
<p>Applies to an occupier of premises or a person who carries on or proposes to carry on an activity at premises or who uses or operates or proposes to use or operate an article at any premises.</p> <p>A person to whom the section applies may be prohibited from causing, permitting or allowing any specified activity to be carried on at a premises, or using or operating a specified article at the premises in a manner that causes the emission of noise that when measured at any specified point is in excess of a specified level at (or between) specified times and/or days or where not specified, at all times.</p> <p>The purpose is to limit noise by specifying a noise level and measurement point in a formal way.</p> <p>It is necessary to measure noise and establish an acceptable noise level for the article or activity.</p> <p>Example: Do not cause permit or allow the noise level from the pump to exceed 45dB(A) $L_{eq\ 15\ min}$ at any time</p>	<p>The notice can take effect immediately or on a later date as specified in the notice.</p> <p>It remains in force until revoked or varied by the ARA.</p> <p>A person served with a notice may, within 21 days of being served (or seven days for noise from animals), appeal to the Land and Environment Court (s. 104 POEO (General Regulation)).</p> <p>The lodging of an appeal will not delay the start of the notice unless the Land and Environment Court directs otherwise.</p>	<p>Failure to comply with notice:</p> <ul style="list-style-type: none"> • corporations \$60,000, and for each day offence continues \$6,000 • individuals \$30,000, and for each day offence continues \$600 <p>(s. 265 POEO Act)</p>	<p>Failure to comply with notice:</p> <ul style="list-style-type: none"> • corporation \$1,500 • individual \$750

When the provision may be used, purpose of provision and example	Appeal period and time in effect	Maximum penalty for prosecution	Penalty notice fine as of February 2020
between 7am and 10pm on any day when measured at the northern boundary of 45 Smith St.			
Compliance cost notice (ss 104 and 267B POEO Act)			
<p>Council incurs costs in ensuring compliance with a prevention notice or noise control notice.</p> <p>The purpose is to ensure recovery of compliance costs, including monitoring of action and any associated matters.</p> <p>Example: Pay \$500, being reasonable costs incurred by council in taking listed steps to monitor action and ensure compliance with the prevention notice dated [x].</p>	Costs must be paid by the due date in the notice.	Legal action to recover amount owing as a debt.	N/A
Operation of plant offence (s. 139 POEO Act)			
<p>Noise is emitted from a premises due to the occupier's failure to maintain plant in an efficient condition or operate plant in a proper and efficient manner.</p> <p>The purpose is to provide a general offence for noise emitted from premises due to a failure to maintain and operate plant properly.</p> <p>Example: A faulty bearing on a pump is causing more noise to be emitted from the premises than if the pump was maintained in an efficient condition.</p>	No formal warning must be given before issuing a penalty notice or proceeding with a prosecution for a breach.	<p>Failure to comply with provision:</p> <ul style="list-style-type: none"> corporations \$1,000,000, and for each day offence continues \$120,000 – also, executive liability for director or other person involved in management of the corporation individuals \$250,000, and for each day offence continues \$60,000 <p>(ss 141 and 169A POEO Act)</p>	<p>Penalty notice fine for breach of provision:</p> <ul style="list-style-type: none"> corporation \$1,500 individual \$750
Dealing with materials offence (s. 140 POEO Act)			
Noise is emitted from a premises due to the occupier's failure to deal with materials in a proper and efficient manner.	No formal warning must be given before issuing a penalty notice or proceeding with a prosecution for a breach.	<p>Failure to comply with provision:</p> <ul style="list-style-type: none"> corporations \$1,000,000, and for each day offence continues \$120,000 – 	<p>Penalty notice fine for breach of provision:</p> <ul style="list-style-type: none"> corporation \$1,500 individual \$750

When the provision may be used, purpose of provision and example	Appeal period and time in effect	Maximum penalty for prosecution	Penalty notice fine as of February 2020
<p>The purpose is to provide a general offence for noise emitted due to failure to deal with materials appropriately.</p> <p>Example: Material is being dropped into an unlined metal container when industry practice is to line the container with rubber matting.</p>		<p>also, executive liability for director or other person involved in management of the corporation</p> <ul style="list-style-type: none"> individuals \$250,000, and for each day offence continues \$60,000 <p>(POEO Act ss 141 and 169A)</p>	
Noise abatement direction (s. 276 POEO Act)			
<p>Offensive noise is occurring or has occurred within the last seven days.</p> <p>Issued to person believed to be the occupier or person believed to be making or contributing to the noise.</p> <p>The purpose is to provide a quick response to temporary offensive noise.</p> <p>Example: Stop the offensive noise from stereo system at the premises.</p>	It remains in force for up to 28 days. It can be revoked. There is no appeal.	30 penalty units ² (POEO Act s. 277)	Corporation \$600 Individual \$300
Penalty notice (s. 224 POEO Act)			
<p>There is a breach under the POEO Act or the POEO Noise Control Regulation that is identified in the POEO General Regulation (Schedule 6) as being able to be dealt with via a penalty notice.</p> <p>The purpose is to enable an offender to be fined on the spot. Offender may be given a warning although it is not mandatory.</p> <p>Example: Person to whom noise abatement direction has been given make or contribute to the making of offensive noise emitted from premises.</p>	The penalty must be paid within 28 days of being served unless the notice is revoked or the offender elects to go to court and is prosecuted.	Various (see Schedule 6 of the POEO General Regulation)	Various (see Schedule 6 of the POEO General Regulation)

Notes

- For notices issued by local authorities, the EPA or Department of Planning, Industry and Environment for offences in Kosciuszko National Park. Fines increase to \$15,000 for corporations and \$7,500 for individuals if issued by other classes of officers (see Schedule 6 POEO General Regulation).

2. Section 17 of the *Crimes (Sentencing Procedure) Act 1999* provides that a penalty unit is \$110.

4.3 Using the POEO Noise Control Regulation to manage noise

The POEO Noise Control Regulation is broadly aimed at managing noise from residential activities and equipment, including the use of certain articles (for example air conditioning, power tools and amplified sound systems) when they:

- are audible during prescribed hours, or the duration of noise emitted exceeds prescribed durations; for example, building and motor vehicle alarms (commonly referred to as ‘deemed circumstances’), or
- emit offensive noise (for ‘nominated activities’)

The Regulation also includes:

- specific control measures for vehicles and vessels
- the method to determine the sound levels from shooting ranges
- provisions identifying the grass-cutting machines that emit noise above a prescribed noise level which are prohibited from sale under s136 POEO Act and provisions requiring the labelling of grass-cutting machines with their maximum sound power level.

For ‘deemed circumstances’ provisions, it is not necessary to show that offensive noise is occurring. In some cases, the deemed circumstances include the provision of a warning before an offence is committed. For ‘nominated activities’ provisions, a noise must be offensive before its emission is classed as an offence.

Offensive noise

The POEO Act does not contain a general offence for the emission of offensive noise. Instead it provides options to remedy situations where offensive noise has been emitted. For example, a prevention notice can be issued (see Section 4.2.2).

The ‘nominated activities’ provisions in the POEO Noise Control Regulation make it an offence to cause offensive noise in some common neighbourhood noise situations as outlined below in Section 4.3.2.

4.3.1 Deemed circumstances

Provisions requiring a warning (‘time-of-use’ provisions)

The POEO Noise Control Regulation makes it an offence for certain articles used at a residential premises to emit noise, during prescribed hours, that can be heard in a room (except a garage, storage area, bathroom, laundry, toilet or pantry) of another residential premises, whether or not a door or window to that room is open. Table 7 provides a summary of the time-of-use provisions that apply to certain articles.

Authorised or enforcement officers intending to give a warning under the POEO Noise Control Regulation need to satisfy themselves that the noise is audible in the room and is coming from the alleged source during the restricted times. This may involve listening to the noise inside the impacted residence (if access can be gained) or outside the affected residence and forming an opinion on whether they can prove that the noise would be audible inside the affected residence. This provision applies even when the windows are open in the complainant’s residence. (See also ‘Tips for assessing audibility’ and ‘What constitutes an offence?’ below.)

The officer may rely on a signed statement from the affected person about the audibility of the noise inside the residence, particularly if the officer has not entered the affected residence. The statement should say what effect the noise is having on them. Where an officer relies on statements to determine that a noise is ‘offensive’ (which would be an aggravating factor), the

person making the statement should be told that they might need to give evidence in court as to why the noise was offensive.

The provisions in the POEO Noise Control Regulation do not exclude other courses of action. For example, a noise abatement direction could be issued if an officer considered that a musical instrument or leaf blower, for example, was causing offensive noise, regardless of the time of day.

Table 7 Summary of time-of-use provisions when certain articles that emit noise at a residential premises should not be heard in another residential premises

Article	Times when the article should not be used in a manner that is audible in another residential premises ¹
Air conditioners (cl. 45) and heat pump water heaters (cl. 53)	Before 8am or after 10pm on weekends and public holidays Before 7am or after 10pm on any other day
Power tools (cl. 51) and swimming pool/spa pumps (cl. 52)	Before 8am or after 8pm on Sundays and public holidays Before 7am or after 8pm on any other day
Musical instruments (cl. 57) and electrically amplified sound equipment (cl. 58)	Before 8am or after midnight on any Friday, Saturday or day immediately before a public holiday Before 8am or after 10pm on any other day
Motor vehicles used on residential premises (cl. 8) (excludes vehicles entering and leaving premises)	Before 8am or after 8pm on weekends and public holidays Before 7am or after 8pm on any other day
Motor vehicles fitted with a refrigeration unit used near residential premises (cl. 9)	Before 8am or after 8pm on weekends and public holidays Before 7am or after 8pm on any other day

Note

1. The time-of-use restriction does not prohibit the use of an article during prescribed hours. It only applies where the article emits noise that can be heard in any room (except a garage, storage area, bathroom, laundry, toilet or pantry) in any other residential premises whether or not a door or window to that room is open, during the prescribed hours.

Tips for assessing audibility

Because the test of audibility (that is whether the article under consideration can be heard in another residential premises) is one of strict liability, it is more stringent than the test for 'offensive noise' under the POEO Act.

Note that the noise level inside a dwelling can be higher than the noise level outside due to 'standing sound waves' in the room.

What constitutes an offence?

An offence occurs when, during the hours prescribed in the POEO Noise Control Regulation, an article is used in a manner that emits the audible noise within 28 days after a warning has been given. A warning needs to be given and contravened before an offence against the deemed circumstance provisions of the Regulation is committed.

Only a council enforcement/authorised officer (or police officer) can issue the warning. A warning can be given verbally or in writing and needs to be given within seven days of the noise occurring. The person receiving the warning should understand:

- the warning has a legal basis – this could be achieved by referring to the relevant clause in the Regulation or by giving the person a copy of the clause

- what they are required to do – this means understanding that they must not cause or permit the noise to be emitted during the restricted hours within 28 days of the warning being issued (i.e. the warning lasts for 28 days)
- they will commit an offence if they do not comply.

If the article is operated during the restricted hours specified by the Regulation within 28 days of the warning being issued, and the noise can be heard inside a room in another residence (other than a garage, storage area, bathroom, laundry, toilet or pantry), then an offence has been committed.

Contravention of a ‘deemed circumstance’ provision

If an offence has been committed, a council enforcement officer (or police officer) can issue a penalty notice, or council can start court proceedings, provided there is enough evidence to support the case. Evidence that may help support enforcement action could include a signed statement from one or more witnesses, identifying the source (if known) and nature of the noise, when and where it was heard, and an indication of its volume and its effect/s on them.

Deemed circumstances not requiring a warning

Duration test for intruder alarms

The POEO Noise Control Regulation specifies how long motor vehicle and building intruder alarms may sound. An offence occurs where an alarm sounds for longer than the time permitted by the Regulation. For these provisions a warning does not need to be given before an offence is deemed to occur. A summary of duration provisions for alarms is provided in Table 8 below.

Table 8 **Restricted duration of noise from alarms**

Type of noise	Restrictions on the duration of the noise emitted ¹
Motor vehicle intruder alarm (cl. 25)	<ul style="list-style-type: none"> • More than 90 seconds if the vehicle was manufactured before 1 September 1997 • More than 45 seconds if the vehicle was manufactured on or after 1 September 1997
Building intruder alarm (cl. 42)	<p>Sound is audible in any room of a residential premises (other than a garage, storage area, bathroom, laundry, toilet or pantry) and sounds for:</p> <ul style="list-style-type: none"> • more than 10 minutes if the alarm was installed before 1 December 1997 • more than five minutes if the alarm was installed on or after 1 December 1997

Note: Refer to the legislation for the whole clause, including considerations for when an offence has not been committed.

It does not matter whether the alarm sounds continuously or intermittently. For example, a car alarm that sounds for 30 seconds, stops for one minute and then sounds again for another 30 seconds is taken to sound for 60 seconds, which is more than the 45 seconds prescribed for a vehicle alarm manufactured on or after 1 September 1997. The location where the alarm is heard is important. For building intruder alarms, the assessment must be made inside any room (excluding a garage, storage area, bathroom, laundry, toilet or pantry) in any other residential premises. For vehicle intruder alarms, the assessment can be made anywhere.

Sounding of vessel sirens

The POEO Noise Control Regulation also makes it an offence to permit a vessel's siren, whistle, hooter, fog horn or bell to be sounded on navigable waters except for the purposes of navigation (cl. 34).

4.3.2 Nominated activities

The POEO Noise Control Regulation makes it an offence to undertake the following nominated activities in a manner that emits offensive noise.

- Vehicles used on a place other than a road or road-related area (as defined in the Regulation) in a manner that emits offensive noise (cl 6).
- Use of motor vehicle sound systems in a manner that emits offensive noise (cl 31).
- To drive or use motor vehicles on a road or road-related area (as defined in the Regulation) if the vehicle sound system emits offensive noise (cl 33).
- The use of vessels on navigable waters in such a way as to emit offensive noise (cl 35).
- To cause or permit any musical instrument or sound system to be used on a vessel in such a manner that it emits offensive noise (cl 39).

What constitutes an offence?

An offence occurs when the offensive noise is emitted. Section 4.2.1 discusses how offensive noise is assessed. Depending on the severity of the offence, the officer may or may not wish to give a warning prior to taking action. This is not formally required by the legislation, but is considered good regulatory practice.

Contravention of a 'nominated activity' provision

If an offence has been committed, an enforcement officer can issue a penalty notice, or the council can start court proceedings, provided there is enough evidence to support the case.

A noise abatement direction could also be used to control offensive noise in these situations.

4.4 Enforcement

Enforcement options for the use of the above regulatory options include the following. More detailed information on these options is available in *Powers and Notices Guideline for Authorised Officers and Enforcement Officers - Protection of the Environment Operations Act 1997* (EPA, 2021).

Any decision an authorised officer or enforcement officer takes may be open to administrative or judicial review.

4.4.1 Penalty notices

Penalty notices are issued by enforcement officers and are often used for less serious breaches where it appears to an officer that an offence has been committed. However, given that the recipient of a penalty notice may elect to have the matter determined by the Court, an officer should have enough relevant, admissible evidence to be able to prove all elements beyond a reasonable doubt. Table 3 lists the offences for which a penalty notice may be issued and which enforcement officers may issue them. Penalty amounts payable are listed in Schedule 6 of the POEO General Regulation.

4.4.2 Official cautions

An official caution may be issued as an alternative to a penalty notice. It may be issued where an officer believes, on reasonable grounds, that a person has committed a Tier 3 offence (Section 3.1.2) and in the circumstances it is appropriate to give an official caution, having regard to the factors set out in the Attorney General's Caution Guidelines under section 19A(3) of the *Fines Act 1996*. For example an officer may consider using an official caution when the breach is minor and was not deliberately committed. The officer needs to exercise discretion based on their council's relevant guidance.

4.4.3 Prosecutions

Prosecutions are used for serious breaches or repeat offenders. Only the ARA and the EPA can initiate court proceedings instead of issuing a penalty notice for a breach of the POEO Act or the POEO Noise Control Regulation. A person issued with a penalty notice may elect to have the matter heard by the court. In that instance, the ARA or an enforcement officer may start court proceedings (s 221(3) POEO Act). Enforcement officers should refer to their council's policies on compliance and enforcement when considering when to take action. The EPA's approach to compliance and enforcement is set out in its *Compliance Policy* (EPA, 2013). Factors the EPA takes into account in deciding whether to prosecute offences are set out in its *Prosecution Guidelines* (EPA, 2013). Councils may wish to develop similar guidelines.

5. Managing noise through land-use planning

Implementing noise control strategies during the planning process is the most effective way to minimise noise impacts on communities. These strategies can manage potential land-use conflict and encourage good design, siting and construction.

This section deals with preventing noise impacts through planning both at the strategic planning level and during development assessment and approval.

5.1. Introduction

Land-use planning is the most effective and efficient way to manage potential land-use conflict by seeking to locate noisy land uses away from residential and other noise-sensitive land uses. Land-use planning occurs both at the strategic planning level (Section 5.2) and during development assessment and approval of a project (Section 5.3). Development approval processes require environmental impacts, including noise, of a development to be identified and appraised against broader social, economic and environmental considerations before the development is approved with appropriate environmental conditions.

It is important that adequate planning controls are in place to identify and manage noise-based land-use conflict issues. The potential to address noise issues retrospectively can be challenging and expensive and lead to community complaints.

Implementing noise control at a strategic planning level provides the most effective means of minimising noise impacts on communities. This is best achieved by applying the following hierarchical approach to noise control:

1. spatially separating incompatible land use through appropriate zoning to minimise noise-related land-use conflicts
2. minimising noise emissions at source through best practice selection, design, siting, construction and operation as appropriate
3. reducing noise impacts at receivers through best practice design, siting and construction.

Sustainable land-use planning and careful design and location of development offers the greatest opportunity to manage noise. Noise-generating activities and noise-sensitive areas should be separated where practicable. For example, situating commercial buildings, recreation space or similar between incompatible land uses provides a physical barrier and/or spatial separation.

The *NSW Road Noise Policy* (DECCW, 2011) and the *Rail Infrastructure Noise Guideline* (EPA, 2013), provide guidance to manage noise from new and redeveloped road and rail projects, respectively. These documents complement planning guidance provided in the *Development Near Rail Corridors and Busy Roads: Interim Guideline* (Department of Planning, 2008), which recognises the need for judicious land-use planning, architectural design and building orientation and good internal layout to achieve acceptable acoustic amenity for residential development encroaching on to existing road and rail corridors. Advice on managing noise from industrial and construction activities is provided in the *Noise Policy for Industry* (EPA, 2017) and the *Interim Construction Noise Guideline* (DECC, 2009), respectively. Advice on applying noise policies and guidelines in the context of local government responsibility is provided in Section 7.

Figure 6 shows the paths for considering noise in land-use planning.

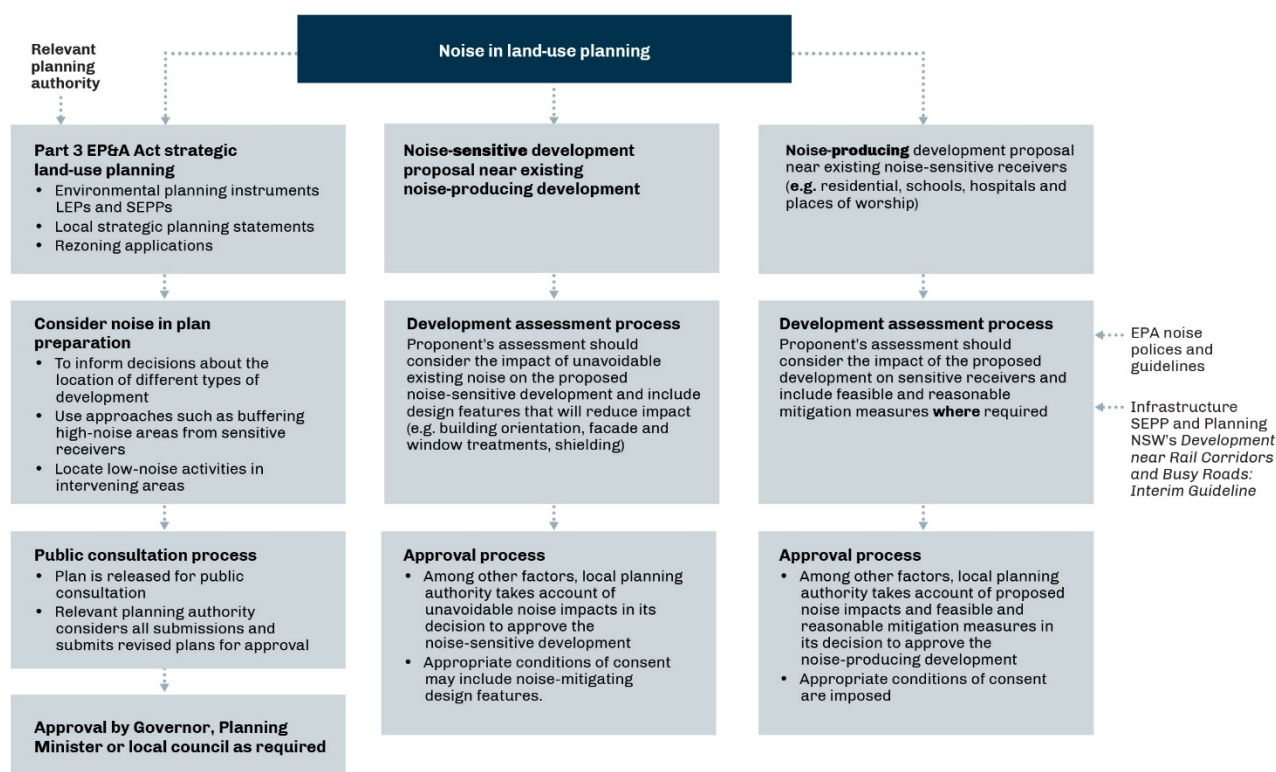


Figure 6 Considering noise in land-use planning

5.1.1. Land-use noise control: key roles

The following stakeholders have a key role to play in preventing and managing noise impacts:

- Councils have an important role as decision makers when applying land-use planning instruments.
 - Planners should consider the potential noise impacts of different land uses when developing a strategy for an area. Planning instruments or policies should be developed to provide a consistent approach to managing potential noise impacts.
 - Planners should also consider potential noise impacts during the development application (DA) phase for new or changing land uses. This applies to both noise-producing and noise-sensitive activities.
 - Environmental health and compliance officers should provide support and advice to planners and councillors in relation to existing and future noise impacts and offer advice on individual DAs where noise impacts may occur.
- Industry and developers should consider noise impacts in their development proposals and operating procedures so that noise impacts are minimised.
- Infrastructure managers and regulators, such as Transport for NSW and local government, have important roles in the design and operation of transport infrastructure.

5.2. Strategic planning

Strategic planning under Part 3 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) provides councils the opportunity to manage noise through development and implementation

of local environment plans (LEPs), local strategic planning statements and development control plans (DCPs).

When preparing environmental plans and strategies, planning authorities should consider potential noise impacts to inform their decision making on the location of different types of development and identify ways to separate sensitive land-use from noise-generating development through good design. An example is to locate activities that are low-noise generating, such as light-commercial areas and parks, in intervening areas. Appropriate separation between high-noise land uses and sensitive land uses will reduce the potential for noise-related land-use conflicts.

Examples of strategic planning initiatives to promote better noise outcomes include:

- Zone different land uses to avoid the potential for noise-based conflicts by separation and/or suitable controls in the planning instruments to ensure compatibility.
- For land affected by noisy activities, use controls in land-use planning instruments to promote compatibility between existing noise-generating activities or industrial-zoned land and new residential developments. Examples of existing land-use planning controls for new residential development adjacent to busy roads and rail are contained in the *State Environmental Planning Policy (Infrastructure) 2007, Clauses 87 and 102*. Land-use planning authorities could consider developing similar requirements for new residential areas or existing ones undergoing urban renewal with higher-density settlement patterns near major clusters of industries, such as ports.
- Consider existing industry, infrastructure or industrially zoned land when changing land-use zones to a more sensitive use or greater density of residential settlement pattern to ensure the strategic planning decision does not unduly impact on the future operation of existing land uses in the area.
- Inform members of the public moving into noise-affected areas in order to avoid unrealistic expectations of noise amenity in affected areas (see Sections 5.2.6 and 10).

5.2.1. State environment planning policies

State environment planning policies (SEPPs) are made by the Governor for the purpose of environmental planning by the state and usually only address matters of state, regional or district environmental planning significance. Local councils have a role in their development by providing input at any public consultation phase and are thereafter required to implement the SEPPs in their area. The following SEPPs include special planning provisions for noise.

State Environmental Planning Policy (Infrastructure) 2007

The *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across the State. The development of higher-density residential land near major public transport nodes can result in land-use conflict. The Infrastructure SEPP requires noise-sensitive developments on land in, or adjacent to, transport infrastructure corridors to consider noise in their design.

The Infrastructure SEPP provides (cll 87, 102) that a consent authority must not grant consent to residential accommodation in, or adjacent to, a rail corridor or busy road (more than 20,000 vehicles a day) that the consent authority considers likely to be adversely affected by rail or road noise or vibration unless it is satisfied that appropriate measures will be taken to ensure the following noise levels are not exceeded:

- in any bedroom in the building – L_{Aeq} 35dB(A) at any time between 10pm and 7am
- anywhere else in the building (other than a garage, kitchen, bathroom or hallway) – L_{Aeq} 40dB(A) at any time.

The *Development near Rail Corridors and Busy Roads: Interim Guideline* (DoP 2008) provides guidance for the planning, design and assessment of development in or adjacent to rail corridors

and busy roads to support the Infrastructure SEPP. While the provisions in Infrastructure SEPP apply for busy roads they may also be used as a guide where noise impacts remain high for roads with lower traffic volumes.

State Environmental Planning Policy No. 65: Design Quality of Residential Apartment Development

The *State Environmental Planning Policy No. 65: Design Quality of Residential Apartment Development* aims to improve the design quality of residential apartment development in NSW. In determining a DA for residential apartments, consent authorities must take into account the design quality of the development when evaluated in accordance with the design quality principles included in Schedule 1 of this SEPP. Principle 6 relates to achieving good amenity both internally and externally for residents and neighbours and this includes considering acoustic privacy.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

The *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* aims to provide streamlined assessment processes for developments that comply with specified development standards. In some circumstances, a development may be exempt from the requirement for any planning approval or only require assessment under Part 5 of the EP&A Act. In other cases, consent may be obtained through a more streamlined process where a complying development certificate is issued by the council or a private certifier if the development is of a specified kind and meets the specified standards. Examples of exempt and complying developments that include noise development standards are:

- exempt domestic air conditioning units if, among other things, the unit is
 - designed to operate at a noise level that does not exceed 5dB(A) above background at any property boundary during the day (8am to 10pm Saturday, Sunday and public holidays and 7am to 10pm any other day); and,
 - not audible in habitable rooms of adjoining residences during the night (during periods not defined as day); and,
 - greater than 450mm from the boundary and less than 1.8m above the existing ground level
- exempt heat pump water heaters if, among other things, the unit is
 - designed to operate at a noise level that does not exceed 5dB(A) above background at any property boundary during the day (see above); and,
 - not audible in habitable rooms of adjoining residences during the night (see above)
- complying pools and spas if, among other things, the pump is housed in a soundproof enclosure
- complying rainwater tanks if, among other things, the pump is housed in a soundproof enclosure
- the erection of a complying new dwelling house or an addition to a dwelling house on land in the 20–25 Australian Noise Exposure Forecast contours for aircraft noise complying with all other requirements of the SEPP is complying development,
 - where constructed in accordance with AS 2021–2015, Acoustics: Aircraft Noise Intrusion – Building Siting and Construction.

Under this SEPP, complying development certificates for the listed uses and activities have the following conditions:

- housing (Schedules 6–7) – construction may only be carried out between 7am and 5pm on Monday to Saturday and at no time on Sundays or public holidays

- commercial and industrial (Schedule 8) – construction may only be carried out between 7am and 6pm Monday to Friday and between 8am and 1pm on Saturdays and at no time on Sundays or public holidays. Work outside these hours is permitted if the noise
 - is in accordance with the *Interim Construction Noise Guideline* (DECC, 2009), that is no louder than 5dB above the rating background level at any adjoining residence and no louder than the noise management levels in Table 3 of that guideline
 - relates to the approved delivery of materials (approved by the NSW Police or other relevant authority) or in an emergency to avoid the loss of lives or property or to prevent environmental harm.
- demolition works (Schedule 9) – works may only be carried out between 7am and 5pm on Monday to Saturday and at no time on Sundays or public holidays
- fire safety code works (Schedule 10) – works may only be carried out between 7am and 6pm Monday to Friday and between 8am and 1pm on Saturdays and at no time on Sundays or public holidays.

5.2.2. Regional strategic plans

A regional strategic plan (RSP) is the basis for strategic planning in a region. An RSP consists of a vision statement as well as objectives, strategies and actions designed to achieve the objectives. RSPs provide consistency and guidance for local strategic planning statements. RSPs must be given effect where planning proposals are made for a local environment plan (see 5.2.3). RSPs are developed with regard among others to SEPPs, infrastructure strategies and other strategic plans.

Currently there are 10 RSPs that cover NSW: Central Coast, Central West and Orana, Far West, Hunter, Illawarra-Shoalhaven, Greater Sydney, New England North West, North Coast, Riverina-Murray, and South East and Tablelands.

5.2.3. Local environment plans

Local environment plans (LEPs) guide planning decisions in local government areas. Through zoning, application of land uses, development standards and other controls, LEPs enable councils to manage the way land is used, including noise management considerations (such as separating noise-sensitive and noise-making land uses) subject to any inconsistent provisions of a SEPP.

5.2.4. Local strategic planning statements

Under the EP&A Act each council is required to prepare a local strategic planning statement (LSPS)⁵ to set out vision for land use in the local area. Councils should consider noise, among other environmental considerations, when developing their LSPSs.

A council's LSPS is required to include or identify:

- (a) the basis for strategic planning in the area, having regard to economic, social and environmental matters,
- (b) the planning priorities for the area that are consistent with any strategic plan applying to the area and (subject to any such strategic plan) any applicable community strategic plan under section 402 of the *Local Government Act 1993*,

⁵ In March 2018, amendments to the EP&A Act introduced new requirements for each council to prepare and make an LSPS. Each Greater Sydney Region council was required to have its first LSPS in place by 1 December 2019. For each regional council the deadline was 1 July 2020. LSPS are required to be reviewed every seven years as a minimum.

- (c) the actions required for achieving those planning priorities,
- (d) the basis on which the council is to monitor and report on the implementation of those actions.

LSPSs shape how development controls in LEPs evolve to deliver and meet community needs. Examples of priorities in current regional and district plans that could warrant a noise consideration in council LSPSs include:

- protecting regionally significant transport corridors
- protecting agricultural land from residential encroachment
- identifying important agricultural land that is suitable for agricultural enterprises and protect it from incompatible development
- supporting new and expanded industrial activity
- supporting industrial land development in local centres for ancillary service industries to service the agricultural and mining sectors and protect industrial areas from incompatible land use
- locating future rural residential development appropriately
- promoting a region with communities that are strong, healthy and well-connected
- maintaining and protecting environmental, social and economic values in rural areas
- ensuring provision of more housing will occur concurrently with the creation of liveable neighbourhoods close to employment opportunities, public transport, walking and cycling options for diverse, inclusive multi-generational and cohesive communities.

5.2.5. Development control plans

Development control plans (DCPs) provide detailed planning and design guidelines to support the planning controls in LEPs. They can be used to provide guidance for:

- areas where existing noise levels are already high (such as near an existing noisy industry, a busy road or a rail line)
- acceptable internal and external noise criteria for noise-sensitive developments (such as setting acceptable noise levels for inside residential dwellings)
- acceptable performance criteria for noise-sensitive developments (such as specifying setbacks, boundary walls, solid balconies and window glazing)
- activities that are likely to be noisy (such as requiring environmental management plans that address noise management)
- acceptable performance criteria for noisy activities (such as the location of the proposed activity)
- circumstances where an acoustic report may be required.

An example of a noise related provision in a DCP is in Chapter 13 of the *Fairfield Citywide DCP 2013* which addresses the impact that child care centres have on the adjoining community (see box below).

Extract from the Fairfield Citywide DCP 2013 (Fairfield City Council 2013): Child Care Centres

13.1.3 Location Requirements

Objectives ...

- (b) To minimise the impact of child care centres on residential amenity in terms of traffic generation and movement, traffic noise and noise from children by encouraging an even distribution of small centres in residential areas ...

13.1.8 Visual and Acoustic Privacy ...

Objectives

- (a) To minimise noise generation from the centre and intrusion of noise from external sources, and
- (b) To ensure the privacy of surrounding premises is maintained and protected from overlooking.

Controls

- (a) Child care centres must achieve an ambient noise level within the centre not exceeding 40dB(A) within learning areas. Designated sleeping areas are to achieve a level not exceeding 35dB(A) within the room. Designs should aim to locate sleep rooms and play areas away from the principal noise sources. Where necessary the impact of noise must be reduced by solid fencing and double glazing.
- (b) Centres must be carefully designed so that noise is kept to a minimum and does not create an “Offensive Noise” as defined by the Protection of the Environment Operations Act 1997. Factors to consider, and which council may require to be addressed include:
 - orienting the building having regard to impacts on neighbours. This may include locating play areas away from neighbouring bedrooms;
 - providing double-glazing of windows where necessary;
 - erection of noise barriers, which may include fencing types that minimise noise transmission;
 - insulation of external noise sources such as air conditioners;
 - placing restrictions on the number of children to be outdoors at any one time.
- (c) All applications for Type B & C, child care centres shall be accompanied by an ‘acoustic’ report, prepared by a suitably qualified person addressing the above issues to council’s satisfaction.
- (d) Overlooking of adjoining principal living areas and private open spaces must be kept to a minimum. This may be done by a number of means including appropriate building layout, landscaping or screening.

5.2.6. Notifying potential noise impacts

Planning certificates under s. 10.7 of the EP&A Act are used to notify people of certain matters, controls and policies that may affect land to which the certificate relates. For example, a certificate is required to identify the DCP, LEPs and SEPPs that apply to the land.

Where land is likely to be affected by nearby noisy activity, potential purchasers of the affected property can request a planning certificate from the relevant council for a fee.

As well as including answers to the list of mandatory matters, a planning certificate can, at the council’s discretion (s10.7(5)) include advice on such other relevant matters affecting the land of which the council is aware.

For example, a council could inform the potential buyer about the existing noise environment of the property. Some councils have used s.10.7(5) certificates to notify that land is affected by noise from aircraft or from port activities. It allows a purchaser of the land to make a decision on the land’s suitability for the intended purpose, taking into account personal sensitivities.

The certificate is not itself a regulatory tool but a means of notifying a potential land owner of relevant matters affecting the land.

The mandatory information is required to be annexed to sales contracts under the *Conveyancing Act 1919*, but the additional information that may be included under section 10.7(5) certificates is not.

Recording information on planning certificates to notify potential environmental impacts needs careful consideration and should only be contemplated after all feasible and reasonable noise mitigation measures have been applied to the source of the noise. There is also a need to manage potential land-use conflicts. Furthermore, if a council chooses to include certain kinds of information about noise in certificates, it should ensure that a consistent approach is taken across all relevant properties so as to ensure recipients do not rely on the lack of any information on any particular certificate as a representation that no such noise impact exists.

Other information and education programs could be used to encourage owners and occupiers of land to consider their neighbours’ sensitivities to noise (see Section 10).

5.3. Development assessment and approval

Under the EP&A Act and its interaction with the POEO Act, there are many different assessment pathways for new development. The pathway will be determined by the type of development. Councils are the consent authority for local development including integrated local development. Figure 7 provides a summary of the primary pathways for development relevant to councils. The exempt and complying development pathways are discussed in s. 5.2.1 in terms of noise considerations.

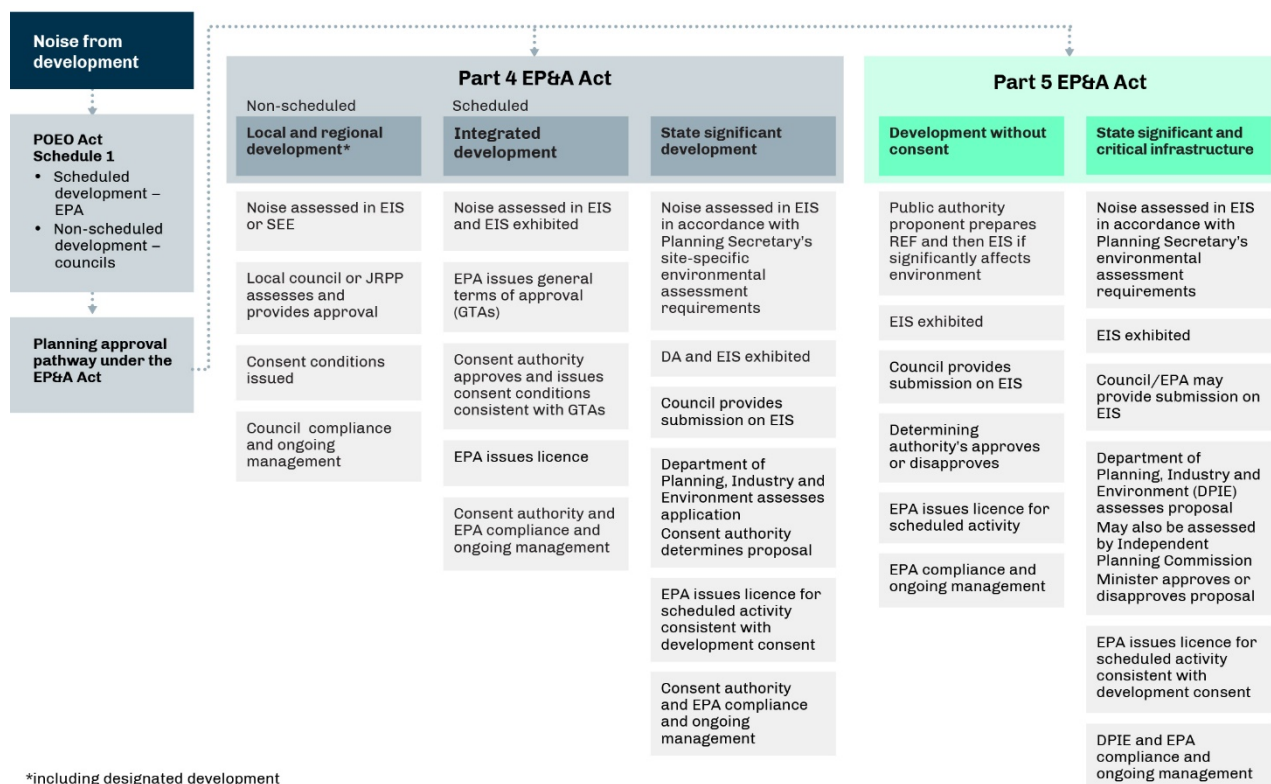


Figure 7 Overview of NSW primary planning assessment pathways for noise

5.3.1. Noise control at each stage of land development

There are generally three major stages of development and planning where potential noise impacts should be considered and managed.

The initial planning stage

A green field (undeveloped) site offers the greatest management flexibility in zoning noisy development and noise-sensitive land uses. Where there is potential for land-use conflict, the site should be zoned appropriately to minimise potential impacts. Clear goals for new noisy (industrial) activity can be developed that provide an equitable share of noise while protecting the amenity of nearby planned or existing residential areas. Advice is provided in the EPA's *Noise Policy for Industry* (2017). Councils may require specialist acoustic advice. Part 3 provides more information.

The subdivision stage

There may be opportunities to design the internal subdivision layout to minimise noise impacts by:

- using the natural topography to prevent line of sight between the noise source and residential areas and thus block direct spreading of noise

- locating activities that are not noise sensitive, such as commercial areas and parkland, between residences and the noise source
- orienting dwellings so that living areas face away from noise sources
- determining which areas will be noise affected and ensuring building and subdivision design needs to incorporate noise mitigation.

The building design stage

Noise-control measures can be applied to designing noise-sensitive rooms within buildings to achieve acceptable internal noise levels by:

- locating living areas away from the area most exposed to a noise source
- using windows with high acoustic rating, using quality walls/partitions and doors and ensuring that windows and doors have adequate seals
- carefully selecting the location for installation of noise sources, such as air conditioners and water heaters.

Site layouts for premises with noisy activities should consider using building structures to shield noisy operations and should locate areas of access to the site or buildings away from noise-sensitive areas (see *Development Near Rail Corridors and Busy Roads: Interim Guideline* (DoP, 2008b)).

5.3.2. Considering noise in the DA process

As with many environmental considerations, noise issues are best addressed early in the DA process. The steps below summarise the process and give examples of circumstances where noise issues should be considered.

Pre-application/lodgement opportunities

There are various non-statutory and statutory opportunities for councils to identify noise issues early in the DA process. For example, many councils offer pre-DA meetings to discuss assessment requirements with proponents prior to lodgement of a DA. These meetings provide an opportunity for councils to discuss legislative, policy and local requirements related to noise issues. The EP&A Act includes opportunities, and obligations, for councils to be involved in the preparation of environmental assessment requirements for major projects and DAs. Environmental health officers and statutory planners should work together to ensure that these opportunities are used to ensure environmental issues, including noise, are addressed early in the process.

Assessment/determination process

When a council is determining a DA, or being consulted on a project application, noise issues need to be considered. Generally, it is relatively easy to identify a potentially noisy development and, conversely, a development that may be sensitive to noise. Typically, noise-sensitive developments include schools, residential developments, hospitals, places of worship and some community centres. The next step is to consider the location of the proposed development.

A noise impact assessment is warranted when a noise-producing development is proposed near noise-sensitive areas or, conversely, where a noise-sensitive development is proposed in a noisy area. The complexity of the noise impact assessment and the council's capacity to critically review the assessment will vary, but the first critical step will always be to identify the potential for noise-related land-use conflicts. Councils need to determine, on a case-by-case basis, whether a noise impact assessment should be reviewed internally or whether external experts should be commissioned to review it.

Conditions of approval can be used to:

- limit the noise emitted by a proposed noise-producing development
- ensure a proposed noise-sensitive development is designed in a way that protects internal noise amenity
- require appropriate noise mitigation measures
- require ongoing monitoring and/or measurement of noise.

Post assessment/determination process

Often project approvals and development consents include commitments and conditions relating to noise performance. Usually, physical examination can establish whether these requirements are being met. For example, a requirement for a noise wall at a particular location and height can be verified visually. In other circumstances, noise performance requirements may be expressed as 'noise limits', where noise measurements are required. Councils should consider whether they should measure compliance or whether that should be the proponent's responsibility.

Changing land uses

Changing land-use patterns in an area can sometimes lead to new noise impacts or can exacerbate existing noise impacts. This can occur in both rural and urban areas owing to:

- new residential development being located close to existing noisy activities
- new or intensified noisy activities being located close to existing residential areas
- changing expectations of residents about the amenity of a local area.

Common noisy activities include commercial or industrial premises, main roads, rail lines and some entertainment facilities.

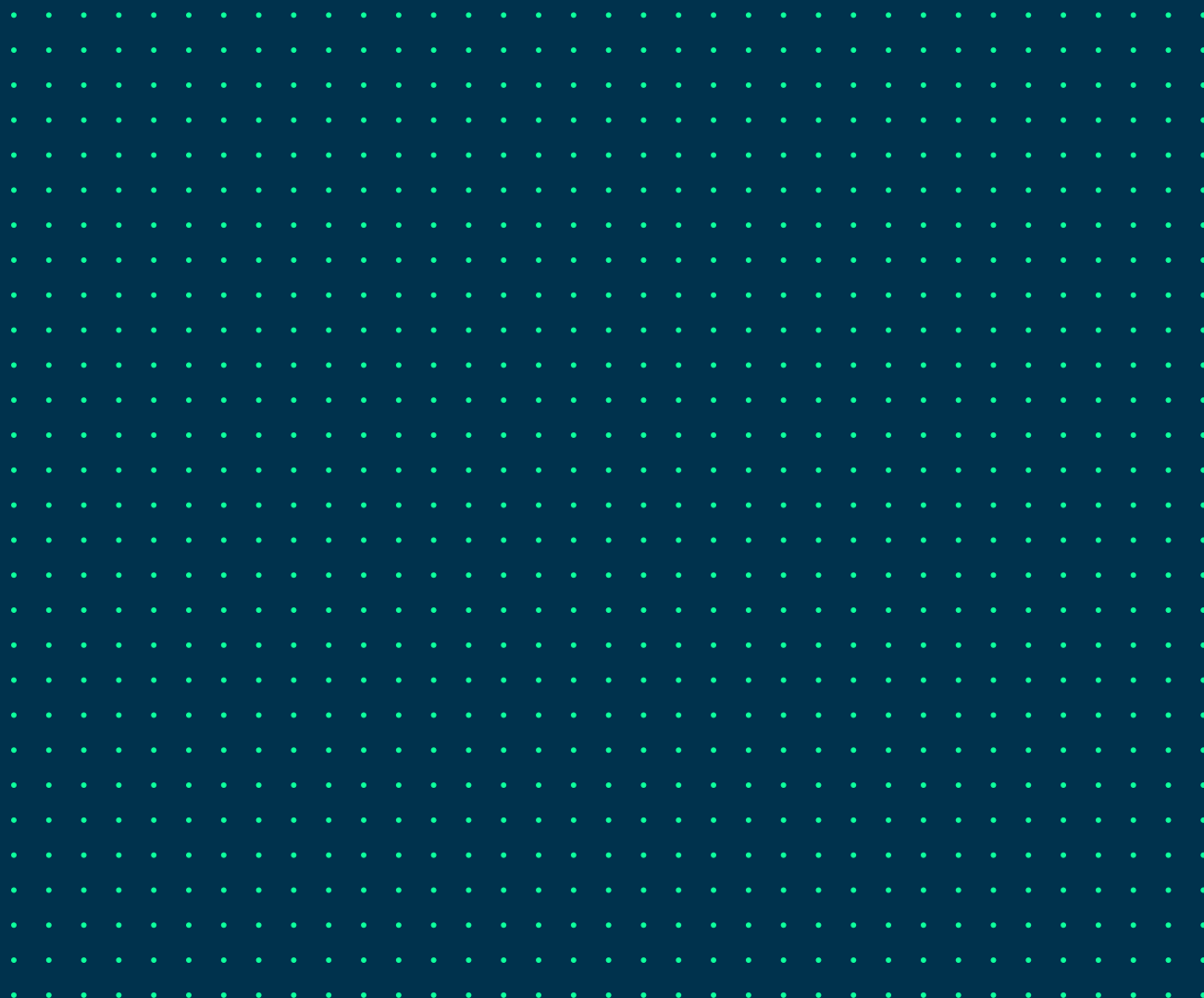
Existing use rights

The POEO Act does not give priority to existing uses. This means that where, for example, a farm is encroached on by residential development and residents moving in object to the farm noise, the farm owners may need to reduce the farm noise even though the farm predated the residential development.

The EP&A Act upholds the integrity of an existing consent condition for a land-use activity, such as a farm, without regard to complaints about the activity's noise by residents moving into the area. This is provided the activity adheres to its consent condition.

Part 3

Technical and supporting information



This part of the Noise Guide for Local Government provides technical support and general information for local council officers who regulate noise.

In this part:

Section 6 Fundamentals of Acoustics - provides an overview of the science of acoustics and noise management principles

Section 7 Assessing an Acoustic Report - provides guidance on assessing noise reports

Section 8 Non-regulatory Approaches - provides guidance on non-regulatory approaches to managing noise

Section 9 Noise Guidance - provides an overview of policies and guidelines that may assist council in managing noise

6. Fundamentals of acoustics

The purpose of this section is to describe basic acoustics concepts. It is not a substitute for formal education and training and does not assume any specialist knowledge.

6.1 Introduction

The section is intended to provide an introduction into environmental acoustics. Further information can be found by searching online. Tertiary education courses are available for those who would like to develop specialist knowledge.

However, acoustics is a complex topic and it is important to recognise when expert advice may be needed. The Australian Acoustical Society and Association of Australasian Acoustical Consultants maintain a database of specialist acoustic consultants and companies. See the References (in Section 10) for further resources.

6.2 What is acoustics, sound and noise?

Acoustics is the science of sound.

Sound can be described as changes in air pressure that can be heard (and measured by a sound level meter). Sound can include natural sources such as wind, running water and birdsong; or artificial noise such as amplified music, vehicles and machinery. Noise simply refers to any unwanted sound.

Environmental noise is a broad term that is taken to mean noise present outside. It can be made by many different things including road and rail transportation, mechanical plant, birds, insects and other animals, the wind in the trees or water.

How someone reacts to noise can vary from one person to another and can be influenced by a range of factors including:

- an individual's hearing sensitivity;
- how the receiver feels about the person or thing making the sound (if the noise maker is perceived to be 'unreasonable' or 'inconsiderate' in their behaviour);
- the characteristics of the sound, for example how loud it is or what it sounds like;
- the context in which it is heard, for example, where the sound is made and received, when the sound occurs and what other sounds are present.

A person's reaction to noise can also change over time and in different circumstances, for example, if they are tired.

Annoyance may be caused by both temporary or continuous noise sources. In environmental noise, there are often many sounds occurring at any one time and isolating the sound of interest among all the other sounds can be difficult. Therefore, it can be challenging to identify, measure and reduce noise.

Sound and noise may be described and assessed using technical language, which can be difficult for people unfamiliar with the terms to understand. This section of the guide seeks to explain some of the more common technical terms used in acoustics.

6.3 The physics of sound

Acoustics is a physical science. The physical aspects of acoustics then inform how we perceive sound. The perception of sound is described in Section 6.4.

The concepts described in this section are taken from and explained in various Australian and International Standards⁶.

6.3.1 Sound pressure waves

A source of sound creates small waves of changes in air pressure. These pressure waves are known as sound waves when they are in the audible frequency range (see more about the frequency of sound in Section 6.3.3).

Sound pressure waves travel through the air, from the source to the ear. The ear detects these small changes in pressure and interprets them as sound.

6.3.2 The decibel scale

One of the most common ways to measure sound is on a decibel (dB) scale.

The decibel is a logarithmic ratio of atmospheric pressure. Although sound pressure can be measured in pascals, it is generally expressed as a sound pressure level (L_p , described below) in decibels. For sound pressure levels, it is the sound pressure of a sound relative to a reference pressure as follows:

Equation 6-1 Calculation of a sound pressure level

$$\text{Sound Pressure Level } (L_p) \text{ in decibels (dB)} = 20 \log_{10} \left(\frac{\text{sound pressure}}{\text{reference sound pressure}} \right)$$

Pressure is measured in pascals (Pa). The reference sound pressure is based on the smallest sound pressure that a healthy young adult can hear: two micro pascals (0.000002 Pa).

Sound pressure level is often written as SPL or L_p . So, for example, for a sound pressure level of 50 dB, the expression would look like:

Equation 6-2 Calculation of 50 dB sound pressure level

$$L_p \text{ 50 dB} = 20 \log_{10} \left(\frac{0.00632 \text{ Pa}}{0.000002 \text{ Pa}} \right)$$

The decibel can also be used for sound power levels by using a reference sound power of 1 pico watt (0.000000000001 W) as sound power is measured in watts. The sound power level is often written as SWL or L_w . For example, a sound source with a sound power level of 100 dB is:

Equation 6-3 Calculation of 100 dB sound power level

$$L_w \text{ 100 dB} = 20 \log_{10} \left(\frac{3.16228^{-10} \text{ W}}{1^{-12} \text{ W}} \right)$$

6.3.3 Frequency of sound

The frequency of a sound is the number of times per second that a sound pressure wave repeats itself. It is expressed in Hertz (Hz). The lower the frequency, the fewer wave cycles per second.

⁶ Search the SAI Global website at: <https://infostore.saiglobal.com/en-au/>

The human ear can generally hear a range of frequencies from around 20 Hz up to around 20,000 Hz. As a person ages the highest frequency that can be heard decreases.

6.3.4 Sound pressure and sound power

As discussed in Section 6.3.2, sound can be expressed as a sound pressure level (L_p) or a sound power level (L_w).

In general terms, the sound pressure is the fluctuation in air pressure, from the steady atmospheric pressure, created by sound. The sound pressure level is the sound pressure expressed on a decibel scale. Where a sound pressure level is given, it must always be quoted at a distance.

The sound power is the sound energy radiated per unit time (in watts). The sound power level is the sound power expressed on a decibel scale.

An analogy to describe the difference between L_p and L_w would be to consider a light bulb with a power of 100 watts. When standing far from the bulb the light will be dull, and when standing close, the light will be bright. However, no matter where a person stands, the power of the bulb will always be 100 watts. In this example, the sound power level would be equivalent to the wattage of the light bulb, whilst the sound pressure level would be the amount of light perceived relative to the location of the bulb.

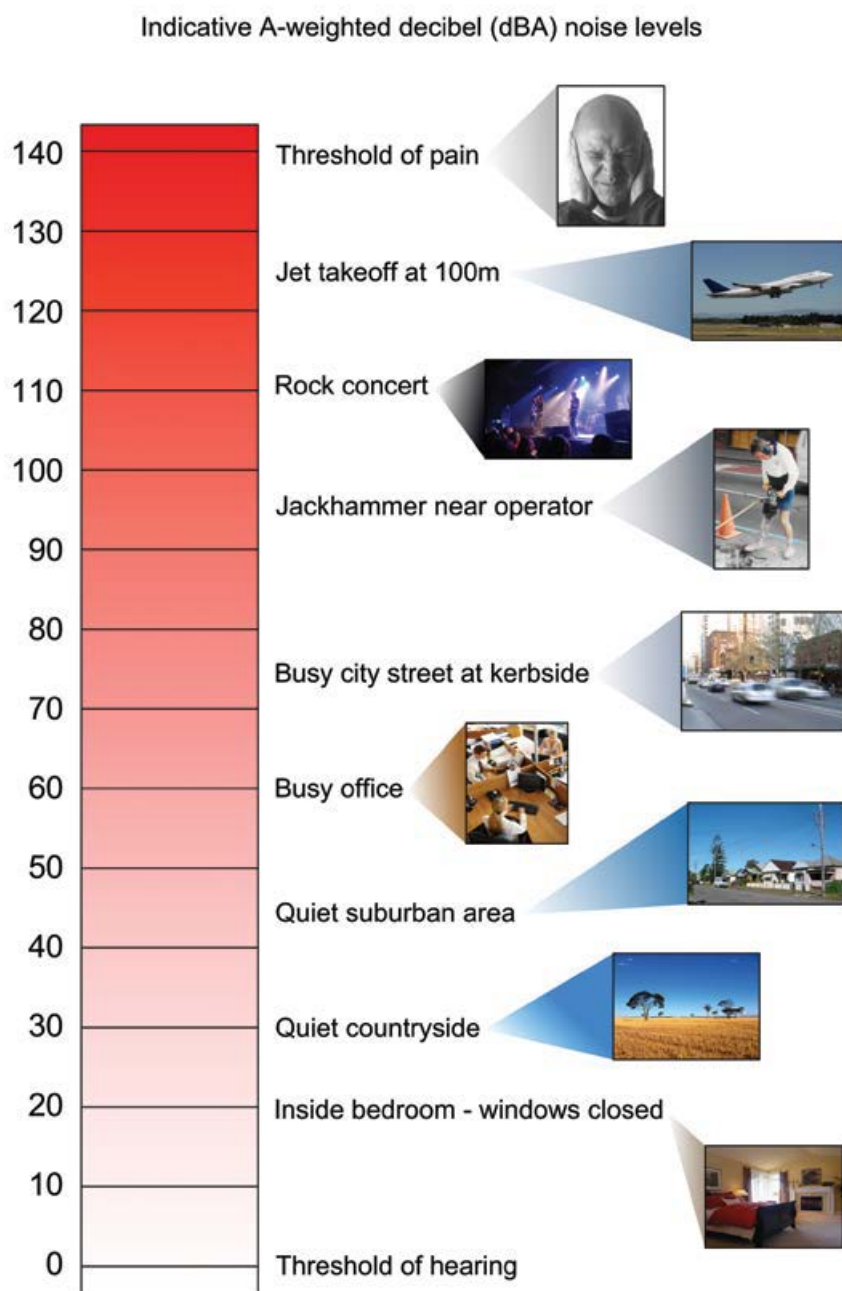
When describing how much sound energy a source of sound has, it can either be described as sound pressure level at a certain distance, or as a certain sound power level (without a distance). Sound power level is a good way to compare noise sources and is helpful when calculating noise levels.

6.4 Perception of sound

6.4.1 Noise levels

Examples of noise sources and their indicative noise levels are set out in Figure 6-1.

Figure 6-1 Examples of common noise levels



6.4.2 Changes in noise level

The changes in pressure that create sound are very small compared to the pressure of the air around us and pressure created by even the lightest breeze.

The human ear perceives sound logarithmically. This means that, for example, it takes 10 times the (sound) *energy* for the ear to *perceive* a doubling of loudness. This feature of the human ear and the range of pressures that can be heard means that it is necessary to use a unit (the 'decibel'), which deals with this very large range in a simple way.

When assessing a change in noise level, it is useful to know how the difference between two noise levels might be *perceived*. The following rules of thumb are helpful for assessing the subjective changes in noise level of a steady state (constant) noise source in the mid-frequency.

- A change of 2 dB or less is not typically noticeable
- A change of 3 dB is typically just noticeable change
- A change of 5 dB is clearly noticeable change
- A change of 10 dB is perceived as a double or half as loud
- A change of 20 dB is much louder or quieter.

Note that an increase of 3 dB requires twice the energy; an increase of 5 dB three times the energy; and an increase of 10 dB ten times the energy (see Section 6.5).

In addition to the way people perceive changes in sound, people are more sensitive to noise at different frequencies. The audible frequency range can be generally divided up into three broad ranges:

- Low frequency – typically 20 to 200 Hz
- Medium (or mid-) frequency – typically 200 to 2,000 Hz
- High frequency – 2,000 to 20,000 Hz

People are less sensitive at very low and very high frequencies. When measuring noise, this is reflected by using frequency weightings (see Section 6.6.3).

In some circumstances low frequency sound can be felt as well as heard, for example near speaker arrays in live music concerts or close to very noisy machinery. In certain circumstances, this can be interpreted as sound (or noise).

6.4.3 Character of sound

Another important consideration is the character of the noise source. Depending on the character of the noise, it can be perceived as more annoying than a continuous type sound, i.e. one that does not change much over a time period, such as steady flowing road traffic noise on a busy road. Examples include:

- Tonal noise. When noise contains a prominent tone or frequency, it is described as “tonal”. An example of tonal noise would be cicadas singing, or an angle grinder cutting metal. Tonal noise occurs across all frequency bands, and are often described as drones, whines, squeals or hums.
- Low frequency noise. When noise contains a lot of very low pitch energy. An example of low frequency noise is the rumble of large machinery in the far distance, or a coal handling plant. The further a person gets from a noise source, the received noise has increased low frequency content because atmospheric absorption removes the higher and mid frequencies at a greater rate than at lower frequencies.
- Impulsive noise. This is where noise contains short, sharp events that often repeat, such as using a jackhammer on concrete, a dog barking, gunshots, percussive pile driving or hammering on metal.
- Intermittent noise. When the noise level or loudness changes regularly by a noticeable amount. An example of intermittent noise is a leaf blower being revved up and down, or cars passing occasionally on a quiet road or refrigeration plant cycling on and off.

Some of these characteristics may sometimes require detailed consideration and assessment to account for the likelihood of greater annoyance. For example, by applying Fact Sheet C of the Noise Policy for Industry. Section 9 explains more about the role of the Noise Policy for Industry and other noise policies and guidelines.

6.5 Predicting, calculating or modelling noise

6.5.1 Adding and subtracting sound levels

The decibel scale is logarithmic. This means that 35 dB plus 35 dB does not equal 70 dB. Logarithmic addition means that for two or more noise levels, if the difference between the highest and the next highest noise level is:

- 0 to 1 dB: add 3 dB to the higher level to give the total noise level
- 2 to 3 dB: add 2 dB to the higher level to give the total noise level
- 4 to 9 dB: add 1 dB to the higher level to give the total noise level
- 10 dB and over: the noise level is unchanged (i.e. the higher level is the total level).

So, 35 dB plus 35 dB equals 38 dB, and 33 dB plus 35 dB equals 37 dB.

When subtracting one noise level from another, consider what the noise level would be with one of the noise sources turned off.

Taking an example of two noise sources A and B, if a measurement is carried out when sources A and B are operating, followed by a measurement with only source B operating (i.e. source A off), then the difference between the measurements can be used to determine the noise level of source A as described in Table 6-1.

Table 6-1 Difference in noise level from source A and source B

Reduction in noise level (A+B)-A, dB	Noise level of source A
1	Measurement of source A plus B minus 7 dB
2	Measurement of source A plus B minus 4 dB
3	Measurement of source A plus B minus 3 dB
4 to 5	Measurement of source A plus B minus 2 dB
6 to 9	Measurement of source A plus B minus 1 dB
10 or more (noise level is 10 dB higher with Source A on than off)	Source A is the noise level measured with source A and B on.

Note: this method applies adding and subtracting average noise levels (L_{eq}) and not percentile (statistical) noise levels (for example L_{90}). Section 6.6.2 explains the meaning of L_{eq} and statistical noise levels.

6.5.2 Propagation of noise in the environment

The loudness of a sound at the source and at a receiver distant from the source depends on several factors, including:

- Distance. Noise decreases as it moves away from a source because the sound waves spread out and energy dissipates.
- Ground effects. Noise is absorbed or reflected by the ground. Surfaces such as grass and foliage absorb some noise, but hard surfaces such as concrete and water reflect sound.
- Atmospheric absorption. Some noise is absorbed by the air. The further from the source, the more noise the air absorbs.
- Weather. Different types of weather can either reduce or increase the amount of noise received. Wind speed and direction, humidity, temperature and the temperature gradient in the atmosphere (when temperature changes with increased height above ground) – all affect how noise travels through the air.

- Barriers. Noise walls, buildings, natural landform such as a hill or mountain can reduce noise levels. Trees and vegetation are not effective as noise barriers but the sound of wind in vegetation can 'mask' other sounds.
- Directivity. Some sources can be directional, where noise emissions are not equal in all directions and can be focused in one place. An example would be a directional loudspeaker.
- Reflection. Reflective surfaces (other than the ground), such as a wall, the side of a building can increase the amount of noise.

The way these factors interact to modify the received noise levels can be complex. A number of calculation methods have been developed to account for these factors. In complex situations, including those involving greater distances, multiple noise sources and complex topography, a detailed calculation may be necessary using well-established noise modelling algorithms; for example, ISO 9613-2:1996 *Acoustics- Attenuation of sound during propagation outdoors – Part 2: General method of calculation*.

However, in less complex situations, such as calculating noise over a relatively short distance, it may not be necessary to take account of all of these factors when calculating noise levels.

6.5.3 Simple noise calculations

Where calculations are needed to provide an indicative noise level the following method can be used.

A sound pressure level (L_p) will decrease by 6 dB for every doubling of distance from a free-field point source; whereas it will decrease by 3 dB from a (free-field) line source. An example of a point source is a 'fixed' noise source such as an air conditioning unit; and a line source is a 'long' noise source such as transport corridors. 'Free-field' broadly means where sound is measured or predicted in the absence of any reflections (other than the ground).

The following equation can be used to calculate a sound pressure level at another distance:

Equation 6-4 Point and line source calculations of a sound pressure level

$$L_{p_x} = L_{p_y} - 20 \log(d_x/d_y) \text{ for a point source}$$

$$L_{p_x} = L_{p_y} - 10 \log(d_x/d_y) \text{ for a line source}$$

where:

$$L_{p_x} = L_p \text{ at distance } x \text{ from the source in metres (predicted)}$$

$$L_{p_y} = L_p \text{ at distance } y \text{ from the source in metres (measured)}$$

$$d_x = \text{distance in metres to location } x \text{ from the source}$$

$$d_y = \text{distance in metres to location } y \text{ from the source}$$

Another way to calculate the sound pressure level at a receiver is when the sound power level of the source is known. This calculation only considers distance to provide an estimate of the noise from a source at receiver as follows:

Equation 6-5 Calculation of a sound pressure level from a sound power level

$$L_p = L_w - 20 \log_{10}(r) - 8$$

Where:

$$L_p \text{ is the sound pressure level at the receiver in dB}$$

$$L_w \text{ is the sound power level of the source in dB}$$

$$r \text{ is the distance between the source and the receiver.}$$

However, this calculation assumes that the source is relatively close to the ground, that is, it is not an elevated source such as a wind turbine which would require specialist calculation considerations. It does not include consideration of barriers, ground effects, weather or any other

factors. This method will only be accurate if the receiver is close to the source and other factors, such as ground effect or barriers have little or no effect.

In more complex situations the following calculation which considers the range of factors in Section 6.5.2 may be required:

Equation 6-6 Calculation of a sound pressure level including numerous factors

$$L_p = L_w - A_{\text{distance}} - A_{\text{atmospheric}} - A_{\text{ground}} - A_{\text{barrier}} - A_{\text{weather}} - A_{\text{reflection}} - A_{\text{directivity}}$$

Where each 'A' in this equation represents an aspect that either reduces or enhances the sound and the outcome is a sound pressure level at the receiver. Because it can be time consuming and difficult to calculate each term by hand using a noise model can be advantageous.

6.5.4 Noise models

The use of computer noise models may be necessary to calculate noise levels in complex situations where there is a need to predict noise levels at numerous noise-sensitive receivers from numerous noise sources.

Several software packages are available which can implement recognised calculation algorithms such as including ISO 9613 and CONCAWE. There are many different calculation methods and each of these (and noise model software packages) have their advantages and disadvantages for particular circumstances, so it is important to understand and use a method that is appropriate to the circumstances.

Information typically input into a noise model includes:

- location and height of the receivers
- intervening barriers such as walls, buildings and natural features
- different types of ground coverings
- noise sources information including location, height above ground, sound power levels and directivities
- weather conditions
- ground topography

The accuracy of a model depends on accurate input data.

Noise models can be used to either calculate noise levels at a specific location, or at a grid of receivers over an area which may be used to create noise contour maps that illustrate how noise spreads out over an area. This is useful to show how noise affects a larger area, not just at specific points.

6.6 Measurement of noise

6.6.1 Using a sound level meter to measure noise

Measurement procedures and descriptors are set out in the sections below. These are to be taken into consideration prior to conducting noise measurements. Sound level meters can take the form of handheld devices which are used for the attended measurements described below, or noise loggers which are used for long term assessment of noise.

Measurements for regulatory purposes should be carried out by a competent person and in accordance with best-practice, for example, consistent with Australian Standard (AS) 1055: 2018 *Acoustics – Description and measurement of environmental noise*.

6.6.2 Sound level descriptors

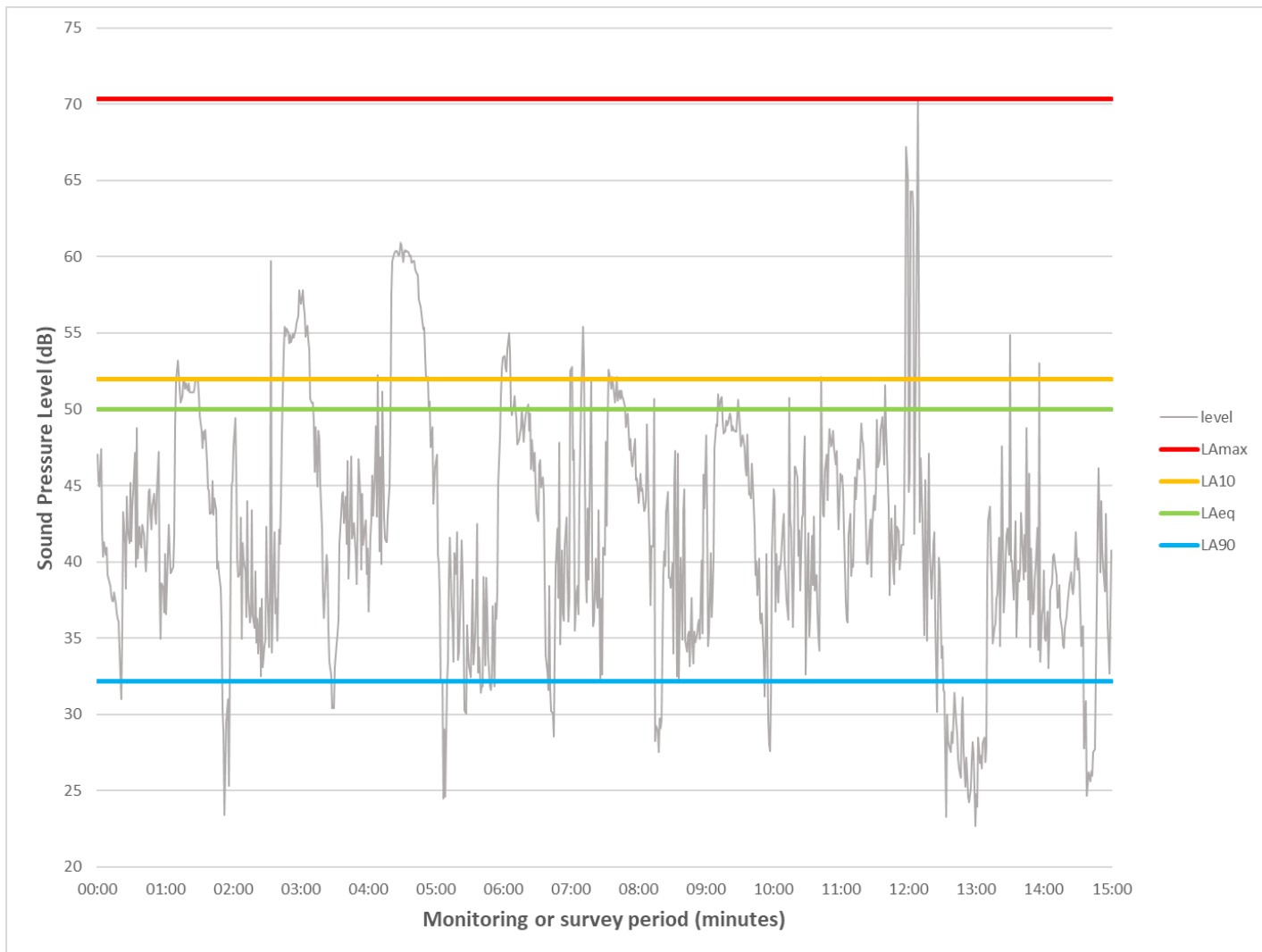
Sound levels change over time. Because of this, different methods are needed to measure and describe time-varying sound. The descriptors introduced below are commonly used for environmental noise measurement. Australian Standard 1055:2018 *Acoustics – Description and measurement of environmental noise* provides guidance on the meaning and how noise descriptors are written. The descriptors in Table 6-2 are expressed in decibels (dB).

Table 6-2 Descriptors and their definition

Descriptor	Definition
$L_{eq,T}$	Equivalent continuous sound pressure level. This measure is often likened to an average sound level over a period of time (T). It is called equivalent because it is the value of an equivalent unchanging sound level that has the same amount of sound energy as the sound that changes over the time period T.
$L_{n,T}$	Percent exceedance level. This is a statistical measure of a changing sound. It is the sound level that is equalled or exceeded for n percentage of the time period T. So, when $n = 10$, it becomes $L_{10,T}$ and it is the sound pressure level that is exceeded for 10 per cent of the time period T.
$L_{90,T}$	The 90 th percent exceedance level. The $L_{90,T}$ is an example of one of the most common statistical measure of noise and is often used to describe the background noise level as it is a measure of the quieter periods during a measurement This is the noise level that is equalled or exceeded for 90 per cent of the time. This means that for 90 per cent of the time period T, the noise level is more than this level.
$L_{max,T}$	This is the maximum sound pressure level in a time period, T.

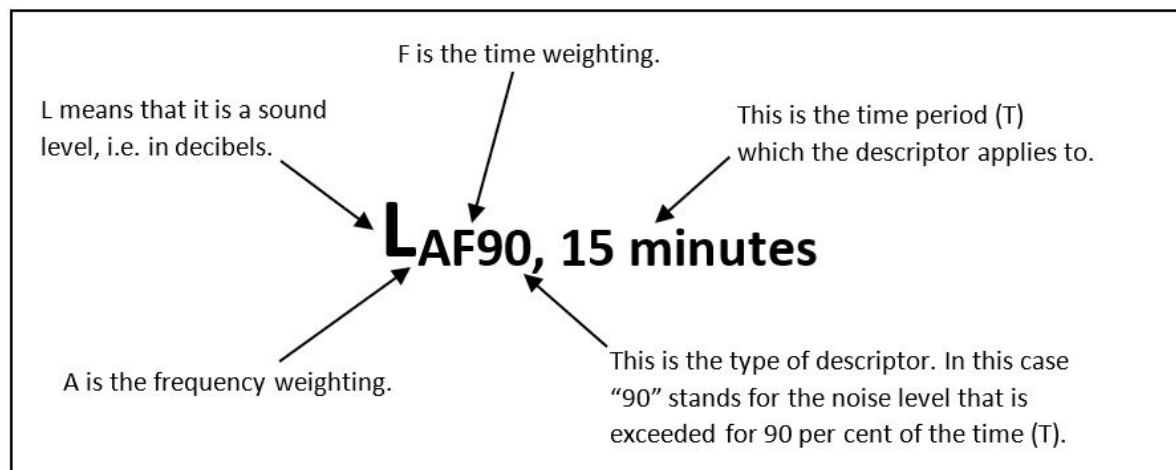
Figure 6-2 below illustrates an example of a noise measurement (represented by the moving grey line). The solid coloured lines show how this measured noise level is described in terms of the L_{Amax} , L_{A10} , L_{Aeq} and the L_{A90} .

Figure 6-2 Noise level expressed with different descriptors.



Other terms can be added to a sound level descriptor including the frequency and time weighting, and time period. The example in Figure 6-3 shows what the different elements of a descriptor mean.

Figure 6-3 Elements of a noise descriptor.



Examples of noise descriptors and their meanings are shown below:

- $L_{Aeq,15\text{ minutes}}$ - The A-weighted continuous equivalent noise level over 15 minutes (the most common environmental noise descriptor).
- $L_{AF90, 15\text{ minutes}}$ - The A-weighted noise level that is exceeded for 90% of 15 minute using fast time weighting. This is commonly referred to as the “background noise level”.
- $L_{AF1, 1\text{ minute}}$ - The A-weighting noise level that is exceeded for 1% of one minute using fast time weighting.
- $L_{ASmax,15\text{ minutes}}$ - The A-weighted maximum noise level over 15 minutes using a slow time weighting.
- $L_{CSmin, 1\text{ hour}}$ - The C-weighted minimum noise level over one hour using slow time weighting
- $L_{Zeq,5\text{ minutes}}$ - The Z-weighted (or linear) equivalent continuous noise level over five.

Sometime a noise level can be given as $L_{Aeq,15\text{ minute}}$ 50 dB or $L_{eq,15\text{ minute}}$ 50 dB(A). In this example, the A-weighting is simply appended to the ‘dB’ rather than be included in the descriptor.

Environmental noise measurements are usually described using the ‘Fast’ time-weighting and A-weighted noise levels over a 15-minute period. However, in the case of L_{eq} , which is a time averaged descriptor, a time weighting does not apply.

6.6.3 Applying frequency and time weightings

When measuring noise levels, ‘frequency weightings’ are applied to measurements of environmental noise to account for the way people perceive sound at different frequencies (see Section 6.3.3). The most common frequency weightings are the A-, C- and Z-weightings.

- A-weighting is most commonly used when measuring environmental noise as it was correlates well with the way people perceive sound over different frequencies.
- C-weighting is more commonly applied to occupational noise measurements but may also be used as a supplementary measure alongside A-weighted measurements to identify potential for low frequency sounds.
- Z-weighting, sometimes called linear weighting, means that no corrections for frequency are been applied. Z-weighting differs to linear as it only considers audible frequencies between 20Hz to 20KHz.

The A-, C- and Z-weightings are defined in International Standard IEC 61672-1 *Electroacoustics - Sound level meters Part 1: Specifications*.

The ‘time weighting’ represents the time it takes a sound level meter to respond to changes in noise levels. Time weightings are defined by IEC 61672-1. This includes

- fast time weighting (F) – is 125 ms rise and decay time.
- slow time weighting – is one second rise and decay time.
- Impulse time weighting - 35 ms while the signal level is increasing and 1.5 seconds when the signal level is decreasing. Though not commonly used, some sound level meters include an impulse time-weighting. It can be used to detect a type of peak, with a rapid rise time and a much slower decay.

For most environmental noise measurements, the Fast (F) weighting is specified.

6.6.4 Attended noise measurements

Attended noise measurements means being present while measuring noise, using a ‘hand-held’ sound level meter, and making observations and notes at the time that the noise source is present to describe the noise source and the ambient noise environment.

The following provides an overview of the key steps to consider when carrying out noise measurements. Appropriate education and training should be undertaken by those looking to undertake attended noise measurements and should be carried out with reference to best practice, for example Australian Standard AS 1055:2018 *Acoustics: description and measurement of environmental noise*.

Preparation

- Determine the location where the impact occurs. Typically, this will be at a point on the boundary of the complainant's property closest to the noise source, however, take into consideration the location where the highest impact occurs on or within a property boundary.
- Undertake the attended noise measurement at a time that is representative of the worst-case noise impact at the receiver location.
- Avoid taking measurements when it is raining, or the average wind speed exceeds five metres per second at microphone height. At these wind speeds, the microphone can detect wind as sound.
- Be prepared to measure the noise under investigation for long enough to establish that the measured value is representative of the subject noise. Typically, this will be for 15 minutes continuously. Usually, the noise level of the source under investigation will be measured as an L_{Aeq} noise level.

During the measurement

- Check the calibration of the sound level meter before and after each set of noise measurements. The sound pressure level shown on the meter should match the stated sound pressure level for the calibrator being used both before and after the measurement.
- It is important to keep detailed notes on the noise environment. Listen for any annoying characteristics as outlined in Section 6.4.3. Make sure that noise from other sources (wind in trees, voices, running water etc.) do not influence the measurement.
- Make the required adjustments to the measured noise levels if the measurement position is close to a wall or another reflective surface.

6.6.5 Unattended noise measurements

Unattended noise measurements are performed by leaving a sound level meter/logger in a location for an extended period. Equipment suitable for this task typically have both large capacity batteries and data storage and are placed in secure cases and fitted with microphones designed to withstand inclement weather.

Unattended measurements are most useful for determining background noise levels by providing many 15-minute measurements which can be reviewed to identify patterns in noise levels over many days. Some loggers have the capability to record audio. This may be helpful to understand what the key sources of noise are, contributing to the measured noise level.

Often, unattended measurements are necessary when noise assessments are required to calculate 'rating background levels' (RBL). It may be a requirement when assessing certain industrial facilities, for example when the EPA's *Noise Policy for Industry* is applied. Section 9 explains the role of the *Noise Policy for Industry* (and other noise policies and guidelines), including when they should be applied.

6.7 Noise management principles

6.7.1 Introduction

Minimising or eliminating potential noise issues before they occur, such as through effective land-use planning processes is the most effective way to manage noise. However, where there are pre-existing noise issues, the following provides advice on noise management principles. This advice should also be considered alongside non-regulatory approaches to managing noise as described in Section 8.

6.7.2 Noise mitigation must be feasible and reasonable

Measures to reduce noise impacts from proposed or existing developments or activities must be proportionate to the impact and adopt best-practice noise control, which can be described as 'feasible' and 'reasonable' noise management defined as follows.

A **feasible** mitigation measure is a noise mitigation measure that can be engineered and is practical to build and/or implement, given project constraints such as safety, maintenance and reliability requirements. It may also include options such as amending operational practices, for example, moving a noisy operation to a less-sensitive time or location to achieve noise reduction.

Selecting **reasonable** measures from those that are feasible involves judging whether the overall noise benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the mitigation measure. To evaluate if a measure is feasible, consider the following:

- Noise impacts:
 - existing and future levels, and projected changes in noise levels
 - the number of people affected or annoyed
 - any noise performance criteria required for the activity.
- Noise mitigation benefits:
 - the amount of noise reduction expected, including the cumulative effectiveness of proposed mitigation measures,
 - the number of people protected.
- Cost effectiveness of noise mitigation:
 - the total cost of mitigation measures
 - noise mitigation costs compared with total project costs, considering capital and maintenance costs
 - any ongoing operational and maintenance costs borne by the community, for example, running air conditioners or mechanical ventilation.
- Community views:
 - engage with affected land users when deciding about aesthetic and other impacts of noise mitigation measures
 - determine the thoughts of all affected land users, not just those making representations, through early community consultation
 - consider noise mitigation measures that have support from the affected community.

When determining whether noise mitigation is 'feasible and reasonable', the starting point is identifying all mitigation measures that would result in achieving relevant noise performance criteria, and then identifying why particular measures may not be either feasible or reasonable.

6.7.3 Noise Control

Implementing effective noise management during the planning phase for new development is the most effective method to manage noise. The scope for applying feasible and reasonable mitigation measures to existing activities is generally more limited and potentially more costly than for new greenfield developments.

Selecting the right approach to noise mitigation will depend on the nature of the noisy activity, the location of noise receivers, the cost and viability of various solutions, the degree of noise mitigation required, any special characteristics of the noise, and individual site considerations. Often a mixture of noise control measures works best.

There are three main areas where measures to reduce noise can be applied:

- at the source
- in the transmission path
- at the noise receiver.

Control of noise at the source is always the preferred method of noise control as it reduces the impact on the entire surrounding area.

Noise path control or mitigation at the receiver usually requires measures that block the transmission of noise such as erecting barriers or making architectural modifications to building facades. As the benefit from these measures would typically only apply to a limited area, this should only be done after trying to control noise at the source.

6.7.3.1 Controlling noise at the source

The following are examples of practical ways in which noise at the source can be reduced or managed.

- Considering alternatives to the noisy activity (e.g. using nets to protect crops instead of gas scare guns).
- Changing the activity to reduce the noise impact or disturbance (e.g. reorganise the way the activity is carried out).
- Choosing a suitable time - schedule the noisy activity to less-sensitive times of day. There are different sensitive times of the day for different people, for example, schools during the day, times of religious services, and residences during evenings and nights. Where there are several noisy pieces of equipment, scheduling operations so they are used separately rather than concurrently.
- Relocating the noise source away from receivers or behind structures that act as barriers, or at the greatest distance from the noise-sensitive area; or orienting the equipment so that noise emissions are directed away from any sensitive areas, to achieve the maximum reduction of noise. Examples for which this approach may be suitable include power tools, air conditioners, pool pumps, music practice and changing the directions of a gas scare gun or a diesel generator exhaust outlet.
- Keeping equipment well-maintained and operating it in a proper and efficient manner. Poorly maintained equipment can be very noisy, such as when bearings are worn, or an engine needs to be tuned. Examples include motor vehicles, lawn mowers, power tools, and commercial equipment such as refrigeration and exhaust systems.
- Employing quiet practices when operating equipment, for example, positioning idling trucks in appropriate areas or requiring trucks to turn engines off rather than idle for long periods.
- Choosing quiet equipment — noise should be a factor in selecting equipment. Equipment often has manufacturer specifications identifying noise output and this can be used to compare equipment. The *Protection Of the Environment Operations (Noise Control*

Regulation) 2017 (clauses 44, 48, 50 and 54-56) includes labelling requirements to provide information to help choose quiet equipment.

- Managing equipment operation — equipment can be operated in such a way as to manage noise optimally. For example, use equipment such as a leaf blower for short periods and avoid revving it repeatedly. These devices are often much quieter but just as effective when used at around half the maximum power.
- Using broad band or other low impact reversing alarms in place of beeper and tonal alarms. These alternative systems can reduce off-site noise impacts while maintaining on-site worker safety.
- Using vibratory piling instead of impact piling.
- Using high-pressure hydraulic rock crushers to split rock, instead of hydraulic or pneumatic hammers.
- Choosing fan design features that will reduce noise — these may include blade length and speed of rotation.
- Ensuring that equipment has an efficient muffler system or suitable noise insulation (e.g. compressors or jackhammers with insulation, or trucks that have efficient muffler systems).
- Providing insulation to line metal trays, hoppers or bins on equipment such as macadamia nut de-huskers, grain containers or hoppers. This helps to stop impact noise and reverberations.
- Using vibration isolation, such as placing rubber mats or springs between noisy equipment and a rigid floor or wall. This approach may be helpful in boiler rooms, for commercial mixers in bakeries, or in refrigeration motors and exhaust equipment and ducting.
- Building an enclosure around the noise source so that noise is contained. The enclosure may need to allow for enough ventilation and cooling. Any gaps need to be properly designed to limit the amount of noise that can escape. The enclosure should be made of dense material and be lined with noise-absorbing material like glass or polyester batts.

6.7.3.2 Controlling noise in the transmission path

Noise can be controlled in the transmission path by using separation distances, barriers and sound absorptive materials.

- Increasing the separation distance (distance attenuation) between the noise source and receiver reduces the noise level. As a rule of thumb, each doubling of the distance from a noise source equates to a reduction of sound pressure level of 6 dB (the inverse square law).
- Careful site selection for a new noisy activity can help minimise noise impacts where it is possible to provide adequate separation distances. Taking advantage of topographic features of buildings by siting the noisy activity behind a wall can reduce the distance needed to adequately reduce noise levels.
- Barriers are most effective when they are located close to the noise source or the noise receiver and block the line of sight between the source and receiver. The extent of any noise reduction will depend on the height and mass of the barrier and the frequency-content of the noise source (barriers are less effective for low-frequency noise). Noise barriers should have no gaps and use absorptive material to reduce noise levels by minimising reflections. Trees or other vegetation do not provide an effective noise barrier but can have a psychological effect, i.e. 'out of sight, out of mind' and can 'mask' noise when it is windy.

6.7.3.3 Controlling noise at the receiver

This is the least preferable method of noise control and should only be considered after all source and path-based noise control options have been exhausted. Common approaches to controlling noise at receiver locations, such as residential dwellings, schools or hospitals, can include a combination of the following three measures.

- Site and building layout can include the use of setbacks for a new house or changing the shape and orientation of the building to avoid sound being reflected into noise-sensitive rooms. Orientation and placement of rooms within a building can also help to minimise noise impact (e.g. placing bedroom and sensitive living areas furthest from a noise source and placing kitchen, bathroom or garage areas closest to the noise source). Options can include providing solid balconies designed to reflect sound away from a building.
- Building construction elements can also be used to reduce noise, for example, building elements such as doors, walls, windows, floors, roof and ceilings with good acoustic performance. Options for window design include sealing air gaps around windows and doors, laminated or thick glass, and double-glazing. All external building elements need to be considered to ensure that noise insulation is effective. This is because even small gaps can significantly reduce the effectiveness of noise insulation measures.

Additional guidance can be found in the *Development near rail corridors and busy roads – Interim guideline* (DoP 2008).

7. Assessing an acoustic report

When council relies on acoustic reports to make a determination and/or inform regulatory decision making, council must be satisfied that the report is fit for purpose, has been prepared in accordance with good professional practice, and provides sufficient evidence to support the stated conclusion(s)/recommendation(s). This section provides an overview of what council should consider when assessing an acoustic report.

7.1 Introduction

When reviewing an acoustic report, council should determine if it has:

- been prepared by a competent person (see Section 7.1.1 below);
- been undertaken in accordance with best practice, referencing and appropriately applying relevant standards, policies and guidelines; and
- considered all relevant matters pertaining to the scope of the report.

If there is doubt regarding the quality or integrity of the acoustic report and/or uncertainty regarding potential noise impacts, then it may be appropriate to engage a competent acoustic practitioner to undertake an independent review and advise council.

The acoustic report must include enough information to support any stated conclusions and recommendations.

7.1.1 Competent person

An acoustic report should be prepared by a competent person who must satisfy one or more of the following:

- Have qualifications and/or experience sufficient to fulfil the requirements of 'member' grade of the Australian Acoustical Society (AAS)
- Undertake the duties of an acoustic consultant on behalf of a consultancy firm that is a member of the Association of Australasian Acoustical Consultants (AAAC)
- Have a recognised tertiary qualification in a discipline pertinent to acoustics
- Be able to show competence through professional experience and/or technical expertise to the satisfaction of council.

7.2 Preliminary quality review

A preliminary review of the acoustic report may be undertaken to give an early indication of the quality of the report and/or identify information that may be missing and/or incomplete. The preliminary review should identify if the following information has been provided:

- The name and qualifications or experience of the person(s) preparing the report;
- The project description or reason the report was prepared. This should include information on the nature of the development including proposed hours of operation, and the purpose for preparing the report, for example to support a development application;

- Details of instrumentation and methodology used for noise measurements, including details on descriptors used; and evidence that the equipment is calibrated to relevant standards;
- A site map showing noise sources, measurement locations and potential noise receivers. Typically, where noise sources and receivers are in close proximity, the acoustic report will require greater rigour and assessment by council officers.

This initial review may identify the need to seek more information. A detailed appraisal will determine if the acoustic report has adequately assessed the likely noise impact and identified mitigation to manage any impact and should include consideration of the following matters:

- Determining if the relevant noise guidelines or policies have been considered and applied, for example those nominated by planning authorities in planning instruments (e.g. DCPs and/or planning approvals) or in pre-DA meetings for a development;
- Evaluating the adequacy of noise measurements presented in the report. For example, to determine background noise (and specific noise sources). The methodology should be clearly described in the acoustic report;
- Identifying if the report has considered the likely effect of weather, and considered other relevant matters such as extraneous noise sources, annoying characteristics of the noise source and operating conditions at the time of the measurements;
- Deciding if a management plan is required to achieve the nominated noise goals (e.g. noise limits or other performance requirements to manage noise). If so, determine if the acoustic report provides enough detail to include in a noise management plan.

Check:

- What is the project? What type of development is proposed? What is the scale of the project and therefore what can be expected in terms of sources of noise and potential noisy activities?
- Are there phases for the development and what is the duration of each phase? The phases may be short- or long-term; the noise level may differ for each phase.
- What are the noisy activities/plant/equipment e.g. on-site sources, truck movements etc. Check the equipment sound power levels or sound pressure levels nominated to a specific distance. See Section 7.6 for further information about source noise levels.
- Are there day, evening and/or night time works? Night-time is more sensitive than daytime; it is preferable to schedule works during less sensitive times where practical.
- Are there construction and operation phases to consider? Construction may be short-term in duration, use different equipment, have higher noise levels than operational activities, and is assessed against different requirements.

While the issues set out above provide some of the most important aspects, the following sections outline the key considerations in more detail. However, it is important that the scope and level of detail in an acoustic report is proportional to the scale of development/risk of noise impacts. It is also a good idea to check the acoustic report is consistent with information provided in other associated documents, for example in the project description for an environmental Assessment (or similar).

7.3 Identifying noise sensitive locations

The acoustic report should include a map showing the location of the site and the sensitive receivers, cross-checked these with other sources of information such as digital maps and aerial photographs. Check that all noise sensitive receivers have been identified, including those that are approved but haven't started being constructed yet, and if the nominated receiver location(s) is

representative of the locations most likely to be impacted by any potential noise impacts. Also cross-check the distance to the receivers and any intervening topography or buildings.

7.4 Establishing the ambient noise level

Ambient noise is the all-encompassing noise associated within a given environment and should not include the noise source under investigation. It is the combination of sounds from many sources, both near and far.

Some noise policies and guidelines require ambient noise levels to be determined and used as the basis to set appropriate noise assessment criteria. In turn, these may be considered by council for inclusion as performance requirements within consents or other statutory instruments.

You can get ambient noise levels through short- or long-term methods. For example, in accordance with the procedures described in the *Noise Policy for Industry*.

Check:

- Whether the background noise levels were measured without the subject site operating and excluded noise from activities that are atypical of the area (extraneous noise), e.g. construction, change in traffic due to holidays, special events and other sources such as air conditioning units. There are often notes accompanying the measurements that describe whether the subject site was audible.
- That the instrumentation used was appropriate. Sound level meters (attended monitoring) or data loggers (unattended monitoring) used to measure background noise levels should be either Class 1 or 2 instruments in accordance with AS IEC 61672.1-2013 (or 2019). The instruments should have current NATA accredited laboratory calibration certificates and must be field calibrated before and after measurements.
- If using long-term monitoring, whether the duration of noise monitoring is enough: typically, one week's worth of valid data that covers the days and times of operation of the proposal.
- Whether the effects of adverse weather during noise monitoring were considered. Ideally, data acquired during periods of rain or wind speeds exceeding 5m/s at microphone height should be excluded. Noise logger graphs should identify periods of adverse weather that were excluded from the measurements. Details of the meteorological station that is representative of the site location should be provided.
- If a map showing the monitoring location(s) has been provided.

7.5 Identifying noise sources and noise levels

Council officers should consider if all noise sources have been considered. For example, does it consider:

- industrial type sources such as blowers, vibrators, mixers, screens, crushers, grinders and heavy mobile machinery
- mechanical plant and ventilation noise associated with residential developments; for example, air conditioning, lift motors and exhausts (kitchen, bathroom, car park)
- assessing noise from vehicles both on- and off-site?

The report should identify nominated noise levels for each source. This may be presented as a sound pressure level at a given distance or a sound power level.

It may be appropriate to compare data in the acoustic report against similar noise sources presented in acoustic reports prepared for similar developments. Sound power level data is also published in standards, guidelines and policies; for example:

- Appendix B in the *Interim Construction Noise Guideline*;
- Australian Standard AS 2436:2010 *Guide to noise and vibration control on construction, demolition and maintenance sites*; and
- British Standard BS 5228-1: 2009 *Code of practice for noise and vibration control on construction and open sites*.

If there are significant discrepancies between noise levels quoted in the acoustic report and those in standards and other sources, then it may indicate the need to seek more information. In some cases, consultants may undertake direct noise measurements of similar equipment/activities. This should be clearly documented in the acoustic report.

7.6 Noise predictions

An acoustic report should present noise predictions for the proposed development for relevant time periods (day, evening and night) representative of the hours the development operates (or proposes to operate). The reasonable worst-case noise levels in each time period should be presented so as not to underestimate noise impacts and to ensure any noise mitigation is appropriate.

A description of the model or process used to calculate the noise levels should be included and justified. Because the accuracy of noise predictions depends on the quality of the input data, such as topographical data, sound power levels and traffic flow data, all calculation assumptions should be provided. Assessments for developments that propose to operate at night should consider the likelihood of sleep disturbance and “shoulder periods” between the day period and those periods either side.

Check the source data:

- If source noise levels are presented by frequency, e.g. a table showing octave or one-third octave band noise levels. This can be used to determine tonal components.
- The source height in relation to the receiver height, e.g. for road traffic, heavy vehicle exhausts are typically 3.5 metres above ground level, 1.5 metres for engines, and 0.5 metres for tyre noise.
- The reasonableness of source locations used in the model, e.g. if equipment is likely to operate close to receivers and is modelled as such.

Check the transmission path variables such as distance attenuation, ground type, topography, atmospheric absorption and barriers.

Check at the receivers:

- If noise is predicted at the most-affected point. When determining what the most-affected point is, the proponent should have considered factors such as the direction of the source relative to the receiver, localised barriers or shielding and the location/orientation of sensitive spaces within the receiver, for example bedrooms.
- Which receivers have been included in the noise predictions and whether the identified receiver is representative of the most affected location. If noise contour maps are provided, check the contour levels in relation to the receivers to see if any sensitive receivers with high noise levels have been overlooked in the discussion of results.
- The height of receivers with the height of the source. Determine whether elevated floors of sensitive buildings have been considered.

- If any modifying factor corrections are applied to the predicted noise level at the receiver, before comparison with the criteria to account for annoying characteristics. This is typically a consideration for industrial noise sources (see the *Noise Policy for Industry* at Fact Sheet C).

Check weather conditions such as temperature inversions and source-to-receiver winds, which can increase noise levels. For small scale commercial/industrial sources where the receivers are located within 200m, weather affects can be disregarded.

7.7 Assessment of impact

The predicted noise levels (after mitigation, see Section 7.8 below) may be used to identify noise goals. The noise goals can be used to inform criteria within consents and other statutory instruments and may take account of ambient noise levels (Section 7.4) and/or appropriate noise policies and guidelines (see Section 9).

Where council takes account of noise policies and guidelines to determine appropriate performance goals (or noise criteria), council should ensure these policies and guidelines have been appropriately applied, proportional to the circumstances of the project.

It's a good idea for council to provide guidance on how to assess impacts at the outset of the project (for example, specific council policy) to ensure that acoustic reports are fit for purpose and can be used by council to set noise criteria and/or other performance targets.

Council may wish to consider the following advice when evaluating acoustic reports where the following noise sources are considered.

7.7.1 Mechanical plant

Mechanical plant typically refers to stationary items of plant such as air-conditioning, refrigeration, exhaust and ventilation fans, compressors etc that would typically be associated with commercial or industrial premises.

In the first instance, council can develop its own noise policy on how to manage noise from small industrial developments where mechanical plant (and other 'steady state' activities/plant) are likely to be the main source of noise.

EPA policies and guidelines for industrial noise apply to large scale industrial developments regulated by the EPA under the POEO Act. Because of the complexity of these policies and guidelines, they may not be appropriate for smaller developments regulated by council. For example, developments close to residential dwellings may not require an assessment of varying weather conditions or long-term noise logging in order to determine a suitable background noise level that will inform an acceptable noise limit.

Regardless of the policy or guideline applied in an assessment, an acoustic report should be able to determine if feasible and reasonable noise mitigation measures have been identified to mitigate noise impacts. The acoustic report can be used to inform consent conditions where a consent or determining authority decides that noise limits or requirements are desirable.

7.7.2 Patrons and music

Licensed premises regulated by Liquor and Gaming NSW may be subject to specific noise conditions. Council may need to consider extra measures to manage noise from patrons (and music from licensed premises) where it has the potential to cause nuisance to nearby residential dwellings. This may include planning controls such as management plans, to limit hours of operation, and community engagement for any major events.

7.7.3 Vehicles

The impact of on-site and off-site vehicle movements should be considered, including noise from car park activity, delivery vehicles, and drop-off/pick-up zones. Off-site vehicle noise relates specifically to extra traffic generated by land use developments on existing roads.

7.7.4 Child care centres and play spaces

Child care centres are an increasingly common noise source in residential areas. The Association of Australasian Acoustical Consultants (AAAC) has published a *Guideline for Child Care Centre Acoustic Assessment* (AAAC, 2020) for assessing and managing noise from child care centres.

7.7.5 Residential or noise-sensitive development proposed near existing noise

For new residential development or noise-sensitive receivers encroaching on existing transport infrastructure, council should consider the requirements of the *State Environmental Planning Policy (Infrastructure) 2007* and the *Development near rail corridors and busy roads: interim guideline* (DoP, 2008).

7.8 Evaluation of mitigation measures

Acoustic reports must explain how any noise impacts will be managed by setting out the recommended feasible and reasonable mitigation measures (see Section 6.7) and providing information to explain how those recommended mitigation options have been evaluated and selected.

The preparation and adoption of a noise management plan can be particularly useful when there may be residual noise impacts. Including management plans within statutory instruments may be a helpful way of reviewing performance against the plan. It is important to manage community expectations when developments are approved with residual noise impacts. See Section 8 for more information on managing expectations.

Check:

- the source controls, which often provide best means for controlling noise, such as enclosing noisy equipment, incorporating vibration-isolation methods and using alternative work methods (e.g. hydraulic splitters instead of rock breakers)
- if barriers, bunds, topography or intervening buildings can reduce the line-of-sight from the source to receivers. Equipment can be relocated to increase distance between the source and receiver. Alternative means of mitigation may be needed for upper levels of high-rise dwellings. Temporary barriers and acoustic sheds might be used for longer-term construction noise.
- for proposed development containing sensitive receivers, check mitigation at the receiver e.g. architectural treatment (double glazing), reorientating buildings so that more sensitive rooms do not face the noise source, and temporary relocation.
- the management practices including scheduling activities at less sensitive times (e.g. peak hour road traffic noise might mask the source noise), providing respite periods, and consultation with the community, complaint handling and notification of works.

8. Non-regulatory approaches

Where possible, it is preferable to resolve noise issues through the non-regulatory measures such as communication, education, negotiation. This section provides suggested approaches.

8.1 Introduction

Resorting to the regulatory measures described in Parts 1 and 2 can in some circumstances be time-consuming and difficult. Where possible, it is preferable to resolve noise issues through non-regulatory measures. Effective communication and consultation can be an effective way to resolve conflict between neighbours and/or businesses in the community.

The following describe strategies on how to engage with the community, manage expectations by developing council-specific guidance, and resolve noise issues through mediation.

8.2 Consultation and communication

8.2.1 Consultation

Noise issues can often be resolved through communication. If people are informed and/or consulted, understand what's causing the noise, what is being done to manage it, and how to raise any concerns, then people are more likely to tolerate noise. In some instances, the noisemaker may not be aware they are affecting others and may be willing to change their behaviour.

Engaging and informing the community about any new developments or significant changes to existing developments will help manage community expectations and give the community an opportunity to raise their concerns for council's consideration.

8.2.2 Communication between neighbours

Persons affected by noise may have an unreasonable expectation of quiet or high expectations for what can be done to end or manage noise. Similarly, those responsible for making noise may not be aware that they are affecting their neighbours.

For neighbourhood noise issues, neighbours should be encouraged in the first instance to discuss their noise issue with the person making the noise. Communication may be all that is required to reach a mutually satisfactory solution. Notifying neighbours about a noisy event such as a party can often alleviate concerns and prevent complaints during the event.

Where neighbours have not sought to resolve the problem themselves, council officers could facilitate communication, which could involve anything from an informal discussion to more formal negotiation and mediation processes (see Section 8.4) to resolve a dispute.

Informal approaches are often preferable to taking statutory actions and are likely to use fewer council (or police) resources. This approach is particularly useful for ongoing noise disputes; for example, establishing an agreement on the time or location that people play loud musical instruments that have been causing conflict between neighbours.

8.3 Developing council-specific guidance

Educating the community about what council can and cannot do to manage noise, and information on common noise issues and how these can be resolved can help avoid or reduce noise conflicts.

Many people affected by noise may not have a good understanding of the regulatory framework, other than directing noise complaints to the local council. Similarly, people whose activities generate noise may not fully appreciate that they could be prosecuted when they emit unreasonable noise and/or are not complying with a consent.

Informing people about their rights and responsibilities may help bring about a resolution to a noise conflict without the need for regulatory intervention. Additionally, it is helpful for complainants to be educated about what information is needed to support any noise complaints (for example, the need to keep a detailed noise diary or other evidence, as outlined below).

The EPA has published brochures on common neighbourhood noise issues that may be helpful to council. These can be viewed on the [EPA's website](#) and can also be adapted by council for their own requirements⁷.

Council may also wish to consider developing its own advice on issues that may be relevant to their area, for example, providing advice for hobby farm residents, landlords of holiday-let venues, or for owners of dog kennels aimed at encouraging responsible behaviour and cooperative neighbourhood relationships.

Councils are encouraged to develop their own policies to set out to the community how they will manage noise complaints. Council can help to manage expectations by explaining how people can keep detailed records of the issue to assist council investigation. For example, helpful information for a complainant to collect if affected by dog barking could include the times a neighbour's dog barks, the duration of barking, where the dog is when the barking occurs (i.e. front or back yard), whether the owners were home at the time and how or if they responded to the barking and a description of the impact to the complainant.

Keeping records in this way can help council to take appropriate regulatory action (if warranted) or provide objective evidence needed to support a mediation process or other complainant-initiated action. Noise diaries should include prompts to provide the date, time, duration and character of the noise. An example is shown in Table 8-1 below.

Table 8-1 Example noise diary entries

Date	Time (am/pm)	Duration (How long did the noise last?)	Noise Characteristics (Describe the noise. Did it start and stop, was it a high or low frequency, did it buzz or hum?)
4/3/2021	10:53	45 mins	Buzzing sound from the top of the shopping centre carpark

The example in Figure 8-1 below is published by Port Macquarie-Hastings Council⁸ and sets out its approach to the issue of barking dogs. This provides information to complainants on how barking dog complaints will be managed.

Figure 8-1 Port Macquarie Hastings advice on barking dogs

Advice on managing noise from barking dogs (Port Macquarie-Hastings Council website)

⁷ Search for Neighbourhood Noise on the NSW EPA website. www.epa.nsw.gov.au

⁸ Search for noise from barking dogs on Port Macquarie Hastings Council website. www.pmhc.nsw.gov.au

[Port Macquarie-Hastings] Council encourages neighbours to resolve these types of issues between themselves.

The first step is to speak with the dog owner and advise of the complaint and provide information which may assist in better managing the behaviour of the dog in question. Many complaints are resolved through this approach, but if you're not satisfied with the owner's response, you can contact Council on [Telephone number]. The Call Centre staff will ask you a number of questions relating to the nature of the complaint, the address of the offending animal, a full description of the animal and your name and address. (Council may not act on anonymous complaints.)

The next step is for Council to follow a procedure which firstly seeks to resolve the matter through non-regulatory means. In the event of the procedure progressing further, regulatory mechanisms are introduced as per Section 21 (Nuisance dogs) of the *Companion Animals Act, 1998*.

Financial penalties will apply where a dog owner fails to satisfactorily address the barking behaviour of their dog.

This example gives a clear procedure and is transparent on what action council can take and what is expected from a complainant.

8.4 Mediation

Mediation is a form of negotiation, in which a third party (e.g. council or a justice representative) helps the people in dispute to find their own solutions and resolve problems amicably in an informal and confidential forum without strict legal rules.

Informal mediation could take place between the person making the noise and the person or people affected, with a council officer acting as mediator. The aim is to reach a mutually acceptable agreement that avoids the need for more formal mediation or for regulatory intervention. A council officer may decide to offer assistance by acting as the mediator in this situation. Key strategies for successful mediation are:

- Remain impartial and focused on solving the problem.
- Look for areas where both sides agree.
- Listen actively and acknowledge what is being said.
- Recognise and understand emotions. Don't let emotional outbursts affect the mediation process.
- Be open to others' perceptions of the problem.
- Try to build rapport with all sides.
- Focus on possibilities, be flexible, and think laterally. With objections ask: 'Why not'?

Formal mediation may be appropriate where underlying issues contributing to the conflict also need to be resolved. Community justice centres (CJCs) or a professional mediator may be able to help in these situations. The CJC, a part of the NSW Department of Justice, offers mediation services to the community with the aim of reaching agreement between disputing individuals without involving legal proceedings. This service can assist in resolving noise disputes. Councils and local courts can recommend the use of a CJC to complainants as an alternative to, or before starting legal proceedings. Suitable referral forms are provided on the CJC website or alternatively, individuals can refer themselves using the self-referral form.

The CJC has published fact sheets that can assist residents to handle situations of potential conflict with neighbours.

- *Dealing with a Dispute* (2019)
- *Mediation at Community Justice Centres* (2015)
- *Better ways to handle conflict* (2015)
- *Preparing for mediation* (2012)

Further information can be obtained by searching for these fact sheets on the CJC website (www.cjc.justice.nsw.gov)⁹.

8.4.1 The NSW Ombudsman

The role of the NSW Ombudsman is to safeguard the community in their dealings with government and non-government agencies that fall within its jurisdiction. The NSW Ombudsman helps to make sure councils act fairly and reasonably and can look at the conduct of councillors and council employees and the administrative conduct of the council itself. It investigates and reports on complaints about the conduct of NSW agencies or their employees, including both government (state and local) and some non-government agencies. It has developed publications to provide support and information to agencies including:

- *Effective Complaint Handling Guidelines Third Edition* (2017) and
- *Enforcement Guidelines for Councils* (2015)

If a person believes they have been unfairly treated by a local council and are not satisfied with the way in which council has treated their complaint, they can raise their concerns with the NSW Ombudsman.

Further information on the role of the NSW Ombudsman can be found by searching on the NSW Ombudsman website (www.ombo.nsw.gov.au).

8.4.2 Responding to noise created by a minor

Where a council officer is responding to a noise issue where a minor is the person causing noise, a warning may be the only effective response that the officer can make. This is because special requirements apply when a public official interviews, initiates court action against, or issues a penalty notice for the behaviour of, a person under 18 years of age. See generally *Children (Criminal Proceedings) Act 1987* (inc. s13). While penalty notices may be issued to children 10 years or older, any hearing following withdrawal or annulment of the notice is also subject to that Act (see s53).

Councils should provide clear and lawful instruction and guidance to employees on how to deal with minors on the basis of appropriate legal advice.

8.5 Noise abatement orders (POEO Act ss. 268–273)

A noise abatement order is a regulatory option available under the POEO Act (ss 268-273) for the occupier of a premises to use, independently of any regulatory authority such as a council or the police. It is not available to the appropriate regulatory authority or authorised persons.

Scope: Any occupier of a premises who alleges that their occupation of their premises is being affected by offensive noise can seek a noise abatement order against a person alleged to be making or contributing to the noise or the occupier of premises from which the noise is alleged to be emitted. This can be done without involving a regulatory authority such as council or an enforcement authority such as the police. The order is sought by filing of an application notice in the local court. The application notice form is available on the local court website. The court's registrar has to issue the application notice which starts the legal process.

The court may issue a noise abatement order requiring offensive noise to cease if it is satisfied the alleged offensive noise exists, or that although abated is likely to recur on the same premises.

⁹ Search for the fact sheets on the CJC website. www.cjc.justice.nsw.gov

Using a noise abatement order: Where council or the police have decided that no further action is justified for a particular matter, the resident can be advised about the option of seeking a noise abatement order from a local court.

The burden of proof required for an order to be issued, which is a civil matter, is less than that required for criminal enforcement action by a regulatory authority. That is, the magistrate can make an order if satisfied about the offensive noise on 'the balance of probabilities' based on the evidence presented, rather than having to be convinced 'beyond reasonable doubt'.

Getting a noise abatement order: The following steps are involved in issuing a noise abatement order:

- The occupier of the premises files an application notice with the court registry.
- The court registrar allocates a date for the parties to attend court.
- The magistrate may issue an order on the hearing of the matter if satisfied, on the balance of probabilities, that offensive noise either exists or is likely to recur.

As issuing an order involves court time and likely the involvement of legal representatives, the magistrate will often encourage parties to undertake mediation to prevent this time-consuming and potentially expensive process. This being the case, parties are encouraged to approach the local community justice centre or to seek other mediation options before filing the application notice.

It is not necessary for a person to get legal advice when seeking an order, although this is advisable.

A noise abatement order takes effect either immediately or at a time specified in the order.

An order may be revoked or varied by the local court.

Appeal: A person against whom a noise abatement order has been made may appeal to the Land and Environment Court within 21 days of the order being made (POEO Act s. 290). The lodging of an appeal will not stay the commencement of the order unless the Land and Environment Court directs otherwise. If the Court directs a stay, the order will take effect only when the stay ceases to have effect or the Land and Environment Court confirms the order or the appeal is withdrawn, whichever occurs first (POEO Act ss. 271 & 290).

Restrictions: Under s. 270 of the POEO Act, a noise abatement order may not be directed to the state, a person acting on behalf of the state, a public authority or a person in the capacity of a member, officer or employee of the authority. It also has no force if it affects an activity carried on, by or for the state or a public authority, or by an authorised network operator (within the meaning of the [Electricity Network Assets \(Authorised Transactions\) Act 2015](#)), or an activity that requires or is subject to an EPA licence.

Offence: A person who contravenes the terms of a noise abatement order is guilty of an offence (POEO Act s. 269).

The person who applied for the order may bring prosecution proceedings against a person who contravened the order.

To get a conviction, the breach will have to be established according to the criminal standard of proof (i.e. beyond reasonable doubt). This is more onerous than the standard of proof required to get the order.

Penalties: The maximum penalty for contravention of a noise abatement order is 30 penalty units (at the time of publication \$3,300 (\$110 per unit set by s. 17 of the *Crimes (Sentencing Procedure) Act 1999*)). A penalty notice cannot be issued for contravention of an order.

Table 8-2 Advantages and disadvantages of a noise abatement order

Advantages	Disadvantages	Situations most suited for
<ul style="list-style-type: none"> • It allows the issue of offensive noise to be determined by a local magistrate. • This option is available to residents who are not satisfied with action taken by council or the police. • May not be used against the state, a person acting on behalf of a state or a public authority. 	<ul style="list-style-type: none"> • It is costly and time-consuming for the resident seeking a noise abatement order – for the initial application notice, court time and legal representation. To avoid this, a magistrate will often encourage parties to undertake mediation first. • The complainant will need to provide enough evidence to allow a magistrate to determine on the balance of probabilities whether offensive noise has been emitted or is likely to recur. • Enforcement is complex and costly for the complainant – it requires the complainant to initiate prosecution and the breach would need to be established according to a criminal standard of proof (i.e. beyond reasonable doubt). • A person may appeal against the issue of a noise abatement order within 21 days of being issued the order. However, the noise abatement order applies unless and until the Land and Environment Court rules to stay the order. 	<p>This is a regulatory avenue open to residents to pursue outside of dealing with the council or the police.</p> <p>Most suitable for long term protracted noise issues between neighbours.</p>

9. Noise guidance

This section describes key noise policies and guidelines that may assist councils managing noise.

9.1 Introduction

The EPA has published a range of policies and guidelines to manage noise and vibration in different circumstances as described below.

Generally, these policies and guideline are applicable to significant premises and activities regulated by the EPA under the POEO Act and/or large-scale developments approved EP&A Act (e.g. state significant development/infrastructure projects). As such, care should be taken to ensure these policies and guidelines are applied in proportion to the risk of noise impact associated with the development. Additional noise policies and guidelines are also referenced below.

These documents may be helpful for councils wishing to develop their own policies, including policies that outline council's expectations of noise reports to support development applications, such as criteria or noise management measures that must be considered.

9.2 Noise Policy for Industry (EPA, 2017)

The *Noise Policy for Industry* (NPfI) applies to industrial noise sources from activities listed in Schedule 1 of the POEO Act and regulated by the EPA. All scheduled activities require an environment protection licence issued under the POEO Act. The NPfI is also an appropriate reference document for NSW Planning when assessing major development proposals under the *Environmental Planning and Assessment Act 1979*.

The NPfI sets out the EPA's requirements for the assessment and management of noise from industry in NSW. It aims to ensure that noise is kept to acceptable levels in balance with the social and economic value of industry in NSW.

When new industry is being proposed or existing industry is being upgraded, redeveloped or needs review, attention needs to be paid to controlling noise from the industry. The NPfI is designed to assist industry and authorities to ensure that potential noise impacts associated with industrial projects are managed effectively.

9.3 NSW Road Noise Policy (DECCW, 2011)

The *NSW Road Noise Policy* (RNP) is a comprehensive and effective approach for managing road traffic noise in NSW. This policy is widely adopted by determining authorities, regulators, project proponents and acoustic practitioners. The RNP outlines the range of measures needed to minimise road traffic noise and its impacts. It is intended for use by:

- road project proponents
- determining authorities and regulators involved in the approval and construction of road projects and land use developments that generate extra traffic on existing roads
- city and transport planners and policymakers dealing with issues such as route corridors, heavy vehicle transport and building codes
- acoustic specialists.

The RNP may be used to assess and mitigate the impacts of traffic noise from new and redeveloped road projects, and traffic-generating developments on residential and other sensitive lands.

9.4 Rail Infrastructure Noise Guideline (EPA, 2013)

The *Rail Infrastructure Noise Guideline* (RING) is considered by rail infrastructure proponents (both private and public), consent/approval authorities, designers, engineers, contractors, and commercial and industrial developers involved with the design, approval, construction and development of heavy and light rail infrastructure projects in NSW.

The RING provides a framework to assess potential noise and vibration impacts associated with the ongoing expansion and upgrade of the rail network in NSW and aims to ensure noise and vibration impacts associated with rail development projects are evaluated in a consistent and transparent manner. It applies to heavy and light rail infrastructure projects including the construction of new rail lines and upgrades to existing lines.

9.5 Interim Construction Noise Guideline (DECC, 2009)

The *Interim Construction Noise Guideline* (ICNG) is primarily aimed at managing noise from construction works regulated by the EPA, who will use it to ensure proponents adequately assess and manage noise from proposed construction works.

The types of construction regulated by the EPA under the *Protection of the Environment Operations Act 1997* (POEO Act) include those activities related to construction and maintenance that are described in Schedule 1 of the Act. The EPA regulates these activities through an environment protection licence.

This guideline is for construction proponents (both private and public), consent and/or approval authorities, designers, engineers, contractors, and commercial and industrial developers involved with the design, approval, construction and development of projects.

The ICNG ensures all feasible and reasonable work practices are applied to minimise construction noise impacts, rather than setting numeric noise limits.

Local council is the consent authority for noise from 'non-scheduled' construction activities in its area, except as described in Section 6(2) of the POEO Act. Councils are best placed to decide the level of assessment that should be applied to construction projects in their area. However, this guideline may be of assistance to local councils in guiding decision making. Some local councils have their own policies and procedures for managing construction noise (for example, the City of Sydney Council).

9.6 Assessing vibration: a technical guideline (DEC, 2006)

Assessing vibration: a technical guideline (the Vibration Guideline) is designed to be used in evaluating and assessing the effects on amenity of vibration emissions and may be applied:

- during the land-use planning stage to reduce conflicts that vibration can cause, such as the determination of railway corridors and the design of building footings;
- in assessments of vibration impacts caused by the construction or operation of new developments (e.g. industrial or transport); and
- in assessments of the extent of any problem from an existing situation, and the necessity for implementation of a management plan to address and mitigate existing vibration.

The Vibration Guideline presents preferred and maximum vibration values for use in assessing human responses to vibration and provides recommendations for measurement and evaluation techniques.

9.7 Other noise policies and guideline documentation

In addition to the noise policies and guidelines developed by the EPA, the following may also be appropriate in certain circumstances.

9.7.1 Association of Australasian Acoustical Consultants' Guidelines

The Association of Australasian Acoustical Consultants (AAAC) has developed several guidelines with input from AAAC members, to provide guidance for developers, operators, practitioners, and local council. The guidelines are not statutory documents and the guidance within them may be modified to meet specific requirements. They are available on the AAAC website (see the References in Section 10).

Guidelines that may be a useful resource for council include:

- AAAC Guideline for Child Care Centre Acoustic Assessment;
- AAAC Guideline for Apartment and Townhouse Acoustic Rating
- AAAC Guideline for Selection of an Acoustical Consultant
- AAAC Guideline for Commercial Building Acoustics
- AAAC Guideline for Educational Facilities Acoustics
- AAAC Guideline for Health Care Building Acoustics
- AAAC Licensed Premises Guideline

9.7.2 Development near rail corridors and busy roads: interim guideline (DoP, 2008)

The *Development near rail corridors and busy roads; interim guideline* ('Busy Roads Guideline') assists in the planning, design and assessment of development in, or adjacent to, rail corridors and busy roads.

The Guideline supports specific rail and road provisions of the *State Environmental Planning Policy (Infrastructure) 2007* (the 'Infrastructure SEPP') and the objectives of these provisions are to:

- protect the safety and integrity of key transport infrastructure from adjacent development; and
- ensure that adjacent development achieves an appropriate acoustic amenity by meeting the internal noise criteria specified in the Infrastructure SEPP.

The Infrastructure SEPP refers to guidelines, which must be considered where development is proposed in, or adjacent to, specific roads and railway corridors under clauses 85, 86, 87, 102 and 103 (see page 2). The Guideline provides technical guidance to assist with the implementation of the Infrastructure SEPP.

9.7.3 Blasting Guideline (ANZEC, 1990)

The Australian and New Zealand Environment Council (ANZEC) developed a guideline for blasting overpressure and ground vibration: *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* ('Blasting Guideline').

It may be used to guide the measurement and assessment of noise and vibration from blasting activities. The Blasting Guideline contains recommended criteria to minimise annoyance and discomfort on sensitive receivers caused by blasting.

The recommended criteria in the Blasting Guideline are intended to apply to mining, quarrying, construction and all other operations that involve the use of explosives for fragmenting rock.

9.7.4 Wind Energy Bulletin (DPE, 2016)

The *Wind Energy: Noise Assessment Bulletin* (the Bulletin) was prepared jointly by the Department of Planning and Environment (the Department) and the EPA, and should be read in conjunction with the more general assessment requirements outlined in the Wind Energy Guideline (DPE, 2016).

The Bulletin provides proponents of wind energy projects and the community with advice about how noise impacts are assessed for large-scale wind energy development projects that are state significant development (SSD). In NSW, the EPA regulates noise associated with large scale wind energy projects via an environment protection licence (EPL) issued under the *Protection of the Environment Operations Act 1997*.

The Bulletin provides practical guidance to proponents, planners, regulatory authorities, acoustic specialists and the broader community on how to measure and assess environmental noise impacts from wind energy projects.

9.7.5 Structural vibration

While the EPA's vibration guideline and the ANZEC blasting guideline focus on the human response to vibration, there are standards that are generally referred to when assessing the potential for damage to structures from vibration. Generally, the vibration thresholds for human comfort or annoyance are more stringent than those for structural damage.

The British Standards Institution's BS 7385-2:1993 *Evaluation and measurement for vibration in buildings - Guide to damage levels from ground borne vibration* is often applied to vibration impacts on residential buildings and the German Institute for Standardisation's DIN 4150.3:2016 *Vibration in buildings - Part 3: Effects on structures* is often applied to heritage structures and services/infrastructure buildings.

10. References

10.1 Standards

German Institute for Standardisation 2016, DIN 4150.3:2016 *Vibration in buildings - Part 3: Effects on structures*

International Electrotechnical Commission 2003, IEC 60942:2003 *Electroacoustics: sound calibrators*

International Electrotechnical Commission 2013, IEC 61672.1:2013 *Electroacoustics: sound level meters – Part 1: Specifications*

International Electrotechnical Commission 2017, IEC 60942:2017 *Electroacoustics: sound calibrators*

International Standards Organisation 1996, ISO 9613-2:1996 *Acoustics: attenuation of sound during propagation outdoors*

Standards Australia 1985, AS 1217:1985 *Acoustics: determination of sound power levels of sources* (part 1 to part 7)

Standards Australia 2000, AS/NZS 2107:2000 *Acoustics: recommended design sound levels and reverberation times for building interiors*

Standards Australia 2010, AS 2436:2010 *Guide to noise and vibration control on construction, demolition and maintenance sites*

Standards Australia 2018, AS 1055:2018 *Acoustics: description and measurement of environmental noise*

Standards Australia 2019, AS/NZS IEC 61672.1:2019 *Electroacoustics: Sound level meters Specifications*

The British Standards Institution 1993, BS 7385-2:1993 *Evaluation and measurement for vibration in buildings - Guide to damage levels from ground borne vibration*

The British Standards Institution 2009, BS 5228-1:2009 *Code of practice for noise and vibration control on construction and open sites*

10.2 Legislation

Environmental Planning and Assessment Act 1979

Protection of the Environment Operations Act 1997

Protection of the Environment Operations (Noise Control) Regulation 2017

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy No. 65: Design Quality of Residential Apartment Development

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

Work Health and Safety Regulation 2011

Crimes (Sentencing Procedure) Act 1999

Companion Animals Act 1998

Explosives Regulation 2013

Local Government Act 1993

Road Transport Act 2013

Liquor Act 2007

Companion Animals Act 1998

Strata Schemes Management Act 2015

Strata Schemes Management Regulation 2016

Fines Act 1996

10.3 Noise policies and guidelines

Assessing Vibration: A Technical Guideline, DEC, 2006

Interim Construction Noise Guideline, DECC, 2009

NSW Road Noise Policy, DECCW, 2011

Rail Infrastructure Noise Guideline, NSW EPA, 2013

Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration, ANZEC (Australian and New Zealand Environment Council), September 1990

Approved Methods for Testing Noise Emissions, NSW Government Gazette 98, 1 September 2017

Noise Policy for Industry, NSW EPA, 2017, including:

- 'A Guide to the Noise Policy for Industry', NSW EPA, 2017
- 'Implementation and Transitional Arrangements for the Noise Policy for Industry', NSW EPA, 2017

Powers and Notices Guideline for Authorised Officers and Enforcement Officers, NSW EPA, 2021

Target Shooting Ranges: Application Note for Assessing Noise Compliance, NSW EPA, 2015

Noise from Frost Fans, EPA Victoria, 2012 (publication 1043.1)

Noise Control Guideline, EPA Victoria, 2008 (publication 1254)

Environmental Noise Guideline: Audible Bird Scaring Devices, EPA South Australia, 2007

Wind Energy: Noise Assessment Bulletin for State Significant Wind Energy Development, DPE, 2016

Wind Energy Guideline for State significant wind energy development, DPE, 2016

Development near rail corridors and busy roads: interim guideline, DoP, 2008

Guideline for Child Care Centre Acoustic Assessment Version 3, Association of Australasian Acoustical Consultants, 2020

10.4 Other policies and guidelines

Construction Hours/Noise within the Central Business District. City of Sydney Code of Practice, City of Sydney, 1992

Fairfield City Wide Development Control Plan, chapter 13 Child Care Centres, Fairfield City Council, 2013

Construction Noise and Vibration Guideline, Roads and Maritime Services, August 2016

Quality Assurance Standard for Community and Stakeholder Engagement, International Association for Public Participation (IAP2), 2015

10.5 Further resources

Fundamentals of Acoustics, CH Hansen, Occupational Exposure to Noise: Evaluation, Prevention and Control. World Health Organization, 2001

Educational Courses in Acoustics, Australian Acoustical Society website
(<https://acoustics.org.au/web/web/Careers/Educational-Courses.aspx>)

Find a Member, Australian Acoustical Society website
(<https://acoustics.org.au/web/Membership/Find-a-Member/web/Membership/Find-a-Member.aspx?hkey=4cf9d65a-f5f5-4ec0-9008-d978d7fd9f9b>)

Member Firms of the AAAC, Association of Australasian Acoustical Consultants
<https://aaac.org.au/member-firms>

Guidelines and Downloads, Association of Australasian Acoustical Consultants website
(<https://aaac.org.au/Guidelines-&-Downloads>)

Acoustic Glossary, Gracey & Associates, <https://www.acoustic-glossary.co.uk/time-weighting.htm>

Manning CJ 1981, The propagation of noise from petroleum and petrochemical complexes to neighbouring communities, Report 4/81, CONCAWE, Den Haag