

# Regulatory Impact Statement: proposed Environment Protection (Residential Noise) Regulations 2018



Environment  
Protection  
Authority Victoria

Publication 1694 May 2018

## Regulatory Impact Statement

This Regulatory Impact Statement has been prepared in accordance with the requirements of the *Subordinate Legislation Act 1994* and the *Victorian Guide to Regulation*.

In accordance with the *Victorian Guide to Regulation*, the Victorian government seeks to ensure that regulations are well targeted, effective and appropriate, and that they impose the lowest possible burden on Victorian businesses and the community.

The Regulatory Impact Statement (RIS) process involves an assessment of regulatory proposals and allows members of the community to comment on the proposed new regulations before they are finalised. Such public input provides valuable information and perspectives, and improves the overall quality of regulations.

This RIS has been prepared to facilitate public consultation on the proposed Environment Protection (Residential Noise) Regulations 2018 ("new regulations"). A copy of the new regulations is attached to this RIS.

Public comment or submissions are invited on the Regulatory Impact Statement and the proposed 2018 Regulations. All submissions will be treated as public documents and published on EPA's website unless the submission clearly indicates the submission is confidential.

Please submit comments or submissions by no later than 5pm on Monday 18 June 2018 either by:

email: [residential.noise@epa.vic.gov.au](mailto:residential.noise@epa.vic.gov.au)

on the website: [www.engage.vic.gov.au](http://www.engage.vic.gov.au)

or to:

Residential Noise RIS  
c/o Policy and Regulation Unit  
Environment Protection Authority  
GPO Box 4395  
Melbourne Victoria 3001

© EPA Victoria 2018. This publication is copyright. No part may be reproduced by any process except in accordance with the provisions of the *Copyright Act 1986*.

Disclaimer: This publication may be of assistance to you, but the State of Victoria and its employees do not guarantee that the publication is without flaw or is wholly appropriate for your particular purposes and therefore disclaims all liability for an error, loss or other consequence that may arise from you relying on any information in this publication.

## Contents

Executive summary .....	5
1      Introduction .....	10
1.1    Purpose.....	10
1.2    Scope of the review .....	10
1.3    Have your say .....	11
2      Background.....	13
2.1    Problems associated with noise .....	13
2.1.1    What is noise? .....	13
2.1.2    What are the main sources of noise?.....	15
2.1.3    What are the impacts of noise? .....	15
2.2    Managing noise in Victoria.....	16
2.2.1    Overview of regulatory framework .....	16
2.2.2    Managing residential noise – Environment Protection (Residential Noise) Regulations 2008... .....	19
2.2.3    Other Australian regulation approaches.....	20
2.2.4    Non-government approaches .....	22
2.3    Residual problem.....	22
3      The problems associated with residential noise .....	23
3.1    What is the scale of the residential noise problem in Victoria?.....	23
3.2    How many complaints are made and received about residential noise? .....	25
3.3    What have we learnt about the residential noise issue from local government and police officers? .....	29
3.4    What are the potential trends that may impact the residential noise problem? .....	29
3.5    How effective are the current regulations in managing the residential noise problem? .....	30
4      The objectives of government action via EPA .....	31
5      Options: whether to remake regulations to manage residential noise in Victoria .....	32
5.1    Base case .....	32
5.2    Option 1: Remake the current regulations .....	32
5.2.1    Description.....	32
5.3    Assessment of options.....	33
5.4    Summary of assessment .....	34
5.5    Recommendation .....	34
6      Options: whether to make changes to the content of the regulations .....	35
6.1    Changes identified through initial consultation.....	35
6.2    Assessment criteria .....	35
6.3    Assessment of changes suggested by stakeholders .....	36

6.4	Feasible options .....	39
7	Option 2A: Changes to air conditioner provisions .....	40
7.1	Summary of problem .....	40
7.2	Sub-options to address the problem.....	40
7.3	Option 2A (i): Exemptions during Heat Health Alert periods.....	41
7.3.1	Description.....	41
7.3.2	Analysis of option .....	41
7.4	Option 2A (ii): Reduce the prohibited hours for the use of air conditioner.....	42
7.4.1	Description.....	42
7.4.2	Analysis of option .....	43
7.5	Option 2A (iii): Hybrid approach: reduced prohibited hours and exemptions during Heat Health Alert periods .....	44
7.5.1	Description.....	44
7.5.2	Analysis of option .....	44
7.6	Recommendation .....	45
8	Options for amending concrete pour provisions .....	46
8.1	Summary of problem .....	46
8.2	Sub options to address the problem.....	46
8.3	Option 2B (i): Reduce prohibited hours .....	46
8.3.1	Description.....	46
8.3.2	Analysis of option .....	47
8.4	Option 2B (ii): Remove trucks dispensing concrete from prohibited items in summer months .....	48
8.4.1	Description.....	48
8.4.2	Analysis of option .....	49
8.5	Recommendation .....	49
9	Options to complement the regulations .....	51
10	Conclusions .....	52
11	Consultation .....	53
12	Statement of Compliance with National Competition Policy .....	54
13	Compliance and enforcement .....	55
14	Implementation plan .....	56
15	Evaluation strategy .....	57
	<b>Appendix 1 Exposure Draft .....</b>	<b>59</b>

## List of Tables

Table 1 Common noise sources and their typical sound levels .....	14
Table 2 Summary of regulatory framework for noise.....	17
Table 3 Prescribed items and prohibited times in the current regulations.....	20
Table 4 Summary of residential noise regulatory approaches in Australia.....	21
Table 5 Proportion of people affected by noise from specific sources. Source: EPA .....	24
Table 6 Effects of residential noise disturbance.....	25
Table 7 Summary ranking of frequency of complaints to local government due to different residential noise sources* .....	28
Table 8 Local government and police officers' feedback on using the EP Act/current regulations compared to the PH&W Act .....	30
Table 9 Costs and benefits of Option 1: Remake the current regulations .....	33
Table 10 Overview of assessment of initial stakeholder suggestions for changes to the regulations.....	36
Table 11 Costs and benefits of Option 2A (i): Exemptions during Heat Health Alert periods .....	42
Table 12 Proposed change in prohibited hours for Option 2A (ii) Reduce the prohibited hours for the use of air conditioner.....	42
Table 13 Costs and benefits of Option 2A (ii) Reduce the prohibited hours for the use of air conditioner .....	43
Table 14 Costs and benefits of Option 2A (iii) Hybrid approach: reduced prohibited hours and exemptions during Heat Health Alert periods .....	44
Table 15 Current and proposed prohibited hours for Option 2B (i): Reduce prohibited hours .....	46
Table 16 Costs and benefits of Option 2B (i): Reduce prohibited hours for concrete pouring.....	48
Table 17 Costs and benefits of Option 2B (ii): Exempting trucks dispensing concrete from prescribed items.....	49
Table 18 Evaluation strategy.....	57

## Executive summary

Noise pollution is sound at a level that is annoying, distracting or physically harmful. Noise made by residential neighbours is one of the most common sources of noise exposure in Victoria.

The Environment Protection Authority Victoria (“EPA”) has a role to play to help protect people from being unreasonably disturbed by noise. EPA’s primary tool for managing residential noise in Victoria is the *Environment Protection (Residential Noise) Regulations 2008* (“current regulations”).

The current regulations list specific types of equipment and times when their use is prohibited, if they can be heard from another residence. This helps to clarify what is unreasonable noise for the use of common household items. The current regulations are made under the *Environment Protection Act 1970* (“EP Act”) and are enforced by Victorian Police (“police”) and local government officials.

Prohibited times are generally longer on weekends, longer for prescribed items that are expected to be noisier when used, and in place for night-time hours.

The current regulations do not cover the following types of noise:

- noise from non-residential sources, such as nightclubs, industrial/commercial premises or non-residential buildings
- vehicles in streets
- noise that is not generated by an item (e.g. people’s voices or noisy pets).

## Review of current regulations

The current regulations are being reviewed as they are due to expire on 14 October 2018. As part of the review, EPA needs to determine:

- whether to make new regulations to manage residential noise before the current regulations expire, and if so
- whether to make any amendments to the content of the regulations to improve the management of residential noise in Victoria.

The purpose of the document is to facilitate consultation with key stakeholders and the public on EPA’s proposed response to these matters. It outlines:

- the problems associated with noise exposure, both generally and specifically in the residential context
- how noise is currently regulated in Victoria
- how the current regulations have been reviewed, including the research and stakeholder consultation processes followed
- the options considered and the proposed responses.

## Proposal to make new regulations

EPA proposes to make new regulations. These would largely replicate the current regulations, though there would be the following changes:

- Two amendments to the management of air conditioner noise, as outlined below.

- Some editorial amendments are also proposed. These amendments would have no substantive impacts.

In making this recommendation, the costs and benefits of making new regulations were compared to a situation where there would be no regulations (i.e. after October 2018, if no further action was taken).

The current regulations are well used and help to manage residential noise issues by providing clarity about what is unreasonable noise in a residential context. This helps to reduce the impacts of unreasonable residential noise on human health.

The current regulations do impose some costs on Victorians, such as restricting personal freedoms. However, these are minor in practical terms.

Without new regulations, the residential noise problem is likely to increase as the EP Act alone would not provide sufficient clarity on what is considered unreasonable. EPA considers that the benefits of remaking the regulations would outweigh the costs.

The new regulations will be further complemented with non-regulatory approaches once the regulations are remade.

### Amendments considered by EPA

EPA considered a range of amendments suggested by stakeholders and the community through early consultation processes. These included changes to:

- the meaning of “unreasonable” noise
- expand the range of prescribed items (e.g. by including garage doors and car stackers, barking dogs and human voices)
- the treatment of existing prescribed items (including air conditioners) and exemptions
- the prohibited hours to reflect community standards
- complaints management
- enforcement matters.

The feasibility of the requested amendments was considered using the following criteria:

1. **Legal authority** – whether EPA has the required legal authority to implement the proposed change by amending the regulations. Proposed changes that fall outside the scope of the EP Act cannot be implemented through this review.
2. **Practicality** – whether the proposed option could be effectively implemented and enforced.
3. **Evidence of the problem** – whether there is sufficient evidence of the problem the proposed option seeks to address.
4. **Alignment with the intent of the Environment Protection Act** – whether the impact of the proposed option would result in an undue increase in unreasonable noise, which is contrary to the requirements of the Act.

The majority of the suggested changes were considered unfeasible for one or more of the following reasons:

- the change would require legislative amendments, which are outside the scope of this review
- there was insufficient evidence of a problem to justify the change

- the change would be inconsistent with the EP Act's intent.

The following two options were considered feasible and tested for their costs and benefits:

- changes the treatment of air conditioners during hot weather
- changes to the treatment of trucks dispensing concrete to reduce prohibited hours.

### **Option 2A: Changes to air conditioner provisions**

Under the current regulations, domestic air conditioners are a prescribed item and must not be audible in an adjoining residential property after 10pm.

Local government complaints show that noise from air conditioners is one of the most common sources of complaints. Feedback from local government officers gathered during the initial consultation period also indicates this is growing issue for Victoria, particularly in medium and high density residential areas.

However, the regulation of air conditioner noise requires a balance between minimising noise impacts and allowing people the comfort of using air conditioners during hot nights. During the early stakeholder consultation process, local government officers queried whether the current regulations were appropriate during periods of extreme heat. In some high-density buildings, for example, the only way for residents to maintain reasonable comfort levels is to use an air conditioner.

In response to this feedback, EPA considered the following changes:

- **Option 2A (i): Exemptions during Heat Health Alert periods** – the regulations would provide an exemption to allow residents to use air conditioners on days when a Heat Health Alert has been declared by the Chief State Health Officer.
- **Option 2A (ii): Reduce the prohibited hours for the use of air conditioners** – the prohibited hours for air conditioners would be reduced, either generally or in specified areas (e.g. in mixed-use zones).
- **Option 2A (iii): Combined approach:** reduced prohibited hours and exemptions during Heat Health Alert periods – a combination of Option 2A (i) and Option 2A (ii).

After assessing the costs and benefits of the options, EPA proposes Option 2A (iii), the combined approach.

## Recommended approach

After assessing the costs and benefits of the options, Option 2A (iii), the combined approach is proposed. The new regulations proposed would **amend the prohibited hours for air conditioners to one hour later** (see table below) and **provide exemptions to prohibited hours during Heat Health Alerts**. This would allow people to use their air conditioners for one hour more year-round, and during Heat Health Alerts, at any time.

Prescribed items	2008 Regulation prohibited times	Option 2A (ii) prohibited times
Air conditioners	Monday to Friday: before 7am and after <b>10pm</b> .	Monday to Friday: before 7am and after <b>11pm</b> .
	Weekends and public holidays: before 9am and after <b>10pm</b> .	Weekends and public holidays: before 9am and after <b>11pm</b> .

EPA considers the net benefits from this option would be larger than the other two options. The ability to operate air conditioners during times of extreme heat significantly improves occupant comfort and can even reduce health risks (i.e. due to heat stress). While an air conditioner may be audible in an adjacent dwelling, the intensity of the sound will often be significantly less than that of other noise sources, and the characteristic sound (a low hum) is not considered to be as annoying. Whilst air conditioner noise is currently one of the most complained about noise sources, there is a trend toward increasingly quiet electrical appliances.

## Option 2B: Amending concrete pour provisions

Residential construction leads to the second highest number of noise complaints to local councils.

Noise generated by concrete mixer trucks is a common source of complaints. Concrete dispensing vehicles are currently subject to prohibited hours that start at 8pm and end at 7am on weekdays, and 9am on weekends.

During the early stakeholder consultation process, local government officials reported that the construction industry considers the current hours are too restrictive. Overly hot weather can compromise the structural integrity of concrete in the long-term by causing the concrete to set too quickly and not bind strongly<sup>1</sup>. The construction industry would prefer more flexibility to pour concrete early in the morning (i.e. before it gets too hot).

In response to this feedback, EPA considered the following options:

- **Option 2B (i): Allow concrete pouring to start earlier Monday to Friday during summer months**<sup>2</sup>.  
This option would allow concrete pours to start 2 hours earlier; at 5 am on weekdays, instead of 7am

<sup>1</sup> Concrete Network, Retrieved from <https://www.concretenetwork.com/hot-weather-concreting/problem.html>

<sup>2</sup> The Australian Government defines summer as December to February.

currently. The earlier starts would only take effect in summer (3 months of the year). The prohibited hours for Monday to Friday would remain as they currently are in other seasons.

- **Option 2B (ii): Remove trucks dispensing concrete from prohibited items during summer months.** This option entails removing trucks dispensing concrete from prohibited items during summer months. Concrete pours could occur at any time in summer but would continue to be a prohibited item (and subject to the current restrictions) in all other seasons.

### Recommended approach

After considering and evaluating the qualitative costs and benefits of these options, EPA recommends that no change be made.

There is insufficient quantitative evidence that the benefits from Options 2B (i) and (ii) outweigh the costs.

- While the benefits of earlier concrete pours are recognised in reducing the risk of compromised structural integrity, it is difficult to quantify the extent of the problem, and to measure the specific benefits.
- More permissive regulations would lead to early morning concrete pours, which is likely to cause health impacts to residents<sup>3</sup> due to disrupted sleep early in the morning.

### Proposed new regulations

EPA recommends that the current regulations are re-made with changes to the use of air conditioners to provide exemptions to prohibited hours during Heat Health Alerts periods and to commence prohibited hours for the use of air conditioners one hour later each day.

### How you can provide feedback on these proposals

We are particularly interested in your views about:

- the proposal to remake the regulations
- the proposed changes to the treatment of air conditioner noise
- the proposal not to make changes to prohibited hours for concrete pours
- whether the list of prescribed items and prohibited times meets expectations
- whether prohibited times should be made uniform for all days (i.e. weekdays and weekends)
- whether the prohibited times for amplified music and musical instruments should change
- any other changes that are not already raised in this document.

All submissions will be treated as public documents and published on EPA's website unless the submission clearly indicates the submission is confidential.

Please submit comments or submissions as per the detail on the cover page.

---

<sup>3</sup> Medic, G., Wille, M., & Homels, M.E. (2017). Short- and long-term health consequences of sleep disruption. *Nature and Science of Sleep*, 9, 151-161. <http://doi.org/10.2147/NSS.S134864>

## 1 Introduction

Noise pollution is sound at a level that is annoying, distracting or physically harmful. This can mean different things to different people.

Noise made by residential neighbours is one of the most common sources of noise exposure in Victoria.

The Environment Protection Authority Victoria (“EPA”) has a role to play to help protect people from being unreasonably disturbed by noise. EPA’s primary tool for managing residential noise in Victoria is the *Environment Protection (Residential Noise) Regulations 2008* (“current regulations”).

The current regulations list specific types of equipment and times when their use is prohibited if they can be heard from another residence. This helps to clarify what is unreasonable noise for the use of common household items.

The current regulations are being reviewed as they are due to expire in October 2018. Under section 5 of the *Subordinate Legislation Act 1994*, regulations have a maximum lifespan of 10 years (unless repealed sooner).

EPA proposes to adopt new regulations to replace the current regulations before they expire.

### 1.1 Purpose

The purpose of this document is to facilitate consultation with key stakeholders and the public on the government’s proposed response to the expiring regulations.

It discusses the following matters:

- the problems associated with noise exposure, both generally and specifically in the residential context
- how noise is regulated in Victoria, including through the current regulations
- how the current regulations have been reviewed, including the research and stakeholder consultation processes followed
- the options considered in response to the October 2018 expiry of the current regulations
- details of the proposed new regulations.

### 1.2 Scope of the review

Under the *Environment Protection Act 1970* (“EP Act”), EPA can make regulations to help manage residential noise issues in Victoria. Section 48A(5)<sup>4</sup> of the EP Act defines the scope of the regulations; the regulations can contain provisions about:

- the range of prescribed items
- the set of prohibited times, and
- exemptions to the prescribed items or prohibited times.

The current review was conducted within these parameters.

---

<sup>4</sup> States: “Without limiting the generality of subsection (3), any noise from a prescribed item which—

a. is emitted from residential premises at any time which is prescribed as a prohibited time in respect of that prescribed item; and  
b. can be heard in a habitable room in any other residential premises, regardless of whether any door or window giving access to that room is open—

is deemed to be unreasonable noise unless it is emitted in the case of an emergency.”

This review has also occurred in the context of a broader review of how to best protect the environment in Victoria (see box below). The outcomes of this broader review may have implications for residential noise (and other) regulations made under the EP Act.

### **Independent Inquiry into EPA**

In May 2015, the Minister for Environment, Climate Change and Water appointed a Ministerial Advisory Committee to undertake an independent Inquiry into EPA.

The Final Report of the Independent Inquiry into EPA was released in May 2016. The Report recommends changes to the EP Act, SEPPs and to EPA's regulatory tools. It envisages EPA taking a stronger preventative approach to protect human health and the environment by reducing the harmful effects of pollution and waste.

The Government released its response to the inquiry on 17 January 2017 in which it supported 40 of the 48 recommendations (in full), with seven supported in principle, and one supported in part.

The Government response clearly acknowledged the need to continue current reviews, and adapt to the proposed new model as soon as practicable (Recommendation 15.1). Consideration is being given to how the proposed new regulations may migrate into a new instrument(s).

The Government intends to legislate for a new EP Act by mid-2018. Implementation activities, including developing the agreed final suite of regulatory tools will commence after the legislative reform is completed.

### **1.3 Have your say**

EPA is seeking feedback on its proposal outlined in this document so that any changes to the regulations can be implemented before 13 October 2018.

We are interested in your feedback on what you agree with in the proposed new regulations, what you disagree with and any other improvements or considerations that you think are important. A copy of the proposed new regulations is contained in Appendix 1.

We are particularly interested in your views about:

- the proposal to remake the regulations
- the proposed changes to the treatment of air conditioner noise
- the proposal not to make changes to prohibited hours for concrete pours
- whether the list of prescribed items and prohibited times meets expectations
- whether prohibited times should be made uniform for all days (i.e. weekdays and weekends)
- whether the prohibited times for amplified music and musical instruments should change
- any other changes that are not already raised in this document.

All submissions will be treated as public documents and published on EPA's website unless the submission clearly indicates the submission is confidential.

### Box 1. How to make a submission

Please submit comments or submissions by no later than 5pm on Monday 18 June to:

Email: [residential.noise@epa.vic.gov.au](mailto:residential.noise@epa.vic.gov.au)

on the website: [www.engage.vic.gov.au](http://www.engage.vic.gov.au)

or to:

Residential Noise RIS  
c/o Policy and Regulation Unit  
Environment Protection Authority  
GPO Box 4395  
Melbourne Victoria 3001

## 2 Background

### 2.1 Problems associated with noise

#### 2.1.1 What is noise?

Noise is generally defined as unwanted sound. Individuals have different sensitivity to sound, based on:

- the perceptiveness of their hearing
- the character of the sound (e.g. tone, variability)
- their tolerance or acceptance of sound in their environment. This can be affected by factors such as the time it occurs, its duration (e.g. people are often more sensitive in the evenings when there is greater risk of sleep disturbance), location, and existing background noise levels.

While sound can be objectively measured in decibels (dB) and by using a variety of methods, identifying whether the noise level is 'unreasonable' for the EP Act requires a subjective assessment of whether the sound is unwanted, excessive or otherwise harmful. Table 1 below outlines the typical sound levels for common noise sources.

A range of decibel threshold values are used as the basis for calculating the extent of excessive noise exposure in different circumstances, with lower thresholds typically being applied at night. The World Health Organisation has also published night noise guidelines for Europe<sup>5</sup>. These guidelines set a recommended level of 40 dB for night-time noise, which is equivalent to the sound from a quiet street in a residential area (see Table 1).

---

<sup>5</sup> See [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0017/43316/E92845.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0017/43316/E92845.pdf?ua=1) and <http://www.euro.who.int/en/health-topics/environment-and-health/noise/policy/who-night-noise-guidelines-for-europe>

Table 1 Common noise sources and their typical sound levels

Typical sound level in dB	Source
140	Jet engine at 30m
130	Rivet hammer (pain can be felt at this threshold)
120	Rock drill
110	Chain saw
100	Sheet-metal workshop
90	Lawn-mower
85	Front-end loader
80	Kerbside heavy traffic
75	Passenger car at 60km/hr, 7m distance <sup>6</sup>
70	Loud conversation
60	Normal conversation
45 – 35	Air conditioners <sup>7</sup>
40	Quiet radio music/quiet residential street
30	Whispering
0	Silence

<sup>6</sup> VicRoads, 2003, *A Guide to the Reduction of Traffic Noise*. Available from <https://www.vicroads.vic.gov.au/~/media/files/documents/planning-andprojects/aguidetoreductionoftrafficnoise2003.pdf?la=en>

<sup>7</sup> This is based on the Australian Institute of Refrigeration, Air conditioning and Heating (AIRAH) recommended maximum noise levels from your air conditioner at a residential property boundary; 45dB(A) maximum during the day and 35dB(A) maximum at night - <http://www.fairair.com.au/calculator.noise.aspx>

## 2.1.2 What are the main sources of noise?

Survey research commissioned or undertaken by EPA between 2007 and 2016<sup>8</sup> identified the following as common sources of noise across Victoria:

- road traffic
- residential neighbours
- alarms
- construction activity
- animals/dogs
- music or entertainment venues.

The proportion of people affected by each noise source has differed over the years, though traffic and residential noise have been consistently high. For example, in 2011-12, 26.2% of respondents<sup>9</sup> had been affected by traffic noise from busy roads, 23.7% by individual vehicles and 13.9% by residential neighbours. In 2013-14, 26.2% of respondents had been affected by noise from individual vehicles, 18% by traffic noise from busy roads, and 22.7% from residential neighbours.

## 2.1.3 What are the impacts of noise?

### ***Health impacts***

Exposure to noise can have a range of adverse effects, particularly on human health. A recent World Health Organisation study of the burden of disease due to environmental noise in Europe<sup>10</sup> found the main health impacts of excess noise exposure are:

- annoyance and adverse effects on quality of life
- sleep disturbance
- higher risk of cardiovascular disease
- negative impacts on performance and learning of school children
- mental health<sup>11</sup>
- hearing impairment.

Results from a 2007 EPA state-wide survey<sup>12</sup> (i.e. shortly before the current residential noise regulations were made) showed that 23% of respondents reported losing sleep due to noise exposure and 20% reported having other activities disturbed by noise<sup>13</sup>.

---

<sup>8</sup> Strahan Research (2007). *Report to EPA Victoria on Community Response to Environmental Noise* and EPA Outcomes Social Research survey conducted in 2012, 2014, 2016.

<sup>9</sup> to EPA's Social Outcomes survey conducted in 2012, 2014, 2016.

<sup>10</sup> WHO synthesising all European data in a 2011 report "Burden of disease from environmental noise. Quantification of healthy life years lost in Europe".

<sup>11</sup> Beutel, M.E., Jünger, C., Klein, E.M., Wild, P., Lackner, K., Blettner, M., Binder, H., Michal, M., Wiltink, J., Brähler, E. & Münzel, T. (2016). Noise Annoyance Is Associated with Depression and Anxiety in the General Population – The Contribution of Aircraft Noise. *PLoS ONE*, 11(5). Available from:

[http://ec.europa.eu/environment/integration/research/newsalert/pdf/does\\_environmental\\_noise\\_lead\\_depression\\_anxiety\\_465na2\\_en.pdf](http://ec.europa.eu/environment/integration/research/newsalert/pdf/does_environmental_noise_lead_depression_anxiety_465na2_en.pdf)

<sup>12</sup> Strahan Research (2007). *Report to EPA Victoria on Community Response to Environmental Noise*, p 12.

<sup>13</sup> More recent surveys did not ask about impacts of overall noise disturbance and instead focus on noise disturbance by noise source

## Vulnerable groups

The World Health Organisation also found that some groups are more vulnerable to noise than others<sup>14</sup>. For example:

- as children spend more time in bed than adults, they are more exposed to night noise
- people who are blind or have hearing impairment, chronically ill, and elderly people are more sensitive to disturbance
- shift workers are at increased risk because their sleep structure is under stress
- lower socio-economic groups that cannot afford to live in quiet residential areas or have adequately insulated homes, are likely to suffer disproportionately.

## Costs of noise exposure on health

The costs to society of noise exposure (from all sources) are large. While limited quantitative analysis has been undertaken in Australia, European data indicate the size of the problem of excessive noise exposure.

For example, a 2007 study on traffic noise based on European data concluded that the cost of excess noise exposure is equivalent to approximately 0.4% of GDP in the 22 European Union countries studied<sup>15</sup>. A UK study estimated that the potential productivity cost of prevailing levels of environmental noise at £2bn – £4bn (AUD\$3.6 – 7.2bn) per year in England in 2014 prices. The main causes of this cost were:

- noise-related sleep disturbance and the resulting effect on productivity
- effects of noise on academic performance and the link to lifetime earnings
- noise, health and productivity, focusing on the potential economic consequences of noise related ill health<sup>16</sup>.

## 2.2 Managing noise in Victoria

### 2.2.1 Overview of regulatory framework

The regulatory framework for managing noise in Victoria is complex. It comprises an overarching legislative framework, as well as specific rules that vary across the different noise sources.

Key pieces of legislation that generally apply to all noise sources include:

- the **Environment Protection Act 1970 (“EP Act”)** – which sets out general provisions to control noise emissions, as well as noise offences and enforcement matters across the different noise sources
- the **Public Health and Wellbeing Act 2008 (“PH&W Act”)** – under the PH&W Act, nuisance that “is, or is liable to be, dangerous to health or offensive” is an offence. This can include noise.

Table 2 below summarises the key additional rules for each noise source.

---

<sup>14</sup> World Health Organisation, 1999, Guidelines for Community Noise

<sup>15</sup> L.C. den Boer & A. Schroten (2007). *Traffic noise reduction in Europe*. CE Delft, March 2007. See:

[http://www.transportenvironment.org/sites/te/files/media/2008-02\\_traffic\\_noise\\_ce\\_delft\\_report.pdf](http://www.transportenvironment.org/sites/te/files/media/2008-02_traffic_noise_ce_delft_report.pdf)

<sup>16</sup> Department of Environment, Food and Rural Affairs, (2014). *Environmental Noise: Valuing impacts on: sleep disturbance, annoyance, hypertension, productivity and quiet*. United Kingdom Crown, pp.24-30.

Table 2 Summary of regulatory framework for noise

<b>Issue</b>	<b>Existing regulation</b>	<b>How</b>
Residential noise	<i>Environment Protection (Residential Noise) Regulations 2008</i>	<ul style="list-style-type: none"> <li>Specific regulations to manage residential noise in Victoria - outlined in section 2.2.2</li> </ul>
	EPA Victoria Guideline <i>EPA Noise Control Guidelines</i> (publication 1254)	<ul style="list-style-type: none"> <li>Non-statutory guidelines on specific noise sources, such as retail deliveries, scare guns and construction/demolition. Also, covers recommended decibel levels and operating hours</li> <li>Primarily used by local councils</li> </ul>
	Local government bylaws	<ul style="list-style-type: none"> <li>Some councils have local laws about certain noise sources (e.g. residential intruder alarms). These laws vary across the different councils</li> </ul>
Commercial and Industrial noise	SEPP N-1 Control of Noise from Commerce, Industry & Trade	<ul style="list-style-type: none"> <li>Sets limits on operating hours and decibels to protect residential uses in the metro region</li> <li>Establishes noise measurement practices</li> </ul>
	EPA Victoria Guideline <i>Noise from industry in regional Victoria (NIRV)</i> (publication 1411)	<ul style="list-style-type: none"> <li>Non-statutory guideline that manages noise from commerce, industry and trade premises in regional Victoria and is broadly equivalent to SEPP N-1 in those areas (although it only sets recommended noise levels rather than mandatory noise limits).</li> <li>Legally binding if applied through statutory instrument such as planning permit or notice</li> </ul>
	<i>Planning and Environment Act 1987</i>	<ul style="list-style-type: none"> <li>Provides framework for integrating controls for land use and development, and associated environmental and social protection, including from excessive noise</li> <li>Developments likely to cause noise must identify the likely effects of noise emissions. Planning authorities must consider these when deciding whether to approve a development through a permit. The Better Apartments Design Standards (which refer to noise impacts, amongst other things) are given power through this Act.</li> <li>Council planning permit conditions can apply SEPP N-1 or NIRV</li> </ul>
Traffic noise	<i>Environment Protection (Vehicle Emissions) Regulations 2013</i>	<ul style="list-style-type: none"> <li>Provide standards and test methods for motor vehicle noise emissions, and are usually enforced by EPA and police.</li> </ul>
	Local laws	<ul style="list-style-type: none"> <li>Some Victorian local councils have laws about certain noise sources (e.g. recreational vehicles). There is no consistency across the state and laws apply only in that municipality.</li> </ul>

Issue	Existing regulation	How
Railway noise	EPA Victoria Guideline <i>Modified vehicle guidelines</i> (publication 1031.4)	<ul style="list-style-type: none"> <li>Non-statutory guideline about for vehicles constructed with emission controls – vehicles manufactured after 1 July 1976 – and some general requirements that apply to all vehicles</li> </ul>
	VicRoads traffic noise reduction policy	<ul style="list-style-type: none"> <li>Outlines design standards and expectation for road construction and noise abatement requirements</li> </ul>
	Passenger Rail Infrastructure Noise Policy <sup>17</sup>	<ul style="list-style-type: none"> <li>Guidance for transport bodies and planning authorities for redevelopment/design of new passenger rail infrastructure</li> </ul>
Noise from entertainment venues	<i>Liquor Control Reform Act 1998</i> (LCR Act)	<ul style="list-style-type: none"> <li>Noise levels are considered as part of the licensing process</li> <li>Some licences contain conditions for licensees to follow certain noise management practices</li> <li>Local councils, police and the Victorian Commission for Gaming and Liquor Regulation (VCGLR) is responsible for enforcement under this Act</li> </ul>
	SEPP N-2 Control of Music Noise from Public Premises	<ul style="list-style-type: none"> <li>Sets limits on operating hours and decibels to protect residential uses (particularly sleep at night and normal conversation)</li> </ul>
	<i>Planning and Environment Act 1987</i>	<ul style="list-style-type: none"> <li>As outlined above - council planning permit conditions can apply SEPP N-2</li> </ul>
Large construction projects	EPA Victoria Guideline <i>Environmental guidelines for major construction sites</i>	<ul style="list-style-type: none"> <li>Non-statutory guideline to help developers, contractors and government agencies involved with commissioning or constructing freeways, major roads or major development projects</li> <li>Contains advice on preparing and implementing an environmental management plan for major construction sites</li> </ul>
Large residential subdivision or urban development sites	EPA Victoria Guideline <i>Noise from large residential subdivision or urban development sites</i> (publication 1264)	<ul style="list-style-type: none"> <li>Non-statutory guideline that outlines the legislation applying to noise from subdivision development and construction.</li> <li>Designed to assist developers and councils manage noise from large development projects</li> </ul>

---

<sup>17</sup> This is a Department of Economic Development, Jobs, Transport and Resources policy.

## **2.2.2 Managing residential noise – Environment Protection (Residential Noise) Regulations 2008**

As outlined above, the EP Act sets out the overarching framework for regulating residential noise in Victoria. The EP Act makes it an offence to cause ‘unreasonable noise’ from any residential premises.

Local government and police are primarily responsible for enforcing this part of the EP Act, though EPA also has a small enforcement role.

In determining whether noise is unreasonable, the EP Act states that regard must be had to the:

- volume intensity and duration of the noise
- time, place and other circumstances in which it is emitted.

To help clarify what is unreasonable noise, the EP Act allows for specific regulations to be made.

The current regulations – the Environment Protection (Residential Noise) Regulations 2008 – were made in 2008. The regulations only apply to noise from residential premises. The current regulations set:

- “prescribed items” – i.e. specific types of equipment
- “prohibited times” – i.e. times when the use of prescribed items is prohibited, if they can be heard from another residence
- exemptions for certain construction and large scale residential developments activities.

Police and local government officers use the prescribed items and prohibited times to determine whether to investigate and manage noise issues without having to specifically measure noise levels in each case.

The table below outlines the prescribed items and prohibited times in the current regulations. Prohibited times are generally longer on weekends, longer for prescribed items that are typically expected to be noisier when used, and in place for night-time hours.

Table 3 Prescribed items and prohibited times in the current regulations

<b>Group</b>	<b>Prescribed items</b>	<b>Prohibited times</b>
<b>1</b>	A motor vehicle (except a vehicle moving in or out of premises), lawn mower or other grass cutting device and any equipment or appliance not falling within Group 2 having an internal combustion engine.	Monday to Friday: before 7am and after 8pm. Weekends and public holidays: before 9am and after 8pm.
<b>2</b>	An electric power tool, chain or circular saw, gas or air compressor, pneumatic power tool, hammer and any other impacting tool and grinding equipment.	Monday to Friday: before 7am and after 8pm. Weekends and public holidays before 9am and after 8pm.
<b>3</b>	A domestic air conditioner or evaporative cooler, heat pump, swimming pool pump, spa pump, water pump other than a pump being used to fill a header tank, domestic heating equipment (including central heating and hot water systems) and a domestic vacuum cleaner.	Monday to Friday: before 7am and after 10pm. Weekends and public holidays: before 9am and after 10pm.
<b>4</b>	A musical instrument and any electrical amplified sound reproducing equipment including a stereo, radio, television and public address system.	Monday to Thursday: before 7am and after 10pm. Friday: before 7am and after 11pm. Saturday and public holidays: before 9am and after 11pm. Sunday: before 9am and after 10pm.
<b>5</b>	Any electric equipment or appliance not falling within Group 2, Group 3, or Group 4, including electric gardening equipment, but not electric equipment or appliances for personal care or grooming, or for heating, refrigeration or preparation of food.	Monday to Friday: before 7am and after 8pm. Weekends and public holidays: before 9am and after 8pm.

Source: *Environment Protection (Residential Noise) Regulations 2008*

The current regulations also include exemptions for certain construction and large scale residential development activities. The exemption depends on things such as premise location, zoning and activity duration.

### 2.2.3 Other Australian regulation approaches

Other Australia states and territories have varied approaches to the management of residential noise. Some states, such as South Australia and Tasmania, set a maximum objective limit to define unreasonable noise (i.e. 40 or 45 dB). Others, such as Queensland, set an acceptable range above the ambient (i.e. for fixed plants). During prohibited times, Victoria defines 'unreasonable' in terms of 'noise that can be heard within a neighbouring habitable room', which is a similar approach to NSW, QLD and Tasmania for various sources. This highlights that Victoria's approach aligns with other noise management approaches throughout Australia (Table 4).

Table 4 Summary of residential noise regulatory approaches in Australia

<b>Jurisdiction</b>	<b>Definition of unreasonable noise during prohibited times</b>			<b>Restrictions on noise emission outside of prohibited times</b>		
	<b>Fixed plant</b>	<b>Domestic activities</b>	<b>Construction</b>	<b>Fixed plant</b>	<b>Domestic activities</b>	<b>Construction</b>
Victoria	Audible within habitable room			More than 5 dB above background	Noise should not be unreasonable	
Australian Capital Territory	Noise standards prescribed by <i>Environment Protection Regulation 2005</i> <sup>18</sup>				Not specified	
New South Wales	Audible within habitable room		More than 5 dB above background	Noise not to be 'offensive' Objective limits to define offensive may be specified in some council areas		Noise targets apply, also required to take all reasonable efforts to minimise noise
Northern Territory <sup>19</sup>	Not specified			Not specified		More than 5 dB above background
Queensland	More than 3 dB above background	Audible within habitable room		More than 5 dB above background	Noise should not be unreasonable	
South Australia	Above 45 dB(A)			52 dB(A)	All reasonable efforts to minimise noise emission	
Tasmania	Above 40 dB(A)	Audible within habitable room		45 dB(A)	Noise should not be unreasonable	
Western Australia	Noise limits prescribed by <i>Environmental Protection (Noise) Regulations 1997</i>				Noise should not be unreasonable	

<sup>18</sup> Noise standards are the maximum level of noise that may be emitted by an activity, as measured at the compliance point. These standards are set to protect the acoustic environmental value, appropriate to the land zones.

<sup>19</sup> Note: Strict prohibited times are not defined in NT legislation but are nominated in guidelines.

### 2.2.4 Non-government approaches

In addition to the regulatory approaches outlined above, there are also a few non-government tools for reducing the impact of noise for residents:

- **Owners' corporation rules:** Owners' corporations can provide rules about noise and other nuisances, including noise from air conditioners, musical instruments, televisions, sound systems and lawn mowers. However, a submission from Strata Communities Australia (SCA), the peak body for Victoria's owners' corporations, emphasised the lack of power available to owners' corporations to regulate noise, and underlined the importance of effective regulatory frameworks.
- **Soundproofing and building design by residents:** Residents may choose to soundproof and design dwellings in a way to receive less noise or minimize the impacts of neighbouring residents. The effectiveness of this is limited, as sound proofing reduces all noise equally. This highlights annoying noise characteristics, such as low-frequency bass. In addition, as a general principle, noise controls applied at the source of noise are more efficient than controls applied at receivers of noise, such as residential buildings.
- **Resident mobility:** Residents who are unhappy with the level of noise experienced at their property can choose to move, and less sensitive residents can move in to noise-affected dwellings. There are several potential issues with this:
  - at certain levels, noise will be considered unreasonable to most potential residents
  - excessive noise can pose a health threat to residents
  - resident mobility is often restricted by property markets and lower socio-economic population groups may be forced to live in areas with higher noise impacts
  - it is not necessarily the most efficient use of land to allow it to be degraded by noise.
- **Quieter equipment:** Various noise sources have become quieter due to improvements in technology and standards. Vehicles have become quieter together with stricter standards on vehicle noise emissions; noise cancellation headphones are increasingly popular and affordable; consumers can choose quieter air conditioners with sound level outputs detailed or labelled.
- **Mediation:** The Dispute Settlement Centre of Victoria offers mediation services for the resolution of community issues. Noise issues are the fifth most common source of dispute brought for mediation. Mediation would not be an avenue to resolve all residential noise issues due to the length of time prior to resolution, which may cause impacts to health.

### 2.3 Residual problem

Noise can negatively impact people's health. There are a range of government and non-government tools used to manage noise and reduce these impacts.

The current regulations are the key tool for managing residential noise in Victoria, and these are expiring on the 14 October 2018. Their expiration will leave a gap that non-government measures, outlined in section 2.2.4, are not expected to fill.

To protect people from the health impacts of noise exposure, the key issue that regulation needs to address is the use of items at times that are considered unreasonable.

The nature of the residential noise problem is outlined in the following sections.

### 3 The problems associated with residential noise

This section more specifically discusses the nature and scale of the residential noise problem in Victoria, and the effectiveness of the current regulations at managing residential noise.

#### Data collection

This section draws on various information sources, including information gathered for the current review and other EPA surveys conducted for broader purposes.

As part of the current review, EPA:

- collected basic quantitative data on noise complaints from both police and local government. 33 councils responded to the survey, with an even distribution of metropolitan and non-metropolitan respondents.
- worked with consultants to develop more detailed surveys and administered these in an online format. A total of 48 responses were received from local government and 28 received from police.
- developed and administered a self-selecting online community survey, which had over 1100 responses.

EPA also conducts larger community noise surveys on a biennial basis (“the Outcomes Social Research”). The methodology for these surveys ensures that the responses are representative of the broader community, with 600-700 responses each time. The results from the 2012, 2014 and 2016 surveys were considered as part of this review.

The relevant results of these surveys are summarised within this document but are not otherwise publicly available.

#### 3.1 What is the scale of the residential noise problem in Victoria?

Table 5 outlines the findings of the Outcomes Social Research<sup>20</sup>. It shows that noise from residential neighbours is the second most common cause of noise annoyance in Victoria in 2013-14 and 2015-16.

Table 5 also highlights that the proportion of people affected by residential noise has almost doubled in recent years. This increase is greater than that experienced for other significant noise sources impacting Victorians.

<sup>20</sup> This Outcomes Social Research survey conducted by EPA use statistically representative samples, conducted via computer assisted telephone interview until 2014 and on an online basis since that time. Around 600 – 700 responses are received to each survey.

Table 5 Proportion of people affected by noise from specific sources. Source: EPA

In the last 3 months, have you been affected at home or in your local neighbourhood by noise in relation to any of the following?	2011 – 2012 (%)	2013 – 2014 (%)	2015 – 2016 (%)
Road traffic – individual vehicles	<b>23.7</b>	<b>26.2</b>	<b>27</b>
Residential neighbours	<b>13.9</b>	<b>22.7</b>	<b>26.7</b>
Construction	<b>16.1</b>	<b>18.3</b>	<b>20.4</b>
Road traffic – busy roads	<b>26.2</b>	<b>18.0</b>	<b>24.7</b>
Aircraft	<b>9.2</b>	<b>15.5</b>	<b>7.7</b>
Audible alarms	<b>9.6</b>	<b>9.9</b>	<b>13.1</b>
Trams or trains	<b>5.5</b>	<b>6.9</b>	<b>10.7</b>
Sports or recreation	<b>2.2</b>	<b>3.3</b>	<b>3.7</b>
Farming	<b>1.1</b>	<b>2.4</b>	<b>1</b>
Music or entertainment venues	<b>4.2</b>	<b>2.1</b>	<b>7.7</b>
Factories or industry	<b>2.8</b>	<b>2.0</b>	<b>3.1</b>
Shops, restaurants or other businesses	<b>2.3</b>	<b>1.9</b>	<b>4.7</b>
Something else (please specify)	<b>0.6</b>	<b>0.9</b>	<b>2.9</b>
Local landfill or tip	<b>0.4</b>	<b>0.8</b>	<b>1.4</b>
Ports, boats or shipping	<b>0.0</b>	<b>0.4</b>	<b>3.7</b>
Animals/dogs	<b>0.0</b>	<b>0.2</b>	<b>-</b>
Quarry	<b>0.2</b>	<b>0.1</b>	<b>.8</b>
Mining	<b>0.1</b>	<b>0.0</b>	<b>1</b>
Any source above (inferred)	<b>52.2</b>	<b>55.3</b>	<b>61.8</b>

The same survey asked respondents to rate the degree of annoyance they experienced on a 10-point scale, with 10 being most annoyed and one being least annoyed. Residential neighbours were rated the most annoying noise source (average score of 7.32) followed by:

- construction noise – 7.03
- road traffic noise from individual vehicles – 6.97

These surveys show that residential noise is both widespread and the most annoying source of noise in Victoria.

Key impacts associated with this problem include sleep disturbance (almost 60% of those annoyed by residential noise) and impaired use and enjoyment of one's home (42%, see Table 6).

Only 11% of people reported that they experience health impacts due to residential noise. However, this may represent only that group of people who are aware of specific negative health impacts or that have specifically attributed their negative health impacts to residential noise.

Table 6 Effects of residential noise disturbance<sup>21</sup>

<b>Effect</b>	<b>Percentage of respondents<sup>22</sup></b>
Sleep	59.6%
Use/enjoyment of home	42.3%
Health	11.0%
Nothing in particular	8.9%
Loss of livelihood/income	2.7%
Other	1.7%

Residential noise annoyance is also a source of neighbourhood conflict. For example, annual statistics from the Dispute Settlement Centre of Victoria found that in 2015-16, the Centre helped to address 570 noise-related disputes<sup>23</sup>. Noise issues were the fifth most common source of disputes requiring mediation (fences were the most disputed issue with almost 7000 calls).

### 3.2 How many complaints are made and received about residential noise?

The Outcomes Social Research survey also shows that 25.7% of those impacted by residential noise reported that they have complained to police, EPA and/or local government<sup>24</sup>. This is the highest proportion of respondents that had complained about any specific noise source, indicating that:

- those impacted by residential noise understand who to complain to (compared to those affected by other noise sources such as road or aircraft noise)
- people have a greater expectation that their complaint will be addressed.

For EPA, residential noise is the second most complained about noise source, although this has decreased in recent years (Figure 1).

---

<sup>21</sup> The data from the 2012 EPA community survey constitute the most recent data in respect of the specific impact of residential noise disturbance.

<sup>22</sup> Note that this question was asked of only those respondents who stated that they were “highly annoyed” (score of more than 5 on a 10-point scale) by residential noise.

<sup>23</sup> Figures provided by Dispute Settlement Centre of Victoria for financial year 2015/2016.

<sup>24</sup> EPA Outcomes Social Research survey, 2016.

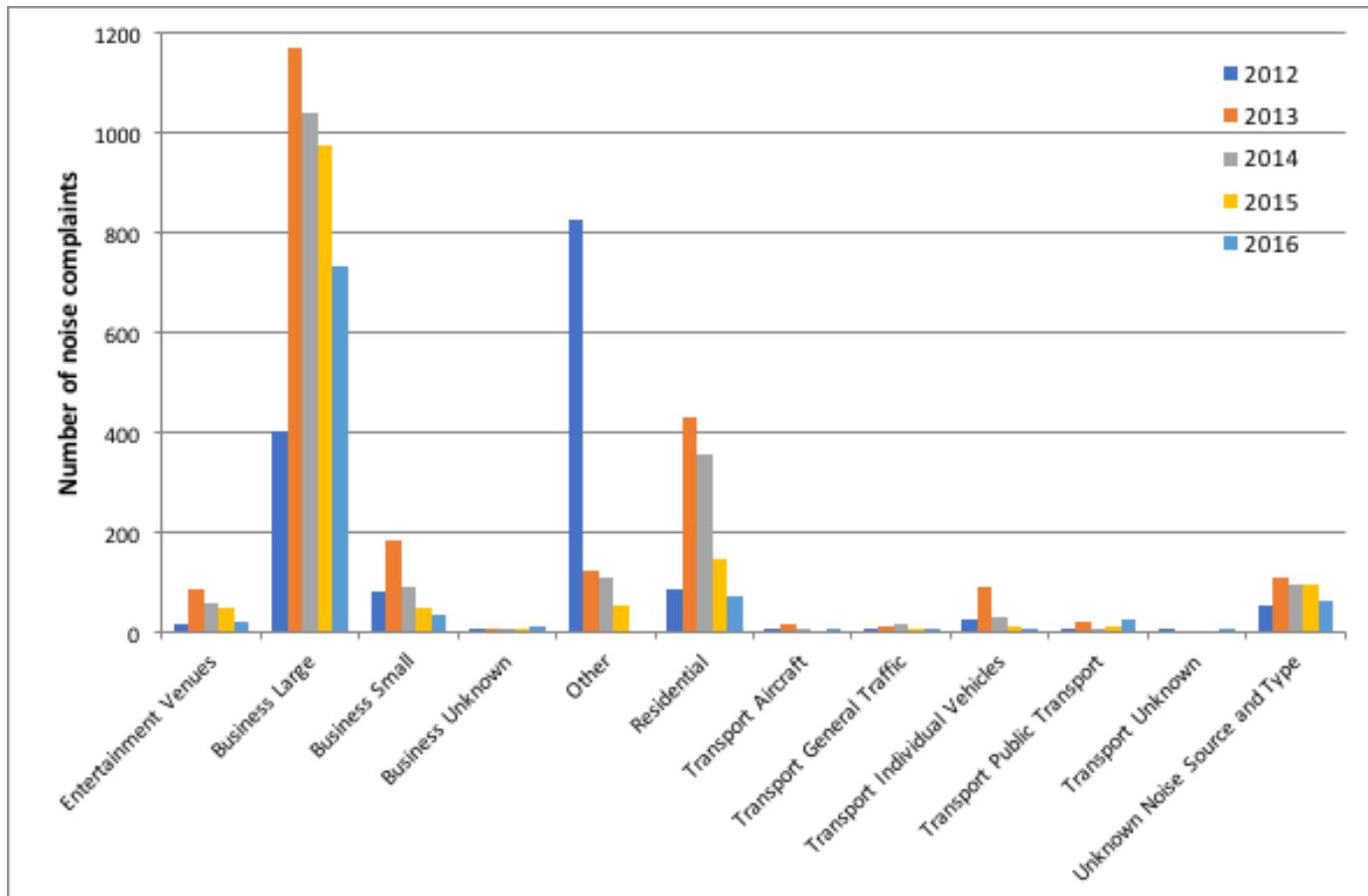


Figure 1 Annual noise related complaints to EPA from 2012 – Dec 2016

Figure 2 shows that the average number of complaints regarding residential noise received by a local council increased by around 20% over the past four years. This finding was based on a survey administered by EPA of 33 local governments, with an even distribution of metropolitan and non-metropolitan respondents.

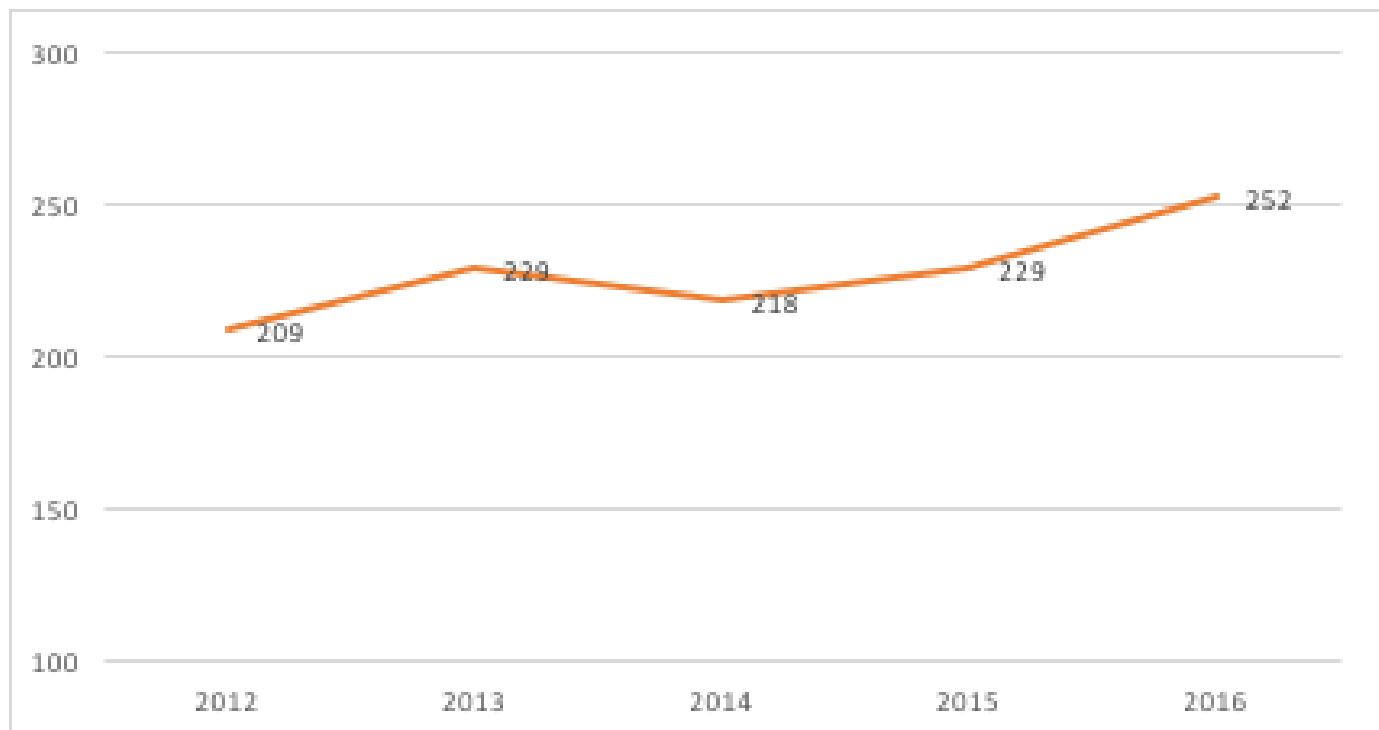


Figure 2 Average number of residential noise complaints to a local council – based on an EPA survey of 33 local councils

There is no available data from police about the number of residential noise complaints that they receive. The survey conducted as part of this review indicates that overall noise complaints have been in decline since 2013.

However, the volume of complaints received by local government, police and EPA may not be an accurate reflection of the size of noise annoyance because there are limitations in data collection of complaints, and barriers to lodging a complaint such as:

- a lack of understanding about which regulator to complain to, and
- uncertainty of how to collect evidence about the noise issue.

While these limitations prevent the drawing of exact conclusions, the top three most common complaints are about amplified music and instruments, followed by residential construction, and air conditioners (Table 7).

While amplified music and instruments are the most complained about noise sources, no further changes have been proposed to the regulations as none were suggested by stakeholders during the initial consultation period.

Table 7 Summary ranking of frequency of complaints to local government due to different residential noise sources\*

Type of noise complaint	Summary frequency score	Average ranking
Amplified music and instruments	83	4.61
Residential construction	79	4.39
Air conditioners	64	3.56
Parties	43	2.39
Household tools and equipment	36	2.00
Recreation activities	30	1.67
Pumps	24	1.33
Vehicle noise on residential property	12	0.67
Outdoor gatherings or outdoor voices	10	0.56
Gardening equipment	10	0.56

\*Notes: Responses were ranked by allocating a score of 5 to the most common source of noise complaints, 4 to the second most common, and so on.

Specific issues for residential construction noise include:

- concrete pours and work being undertaken during prohibited hours
- earthmoving and subdivision work
- demolition work
- an increasing number of relatively large scale residential construction projects being undertaken in existing residential areas
- renovations to existing dwellings or the construction of a single new dwelling by a neighbouring occupier (raised through the community survey).

The issues to which police most frequently respond are<sup>25</sup>:

- parties, to which 57.1 % of respondents stated they respond at least weekly
- amplified music/instruments, to which 50% of respondents respond at least weekly
- outdoor gatherings/voices, to which 39.3% of respondents respond at least weekly.

The following were nominated as emerging sources of residential noise by both local government and police:

- air conditioning/heating units<sup>26</sup>
- swimming pool pumps and pumps relating to water tanks and grey water systems
- car stackers/garage doors
- home personal training and gym businesses
- vehicle noise: recreational vehicles were identified as an issue in the regional and rural context while idling or revving vehicles stationary on driveways or garages were more likely to be nominated as an issue in the metropolitan context

<sup>25</sup> Note that care is needed in interpreting these results, given that there were only 28 respondents to this question.

<sup>26</sup> Reflects an increase of the existing problem rather than a new addition.

- residential premises rented out for short stay accommodation and being used as ‘party houses’<sup>27</sup>
- limitations in design quality or regulatory design standards: transmission of noise between apartments at night, with noise sources mentioned including showers and appliances.

### 3.3 What have we learnt about the residential noise issue from local government and police officers?

The surveys administered to local government and police asked them to identify any significant changes in the noise issues they deal with that have occurred over the past 10 years<sup>28</sup>. The most common responses were the perception of an “increased noise sensitivity” and “reduced tolerance or differing expectations”. This response was further explored with the External Reference Group established for reviewing these regulations, which comprised representatives from local government, police and relevant state government departments. Local government officers suggested reasons for this include:

- a correlation between higher property values and an expectation of higher levels of amenity, including very low noise levels
- the issue of people at different stages of life being neighbours: households without children were said to be increasingly intolerant of children’s noise, while parents were said to have unrealistic expectations of low noise levels in the evenings after children have been put to bed
- the combination of increasing numbers of people working from home, together with shift workers, was seen to have given rise to a significant cohort of people who believe they are entitled to experience very low noise levels during the daytime
- the trend toward larger houses being constructed on smaller blocks, meaning there is significantly less separation between detached dwellings and consequently greater audibility of noise from normal day to day activities.

### 3.4 What are the potential trends that may impact the residential noise problem?

In addition to (or compounding) the reasons stated above, there has been an increase in high/medium density living, which has changed the surveyed local government and police officers’ experience of enforcing noise rules over the last 10 years.

The extent of medium and high-density living has increased substantially since the current regulations were made. Feedback from Strata Community Australia, the peak body for owners’ corporations, states that 1.5 million people, or one quarter of Victoria’s population, lives in dwellings that have an owners’ corporation and that this proportion is expected to continue growing in the future.

This is only likely to increase the residential noise problem given that there is a “city size effect”<sup>29</sup>, wherein the proportion of the population that suffers noise annoyance tends to increase with the size of cities. Larger cities incorporate higher proportions of high-density development, including mixed use development, which means that people are more exposed to noise from a range of sources. This may also be a reason for the perceived reduced noise tolerance identified by local government and police officers.

The identification of this trend is also supported by the range of noise sources that are complained about to local government and police. For example, the increase in medium/high density apartment living and the

---

<sup>27</sup> Some quantitative evidence on the size of this issue was published by Consumer Affairs Victoria as part of a recent review of short stay accommodation [“Independent Panel on Short-Stay Accommodation in CBD Apartment Buildings” (2015)]. Survey data indicated that, while short-stay accommodation accounted for 15% of the total number of person-nights of accommodation in the relevant buildings, it was responsible for 44% of the noise complaints received.

<sup>28</sup> These responses were chosen from a list of potential options presented via the survey and not via a free-text option

<sup>29</sup> See, for example: Brown, A.L. and Bullen, R.B. (2003) Road traffic noise exposure in Australian capital cities. *Acoustics Australia*, 31(1), 17-22.

increasing prevalence of air conditioners has meant that the noise emitted by them is increasingly a source of annoyance to neighbours and over 54% of local government officers stated that the problem of noise from fixed plants such as air conditioning had increased significantly in the last 10 years. Air conditioning units installed in these contexts are located closer to neighbouring dwellings than is typically the case with detached housing, causing greater noise annoyance. In addition, medium/high density dwellings now represent around half of new residential construction in major cities<sup>30</sup>, which indicates that the relative importance of residential noise can be expected to continue to increase.

The magnitude of the noise problem increases in cases where an increase in noise exposure, resulting from increased residential densities, interacts with reduced noise tolerance.

### 3.5 How effective are the current regulations in managing the residential noise problem?

Given the scale of the residential noise problem in Victoria and the likelihood of it becoming greater in the future, it is important to understand how effective the current regulations are in managing this problem.

The EP Act and current regulations are more likely to be used for addressing night time residential noise than any other tool. The PH&W Act is the second most used tool for local government officers and police officers. Police and local government officers identified that the PH&W Act addresses some noises better than the EP Act and current regulations, as the EP Act excluded some common noises (Table 8). For example, a key noise source from outdoor gatherings is human voices, which the EP Act does not regulate.

Table 8 Local government and police officers' feedback on using the EP Act/current regulations compared to the PH&W Act

	EP Act/current regulations	PH&W Act
Noise sources the tool is typically used for	<ul style="list-style-type: none"><li>Gardening equipment</li><li>Household tools</li><li>Amplified music and instruments</li><li>Residential construction</li></ul>	<ul style="list-style-type: none"><li>Recreational vehicles</li><li>Recreational activities</li><li>Gatherings/voices</li></ul>
Feedback on Act	<ul style="list-style-type: none"><li>Better addresses the noise problem for local government officers in coming to a resolution because of the clarity in prescribing items and times</li><li>Easier to use in its ability to obtain more rapid resolution of the problems due to the clarity in prescribing items and times</li><li>There are challenges to its enforcement especially the inability of officers to issue on-the-spot fines for items such as amplified music</li></ul>	<ul style="list-style-type: none"><li>Better addresses noise sources outside of prohibited hours as EP Act is quite subjective.</li></ul>

---

<sup>30</sup> <https://soe.environment.gov.au/theme/built-environment/topic/2016/livability-housing>

Despite the EP Act and current regulations being the most widely used tool for night time noise, most local government and police officers (66% and 60%, respectively) find them only ‘somewhat useful’. Qualitative responses to the survey, together with discussion at the External Reference Group meetings, provide an indication why the current regulations are not considered more useful. Five key issues identified were:

- Lack of tools specifically tailored to addressing persistent offenders. Several respondents noted that two visits must be made within 72 hours to enable enforcement action to be taken, a requirement regarded as unreasonable in dealing with habitual noise-makers
- Inability to issue infringement notices on first incident. Several police and local government officers believe the use of infringement notices would allow rapid, proportionate action to be taken in response to complaints and that this would help to deter non-compliance
- Not all significant noise sources are included in the list of prescribed items. Common examples include animals and human voices – neither of which can be regulated under the EP Act (although outside of the scope of regulations, it does not preclude the government from considering supporting non-regulatory approaches)
- The regulations do not help police and local government officers determine what constitutes unreasonable noise outside “prohibited hours” – i.e. during the day
- Lack of flexibility. For example, it was viewed as reasonable to expect air conditioners to be used until relatively late at night during particularly hot weather. Current regulations have an overly stringent approach to defining what constitutes “unreasonable” noise. In this example, the mere fact that the noise of an air conditioner can be heard from the neighbouring dwelling would render it “unreasonable”, even though this may not be strictly true. There is also a lack of discretion about permitting certain activity during prohibited hours (e.g. the need for an early start to complete concrete pours during the cooler part of the day).

## 4 The objectives of government action via EPA

The government’s long-term objective in regulating residential noise is to protect people from noise that can cause the range of harms outlined in section 2.1.3. There are a range of powers available to government (section 2.2) to achieve this. One way is for EPA to assist police and local government to enforce the EP Act’s prohibition on unreasonable noise. This can be done by clarifying what is ‘unreasonable’ which can include specifying from what items and times noise shouldn’t be heard within neighbouring residential premises. The aim is that this clarity will allow for a reduction of unreasonable residential noise.

## 5 Options: whether to remake regulations to manage residential noise in Victoria

The following section examines whether regulations are the best tool for addressing the residential noise problem and meeting EPA's objectives for action.

### 5.1 Base case

The current regulations will automatically expire on 14 October 2018. This is referred to as the 'base case' because it is the scenario that will occur, if EPA chooses to take no further action.

Under the base case:

- the ability of police and local government officers to address residential noise issues would be limited to the powers provided under the EP Act. That is, police and local government officers could issue a direction to stop unreasonable noise but would have to provide evidence of why they think that noise is unreasonable per the definition in the EP Act.
- there would be no prescribed items or prohibited times to help define the meaning of unreasonable noise under the EP Act. Instead, police and local government officers would need to exercise judgement to determine whether a noise incident could be considered unreasonable.
- police and local government officers would still be able act under the nuisance provisions of the PH&W Act
- non-regulatory initiatives such as the *Noise Control Guidelines* (EPA Publication 1254) would continue to apply, though these would not be enforceable.
- residential and non-residential noise sources would continue to be managed through other mechanisms, such as the non-government approaches, as outlined in section 2.2.4.

The decision about whether to remake the current regulations needs to be assessed against this base case.

### 5.2 Option 1: Remake the current regulations

#### 5.2.1 Description

Under this option, EPA would make new regulations to manage residential noise in Victoria. The new regulations would replicate the current regulations, meaning the existing rules would continue to apply. The new regulations would prescribe the same items, prohibited times and exemptions, as outlined in section 2.2.2 above. Local government and police would continue to use the regulations to determine what is considered unreasonable residential noise and issue directions under the EP Act and regulations.

Under this option, EPA would take the opportunity to make some minor editorial amendments to update the drafting. These amendments would have no substantive impacts.

### 5.3 Assessment of options

The benefits and costs associated with Option 1 are outlined in Table 9 below.

Table 9 Costs and benefits of Option 1: Remake the current regulations

Costs	Benefits
<ul style="list-style-type: none"> <li>• In some situations, noise that is “unreasonable” as defined by the current regulations may not be considered unreasonable if the principles contained in the EP Act<sup>31</sup> were used to assess the situation. This impinges on people’s rights by constraining how they use certain items at certain times of the day, which may impose financial and non-financial costs</li> <li>• Inflexibility in addressing residential noise issues when these issues could be addressed on a case-by-case basis</li> <li>• Specifying the items and times at which they cannot be used to clarify what is meant by ‘unreasonable’ means that the regulations/definition can become outdated as circumstances change (e.g. ‘new’ sources of noise emerge)</li> <li>• Prescribed items and prohibited hours may be out of step with current community expectations and tolerances to noise</li> <li>• Inefficiencies or inequities may arise because some noisy items are prescribed in the regulations while other equally (or more) noisy sources may not be</li> </ul>	<ul style="list-style-type: none"> <li>• There would be a well understood tool for managing unreasonable night-time noise</li> <li>• Police and local government officers would retain the ability to apply the regulations where the PH&amp;W Act is not appropriate</li> <li>• Police and local government officers would have clear guidance available to them as to what constitutes unreasonable noise that covers many of the most commonly encountered enforcement issues</li> <li>• Police and local government officers would not have to rely on the subjective definitions of unreasonable noise contained in the EP Act or the equally subjective nuisance provisions of the PH&amp;W Act</li> <li>• Avoid time consuming, more inconsistent and potentially less effective enforcement activity</li> <li>• Aligns with feedback from police and local government officers that the regulations are widely used</li> <li>• Will help address the forecasted increase in the residential noise problem due to reduced tolerance and an increase in medium/high density living</li> <li>• Establishes a common understanding amongst the community of what is and isn’t reasonable noise</li> <li>• Prescribes the most complained about noise sources (e.g. amplified music, air conditioners)</li> </ul>

<sup>31</sup> When assessing unreasonable noise, as stated in the EP Act, regard must be had to: the volume, intensity and duration of the noise; and the time, place and other circumstances in which it is emitted.

## 5.4 Summary of assessment

Residential noise is a significant issue throughout Victoria (see section 3.1). The current regulations are well used and generally help to manage residential noise issues by providing clarity about what is unreasonable noise in a residential context (see section 3.5). This helps to reduce the impacts of unreasonable residential noise on human health (see section 2.1.3).

The regulations do impose some costs on Victorians, such as restricting personal freedoms, incorporating inefficiencies by focusing on only specific noisy “items” (i.e. music is covered, but human voices are not), and a perceived lack of flexibility in the application of the rules EPA considers that these costs are minor in practical terms. This reflects the fact that local government and police officers stated that they can exercise discretion and persuasion in most enforcement contexts to achieve reasonable outcomes. This flexibility has the effect of minimising what would otherwise be the costs associated with the adoption of a simple but blunt rule as the basis for the regulatory standards.

Without the regulations, the residential noise problem is likely to increase as the Act alone does not provide sufficient clarity on what is considered unreasonable, and there are various limitations to the non-regulatory/non-government approaches. EPA therefore considers that the benefits of remaking the current regulations would outweigh the costs.

## 5.5 Recommendation

Based on the above assessment, it is recommended that the regulations be remade. This would help to protect people from unreasonable noise, reducing the risk of human health impacts as outlined in section 2.1.3.

The new regulations would also be further complemented with non-regulatory approaches in section 9.

## 6 Options: whether to make changes to the content of the regulations

EPA also needs to determine whether there are changes that can be made to the current regulations to:

- better address the residual problem – i.e. the use of noise-emitting items at times that are considered unreasonable
- respond to stakeholder feedback about the limitations of the current regulation (as outlined in section 3.5).

### 6.1 Changes identified through initial consultation

Throughout the initial consultation phase, stakeholders and the community suggested various changes to improve the regulation of residential noise in Victoria. These included changes to:

- the meaning of “unreasonable” noise
- expand the range of prescribed items (e.g. by including garage doors and car stackers, barking dogs and human voices)
- the treatment of existing prescribed items and exemptions
- the prohibited hours to reflect community standards
- complaints management<sup>32</sup>
- enforcement matters.

### 6.2 Assessment criteria

The following criteria was identified to assess the feasibility of these changes requested by stakeholders.

1. **Legal authority** – whether EPA has the required legal authority to implement the proposed change by amending the regulations.
  - The scope of this review is defined by the parameters of the EP Act. That is, the regulations can prescribe items, prohibited times and exemptions (section 71(1) (fa)).
  - Proposed changes that fall outside the scope of the EP Act cannot be implemented through this review.
2. **Practicality** – whether the proposed option could be effectively implemented and enforced.
  - This criterion acknowledges that, while ‘voluntary compliance’ is an important factor in regulatory implementation, formal rules have limited effectiveness unless they can be enforced if people choose not to comply.
3. **Evidence of the problem** – whether there is sufficient evidence of the problem the proposed option seeks to address.
  - A general requirement in framing noise regulation is to balance people’s rights to enjoy their normal activities with the need to protect others from exposure to unreasonable noise annoyance. Additional restrictions should only be adopted where there is evidence of a significant residual problem associated with the current regulations.
4. **Alignment with the intent of the EP Act** – whether the impact of the proposed option would result in an undue increase in unreasonable noise, which is contrary to the requirements of the EP Act.

---

<sup>32</sup> This includes clarification of roles for complaints management, advice on gathering evidence on complaints, and guidance on how to use the EP Act and current regulations (particularly during non-prohibited hours)

- The EP Act contains a clear prohibition on the making of “unreasonable noise” (section 48A) and identifies criteria for determining this. Any changes to the regulations must be consistent with these criteria<sup>33</sup>.

## 6.3 Assessment of changes suggested by stakeholders

The following table summarises the feasibility of the changes suggested by stakeholders using the assessment criteria. Further details are provided in the discussion below.

**Table 10 Overview of assessment of initial stakeholder suggestions for changes to the regulations**

Overview of suggested changes	Assessment criteria				Summary of assessment
	Legal authority	Practicality	Evidence of the problem	Alignment with Act's intent	
<b>Changes to the meaning of unreasonable noise</b>					
• Amend the definition of unreasonable in the Environment Protection Act to increase the threshold from ‘being audible in an adjoining residence’ to being unreasonable <i>per se</i>	x				Excluded from further assessment as these changes would require legislative amendment
• Introduce an objective noise standard to determine what is unreasonable	x				Excluded as these changes would require legislative amendment
<b>Changes to the range of prescribed items<sup>34</sup></b>					
• Include garage doors and car stackers as a prescribed item	✓	✓	x	x	Insufficient evidence of a problem to justify this change
• Include barking dogs as a prescribed item	x				Excluded as these changes would require legislative amendment
• Include human voices as a prescribed item	x				Excluded as these changes would require legislative amendment

<sup>33</sup> When assessing unreasonable noise, as stated in the EP Act, regard must be had to the volume intensity and duration of the noise, and time, place and other circumstances in which it is emitted.

<sup>34</sup> EP Act lists “items” such as mechanical items which can be prescribed. Human voices and animals are not on the list and thus cannot be prescribed.

Overview of suggested changes	Assessment criteria				Summary of assessment
	Legal authority	Practicality	Evidence of the problem	Alignment with Act's intent	
• Include home business as a prescribed item	x				Excluded as these changes would require legislative amendment
• Include parties at short stay accommodation as a prescribed item	x				Excluded as these changes would require legislative amendment
<b>Changes to the treatment of existing items or exemptions</b>					
• Change the treatment of air conditioners during hot weather	✓	✓	✓	✓	Included for further assessment to test expected costs and benefits (see below)
• Changes to the treatment of trucks dispensing concrete to reduce prohibited hours	✓	✓	✓	✓	Included for further assessment to test expected costs and benefits (see below)
<b>Changes to the prohibited hours</b>					
• Revise times so that prohibited times commence uniformly	✓	x	x	✓	Impractical as a common time for all days is too blunt and will adversely affect weekends.
• Reduce the end of the prohibited hours on Saturdays	✓	✓	x	✓	Insufficient evidence of a problem to justify this change
<b>Enforcement matters</b>					
• Provide police and local government officers with the power to issue a fine on first offence	x				Excluded as these changes would require legislative amendment

Overview of suggested changes	Assessment criteria				Summary of assessment
	Legal authority	Practicality	Evidence of the problem	Alignment with Act's intent	
<ul style="list-style-type: none"> <li>Introduce provisions to address frequent or repeat offenders</li> </ul>	x				Excluded as these changes would require legislative amendment

The following sections provide further information about the changes requested by stakeholders and the outcome of assessing them against the above criteria.

### Changes requiring legislative amendments

The following changes suggested by stakeholders could not be addressed because they would require changes to the EP Act, meaning they are outside the scope of this review:

- Changing the definition of “unreasonable” contained in section 48A(5) of the EP Act, so that it is not sufficient for noise from a prescribed item simply to be audible in an adjoining residence at a prohibited time for it to be considered unreasonable per se.
- Introducing an objective noise standard to determine what is unreasonable (such as decibel noise limit), which would not require a judgement on what is considered unreasonable.
- Including barking dogs and human voices as prescribed items. The EP Act does not allow for the regulation of animal or human sounds.
- Include home businesses and parties at short stay accommodation as prescribed items. Both are activities that incorporate the use of a large variety of items and cannot be defined to a few items that are not already part of the current regulations.
- Provide police and local government officers with the power to issue a fine on first offence.
- Introducing provisions to address frequent or repeat offenders.

### Changes with insufficient evidence and practicality issues

The following changes suggested by stakeholders could not be addressed because it was determined that they could not be reasonably enforced and/or that there was insufficient evidence of the problem the changes would seek to address:

- Include garage doors and car stackers as a prescribed item:

If these were included as a prescribed item, many residents would be unable to enter or access their building’s garage during prohibited times and would then be required to park their vehicles on the street. This would not be practicable because on the street parking may not be available within a reasonable distance of the apartment building and it may impact the amenity of the neighbourhood. The responses of local government officers indicated that garage doors and car stackers are not currently significant noise issues. Almost 80% of local government officers reported that they never deal with noise complaints related to this source, while a further 12.5% of respondents indicated that they deal with such complaints only infrequently (i.e. less than monthly). The responses from Victoria police were consistent with those from local government, with 82% of Victoria police respondents indicating that they never deal with noise complaints arising from garage doors/car stackers. Thus, it appears that the size of this issue is currently limited.

- Reducing the end of the prohibited hours on Saturdays for all prescribed items:  
There is insufficient evidence to support these changes. Only a small number of police and local government officers raised this issue, and weren't addressed by significant numbers of respondents to the community surveys conducted by EPA.

### **Changes that do not align with the Act's intent**

The following changes suggested by stakeholders could not be addressed because they do not align with the intent of the Act, which is to manage unreasonable noise:

- Revising times so that prohibited times commence uniformly  
A possible benefit of uniform prohibited times is that they may be easier for people to remember and keep track of. However, a common time for all days may be impractical, and will adversely affect personal freedoms on weekends, when social expectations would be for more leeway on weekends.

### **6.4 Feasible options**

The following two changes suggested by stakeholders were not excluded through the initial assessment:

- Changes to the treatment of air conditioners during hot weather
- Changes to the treatment of trucks dispensing concrete to reduce prohibited hours

The costs and benefits of options to vary these two items are outlined below.

## 7 Option 2A: Changes to air conditioner provisions

### 7.1 Summary of problem

Under the current regulations, domestic air conditioners are a prescribed item and must not be audible in an adjoining residential property after 10pm. This aligns with the intent of the regulations to manage unreasonable noise that has the potential to cause a range of health harms.

Local government complaints show that noise from air conditioners is one of the most common sources of complaints. Feedback from local government officers gathered during the initial consultation period also indicates this is growing issue for Victoria, particularly in medium and high density residential areas. This is likely worsened by the pattern of reduced noise tolerance observed by local government and police officers.

The regulation of air conditioner noise requires a balance between minimising noise impacts and allowing people the comfort of using air conditioners during hot nights. In some high-density buildings, for example, the only way for residents to maintain reasonable comfort levels is to use an air conditioner. This balance is difficult to strike with the strict application of the current regulations.

Local government officers provided the following feedback about regulating air conditioner noise with the current regulations:

- many queried whether the current regulations were appropriate during periods of extreme heat
- a strict application of the rules, requiring residents to turn off air conditioners at 10pm, is sometimes unreasonable during extreme heat periods, particularly for vulnerable groups.
- many highlighted the need to consider adopting a more flexible approach in regulating in this area
- it is reasonable to expect air conditioners to continue to be used until relatively late at night during particularly hot weather
- it could be appropriate to adopt a less stringent approach to defining what constitutes “unreasonable” noise from this source during prohibited hours.

### 7.2 Sub-options to address the problem

The following three options were identified for addressing this problem

- **Option 2A (i): Exemptions during Heat Health Alert periods** – the new regulations would provide an exemption to allow residents to use air conditioners on days when a [Heat Health Alert](#) has been declared by the Chief Health Officer.
- **Option 2A (ii): Reduce the prohibited hours for the use of air conditioners** – the prohibited hours for air conditioners would be reduced, either generally or in specified areas (e.g. in mixed-use zones).
- **Option 2A (iii): Combined approach: reduced prohibited hours and exemptions during Heat Health Alert periods** – a combination of Option 2A (i) and Option 2A (ii).

## 7.3 Option 2A (i): Exemptions during Heat Health Alert periods

### 7.3.1 Description

This option would incorporate an exemption from prohibited hours for the use of air conditioner during Heat Health Alert periods.

The State Chief Health Officer issues Heat Health Alerts of forecast heatwave conditions that are likely to impact on human health. The alerts are issued based on identified temperature thresholds above which heat-related illness and mortality increases substantially<sup>35</sup>. The alerts are issued to local governments, departmental program areas, hospitals, police, and state-wide or major metropolitan health and community service providers. Community members can be made aware of the alerts by subscribing to the alert system and often through local media.

Heat health alerts were issued a total of 13 days during the summer of 2013 – 14<sup>36</sup> across Victoria. They are, however, issued for specific districts rather than the whole state. This means that the number of days subject to a heat health alert would have been fewer than 13 for most districts. As such, it is likely that this option would only apply for around 10 – 20 days per year in any given district.

### 7.3.2 Analysis of option

#### Impact on community

If option 2A (i) is adopted, residents would be able to use their air conditioners during Heat Health Alerts, without being directed to turn it off by local government or police.

Excess exposure to heat can cause health impacts. This was evident during the January 2009 heatwave, which led to 374 deaths and a 25% increase in emergency department presentations<sup>37</sup>.

There is an increasing use of air conditioners for cooling and comfort<sup>38</sup>. It is not clear how significant the impact of allowing the public to run air conditioners overnight would be in reducing the extent of these health harms. However, even if the change were to have very little impact in terms of the incidence of medically diagnosed heat related conditions, it would be expected to significantly improve the level of comfort experienced by residents who choose to use air conditioners overnight.

This option may lead to increased noise annoyance, though this would be seasonal only and limited to certain nights when a Heat Health Alert has been issued.

The levels of annoyance may also be mitigated to some extent by the growth in newer, quieter technology (i.e. the noise levels generated by air conditioners could diminish over time). This would suggest that the potential costs associated with an exemption will also fall over time. Still, diminishing noise levels of new air conditioners could change stakeholder's expectations and generate more noise annoyance, as the noise from older (and noisier) air conditioning units would be more pronounced.

Increased use of air conditioners is likely to increase domestic energy costs; however, this impact may be minimal given that despite the current regulations, police and local government officers report that on hot nights, many residents already run their air conditioners during prohibited times.

---

<sup>35</sup> Further information: <https://www2.health.vic.gov.au/public-health/environmental-health/climate-weather-and-public-health/heatwaves-and-extreme-heat/heat-health-alert-status>

<sup>36</sup> More recent data have not been identified.

<sup>37</sup> Government of Victoria (2009). *January 2009 Heatwave in Victoria: An Assessment of Health Impacts*.

<sup>38</sup> 2011 Victorian households water and energy data showed that 1.6 million or 74% of households use at least one air conditioner for cooling. This is an increase of 67% from 2008 (ABS, 2012, 4602.2 – Household Water and Energy Use, Victoria, October 2011. Retrieved from

<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/85424ADCCF6E5AE9CA257A670013AF89?opendocument>

### Impacts on local government and police

Local government officers are required to enforce the current regulations when a noise complaint is received for using air conditioners outside the prohibited hours. If Option 2A (i) is adopted, local government officers would not be required to respond to noise complaints when residents use air conditioners during Heat Health Alerts. They are also likely to eventually receive fewer complaints about air conditioner noise during this time, however it is also possible that complaints may rise but no regulatory action would be undertaken given the noise would not be considered 'unreasonable'. Local governments and police officers would have to ensure that Heat Health Alerts are communicated to all relevant officers.

Table 11 outlines the costs and benefits of this proposed change.

**Table 11 Costs and benefits of Option 2A (i): Exemptions during Heat Health Alert periods**

Costs	Benefits
<ul style="list-style-type: none"> <li>Community: Increase in noise annoyance experienced by some residents, particularly in medium and high density areas</li> <li>Community: Minimal increase in domestic energy costs</li> </ul>	<ul style="list-style-type: none"> <li>Community: Improved comfort during Heat Health Alert periods</li> <li>Community: Reduced likelihood of heat related health issues during Heat Health Alert periods</li> <li>Community: Reduced likelihood to complain to local government (if are aware of issued Heat Health Alert)</li> <li>Local government: No response to air conditioner noise complaints required for local government during Alert periods</li> </ul>

### 7.4 Option 2A (ii): Reduce the prohibited hours for the use of air conditioner

#### 7.4.1 Description

This option would allow people to use their air conditioners for one extra hour each evening. It would reduce the prohibited hours for the use of air conditioners by one hour, from the current 10pm to 7am the next day on weekdays, and 10pm to 9am the next day on weekends to commence at 11pm daily (Table 12). It differs from Option 2A (i) by reducing the prohibited hours during any period not just during Heat Health Alerts.

**Table 12 Proposed change in prohibited hours for Option 2A (ii) Reduce the prohibited hours for the use of air conditioner**

Prescribed items	2008 Regulation prohibited times	Option 2A (ii) prohibited times
Air conditioners Evaporative coolers	Monday to Friday: before 7am and after <b>10pm</b> .	Monday to Friday: before 7am and after <b>11pm</b> .
	Weekends and public holidays: before 9am and after <b>10pm</b> .	Weekends and public holidays: before 9am and after <b>11pm</b> .

To implement this option, the new regulations would include a separate group of prescribed items for air conditioners and evaporative coolers. The prohibited hours applicable to the other types of equipment in Group 3 of the current regulations would not change.

## 7.4.2 Analysis of option

### Impacts on community

This option would allow all Victorian households to use their air conditioners for an extra hour at night, which would extend residents' comfort before bed. This change would apply every day, so the potential benefits in both comfort and health associated with additional cooling, would be greater than in option 2A (i) on non-Heat Health Alert days.

This option may lead to increased noise annoyance, like that of option 2A (i). However, with newer technology, the noise levels generated by air conditioners could diminish over time. This would suggest that the potential costs associated with an exemption will also fall over time. Still, diminishing noise levels of new air conditioners could change resident's expectations and generate more noise annoyance, as the noise from older (and noisier) air conditioning units would be more pronounced.

### Impact on local government and police

Changes to prohibited times for the use of air conditioners could potentially help local government officers address one of the most frequent source of noise complaints - noise from air conditioners. The reduced prohibited hours would offer clarity between 10-11pm at night when local government officers manage air conditioner noise complaints. There is no direct data available to confirm that reduced prohibited hours would directly lead to reduce hours in managing noise complaints. It was expected that one hour would provide increased comfort at a time that many would be going to bed and only generate a small increment of extra noise annoyance, relative to extending permitted hours beyond this.

This option may lead to increased noise annoyance and generate more complaints for local government and police to address, like that of option 2A (i). However, with newer technology, the noise levels generated by air conditioners could diminish over time. This would suggest that the potential costs associated with an exemption will also fall over time. Still, diminishing noise levels of new air conditioners could change stakeholders' expectations and generate more noise annoyance, as the noise from older (and noisier) air conditioning units would be more pronounced.

Table 13 outlines the costs and benefits of this proposed change.

**Table 13 Costs and benefits of Option 2A (ii) Reduce the prohibited hours for the use of air conditioner**

Costs	Benefits
<ul style="list-style-type: none"> <li>Community: Increase in noise annoyance, particularly in medium and high density areas, similar to that for option 2A (i)</li> <li>Community: Minimal increase in domestic energy costs</li> </ul>	<ul style="list-style-type: none"> <li>Community: Improved comfort for residents with air conditioners everyday (greater than option 2A (i) which would only be evident during Heat Health Alert periods)</li> <li>Local government: Modest decrease of enforcement effort over time as fewer complaints expected, like that of option 2A (i)</li> </ul>

## 7.5 Option 2A (iii): Hybrid approach: reduced prohibited hours and exemptions during Heat Health Alert periods

### 7.5.1 Description

This change to the current regulations would be a combination of options 2A (i) and (ii). There would be both:

- a later starting time for the prohibited hours for the use of air conditioners from the current 10pm to 7am the next day on weekdays and 10pm to 9am the next day on weekends to commence at 11pm daily; and
- no prohibited hours for air conditioners during times of Heat Health Alerts.

### 7.5.2 Analysis of option

#### Impact on community

These would be the same as those described for options 2A (i) and (ii) combined. This option would offer the most amount of time that air conditioner use would be exempt from prohibited hours.

#### Impact for local government and police

These would be the same as those described for options 2A (i) and (ii) combined. This option would require the least amount of response effort to complaints about air conditioner noise; it would be quicker to explain to a complainant that air conditioner noise is not within the prohibited hours than attending and investigating the alleged source of the complaint under the current regulations.

Table 14 outlines the costs and benefits of option 2A (iii).

**Table 14 Costs and benefits of Option 2A (iii) Hybrid approach: reduced prohibited hours and exemptions during Heat Health Alert periods**

Costs	Benefits
<ul style="list-style-type: none"><li>• Community: Increase in noise annoyance experienced, particularly in medium and high density areas</li><li>• Community: Minimal increase in domestic energy costs</li></ul>	<ul style="list-style-type: none"><li>• Community: The most improved comfort for residents with air conditioners (compared to options 2A (i) and (ii))</li><li>• Community: Reduced likelihood of heat related health issues during Heat Health Alert periods</li><li>• Community: Reduced likelihood to complain to local government (if are aware of issued Heat Health Alert)</li><li>• Local government: The largest decrease of enforcement effort over time</li></ul>

### 7.6 Recommendation

Option 2A (iii): Reduced prohibited hours and exemptions during Heat Health Alert periods is the preferred approach.

The net benefits from this option are likely to be larger than the other two options. The ability to operate air conditioners during times of extreme heat significantly improves occupant comfort and can even reduce health risks (i.e. due to heat stress). While an air conditioner may be audible in an adjacent dwelling, the intensity of the sound will often be significantly less than that of other noise sources, and the characteristic sound (i.e. a low hum) is less annoying. Whilst air conditioner noise is one of the most complained about sources currently, trends toward increasingly quiet electrical appliances underline the significance of this latter point. A third factor is that there may be little non-mechanical ventilation available in some apartment contexts, so that there may be no feasible alternative to their use.

## 8 Options for amending concrete pour provisions

### 8.1 Summary of problem

Residential construction leads to the second highest number of noise complaints to local councils (see section 3.3). A key source of this noise is concrete pours. Currently concrete dispensing vehicles are prescribed as a Group 1 item and are subject to prohibited hours that start at 8pm and end at 7am on weekdays and 9am on weekends.

During consultation with the External Reference Group, it was identified that stakeholders would prefer a more flexible approach especially in summer because overly hot weather compromises the structural integrity of concrete in the long-term by causing the concrete to set too quickly but not bind strongly<sup>39</sup>. For builders, commencing concrete pouring earlier in the day before temperatures increase, can minimise this issue. While no data is available, local councils have indicated that concrete pouring within prohibited times is widespread, with some industry members starting to pour at 5am on hot days.

This has the potential to affect neighbours as concrete pours involve large, noisy machinery.

### 8.2 Sub options to address the problem

EPA identified the following options to address the above problem:

- **Option 2B (i): Allow concrete pouring to start earlier Monday to Friday during summer months<sup>40</sup>.** This option would allow concrete pours to start 2 hours earlier; at 5 am on weekdays, instead of 7am currently. The earlier starts would only take effect in summer (3 months of the year). The prohibited hours for Monday to Friday would remain as they currently are (i.e. prohibited 8pm to 7am weekdays and 8pm to 9am weekends) in other seasons.
- **Option 2B (ii): Remove trucks dispensing concrete from prohibited items during summer months.** This option entails removing trucks dispensing concrete from prohibited items during summer months. Concrete pours could occur at any time in summer but would continue to be a prohibited item (and subject to the current restrictions) in all other seasons.

### 8.3 Option 2B (i): Reduce prohibited hours

#### 8.3.1 Description

Under this option, the current regulations would be amended to reduce the prohibited hours in summer months for the operation of trucks dispensing concrete as indicated in Table 15.

Table 15 Current and proposed prohibited hours for Option 2B (i): Reduce prohibited hours

	<b>Monday to Friday</b>	<b>Weekends and public holidays</b>
Current prohibited times	Before <b>7 am</b> and after 8 pm	Before 9 am and after 8 pm
Proposed prohibited times (Dec – Feb)	Before <b>5 am</b> and after 8 pm	Before 9 am and after 8 pm
Proposed prohibited times (Mar – Nov)	Before <b>7 am</b> and after 8 pm	Before 9 am and after 8 pm

---

<sup>39</sup> Concrete Network, Retrieved from <https://www.concretenetwork.com/hot-weather-concreting/problem.html>

<sup>40</sup> The Australian Government defines summer as December to February.

Concrete could be poured for an additional two hours between Monday and Friday in summer months to capitalise on the cooler weather earlier in the morning. There would be no change in the roles and responsibilities to enforce the regulations which currently rests with local government officers and police.

The reduced prohibited hours on weekdays are only proposed for summer, when the hottest morning conditions occur. Early morning temperatures throughout the rest of the year will less frequently present poor concrete pour conditions and therefore, reduced prohibited hours in other seasons have not been considered further. The proposed reduction in prohibited hours between Monday to Friday will provide sufficient additional opportunities for concrete pours in order to avoid reducing prohibited times on weekends and public holidays. This will minimise noise annoyance during weekend mornings.

### **8.3.2 Analysis of option**

#### **Impact on community**

Compared to the situation under the current regulations, residents with neighbouring premises undergoing construction may experience more noise annoyance for 3 months of the year between 5am – 7am on weekdays. Given concrete pouring for residential construction does not occur for extended periods the extra noise annoyance may be limited in duration. There is a likelihood that it may trigger other construction work to start which could generate noise and create more noise annoyance. There is also a risk of the definition of 'trucks dispensing concrete' being exploited to include other noise generation trucks and creating more noise annoyance for residents.

#### **Impact for industry**

Construction involving concrete pouring at residential premises could occur 2 hours earlier for 3 months of the year. This may increase the flexibility of the residential construction industry, which may reduce costs and improve productivity.

#### **Impact for local government**

Local government may receive more noise complaints, given that there may be more noise annoyance. However it would be quicker to explain to a complainant that concrete pouring noise is not considered unreasonable under the proposed new regulations than having to attend and investigate the alleged source of the complaint under the current regulations. There is also a risk of the definition of 'trucks dispensing concrete' being exploited to include other noise generating trucks and creating more noise annoyance for residents and noise complaints for local government.

The costs and benefits of the option are presented in Table 16.

Table 16 Costs and benefits of Option 2B (i): Reduce prohibited hours for concrete pouring

Costs	Benefits
<ul style="list-style-type: none"> <li>• Community: Increased potential for noise annoyance and impacts to health from disturbing sleep although likely to be limited in duration as because concrete pours for residential construction does not occur for extended periods.</li> <li>• Industry: Increased cost to industry to pay for operations in non-standard working hours which would be compared to the benefits of starting earlier.</li> <li>• Industry: Increased burden on personnel to start earlier in summer.</li> <li>• State government: Need to communicate changes to the regulations.</li> <li>• Community: May trigger other construction work to start which could generate noise and create more noise annoyance</li> <li>• Local government and community: Risk of the definition of ‘trucks dispensing concrete’ being exploited and generating noise annoyance and complaints</li> </ul>	<ul style="list-style-type: none"> <li>• Industry: Access to more optimal concrete pour conditions with resulting benefits in terms of structural integrity of the concrete pour</li> <li>• Local government: Reduced cost to respond to noise complaints because no requirement to investigate noise complaints about concrete pours from 5am Monday to Friday</li> <li>• Community: Stronger, less compromised concrete</li> <li>• Industry: Greater flexibility to operate in summer months</li> <li>• Industry: Increased productivity – more projects could be undertaken due to the reduced prohibited hours in summer months.</li> </ul>

## 8.4 Option 2B (ii): Remove trucks dispensing concrete from prohibited items in summer months

### 8.4.1 Description

Under this option, the current regulations would be amended to remove trucks dispensing concrete from prohibited items in summer months (between December and February). In summer, concrete pours could occur at any time on weekdays, weekends, and public holidays.

This option would only apply in summer, when the hottest conditions that could compromise concrete occur. High temperatures do not occur frequently enough in other seasons to warrant removing concrete pouring trucks from prohibited items outside of summer.

There would be no change in the roles and responsibilities to enforce the regulations, which falls to local government officers.

## 8.4.2 Analysis of option

### Impact on community

Residents with neighbouring premises undergoing construction may experience more noise annoyance for 3 months of the year. Given concrete pouring for residential construction does not occur for extended periods the extra noise annoyance may be limited in duration. There is a likelihood that it may trigger other construction work to start, which could generate noise and create more noise annoyance. There is also a risk of the definition of ‘trucks dispensing concrete’ being exploited to include other noise generating trucks and creating more noise annoyance for residents. The potential for noise annoyance would be greater than option 2B (i) due to a lack of prohibited hours.

### Impact for industry

Construction involving concrete pouring at residential premises could occur at any time for 3 months of the year. This may increase the flexibility of the residential construction industry, which may reduce costs and improve productivity, more than that of option 2B (i).

### Impact on local government

Local government may receive more complaints, given there may be more noise annoyance. However, there may be a reduced enforcement burden. This is because it would be quicker to explain to a complainant that concrete pouring noise outside of the prohibited hours is not considered unreasonable than having to attend and investigate the alleged source of the complaint under the current regulations. There is also a risk of the definition of ‘trucks dispensing concrete’ being exploited to include other noise generation trucks and creating more noise annoyance for residents and generating noise complaints for local government

The costs and benefits of the option are presented in Table 17.

Table 17 Costs and benefits of Option 2B (ii): Exempting trucks dispensing concrete from prescribed items

Costs	Benefits
<ul style="list-style-type: none"> <li>Community: Risk of increased noise annoyance, including potentially at night-time and on weekends, as pours would be permitted, higher than that of option 2B (i)</li> <li>Community: Increased potential for noise complaints than the current regulations and option 2B (i)</li> <li>State government: Need to communicate changes to the current regulations like option 2B (i).</li> <li>Local government and community: Risk of the definition of ‘trucks dispensing concrete’ being exploited and generating noise annoyance and complaints</li> </ul>	<ul style="list-style-type: none"> <li>Community: Stronger, less compromised concrete like option 2B (i)</li> <li>Industry: Access to more optimal concrete pour conditions than the current regulations.</li> <li>Industry: Greater flexibility to operate in summer months – more projects could be undertaken due to the reduced prohibited hours in summer months.</li> <li>Local government: Reduced cost to respond to noise complaints because no requirement to investigate noise complaints about concrete pours during summer</li> </ul>

## 8.5 Recommendation

The preferred approach for concrete pours is option 1 Remake the regulations with no change to

restrictions on concrete pours.

There is insufficient quantitative evidence that the benefits from options 2B (i) and (ii) outweigh the costs.

While the benefits of earlier concrete pours are recognised in reducing the risk of compromised structural integrity, it is difficult to quantify the extent of the problem, and to measure the specific benefits.

More permissive regulations would lead to early morning concrete pours, which is likely to cause health impacts to residents<sup>41</sup> due to disrupted sleep early in the morning.

---

<sup>41</sup> Medic, G., Wille, M., & Homels, M.E. (2017). Short and long-term health consequences of sleep disruption. *Nature and Science of Sleep*, 9, 151-161. <http://doi.org/10.2147/NSS.S134864>

## 9 Options to complement the regulations

Stakeholders suggested several non-regulatory changes that would assist in the regulation and management of residential noise in Victoria. It was proposed that EPA develops:

- advice to local government and police about the application and interpretation of the regulations (particularly how to assess ‘unreasonable’ noise outside of prohibited hours).
- advice for community members about the respective roles of local government and Victoria police in addressing residential noise issues.
- templates / toolkit for the use of community members in resolving residential noise issue.
- advice for local government and police in interpreting and applying the EP Act’s mandate for reducing unreasonable noise, especially for items that are not prescribed or in more complex situations.

These suggestions are independent of changes to the current regulations but would help local government and police to better use the regulations in responding to residential noise complaints. It could also assist with a more consistent approach to regulation of unreasonable noise outside of prohibited times. This guidance may also help residents comply with the obligation to avoid emitting unreasonable noise (in case they are unaware that are contravening these obligations) and may also reduce the number of complaints where unreasonable noise is not being emitted (e.g. understanding the start and end of prohibited times may mean fewer complaints).

EPA will consider providing advice and templates as a tool to support the management of the residential noise issue. Once public submissions regarding the proposed new regulations and RIS have been analysed, EPA will determine what advice is required, and how these should be developed.

## 10 Conclusions

Noise can negatively impact people's health and amenity. There are a range of government and non-government tools for managing noise in order to reduce these impacts.

The current regulations are the primary tool for the management of residential noise. These will automatically expire on 14 October 2018. If they were to expire there would be a regulatory gap, which would not be adequately addressed through non-government measures.

Initial consultation shows that even with the current regulations, residential noise is a significant issue for the community.

Analysis of the potential approaches within the scope of the review identified two key choices:

- whether to make new regulations to manage residential noise before the current regulations expire, and if so,
- whether to make any amendments to the content of the regulations to improve the management of residential noise in Victoria.

Costs and benefits were assessed for each of these choices.

**It is recommended that the current regulations are re-made with changes to the use of air conditioners to provide exemptions to prohibited hours during Heat Health Alerts periods and to commence prohibited hours one hour later.**

EPA considers that making new regulations with minor amendments will address the key problem – the use of items at a time that is considered unreasonable to protect people from the health and amenity impacts of noise exposure. Air conditioner noise is one of the most widely complained about noise sources amongst those impacted by residential noise and it is expected that the proposed changes will manage community expectations and reduce regulatory burden.

While amplified music and instruments were the most complained about noise source, no changes have been proposed due to the lack of comments in the initial stakeholder consultation.

However, EPA is seeking feedback more broadly on whether the list of prescribed items and prohibited times, in the current regulations, is likely to continue meeting community expectations and whether further changes that were not raised in initial consultations, should be considered.

### 11 Consultation

The review of the current regulations included extensive engagement, starting in early 2017. An External Reference Group was formed, comprising representatives from local government, police and other relevant stakeholders.

The External Reference Group convened for a half day workshop on 3 April 2017, which focused on the following issues:

- identifying major and emerging noise issues faced by enforcement authorities and other stakeholders;
- obtaining views on the overall effectiveness of the current regulations;
- identifying issues and concerns with the operation in practice of the current regulations;
- identifying opportunities to improve the effectiveness of the regulations; and
- identifying other policy actions that could potentially support the operation of the regulations.

In parallel with this process, a substantial survey was undertaken to obtain and analyse data on the effectiveness of the current regulations and obtain a broader range of opinions on the issues discussed in the initial External Reference Group meeting. As part of the current review, EPA:

- Undertook quantitative data analysis of noise complaints from both police and local government. 33 local governments responded to the survey, with an even distribution of metropolitan and non-metropolitan respondents.
- Worked with consultants to develop more detailed surveys, and administered these in an online format. A total of 48 responses were received from local government and 28 received from police.
- Developed and administered a self-selecting online community survey, which had over 1100 responses.

In addition to the above engagement activities undertaken specifically to support the review of the current regulations, EPA drew on the results of its Outcomes Social Research. The methodology for these surveys ensures that the responses are representative of the broader community, with 600 – 700 responses each time. The results of these surveys, conducted in 2012, 2014 and 2016 have been drawn upon in this RIS. Submissions from the Master Builders Association, the Demolition Contractors' Association of Victoria, and Strata Communities Australia were also sought.

The relevant results of these surveys are summarised within this document but are not otherwise publicly available.

The External Reference Group met for a second time on 12 October 2017 to discuss a range of potential changes to the current regulations and the possible adoption of other supporting measures.

EPA has also alerted the general public to the review by establishing a dedicated page on its website ("Review of Residential Noise Regulations"), which explains the purpose and scope of the regulations, highlights the existence and role of the External Reference Group and invites community members and stakeholders to register to receive updates on the review, including opportunities for further participation.

This RIS is being released for public consultation, providing an opportunity for stakeholders and members of the public to provide input into the proposed new regulations.

## 12 Statement of Compliance with National Competition Policy

The National Competition Policy Agreements set out specific requirements regarding all new legislation adopted by jurisdictions that are party to the agreements. Clause 5(1) of the Competition Principles Agreement sets out the basic principle that must be applied to both existing legislation, under the legislative review process, and to proposed legislation:

*The guiding principle is that legislation (including Acts, enactments, Ordinances or Regulations) should not restrict competition unless it can be demonstrated that:*

- (a) *The benefits of the restriction to the community as a whole outweigh the costs; and*
- (b) *The objectives of the regulation can only be achieved by restricting competition.*

Clause 5(5) provides a specific obligation on parties to the agreement regarding newly proposed legislation:

*Each party will require proposals for new legislation that restricts competition to be accompanied by evidence that the restriction is consistent with the principle set out in sub-clause (1)<sup>42</sup>*

Therefore, all RIS must provide evidence that the proposed regulatory instrument is consistent with these National Competition Policy obligations. The *OECD Competition Assessment Toolkit*<sup>43</sup> provides a checklist for identifying potentially significant negative impact on competition in the RIA context. This is based on the following four questions:

- Does the proposed regulation limit the number or range of suppliers?
- Does the proposed regulation limit the ability of suppliers to compete?
- Does the proposed regulation limit to the incentives for suppliers to compete?
- Does the proposed regulation limit the choices and information available to consumers?

If all four of these questions can be answered in the negative, it is unlikely that the proposed new regulations will have any significant negative impact on competition and further investigation of competition impacts is not likely to be warranted.

The proposed new regulations focus on providing guidance to residents and police and local government officers as to the practical interpretation of the limits on residential noise established in section 48A of the Environment Protection Act. They also impact on commercial activities such as construction, some trades, home businesses, or home music teaching, for example, by prescribing their equipment and prohibiting their use in certain times.

Despite impacting some commercial activities, the proposed new regulations are likely to affect all businesses in those sectors equally and do not raise barriers to entry (e.g. by creating unequal start-up costs for some businesses). In some instances, the proposed new regulations might reduce the transaction costs to small businesses of working out what is 'reasonable' so that they can comply with the Act. The proposed new regulations also do not involve the imposition of any of the limitations addressed by the four questions identified above.

Considering this, EPA believes that the regulations have no substantive impact on competition and that they are therefore compliant with the terms of the National Competition Policy.

---

<sup>42</sup> Competition Principles Agreement, Clause 5. 1995. See: [www.ncc.gov.au](http://www.ncc.gov.au)

<sup>43</sup> See OECD (2011) *Competition Assessment Toolkit. Volume 1: Principles*, pp 8-9. OECD, Paris, 2011.

## 13 Compliance and enforcement

The current regulations do not incorporate offence provisions. However, non-compliance with the current regulations is, as discussed above, taken to constitute non-compliance with the prohibition on making unreasonable noise contained in section 48A of the Environment Protection Act.

Section 48(6) of the Act enables police and local government officers to issue a direction to persons suspected of making unreasonable noise (including persons apparently in charge of premises on which such noises being made) requiring them to take such action as the police and local government officer deems necessary to abate the noise. Such directions have a duration of 72 hours.

Section 48(7) provides that a person who fails to comply with such a direction is guilty of an offence and liable to a penalty of up to 120 penalty units, as well as possible additional penalties of 30 penalty units per each day that the offence continues after conviction.

The key role of the current regulations is to facilitate the enforcement of the prohibition on the making of unreasonable noise in a residential context which is contained in section 48A of the Act. They do so by clearly identifying certain circumstances in which noise made in the residential context is defined as constituting unreasonable noise for the purposes of the Act. This will continue to be the case under the proposed new regulations.

It was noted in section 3.5 that a few stakeholders have argued that police and local government officers should have the power to issue infringement notices in respect of offences against the Act's prohibition on unreasonable noise. However, the provision of such a power would require amendment to the Act. The merits of this potential change to the Act are being given consideration in the context of the development of a substantially revised Act, which is currently being undertaken.

## 14 Implementation plan

The proposed new regulations represent limited, incremental change to be current regulations, which have been in place for the past decade. As such, requirements to ensure their successful implementation are also limited. EPA will promote awareness of the key changes to the regulations by communicating directly with local government and Victoria Police and will also highlight the changes on its website.

The recommended change for the use of air conditioners on days on which a Heat Health Alert exists will require attention to ensure that there is widespread understanding and awareness of the change. Given that the issue of a Heat Health Alert is undertaken by Victoria's Chief Health Officer, EPA will consult with the Chief Health Officer to determine the most appropriate means of achieving this outcome.

## 15 Evaluation strategy

EPA recognises the value of understanding the impact of the proposed new regulations on managing the Victorian residential noise issue. This will be important for the next review prior to the expiration of the proposed new regulations. The uncertainty in the future state - created by the proposed EP Act reforms reinforces the need for evaluating the proposed new regulations.

The following evaluation strategy is based on the outcomes sought by the proposed new regulations:

Table 18 Evaluation strategy

Outcome of proposed new regulations	Evaluation objective	Data collection	Timing
Assist police and local government to enforce the EP Act's prohibition on unreasonable noise	<ul style="list-style-type: none"> <li>• To understand how effective the proposed new regulations are in clarifying what is considered unreasonable noise</li> <li>• To determine if the proposed changes to the current regulations delivered on the expected benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Take-up/downloading of EPA guidance on noise: <ul style="list-style-type: none"> <li>◦ EPA circulates 20,000 copies of its <i>Annoyed by noise?</i> brochure annually. It is EPA's most popular publication. The noise pages on EPA's website are also frequently referenced by the public.</li> <li>◦ Trends in the uptake of these resources may indicate changes in the overall magnitude of residential noise issues.</li> </ul> </li> <li>• Community calls to EPA helpdesk about residential noise</li> </ul>	<p>Yearly</p> <p>Yearly</p>
Contribute to a reduction in unreasonable residential noise	<ul style="list-style-type: none"> <li>• To determine if the proposed changes to the current regulations delivered on the expected benefits</li> <li>• To identify future regulatory improvements to further reduce the impacts of residential noise</li> </ul>	<ul style="list-style-type: none"> <li>• Measure community experience of noise via the Outcomes Social Research surveys</li> <li>• Biennial reviews of residential noise complaints with local government and police. EPA will engage with police and local government officers (e.g. via workshops, interviews, surveys, and case studies) to gather quantitative and qualitative information such as: <ul style="list-style-type: none"> <li>◦ the number, location (both geographically and by type of dwelling) and nature of residential noise complaints received</li> <li>◦ the number and timing of complaints about residential and the item</li> </ul> </li> </ul>	<p>Biennial</p> <p>Biennial – after the results of the Outcomes Social Research are available so that the community's experience is also considered in the review</p>

Outcome of proposed new regulations	Evaluation objective	Data collection	Timing
		<p>complained about (particularly air conditioner noise)</p> <ul style="list-style-type: none"> <li>○ police and local government officers' experiences enforcing the regulations</li> <li>○ police and local government officers suggested changes to the proposed new regulations.</li> <li>○ how the regulations have improved outcomes.</li> </ul>	

Given the minor change proposed in making new regulations, EPA considers that the proposed evaluation strategy is proportionate because it:

- only requires minor changes to the way current data about residential noise is collected and focuses on its understanding data trends
- addresses key information gaps.

STATUTORY RULES 2018

## Exposure Draft

*Environment Protection Act 1970*

# Environment Protection (Residential Noise) Regulations 2018

The Governor in Council makes the following Regulations:

Dated:

Responsible Minister:

LILY D'AMBROSIO

Minister for Energy, Environment and Climate Change

Clerk of the Executive Council

### 1 Objectives

The objectives of these Regulations are to—

- (a) prescribe items and times during which noise resulting from the use of those items is taken to be unreasonable noise for the purposes of section 48A(5) of the **Environment Protection Act 1970**; and
- (b) exempt certain premises in certain circumstances from the application of those prescriptions.

### 2 Authorising provision

These Regulations are made under section 71 of the **Environment Protection Act 1970**.

### 3 Commencement

These Regulations come into operation on 13 October 2018.

### 4 Revocation

The Environment Protection (Residential Noise) Regulations 2008<sup>1</sup> are revoked.

## 5 Definitions

In these Regulations—

**Chief Health Officer** has the same meaning as in section 3(1) of the **Public Health and Wellbeing Act 2008**;

**earthmoving machinery** means powered plant used to excavate, load, transport or spread earth, overburden, rubble, spoil, aggregate or similar material, but does not include—

- (a) plant to compact earth, overburden, rubble, spoil, aggregate or similar material; or
- (b) a tractor or industrial lift truck or a vehicle designed to be used primarily as a means of transport on public roads;

**fringe residential subdivision** means any relevant land—

- (a) within a growth area or an urban growth zone under any planning scheme; or
- (b) that is undeveloped land identified for future urban development, other than land within Metropolitan Melbourne that is not covered by a metropolitan fringe planning scheme (within the meaning of section 46AA of the **Planning and Environment Act 1987**);

**growth area** has the same meaning as in section 3(1) of the **Planning and Environment Act 1987**;

**heat health alert** means an alert issued by the Chief Health Officer under the heat health

alert system operated by the Department of Health and Human Services;

***land identified for future urban development***  
means land that—

- (a) is zoned for residential development under any planning scheme or which is described as for use for future residential development in a Local Planning Policy Framework in any planning scheme or a document that is incorporated into or referenced in a Local Planning Policy Framework; and
- (b) is not land described as infill, brownfield, formerly developed for urban purposes or for redevelopment in a Local Planning Policy Framework in any planning scheme or a document that is incorporated into or referenced in a Local Planning Policy Framework;

***Local Planning Policy Framework*** means the framework set out in clause 20 of the Victoria Planning Provisions;

***Metropolitan Melbourne*** has the same meaning as ***Metropolitan Waste and Resource Recovery Region*** has in the Act;

***relevant land*** means land—

- (a) that is the whole of the land on a certified plan of subdivision under the **Subdivision Act 1988**; and
- (b) part of which is land set aside on the certified plan of subdivision as a road; and
- (c) in relation to which an engineering plan submitted by the applicant for subdivision includes specifications for works to construct the road or, if it is

already constructed, works to upgrade the road; and

- (d) used for or in connection with residential premises or on which a residential premises is being constructed;

**storey** means a space within a building that is situated between one floor level and the floor level next above, or if there is no floor level next above, the ceiling or roof next above, but does not include a space—

- (a) that contains only—
  - (i) a lift, shaft, stairway or meter room; or
  - (ii) a bathroom, shower room, laundry, water closet or other sanitary compartment; or
  - (iii) accommodation intended for not more than 3 vehicles; or
  - (iv) a combination of anything described in subparagraph (i), (ii) or (iii); or

- (b) that is an intermediate floor within a room;

**the Act** means the **Environment Protection Act 1970**;

**urban growth zone** means the zone described in clause 37.07 of the Victoria Planning Provisions;

**Victoria Planning Provisions** has the same meaning as in section 3(1) of the **Planning and Environment Act 1987**.

## 6 Prescribed items and prohibited times

- (1) For the purposes of section 48A(5) of the Act—
  - (a) an item set out in Column 2 of the Table is a prescribed item; and
  - (b) subject to subregulation (2), a prohibited time for a prescribed item is the time specified in Column 3 of the Table that corresponds to that prescribed item.
- (2) For the purposes of subsection 48A(5) of the Act, a time specified in Column 3 of the Table is not a prohibited time in respect of a prescribed item that falls within Group 4 at any time a heat health alert is in effect in the weather forecast district in which the item is located.

### **Example**

Noise emitted from a domestic air conditioner in the Central Forecast Region while a heat health alert is in effect in that Region is not taken to be unreasonable noise under section 48A(5) of the Act whether or not the noise is emitted at a time that would otherwise be a prohibited time in respect of domestic air conditioners.

Environment Protection (Residential Noise) Regulations 2018  
Exposure Draft

---

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>
<i>Group</i>	<i>Prescribed items</i>	<i>Prohibited times</i>
1	A motor vehicle (other than a vehicle moving in or out of premises), lawn mower or other grass cutting device and any equipment or appliance with an internal combustion engine that does not fall within Group 2.	Monday to Friday: before 7am and after 8pm. Weekends and public holidays: before 9am and after 8pm.
2	An electric power tool, chain or circular saw, gas or air compressor, pneumatic power tool, hammer and any other impacting tool and grinding equipment.	Monday to Friday: before 7am and after 8pm. Weekends and public holidays: before 9am and after 8pm.
3	A heat pump, swimming pool pump, spa pump, water pump (other than a pump being used to fill a header tank), domestic heating equipment (including central heating and hot water systems) and a domestic vacuum cleaner.	Monday to Friday: before 7am and after 10pm. Weekends and public holidays: before 9am and after 10pm.

Environment Protection (Residential Noise) Regulations 2018  
Exposure Draft

---

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>
<i>Group</i>	<i>Prescribed items</i>	<i>Prohibited times</i>
4	A domestic air conditioner or evaporative cooler.	Monday to Friday: before 7am and after 11pm.  Weekends and public holidays: before 9am and after 11pm.
5	A musical instrument and any electrical amplified sound reproducing equipment including a stereo, radio, television and public address system.	Monday to Thursday: before 7am and after 10pm.  Friday: before 7am and after 11pm.  Saturday and public holidays: before 9am and after 11pm.  Sunday: before 9am and after 10pm.
6	Any electric equipment or appliance that does not fall within Groups 2 to 5, including electric gardening equipment, other than electric equipment or appliances for personal care or grooming or equipment for heating, refrigeration or preparation of food.	Monday to Friday: before 7am and after 8pm.  Weekends and public holidays: before 9am and after 8pm.

## **7 Partial exemptions for premises on fringe residential subdivisions more than 35 metres from nearest property**

- (1) Section 48A(5) of the Act does not apply to noise from an item listed in subregulation (2) that is emitted between 7am and 9am on a Saturday from residential premises located—
  - (a) on a fringe residential subdivision; and
  - (b) more than 35 metres from the nearest point of the property boundary of the closest other residential premises.
- (2) For the purposes of subregulation (1), an item is listed if it is equipment or a motor vehicle that falls within Group 1 or 6 in the Table in regulation 6 and is—

- (a) earthmoving machinery that does not use an impacting, vibrating or rotating implement operated by hydraulic or pneumatic means; or
  - (b) a concrete dispensing truck; or
  - (c) compaction plant that is a self-propelled single drum vibrating roller or non-vibrating compaction machinery.
- (3) Subregulation (1) ceases to have effect with respect to noise emitted from a residential premises on one of the following first occurring—
- (a) 20 weeks passes from the commencement of work on the premises using any item listed in subregulation (2);
  - (b) in the case of premises that is a lot on the certified plan of subdivision referred to in the definition of **relevant land**, the works referred to in that definition required to construct or upgrade a road are completed on the section of road that adjoins the lot.

## **8 Partial exemptions for premises on fringe residential subdivisions more than 200 metres from nearest property**

- (1) Section 48A(5) of the Act does not apply to noise from an item listed in subregulation (2) that is emitted between 7am and 9am on a Saturday from residential premises located—
- (a) on a fringe residential subdivision; and
  - (b) more than 200 metres from the nearest point of the property boundary of the closest other residential premises.
- (2) For the purposes of subregulation (1), an item is listed if it falls within Group 1, 2 or 6 in the Table in regulation 6 and is—
- (a) equipment or a motor vehicle that is—
    - (i) earthmoving machinery that uses an impacting, vibrating or rotating

- implement operated by hydraulic or pneumatic means; or
  - (ii) any type of compaction plant; or
  - (iii) any type of motor vehicle or equipment listed in regulation 7(2); or
  - (b) any item that falls within Group 2 in the Table in regulation 6, other than a pile driver; or
  - (c) any item that falls within Group 6 in the Table in regulation 6.
- (3) Subregulation (1) ceases to have effect with respect to noise emitted from a residential premises that is a lot on a certified plan of subdivision referred to in the definition of ***relevant land*** when the works referred to in that definition required to construct or upgrade a road are completed on the section of road that adjoins the lot.

## **9 Partial exemptions for premises with large scale residential developments in non-residential zones**

Section 48A(5) of the Act does not apply to noise from an item that falls within Group 1, 2 or 6 in the Table in regulation 6 that is emitted during the prohibited time prescribed for that Group if the premises from which the noise is emitted is located on land—

- (a) no part of which is occupied by a person as a residence; and
- (b) on which a residential premises is under construction; and

### **Note**

A residential premises under construction may include a residential premises being extended or structurally altered or commercial or industrial premises being converted into a residence.

- (c) no part of which is zoned for residential purposes under any planning scheme; and

Environment Protection (Residential Noise) Regulations 2018  
Exposure Draft

---

**Note**

The following residential zones are specified in clause 32 of the Victoria Planning Provisions: RGZ, GRZ, NRZ, LDRZ, MUZ and TZ.

- (d) on which the residential premises has or, when constructed, will have—
  - (i) 4 or more storeys above ground level; or
  - (ii) 2 or more storeys below ground level.

Environment Protection (Residential Noise) Regulations 2018

Exposure Draft

---

---

## **Endnotes**

---

<sup>1</sup> Reg. 4: S.R. No. 121/2008.