



Government of **Western Australia**
Department of **Water and Environmental Regulation**



Managing amplified music noise in entertainment precincts

Consultation paper

November 2019

Managing amplified music noise in entertainment precincts

Consultation paper

Department of Water and Environmental Regulation
November 2019

Department of Water and Environmental Regulation
Prime House, 8 Davidson Terrace
Joondalup Western Australia 6027
Locked Bag 10 Joondalup DC WA 6919

Phone: 08 6364 7000

Fax: 08 6364 7001

National Relay Service 13 36 77

dwer.wa.gov.au

© Government of Western Australia

November 2019

This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. Apart from any use as permitted under the *Copyright Act 1968*, all other rights are reserved. Requests and inquiries concerning reproduction and rights should be addressed to the Department of Water and Environmental Regulation.

FIRST 115786

Disclaimer

This document has been published by the Department of Water and Environmental Regulation. Any representation, statement, opinion or advice expressed or implied in this publication is made in good faith and on the basis that the Department of Water and Environmental Regulation and its employees are not liable for any damage or loss whatsoever which may occur as a result of action taken or not taken, as the case may be in respect of any representation, statement, opinion or advice referred to herein. Professional advice should be obtained before applying the information contained in this document to particular circumstances.

This publication is available at our website www.dwer.wa.gov.au or for those with special needs it can be made available in alternative formats such as audio, large print, or Braille.

Contents

Consultation on managing amplified music noise in entertainment precincts in Western Australia	1
How to make a submission	4
1 Background to this reform	5
Planning considerations for entertainment precincts	5
Northbridge entertainment precinct	6
Northbridge noise complaints	7
2 Previous consultation on reforms for Northbridge	8
Key issues raised in submissions	9
3 Management of environmental noise	10
Entertainment noise	12
4 Options for the management of amplified music noise in entertainment precincts	13
Option 1: status quo	14
Option 1: advantages	14
Option 1: disadvantages	14
Option 2: agent of change and indoor assigned levels	15
Option 2: advantages	16
Option 2: disadvantages	16
Option 3: special entertainment precincts	17
Option 3: advantages	18
Option 3: disadvantages	19
5 Establishing a special entertainment precinct in Northbridge	20
6 Potential application of reforms to other entertainment precincts	22
7 Next steps	23
Appendices	24
Glossary	26
References	27

Figures

Figure 1 Special entertainment precincts consultation package	2
Figure 2 Comparison of familiar sounds at their noise levels	11
Figure 3 Reform package consultation elements	23

Tables

Table 1 Tourism/visitor-oriented businesses in Northbridge	6
Table 2 Amplified music noise levels Fortitude Valley	25

Consultation on managing amplified music noise in entertainment precincts in Western Australia

The Department of Water and Environmental Regulation (the department) is working with the Department of Planning, Lands and Heritage to engage the community and key stakeholders in discussions about how to best manage noise from amplified music in entertainment precincts. The State Government's reforms are aimed at balancing the competing needs of entertainment venues, other businesses and residents in vibrant entertainment precincts such as Northbridge.

This consultation paper seeks feedback on approaches to plan and manage areas with an active night-time economy including entertainment venues that play amplified music.

The paper sets out a number of reform options, including the establishment of special entertainment precincts in local planning schemes together with venue approvals to provide an option for entertainment venues to exceed Western Australia's assigned (prescribed) noise levels. The latter will require regulatory amendments to the Environmental Protection (Noise) Regulations 1997 (Noise Regulations).

The paper takes into account feedback received from stakeholders on a previous discussion paper prepared jointly by the department and the Department of Planning, Lands and Heritage and published by the Western Australian Planning Commission (WAPC) in 2018: *Planning for entertainment noise in the Northbridge area*.

In parallel with this consultation, the City of Perth is contemplating a planning scheme amendment to its *City Planning Scheme No.2*. Consultation on the scheme amendment, once initiated, will allow for community input on the City of Perth's proposal to establish Northbridge as the state's first 'special entertainment precinct'.

Stakeholder feedback on the planning elements associated with the Northbridge special entertainment precinct, including the boundary, building construction standards and external amplified noise levels, should be submitted to the City of Perth through their consultation process. Information and updates on the City of Perth's scheme amendment will be available at: <https://www.perth.wa.gov.au>

Complementary to the above, the WAPC has developed a draft *Position statement: special entertainment precincts* (position statement) to provide guidance to local governments in the establishment of special entertainment precincts in local planning schemes, improvement schemes or redevelopment schemes. The draft Position Statement includes general principles and minimum requirements for scheme provisions, including building attenuation measures and notifications on title.

The WAPC is seeking public comment on the draft position statement in conjunction with this consultation paper. Submissions received as part of this consultation paper will also inform the finalisation of the broader state-wide planning framework proposed in the draft position statement.



Figure 1 Special entertainment precincts consultation package

Stakeholder consultation promotes transparency, improves design and ensures risks are identified and unanticipated outcomes are avoided. It also allows innovative ideas to be proposed for consideration. You can provide feedback via an online survey or by a written submission to the department.

The consultation provides an opportunity for businesses, residents and visitors of entertainment precincts to express their views about the reform options and provide estimates of how the implementation measures may impact their businesses, personal finances or entertainment experience.

By making a submission you are consenting to the submission being treated as a public document. Your name will be published; however, your contact address will be withheld for privacy. If you do not consent to your submission being treated as a public document, you should either mark it as confidential or identify the parts that you consider confidential, and include an explanation.

Following public consultation on the reforms outlined in this paper, submissions will be analysed and the Department will make recommendations for amendments to the Noise Regulations to the Minister for Environment.

Submissions, including online survey responses, will be collated and summarised in a report following the close of the consultation period.

The department may request that a non-confidential summary of the material is also provided. It is important to note that, even if your submission is treated as confidential, it may still be disclosed in accordance with the requirements of the *Freedom of Information Act 1992*, or any other applicable law.

The department reserves the right to remove or delete any content that could be regarded as racially vilifying, derogatory or defamatory to an individual or organisation.

How to make a submission

The consultation period will be 12 weeks. Written submissions must be received by 5pm (WST) on 14 February 2020. No late submissions will be considered.

Written submissions can be lodged by email (preferred) at:

entertainment-noise@dwer.wa.gov.au

Hard copies can be mailed to:

Entertainment Noise

Department of Water and Environmental Regulation

Locked Bag 10, Joondalup DC, WA 6919

Feedback from this consultation process will inform the development of legislative and planning approaches to entertainment noise in Western Australia.

For further information please email entertainment-noise@dwer.wa.gov.au

Note: stakeholders with feedback on the Northbridge-specific planning elements of special entertainment precincts should make a submission through the forthcoming City of Perth consultation process.

1 Background to this reform

The State Government is committed to supporting the arts sector and is exploring reforms to encourage development of live music and entertainment venues and cultural industries. This support is articulated in *Creative WA: Supporting the arts and creative industries* (WA Labor 2016).

Creative industries, particularly the music industry, contribute significantly to the Western Australian night-time economy. Entertainment venues such as hotels, taverns and nightclubs represent 16 per cent of all businesses in Western Australia and generate significant revenue in some precincts, with more than \$1 billion in sales in the City of Perth (Ortus 2017).

As well as contributing to economic prosperity, live music venues, nightclubs, bars, cafes and restaurants also contribute to a city's culture, with entertainment venues and event spaces fostering the development of the arts and creative industries, broader tourism and hospitality industries, and opportunities for complementary business activities (WAPC 2018).

While the benefits of a vibrant arts and cultural sector are clear, mixed use entertainment precincts present challenges for planning and, in particular, the management of environmental noise. Inner city areas with a higher density of entertainment venues are experiencing significant infill development with an increasing number of mixed-use and high density residential developments.

This mix of land uses can cause conflict when noise-sensitive development is permitted close to established noise emitters, particularly where the noise is amplified music noise which has dominant or 'intrusive' characteristics. This land use conflict can also restrict the development of new entertainment venues close to residential development.

Although residents choosing to live in vibrant urban centres may be willing to accept higher noise levels at certain times, residents have a right to a reasonable level of amenity, including environmental noise levels that do not unduly interfere with their enjoyment of their premises or adversely impact health. Consideration of the needs of both residents and entertainment venues is required in order to address the planning needs of entertainment precincts.

Planning considerations for entertainment precincts

Local government has an important role in ensuring appropriate planning controls for land use and development through the preparation and administration of local planning schemes and strategies. Local planning schemes designate appropriate land use, residential density and development standards. Local government can also designate special control areas to control a particular type or characteristic of development associated with a precinct.

The WAPC defines a 'special entertainment precinct' as an area with a diverse mix of existing or planned land uses, which include entertainment venues that contribute to

an active night-time economy. A special entertainment precinct will include a number of entertainment venues clustered within a defined location and can include a mix of small bars and live music venues, restaurants, cafes, nightclubs, and pubs.

The draft WAPC position statement on special entertainment precincts, released on 7 November 2019, states that these precincts may be established by a local government through the adoption of a special control area in a local planning scheme.

The function of a special control area that establishes a special entertainment precinct is to manage existing or future conflicts associated with amplified music noise from entertainment venues. Special control area provisions will require higher construction standards for noise-sensitive (particularly residential) developments to ensure appropriate attenuation of music noise and acceptable indoor noise levels.

Northbridge entertainment precinct

Northbridge is considered to be Western Australia's premier entertainment precinct. The area is characterised by a high density of entertainment venues.

Table 1 Tourism/visitor-oriented businesses in Northbridge

Type	Number	% of total
Accommodation	13	8%
Bars	20	12%
Cafes	38	22%
Nightclubs	12	7%
Restaurants/Takeaways	86	51%
Total	169	100%

Source: Lucid Economics 2018

Northbridge contributes significantly to economy of the City of Perth and Western Australia. The *Northbridge Economic Assessment* commissioned by Tourism WA estimates that visitation to Northbridge generates around \$239 million in turnover annually and is predicted to grow as visitor-friendly developments within the precinct (such as the new WA Museum) are completed (Lucid Economics 2018).

Visitation in Northbridge is fairly evenly spread across a 24-hour period with 27 per cent of visits occurring during the day, 33 per cent during the after-work/dinner period and 40 per cent of visitors using the precinct between 10pm and 4am (Lucid Economics 2018), demonstrating a vibrant 24-hour economy.

Northbridge has also attracted an increasing number of permanent residents with State Government policies prioritising infill residential development as the Perth population grows (WAPC 2018b). New residents are drawn to the vibrancy of the location as well as its proximity to the city centre. There are approximately 757 individual residences across 64 properties in the proposed Northbridge special entertainment precinct, with the greatest density of residential development occurring outside of the inner core area.

To support the regulatory impact assessment process, the department commissioned measurement of venue noise levels in Northbridge over August and September 2019. Measured A-weighted levels indicate that amplified music noise outside venues on Friday and Saturday nights (Lloyd George Acoustics 2019) is generally between L_{Leq} 70—90 dB(A). This level of noise is likely to exceed the assigned (or allowable) levels in the Noise Regulations when received at noise-sensitive premises, and areas for future noise-sensitive development, in Northbridge.

Given the importance of our state's cultural industries and Northbridge's contribution to the wider Western Australian economy, there is a good case for establishing a special entertainment precinct in Northbridge.

Northbridge noise complaints

Noise complaints from residents in and around Northbridge relate to the following areas:

- concert and event noise (e.g. Fringe World festival)
- amplified music noise from venues
- amplified music noise from private premises
- patron noise
- road and traffic noise
- construction noise.

According to data provided by the City of Perth, the annual number of complaints about established entertainment venues in Northbridge between 2012 and 2017 has been variable (between 7 and 22 each year).

Complainants include residents, hotel guests and businesses in the area. The number of complaints is relatively limited in the context of Northbridge's overall population. It's possible that some residents, however, are experiencing unresolved issues in relation to particular entertainment premises.

The number of complaints does not necessarily correspond to the areas with high recorded noise levels. This is because the response to noise is subjective, and individuals may become accustomed to higher noise environments over time (DOH 2018).

2 Previous consultation on reforms for Northbridge

In September 2018, the WAPC published the [Planning for entertainment noise in the Northbridge area](#) public consultation paper. The paper was prepared jointly by the Department of Planning, Lands and Heritage and the Department of Water and Environmental Regulation, and was open for public comment from 20 September 2018 – 20 November 2018.

The consultation paper sought feedback on a suite of reforms to establish an entertainment precinct in Northbridge in the City of Perth.

Planning for Entertainment Noise in the Northbridge Area: discussion paper

The 2018 consultation canvassed stakeholder views on a framework for the management of entertainment noise in Northbridge based on the following principles:

Agent of Change: new developments (both noise-sensitive and noise-emitting) would be responsible for noise attenuation.

Designation of a special control area: designation of a special control area would apply special planning controls to protect the health and amenity of residents and the viability of entertainment venues; and to maintain the special character of the entertainment precinct.

Noise impact assessments: planning proposals for new noise emitting and noise receiving developments would be required to undertake a noise assessment to determine the level of noise to be attenuated through design and construction measures.

Construction standards: planning proposals for new noise emitting and noise receiving developments would be required to demonstrate how construction and design will achieve acoustic attenuation to comply with the standards set in the Noise Regulations.

Notification on title: a notification on title would be required for all approved planning proposals affected by entertainment noise.

Amendments to the Noise Regulations: noise protections would be applied to indoor areas of noise-sensitive developments only (with windows and doors closed).

A total of 64 submissions were received from a variety of stakeholders including:

- City of Perth
- other local governments
- Northbridge residents
- property developers
- entertainment venues
- acoustic consultants

- individuals who visit Northbridge for cultural and entertainment purposes.

Key issues raised in submissions

While submissions were broadly in favour of reform to support entertainment venues in Northbridge, there were concerns that the proposed approach did not go far enough to alleviate land use conflict. A summary of key issues raised by stakeholders is outlined below.

- **Uncertainty for venues:** stakeholders raised the issue of ongoing uncertainty for venues under the proposed reforms, and emphasised the preference for levels to be set at the venue. In particular, submissions noted the complexity of venue compliance as a result of indoor levels. The complexity arises from the inability for venues to determine the level of attenuation incorporated in nearby noise-sensitive premises, and thus reasonable emission levels for compliance purposes.
- **Ongoing land use conflict:** a significant number of submissions noted that the proposed reforms, including removal of outdoor assigned levels and adoption of indoor levels, combined with enhanced attenuation for new residential development, would not resolve the existing land use conflict between existing residential development and venues in Northbridge. Ongoing land use conflict was noted by developers, venues and acoustic consultants.
- **Agent of change:** support for adoption of 'agent of change' principles was varied. There was mixed support in particular among developers, venues and arts organisations, and acoustic consultants, some of whom pointed to practical implementation difficulties. A number of submissions noted that agent of change would create an uneven playing field between existing and new venues, and would unfairly disadvantage venues (who typically have less access to capital) compared to developers, which is contrary to the goal of the reforms.
- **Alternative approaches:** a proportion of submissions advocated for alternative approaches to those proposed, such as a 'precinct approach' to entertainment venues and noise management, and expansion of the use of r. 19B of the Noise Regulations to provide an avenue for venue approvals for entertainment venues.

This option is discussed further in section 4 of this consultation paper. For the reasons outlined, it is not the government's preferred approach.

3 Management of environmental noise

Environmental noise can be described as unwanted sound or noise pollution that originates from sources such as transport, commercial and industrial activities, construction sites, residential activities and entertainment.

The primary instruments for noise regulation in Western Australia are the *Environmental Protection Act 1986* (EP Act) and the Noise Regulations.

The Noise Regulations set legally enforceable assigned (or allowable) noise levels for noise emitted from a premises or public place when received at another premises. The assigned levels are defined as outdoor levels and vary according to the type of premises receiving the noise and the time of day the noise is received. Higher levels of protection are afforded to the most sensitive premises, classed as 'noise-sensitive'.

What does 'noise sensitive' mean?

'Noise sensitive' has a specific meaning in the Noise Regulations. Noise-sensitive premises are listed in Part C of Schedule 1 of the Noise Regulations and include:

Residential accommodation, rural properties, caravan parks and camping grounds, small hospitals (less than 150 in-patients), residential care facilities, schools, churches and places of worship, hotel accommodation, aged care facilities, childcare facilities, prisons and detention centres, and water storage dams and catchments.

A noise-sensitive purpose, in relation to a building, means the part of the building used for residential accommodation or the purposes outlined above.

For the purposes of special entertainment precincts, we are primarily concerned with the health and amenity of residents, particularly in the sleeping areas of residential accommodation.

Local governments administer the Noise Regulations throughout Western Australia. Local government Chief Executive Officers (CEOs) have delegated powers to address noise issues from premises within their jurisdiction. Environmental health officers can also be appointed as Authorised Persons and Inspectors under Sections 87 and 88 of the EP Act for the purpose of investigating unreasonable noise emissions.

If the noise received at noise-sensitive premises exceeds the assigned levels in the Noise Regulations, an authorised officer has a range of enforcement options, including infringement notices, noise abatement directions, environmental protection notices, and prosecution, available under the EP Act to protect the health and amenity of sensitive receivers.

The assigned levels set in the Noise Regulations, and environmental noise levels internationally, are A-weighted levels or dB(A). The '(A)' or 'A-weighting' represents a frequency weighting applied to sound that best aligns with the human ear's response to sound at low sound pressure levels.

Environmental noise can impact public health and amenity. The World Health Organisation (WHO) defines 'health' as '[a] state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO 2018). This definition embraces the concept of wellbeing and thus considers noise impacts such as annoyance, interference with communication, and impaired task performance 'health' issues.

While exposure to very high levels of noise can lead to direct injury to the auditory system, noise can also be a non-specific stressor that adversely affects physical and mental health.

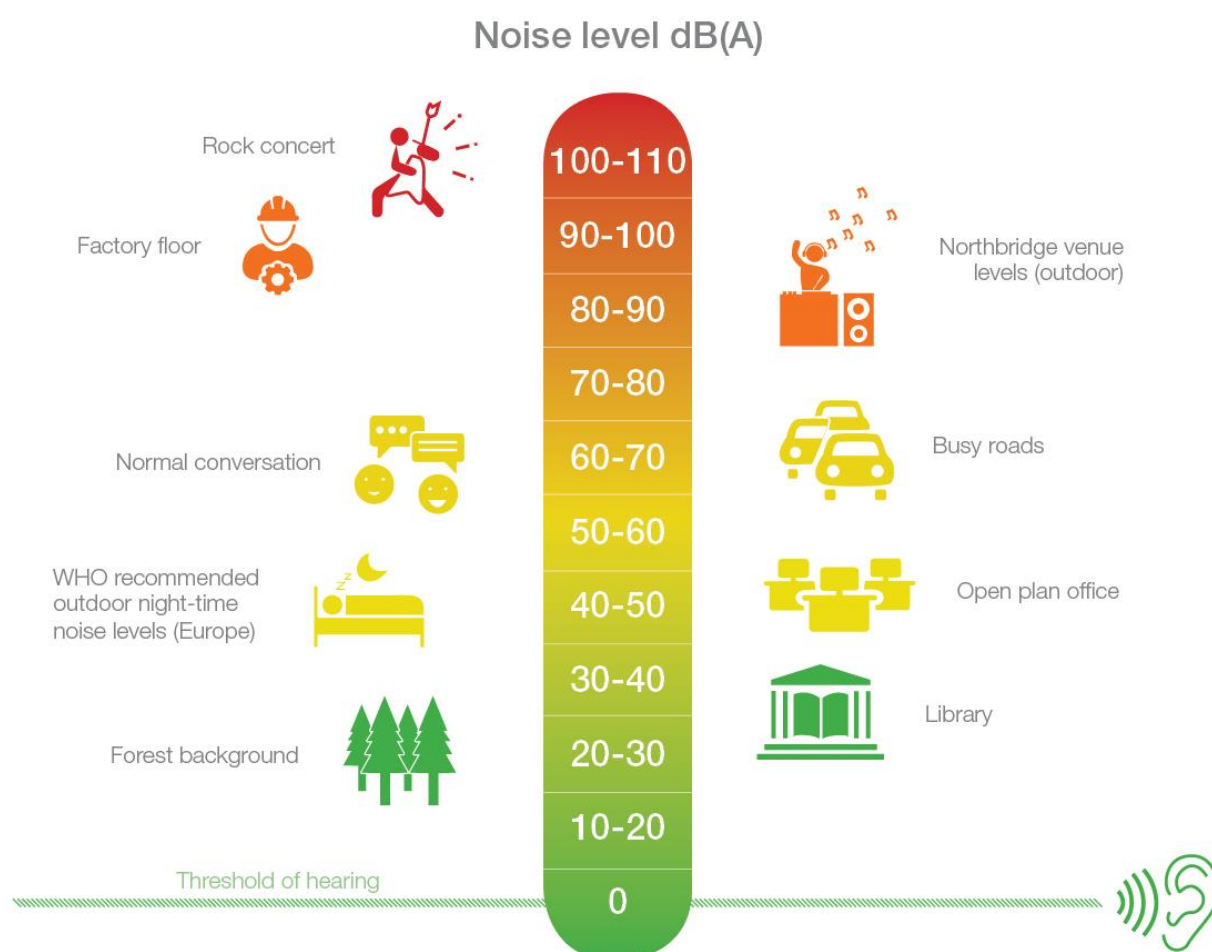


Figure 2 Comparison of familiar sounds at their noise levels

The WHO *Night Noise Guidelines for Europe* outline impacts of night-time noise on health. The guidelines draw on indirect evidence, such as effects of noise on sleep and the association between sleep and health, where direct evidence is not available. The guidelines also acknowledge that, in the range between 30dB and 55dB, impacts 'will depend on the detailed circumstances of each case'.

Entertainment noise

The capacity of a noise to induce annoyance depends upon its characteristics. Noise from amplified music has the potential to cause annoyance and disturb sleep because it contains significant low frequency noise components (sometimes referred to as 'doof').

While human hearing is relatively insensitive in the low frequency range compared to higher frequencies, there is a greater increase in annoyance at lower frequencies with changes in level. Low frequencies pass more easily through building façades than high frequencies, essentially stripping away the higher portions of music noise and leaving behind the low frequency 'doof'. The inability of building façades to reduce this low frequency content is a major issue with amplified music noise.

While the A-weighted sound pressure level is used to assess the impact of general environmental noise, it underestimates the sensitivity of the ear when there are high levels of low frequency noise. Additionally, human hearing is more sensitive to changes in acoustic energy in low frequencies than in the mid to high frequencies. These aspects of hearing response suggest that the A-weighting may not be the most appropriate metric where music noise is concerned.

Generally the low frequency components associated with entertainment noise are found in the 63 Hz and 125 Hz octave bands, although occasionally elevated levels can extend to the 31.5 Hz octave band. Control of sound levels in these octave bands will better address the low frequency impacts associated with entertainment noise.

An important consideration for low frequency noise in residential settings is the degree to which the noise can be attenuated by a building façade. The level of noise reduction from one side of a building element to the other is known as the transmission loss. Transmission loss is typically determined by testing or mathematical prediction and performance is often specified in octave bands. Sound reduction testing of building elements is not usually undertaken for frequencies below 100 Hz and the most common prediction methods only predict performance down to the 50 Hz one-third octave band. So, for the purpose of criteria for entertainment noise, often only the 63 Hz and 125 Hz octave bands are considered.

4 Options for the management of amplified music noise in entertainment precincts

This paper outlines reform options for the management of amplified music noise in entertainment precincts and satisfies the consultation element of a regulatory impact assessment (RIA) for the proposed changes to the Noise Regulations.

An RIA requires government to consider the costs and benefits of a number of regulatory and non-regulatory options before making a decision on how to change the way an issue is managed. The RIA process aims to reduce the regulatory burden on government, businesses and the community by ensuring that all options are considered and that unintended consequences of regulation are avoided where possible.

New or amended regulations should address a clear market or regulatory failure. In the case of entertainment precincts such as Northbridge, historic planning decisions have resulted in noise-sensitive development being permitted with inadequate separation from established entertainment venues. This trend can be exacerbated by infill development in mixed use areas, where convergence of land uses causes conflict when noise-sensitive development is permitted close to existing noise emitters.

The current framework for regulation of environmental noise is designed to protect the health and amenity of receivers, while still allowing for some activities that cannot reasonably and practicably meet noise limits. These activities – including sporting, cultural and entertainment events – are considered acceptable either because of their temporary nature or because of the community benefits they confer. Except in relation to these specific activities, the noise emitter is responsible for ensuring noise levels at the receiver comply with the assigned levels.

While the Noise Regulations are highly effective at protecting the health and amenity of the community, they do not recognise ‘first occupancy’. As a result, conflicts may arise when the requirements of the Regulations aren’t considered at development stage.

Further, the assigned levels provide for protection of amenity in all the noise-sensitive areas of relevant premises, including outdoor areas such as balconies and patios. Protection of such outdoor areas in highly urbanised mixed-use entertainment precincts, subject to high levels of ambient noise, may not be practicable. In these environments it may be necessary to focus on providing protection in internal living spaces.

Western Australia’s *Regulatory Impact Assessment Guidelines* state that ‘[r]egulatory failure may occur where regulation is not ... targeted to address an identified issue and there are unintended or undesirable consequences of that regulation’. (DOTAF 2010)

These combined features of current planning and environmental frameworks have led to unresolved tension between different land uses and different needs of the community in an entertainment precinct.

Over the last 12 months, the State Government has considered a number of reform options for Western Australia's entertainment precincts. In 2018, community input was sought on options to implement agent of change planning principles and adopt indoor assigned levels for entertainment precincts. Stakeholder feedback has informed development of a revised approach to better achieve the government's reform objectives.

A detailed comparison of reform options is outlined below.

Option 1: status quo

Under the current legislative framework, most environmental noise, including noise from entertainment venues, is managed by local government (generally Environmental Health Officers) who implement the provisions of the Noise Regulations under delegation.

The assigned noise levels are the levels of noise allowed to be received at a premises at a particular time of the day or night. It is therefore an offence for the noise emitted from a premises to exceed the assigned level at another premises.

If noise-sensitive development is allowed to occur next to an established noise emitting premises, such as a venue, the noise emitting premises may be required to modify operations to ensure that noise at the new receivers complies with the assigned levels.

If a receiver complains about noise, a local government will usually investigate. In the case of an entertainment venue where the noise emissions result in a breach of the assigned levels at a receiver, the venue must either reduce the noise levels to meet the assigned levels, or risk enforcement action such as prosecution.

Option 1: advantages

- Cost to government and the taxpayer: option 1 represents no net cost to the taxpayer as no changes are required to planning schemes or regulations.
- Protections for all noise-sensitive receivers: the current regulatory regime protects the health and amenity of noise-sensitive receivers (including residents). The assigned levels have been designed to ensure that noise from other premises is kept to acceptable standards.

Option 1: disadvantages

- entertainment venues may be required to alter operations in response to noise complaints: if noise complaints are numerous and sustained, local government officers may require an entertainment venue to reduce their noise emissions. For some businesses this could mean significant investment in infrastructure, for others, it may require changes to the way the business operates including restriction of operations. For entertainment venues it is rarely as simple as

turning the music down. Customers have expectations of how noisy or vibrant an entertainment venue should be (both inside and outside of the venue). Significant changes to the way an entertainment venue operates will affect the business it attracts and its future viability.

- land use planning conflicts may persist: under the existing planning framework, noise-sensitive premises can converge (encroach) on existing noise emitters, including venues. As noise emitters are responsible for emissions under the EP Act, the emitter may be required to moderate their operations to comply with the assigned levels (which are outdoor levels) at the receiver. This may result in either risks to ongoing viability of entertainment venues, or inadequate protection of residents from environmental noise, or both. In addition, there may be unwillingness on the part of local government to enforce the Noise Regulations, particularly in cases where longstanding and iconic venues are the subject of complaints by residents.

Option 2: agent of change and indoor assigned levels

In 2018, the State Government investigated the 'agent of change' planning approach as part of a suite of reforms to manage noise and competing interests in Northbridge and, potentially, in future entertainment precincts in Western Australia.

A comprehensive summary of the approach can be found in the 2018 consultation paper *Planning for entertainment noise in the Northbridge area*.

Agent of change requires that the person or business responsible for a new development bears the cost associated with the protection of noise-sensitive receivers (primarily residents). In practice this means that new residential development needs to account for high levels of amplified music noise by building to a standard that protects residents from unreasonable noise. New entertainment venues, on the other hand, need to implement noise attenuation measures at their business.

The agent of change approach was investigated for adoption in the Northbridge area through the designation of a special control area via a local planning scheme amendment. The proposed scheme amendment required:

- a. Noise impact assessments: new noise-emitting and noise-receiving developments would be required to undertake a noise assessment to determine the level of noise to be attenuated through design and construction measures.
- b. New construction standards: new noise-emitting and noise-receiving developments would be required to demonstrate how construction and design will achieve acoustic attenuation to comply with the standards set in the Noise Regulations.
- c. Notification on title: all approved planning proposals affected by entertainment noise would require information about noise impacts on the property title.

The planning elements of option 2 were complemented by proposed amendments to the Noise Regulations. Under the amended regulations, outdoor assigned levels in

designated areas would be removed and equivalent protections would be provided for indoor areas of noise-sensitive premises (with windows and doors closed).

Option 2: advantages

- **Fairness:** Agent of change requires that the new development is responsible for incorporating appropriate noise attenuation to protect residents from unreasonable noise (indoors). The option 2 approach was adapted from the Victorian Government's agent of change approach for live music venues in 2014 and addressed the State Government's election commitment to investigate the agent of change approach to support creative industries in WA (WA Labor 2016).
- **Protections for all noise-sensitive receivers:** amendments to the Noise Regulations under this option would set new assigned levels *inside* residences with doors and windows closed. This change would acknowledge the need to protect the health and amenity of existing and future residents from unreasonable noise in noise-sensitive areas of residential buildings.

Option 2: disadvantages

- **Implementation difficulties:** although the agent of change approach aims to strike a balance between new entertainment venues and residential developments, there are significant practical difficulties with implementing new building requirements and adopting indoor assigned levels. The 2018 discussion paper acknowledged the difficulty of indoor noise measurement, particularly for entertainment noise with significant low frequency components. In addition, basing new development standards on acoustic predictions is inherently uncertain.
- **Ongoing land use conflict:** option 2 does not remove the existing land use conflict between residents and entertainment venues. Although new residents would benefit from increased sound attenuation and noise-sensitive encroachment would not get any worse, the difficulties for venues in respect of existing noise-sensitive development remain unresolved.
- **Uncertainty for new venues:** as compliance levels would be indoor levels, new venues would be required to make assumptions about the level of attenuation incorporated into nearby noise-sensitive premises. This is likely to be highly complex or impracticable, and lead to ongoing uncertainty in respect of venue operations.
- **Discouragement of new entertainment venues:** while the agent of change approach provides a level of protection for existing venues with respect to further noise-sensitive encroachment, it discourages new entertainment venues by significantly increasing establishment costs (through enhanced attenuation requirements).

Given the implementation issues and lack of venue certainty associated with this option, it is not considered to satisfy the reform objectives and is not the government's preferred option.

Option 3: special entertainment precincts

A 'precinct approach' is an alternative to the agent of change model outlined in option 2. Under this option, the local government will implement key planning reforms, including precinct-wide building attenuation requirements for new residential development to future-proof the area for amplified music noise.

The planning reforms will be complemented by amendments to the Noise Regulations to provide for uniform noise emission levels for approved venues within a special entertainment precinct.

This approach is broadly consistent to that adopted in Brisbane's Fortitude Valley. (See Fortitude Valley case study at Appendix 1.)

The reforms for option 3 would be implemented through the following suite of reforms:

WAPC position statement on special entertainment precincts

The WAPC will outline the principles of a special entertainment precinct and provide high level policy support for their establishment in appropriate locations in Western Australia. The draft WAPC position statement can be found on the Department of Planning, Lands and Heritage's [website](#).

Designation of a special entertainment precinct in a special control area

A local government may designate a special control area as a special entertainment precinct via an amendment to their local planning scheme. The scheme amendment will require:

- a. An external amplified music noise level to identify the expected street level vibrancy within the special entertainment precinct for planning purposes.
- b. Adoption of precinct-wide design and construction standards for new residential development to achieve internal noise levels consistent with the protection of health and amenity¹ (equivalent to 47 Leq dB(Lin) in the 63 Hz octave band and no more than 41 Leq dB(Lin) in the 125 Hz octave band). Adoption of suitable standards would be demonstrated by the submission of a Transmission Loss Design Report for all new residential development and should recognise the external amplified music noise level.
- c. New entertainment venues to undertake a noise assessment, in the form of an Acoustic Report, to determine the level of noise to be attenuated through design and construction measures, consistent with the external amplified music noise level.
- d. As a condition of development for noise-sensitive premises, a notification pursuant to section 70A of the *Transfer of Land Act 1893* to inform prospective owners of the likelihood of higher noise levels.

¹ Noise levels set by the UK Department of Environment, Food and Rural Affairs consistent with protection of health and amenity.

The external amplified music noise level is **not a compliance level** but a level set by the local government to signal the expected street level 'vibrancy' within the precinct, from which building attenuation standards can be determined.

Amendments to the Noise Regulations

The Regulations will be amended to provide an option for entertainment venues located within the special entertainment precinct to apply for approval to exceed the assigned levels.

Generally, approvals will provide for uniform noise levels for venues located within the special entertainment precinct aligned to the levels set out in the local planning scheme (less an adjustment, where relevant, to account for cumulative noise effects). Venue approvals are not compulsory and will be provided on an opt-in basis.

Venues located in the special entertainment precinct without a venue approval would continue to be subject to the requirements of the assigned levels set out in Regulation 7.

Consistent with their responsibility for administering the Noise Regulations, the local government CEO will determine applications and issue venue approvals.

While venue approvals will generally be set consistent with the external amplified music noise level, the CEO may specify the most appropriate compliance measurement location, or require an acoustic report or a noise management plan which describe how the venue will comply with the relevant venue level.

Special entertainment precincts established by local governments will be listed in a Schedule to the Noise Regulations. Entertainment venues located within special entertainment precincts listed in the Schedule will be eligible to apply for a special entertainment precinct venue approval.

Option 3: advantages

- Increased certainty for entertainment venues: entertainment venues with a venue approval will have increased certainty about the maximum amplified music noise level they can emit (measured at a specified point on the venue premises). Venue approvals will be in effect for a fixed period of time, providing business certainty over a fixed period.
- Certainty for developers: a new standard for design and construction of residential development, or mixed use that includes residential use, will include specific requirements for noise transmission loss. The transmission loss will relate directly to the external amplified music noise level specified in the scheme amendment. The higher the external amplified music noise level, the higher the required transmission loss for new development.
- Stronger night-time economy: establishing shared expectations of street vibrancy and precinct characteristics will future-proof important entertainment precincts and have flow-on benefits for surrounding businesses, visitors and residents seeking a vibrant arts and cultural experience.
- Protection of health and amenity for new residents: new residents will be protected from unreasonable noise due to more stringent noise attenuation

standards. Venue approvals will effectively be ‘capped’ at the level set in the scheme, to future proof the area for a given level of noise.

Option 3: disadvantages

- Existing noise-sensitive premises may not be appropriately acoustically treated for the levels of amplified music noise expected in a vibrant entertainment precinct. Retro-fitting noise attenuation measures to existing noise-sensitive premises may assist in protecting the health and amenity of the resident, but will impose a cost on the building owner.

Implications of special entertainment precincts for residents

The suite of reforms for special entertainment precincts are intended to provide certainty for venues, by allowing levels for approved venues to be set near the venue premises, and protection for residents. Protection of residential premises is achieved through minimum construction standards for new residential development, ensuring that special entertainment precincts become better protected from the impacts of amplified music noise over time.

Protections for new residential premises

New residential development will be designed and constructed with the aim of achieving internal noise levels of no more than 47 Leq dB(Lin) in the 63 Hz octave band and no more than 41 Leq dB(Lin) in the 125 Hz octave band. These levels are consistent with protection of health and amenity for residents, ensuring that residents can enjoy their living areas without excessive noise intrusion. Residents cannot, however, expect quiet internal noise levels with their windows and doors open.

Protections for existing residential premises

Existing premises are unlikely to incorporate the same level of attenuation for amplified music noise as that required for new residential development.

In granting a venue approval, the CEO may also specify the appropriate compliance measurement location, or require an acoustic report or noise management plan to outline how the venue will comply with the relevant level.

5 Establishing a special entertainment precinct in Northbridge

The State Government is committed to progressing a solution to the issue of entertainment noise and land use conflict, with an initial focus on Perth's premier entertainment precinct. The Northbridge area has a mix of entertainment, cultural and residential land uses unique to this location, and has been the subject of significant deliberation, modelling and research for almost two decades.

The City of Perth is contemplating a precinct boundary for Northbridge to delineate a special entertainment precinct within the local planning scheme. Within the contemplated precinct, the 'core' area has a high density of entertainment venues and relatively low levels of residential development. The contemplated core area is bounded by William, Roe, Aberdeen and Parke streets and contains 38 identified entertainment venues and 148 individual residences located within five properties. There is one single-dwelling house in this area.

Measurement of venue noise levels in Northbridge commissioned by the department and conducted between August-September 2019 indicates that amplified music noise outside venues on Friday and Saturday nights is generally between 80-100 dB in the 63 Hz octave band, with a small proportion of venues emitting noise over 100 dB in the 63 Hz octave band (Lloyd George Acoustics 2019).

The City of Perth considers that the community has an expectation that noise in the core part of Northbridge will spill into the street and contribute to a vibrant precinct throughout busy night-time periods.

Changes to City of Perth's *City Planning Scheme No.2* to establish the Northbridge special entertainment precinct are likely to propose an external amplified music noise level in the core of L_{Leq} 86 dB in the 125 Hz octave band and L_{Leq} 95 dB in the 63 Hz octave band. The external amplified music noise level is set with regard to community expectations of street level vibrancy but is in excess of the assigned levels in the Noise Regulations.

As a consequence, existing residents may receive noise inside sensitive-use areas of their homes which exceeds assigned (allowable) levels. As the external amplified music noise levels proposed by the City of Perth are close to the noise levels currently emitted by venues, existing residents in Northbridge may not notice a significant difference to the current situation.

Under the amended Noise Regulations, entertainment venues in the core area may apply for venue approvals. Approvals for venues in the core will provide for uniform noise levels aligned to the levels set for the Northbridge core (less an adjustment, where relevant, to account for cumulative noise effects).

Outside of the core area, the land use mix accommodates a higher proportion of residential use. The City of Perth is considering designating this as the 'frame' area. There are 609 individual residences across 59 properties and 20 entertainment venues within the frame area.

The external amplified music noise level contemplated by the City of Perth in the frame area has regard to community expectations and the level of noise attenuation which is practicable for new residential premises. The external amplified music noise level proposed by the City of Perth for the frame is L_{Leq} 70 dB in the 125 octave band and L_{Leq} 79 dB in the 63 Hz octave band.

At this noise level, it is technically and economically feasible to construct new residential buildings to provide for the protection of health and amenity of residents inside their homes (Gabriels Hearne Farrell 2019).

Under the amended Noise Regulations, entertainment venues in the frame area may apply for venue approvals under the Noise Regulations. Approvals for venues in the frame will generally provide for uniform noise levels aligned to the levels set for the Northbridge frame (less an adjustment, where relevant, to account for cumulative noise effects).

Capping venue levels at the level set in the scheme will ensure new residential attenuation requirements are adequate in the context of existing and new venues.

6 Potential application of reforms to other entertainment precincts

The proposed planning and regulatory reforms outlined in this paper may be adopted in other areas of Western Australia in addition to Northbridge.

Local government authorities considering the establishment of a special entertainment precinct will need to consider relevant planning matters, in particular the WAPC's draft Position Statement on special entertainment precincts.

The proposed process for establishing a special entertainment precinct is the designation of a special control area through an amendment to the local planning scheme. As outlined in the WAPC draft position statement, the scheme amendment would be required to address:

- an external amplified music noise level to identify street level vibrancy for planning purposes
- precinct-wide construction standards (building transmission loss) for new residential development to achieve internal levels consistent with protection of health and amenity
- acoustic reports for new noise emitting venues
- notifications on title for all approved planning proposals for noise-sensitive developments located in the proposed precinct.

Special entertainment precincts established consistent with the above will be listed in a Schedule to the Noise Regulations.

Venues located in special entertainment precincts listed in the Schedule will be able to apply to the CEO for a venue approval consistent with considerations outlined in this paper.

7 Next steps

This consultation provides an opportunity for broad stakeholder input on approaches for the management of amplified music noise in Western Australia's vibrant, mixed use entertainment precincts

The consultation will inform the RIA of amendments to the Noise Regulations. Proposed amendments will provide for venues located within a special entertainment precinct to apply for a venue approval.

While stakeholder input is sought on the broad approach, including its application to other areas of the state, Northbridge is the main focus of the current regulatory impact assessment.

Proposed amendments to the Noise Regulations are just one element of a broader suite of reforms. Planning reforms set out in the WAPC draft position statement and the City of Perth's anticipated amendment to *City Planning Scheme No. 2* are not subject to RIA requirements, as these reforms do not require changes to regulation.

However, each reform element has its own consultation process and stakeholders are encouraged to participate in the consultations relevant to their areas of interest.



Western Australian Planning Commission's position statement:

- provides overarching definition and approach and the criteria for local governments to create special entertainment precincts.



Department of Water and Environmental Regulation's Noise Regulation amendments:

- allows entertainment venues in a special entertainment precinct to apply for a venue approval that will allow the emission of amplified music noise consistent with the level set by the local government
- lists special entertainment precincts in a new Schedule.



City of Perth's special control area:

- sets expected external amplified music sound levels for core and frame areas of Northbridge
- sets requirements for building location, design and construction standards for new noise sensitive development
- requires entertainment noise information on property titles
- requires noise impact assessment from new entertainment venues.

Figure 3 Reform package consultation elements

Following the conclusion of the consultation period, submissions will be analysed to develop a detailed understanding of the regulatory impacts of proposed options and underpin sound regulatory and policy development.

The next stage of the process will be development of a decision regulatory impact statement which will analyse impacts of the options presented in this paper and provide further information on implementation of the preferred approach.

Appendices

Appendix A – Fortitude Valley special entertainment precinct

The Fortitude Valley special entertainment precinct was established by the City of Brisbane in 2006. Although the legislative framework for the Fortitude Valley precinct is very different from the proposed Northbridge special entertainment precinct, the vibrancy outcomes, residential construction and venue requirements are similar.

Like Northbridge, Fortitude Valley is home to a mix of live music venues, nightclubs, bars, restaurants, cafes and other commercial businesses in addition to residential development. The intent of the reforms was to protect the long-term future of the live music scene and vibrancy of the precinct without exposing residents to unreasonable levels of amplified music noise.

The Fortitude Valley special entertainment precinct consists of the following features:

- 1 Brisbane City Council designated special entertainment areas within the Brisbane City Plan 2014 to provide an exemption from the noise provisions of the Liquor Regulations 2002. Amplified noise in the precinct is now regulated by the Council under a local law. The local law allows entertainment venues to emit a level of noise at their boundary regardless of how close the nearest residence is.
- 2 New residential development in the core and buffer areas of the precinct are required to comply with performance outcomes for noise insulation specified in the Fortitude Valley neighbourhood plan, which is part of the Brisbane City Plan 2014. The construction performance outcome requires a minimum reduction in sound pressure level (i.e. transmission loss) between the exterior of the building and the bedroom or living room of the residence.
- 3 The local law requires entertainment venues in the core of the precinct to have an amplified music venue permit. The noise limits of the local law are illustrated in the table below:

Table 2 Amplified music noise levels Fortitude Valley

Venue location	Day and time	Amplified music noise level 1	Amplified music noise level 2
Special entertainment precinct core area A	10am – 12am on Sunday, Monday, Tuesday, Wednesday and Thursday 10am Friday to 1am Saturday 10am Saturday to 1am Sunday	LC _{eqT} 90 dB	LL _{eqT} 45 dB in any one-third octave band between and including 31.5 Hz and 125 Hz LA _{eqT} 33 dB
	All other times	LC _{eqT} 80 dB and LL _{eqT} 73 dB in any one-third octave band between and including 31.5 Hz and 125 Hz	LL _{eqT} 43 dB in any one-third octave band between and including 31.5 Hz and 125 Hz LA _{eqT} 30 dB
Special entertainment precinct core area B	10am to midnight Friday and Saturday 10am to 11.30pm on a Sunday, Monday, Tuesday, Wednesday and Thursday	LC _{eqT} 88 dB	LL _{eqT} 45 dB in any one-third octave band between and including 31.5 Hz and 125 Hz LA _{eqT} 33 dB
	All other times	LC _{eqT} 65 dB and LL _{eqT} 55dB in any one-third octave band between and including 31.5 Hz and 125 Hz	LL _{eqT} 43 dB in any one-third octave band between and including 31.5 Hz and 125 Hz LA _{eqT} 30 dB

Research into the economic value of the Fortitude Valley special entertainment precinct found that Brisbane's night-time economy is growing faster than the rest of Brisbane's economy in terms of sales revenue, employment and number of businesses. Of the night-time economy hotspots investigated, Fortitude Valley experienced the greatest growth, with a seven per cent increase in establishments, five per cent increase in employment and nine per cent increase in sale revenue.

Glossary

dB	Decibel. Unit of measurement used to measure the intensity of sound. Decibels are measured on a logarithmic scale.
dB(A)	A-weighted decibel. An expression of the relative loudness of sounds as perceived by the human ear. In the A-weighted system, the decibel values of sounds at low frequencies are reduced, compared with unweighted decibels, in which no correction is made for audio frequency.
dB(C)	C-weighted decibel. C-weighting is an approximation to the frequency sensitivity of human hearing at higher noise levels and better captures the value of low frequency content – particularly the bass elements of amplified music.
LAeq	A-weighted equivalent sound level.
LAeqT	The notional A-weighted, equivalent continuous sound level which, if it occurred over the same time period, would give the same noise level as the actual varying sound level. The T denotes the time period over which the average is taken.
LLeq	The linear equivalent sound level.
LLeqT	The notional linear equivalent continuous sound level which, if it occurred over the same time period, would give the same noise level as the actual varying sound level. The T denotes the time period over which the average is taken.
LCeqT	The notional C-weighted equivalent continuous sound level which, if it occurred over the same time period, would give the same noise level as the actual varying sound level.
Lnight	The A-weighted Leq (equivalent noise level) over the 8-hour night period of 11pm to 7am, also known as the night noise indicator.
Octave band	<p>A range of frequencies whose upper frequency limit is twice that of its lower frequency limit. In acoustical measurements, sound pressure level is often measured in octave bands, and the centre frequencies of these bands are defined by ISO as 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz and 16 kHz to divide the audio spectrum into 10 equal parts.</p> <p>The sound pressure level of sound that has been passed through an octave band pass filter is termed the octave band sound pressure level.</p>

References

- Department of Health 2018, *The health effects of environmental noise*, Australian Government, Canberra, available: [https://www1.health.gov.au/internet/main/publishing.nsf/Content/A12B57E41EC9F326CA257BF0001F9E7D/\\$File/health-effects-Environmental-Noise-2018.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/A12B57E41EC9F326CA257BF0001F9E7D/$File/health-effects-Environmental-Noise-2018.pdf)
- Department of Treasury and Finance 2010, *Regulatory Impact Assessment Guidelines for Western Australia*. Government of Western Australia, Perth, available: https://www.treasury.wa.gov.au/uploadedFiles/Site-content/Economic_Reform/RIA_Program/ria_guidelines.pdf
- Gabriels Hearne Farrell 2019, *Acoustic Report, Northbridge Entertainment Precinct: Evaluation of Residential Building Attenuation*, Report 12-030. Prepared for the Department of Water and Environmental Regulation, Government of Western Australia, Perth.
- Lloyd George Acoustics 2019, *Northbridge Noise Monitoring Report 1*. Prepared for the Department of Water and Environmental Regulation, Government of Western Australia, Perth.
- Lucid Economics 2018. *Northbridge Economic Assessment*. Final Report. Prepared for Tourism WA, Government of Western Australia.
- Moorhouse, A., Waddington, D., Adams, M. 2005, Proposed criteria for the assessment of low frequency noise disturbance. Project report prepared for the Department of Food and Rural Affairs. Acoustics Research Centre, Salford University, United Kingdom.
- Ortus Economic Research 2017, *The Australian Night-Time Economy 2015*. Prepared for National Local Government Drug and Alcohol Committee, Australian Local Government Association, available: <https://www.lgnsw.org.au/files/imce-uploads/100/Australian-Night-Time-Economy-2009-to-2015-FINAL.pdf>
- WA Labor 2016, *Creative WA: Supporting the Arts and Creative Industries*. Election policy document.
- Western Australian Planning Commission 2018, *Planning for entertainment noise in the Northbridge area – Public consultation paper*. Department of Planning, Lands and Heritage, Government of Western Australia, Perth, available: <https://consultation.dplh.wa.gov.au/strategic-infrastructure-projects/entertainment-noise/>
- Western Australian Planning Commission 2018b, *Perth and Peel at 3.5 Million*. Department of Planning Lands and Heritage, Government of Western Australia, available: https://www.dplh.wa.gov.au/getmedia/404a6895-f6ec-4829-87df-8de5b80075b8/FUT-PP-Perth_and_Peel_Sub_Region_March2018_v2
- Western Australian Planning Commission 2019, *Position Statement: Special entertainment precincts*. Department of Planning, Lands and Heritage,

Government of Western Australia, available:

<https://consultation.dph.wa.gov.au/strategic-infrastructure-projects/special-entertainment-precincts>

World Health Organisation 2018, *Environmental Noise Guidelines for the European Region*. WHO, Geneva, available: <http://www.euro.who.int/en/health-topics/environment-and-health/noise/environmental-noise-guidelines-for-the-european-region>

World Health Organization 2009, *Night Noise Guidelines for Europe*. WHO, Geneva, available:

http://www.euro.who.int/_data/assets/pdf_file/0017/43316/E92845.pdf



Department of Water and Environmental Regulation

Prime House

8 Davidson Terrace,

Joondalup WA 6027

Locked Bag 10,

Joondalup DC WA 6919

Phone: 08 6364 7600

Fax: 08 6364 7601

National Relay Service 13 36 77

dwer.wa.gov.au