

Planning for Entertainment-Related Sound



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March, 2023

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Note: Suggestions for reading this paper

For an introduction to planning for entertainment-related sound and details on the approaches, strategies, and systems needed for an effective and comprehensive approach to entertainment-related sound, *read Part 1: pages 4 through 12.*

To explore the case studies that provide model policies and programs, and were utilized to help develop and articulate the key strategies, *continue reading Part 2: pages 13 through 22.*

To delve into details on existing approaches to sound ordinances and sound level allowances, *read Part 3: pages 23 through 26.*

Introduction

Nightlife, entertainment, arts, culture, and live music help make cities unique and authentic. They attract companies and tourism, celebrate local culture, and build community. They are often multi-billion-dollar economic impact engines for cities. However, thriving cities also need to maintain residential quality of life to ensure the nightlife industry is sustainable and that cities remain livable.

Unfortunately, conflicts between entertainment and residential uses that cause negative impacts to nighttime economies and quality of life are very common in cities. These conflicts have become especially pervasive given the trend in urban redevelopment that has taken place over the past 25 years and continues today. By the late 1990's many US cities put policies in place to encourage compact and transit-oriented development. They began to actively encourage mixed-use and residential development in their downtowns and urban cores.¹ Similar trends were taking place in Australia² and The UK³.

Many live music venues and nightlife establishments were already in downtowns and city centers when this residential revitalization began to ramp up in the late 1990's. In addition, beyond supporting existing establishments, vibrant cities recognized that they needed to establish areas in urban neighborhoods where new venues and clubs could open, and where policies are designed to allow them to flourish.

It is within this context that live music and nightlife establishments found themselves navigating outdated sound ordinances and planning policies that were not considering their needs. Inadequate sound management emerged as a critical issue that was contributing to conflicts and the risk of displacement.

These conflicts will continue to be an issue today and in the future without more widespread use of thoughtful, comprehensive, and proactive sound management solutions for entertainment-related sound.

Most cities don't have a strategy for managing nightlife and entertainment-related sound. Instead, they manage it the same way as noise from other sources, using ineffective approaches. There is a lack of proactive planning and an over-reliance on sound ordinances that are often outdated, confusing, and written without any consideration for entertainment-related sound, and with compliance and enforcement managed solely by the police department.

Amplified sound is an integral part of a nightlife and entertainment establishments' programming and business model. This is completely different from noise caused by barking

¹ <https://www.lincolnst.edu/sites/default/files/pubfiles/smart-growth-policies-chp.pdf>; <https://www.epa.gov/smartgrowth/smart-growth-network>

² <https://www.cnu.org/publicsquare/smart-growth-down-under>

³ https://uk.sagepub.com/sites/default/files/upm-assets/66135_book_item_66135.pdf

dogs, loud neighbors, or after hours construction, which shouldn't be taking place at night in a manner that is a disturbance and prevents people from sleeping. In contrast, nightlife-related programming is designed to take place at night and has to be approached as sound to be managed, rather than noise to be eliminated.

This paper details the approaches, strategies, and systems needed for an effective and comprehensive approach to entertainment-related sound. It also explores five case studies that provide model policies and programs. It serves as a blueprint to support a vibrant and sustainable nighttime economy and a livable city with a high quality of life for residents.

PART 1: Eight Key Principles for a Comprehensive Sound Management System

This section details the approaches, strategies, and systems needed for an effective and comprehensive approach to entertainment-related sound. Eight key principles are introduced that should be included in planning for entertainment-related sound. The first four principles focus on best practices for crafting a sound ordinance, while the last four focus on ensuring the other components of a comprehensive and proactive system are in place.

Best Practices for Crafting Sound Ordinances

A comprehensive and proactive sound management system requires more than a sound ordinance. Still, a sound ordinance is a critical component, and it is important to get this right. When done well, the sound ordinance provides an objective policy framework that balances support for both vibrant nightlife and residential quality of life, is fair and reasonable to the nightlife industry and residents, manages expectations, and provides predictability to all stakeholders.

Most US cities regulate sound via their sound ordinance, which is documented in a section of city code related to noise and sound. These city codes are typically focused on prohibiting noise that is a disturbance to nearby residents. Most use specific decibel levels, although they are often one-size-fits-all and not tailored to amplified sound. Existing approaches to sound ordinances are detailed in [Appendix I: Existing Approaches to Sound Allowances](#).

There are four key principles that should be incorporated in a sound ordinance for successful entertainment-related sound management:

Key Principle #1: Sound to be Managed, Not Noise to be Eliminated

The approach to sound management has to start from an understanding that amplified sound is an integral part of an entertainment establishment's programming and business model and that it is a legitimate and desirable part of a healthy and vibrant city and local economy. If amplified sound from nightlife is viewed as sound to be managed rather than noise to be eliminated, then it follows that an appropriate sound level must be documented and legalized.

Unfortunately, many ordinances are primarily prohibitive with one-size-fits-all levels that don't accommodate entertainment, or worse, when a disturbance arises, the default is to always consider the establishment to be at fault ("polluter pays"). Under this type of regulation, establishments don't have a right for their programming to exist in their location with sustainable and predictable conditions.

Ordinances and regulations that focus on enabling entertainment-related sound prioritize the

right for that sound to exist at a level that is appropriate for the context. They still have sound level limits that are calibrated properly and require management and compliance, but these are objective and stable. This approach legalizes existing establishments programming for the long-term, rather than making establishments non-compliant when new residential buildings are developed nearby. It also encourages a strong connection between urban planning and regulating the sound level, and requires customizing allowed sound levels based on the current context or desired character of different locations and areas of the city.

Under this framework, an establishment isn't always at fault if the programming from their sound is disturbing a nearby neighbor. If they are in compliance, they have a right to continue their amplified sound programming as well. This right puts some accountability on the residential developer and resident to understand the existing level of sound where they are building or moving, and either build the residential unit to livable standards or recognize that the unit may not be as quiet as preferred or desired. This approach could also include requiring sound proofing of nearby residential units. However, such a program will be covered later in key principle [#5: anticipating and addressing quality of life for nearby residents](#) and the [case studies](#).

Key Principle #2: Tailor Sound Allowances for Entertainment-related Amplified Sound

Amplified sound is an integral part of an entertainment establishment's programming and business model, and it is often expected, and should be anticipated, that some level of sound will be heard outside of the establishment. The sound ordinance should be tailored for entertainment-related sound that is different from the approach to general noise from other sources.

Sound level allowances that are too low for an establishment to operate their programming at a reasonable and well-managed sound level is not a useful or appropriate approach. On the other hand, sound levels must be set appropriately to effectively maintain residential quality of life.

Effective entertainment-related sound management should include measuring and managing low frequency sound (bass), since this is a prominent part of amplified music. The bass is the most difficult element of sound to contain and keep out of nearby residences, and is often the biggest source of disturbances and complaints. Most US cities use only the A weighting scale (dBA) in their sound ordinances, which is geared towards measuring higher frequencies. The C weighting scale (dBC) is geared towards measuring the low frequencies (bass) that are prominent in amplified sound. Australian regulations use octave bands, which is similar to, but more precise than dBC for measuring the impact of low frequency. However, it is also more complex, not available on entry level sound meters, and more difficult for venues to self-regulate.

Key Principle #3: Customize Sound Level Allowances for Specific Locations

Nightlife establishments share the same built environment and ecosystem with the daytime economy. However, nightlife planning is often not undertaken proactively. Different neighborhoods and areas of the city have varying characters, cultures, and vibes. These differences are part of what makes cities unique and interesting. Cities recognize the importance of establishing a vision for important historical and cultural places, and creating tools to encourage the desired design and vibrancy of those places. Cities often have extensive comprehensive plans and detailed land use and zoning strategies that vary among neighborhoods, areas, and special districts.

Likewise, nightlife locations and districts also have different levels of activity and intensity, and different histories, characters, and cultures. Each city is unique, but most cities have diverse areas with a wide variety of activity and intensity that encompass intense nightlife districts, vibrant, but mixed use downtown neighborhoods, commercial corridors, urban residential neighborhoods, and quiet residential areas. Sound level allowances and standards should be customized to accommodate these different contexts.

Two approaches used to customize sound management standards are Entertainment Districts and Sound Permits.

Special Nightlife and Entertainment Districts

Special districts customize standards using a district-wide approach based on the history and desired character of the area. These districts are the exception where cities have recognized the importance of nightlife and entertainment areas, have proactively planned for nightlife, and created sound management standards that acknowledge their amplified sound programming. While most cities with special districts create one district or one set of standards, it doesn't have to be limited. There can be multiple entertainment districts that have different characters, levels of intensity, and standards. Entertainment districts are a valuable tool to preserve an existing nightlife and entertainment area or plan for a new or emerging area. However, a drawback of entertainment districts as a planning and policy approach, is that it may encourage an over concentration of nightlife establishments in a small number of designated areas.

Special Sound Permits

Regardless of the existence of special districts, there are still going to be existing or new establishments outside of those districts as well. Moreover, new nightlife establishments often develop organically, rather than according to a comprehensive plan. In theory new districts could be created, but that is not the most flexible and agile approach to managing sound for establishments that may be located on their own or in an emerging area outside of established districts. The most flexible way to customize sound management for individual establishments is with a special permit. These permits don't depend on the venue being located in a district and

they can customize standards for individual establishments based on their specific history, character, and context.

More detailed descriptions of how Entertainment Districts and Sound Permits have been implemented in cities is in [Appendix I: Existing Approaches to Sound Allowances](#)

Key Principle #4: Provide Long-term Predictability for All Stakeholders

In order for entertainment venues to build and sustain a business model, and for developers of nearby residential projects and nearby residents to have accurate expectations about the level of sound that will be present in the environment, both need predictability.

Sound Level Standards and Predictability

To provide predictability the sound ordinance has to include detailed standards. These standards must provide a solid policy foundation that all stakeholders can rely on for the long-term. One of the key ways to create a foundation of predictability in sound ordinances is to set a standard for sound level limits and, most importantly, establish the location where that measurement is taken.

Approaches to Sound Standards and Predictability (ordered from least to most predictable)

1. **Subjective Nuisance Standards** like, “noise that is offensive to a person of ordinary sensibilities,” are vague and not tailored for entertainment. There is no predictability since there are no objective sound measurements and it is literally up to the person making the assessment to determine what is offensive.
2. **Sound Level at the Residential Location** are standards that include objective sound measurements based on the sound level at a residential or complainant location. These are problematic for providing predictability. Any time a new residential use moves in closer to an entertainment venue, the standard changes for the venue and they risk becoming non compliant. In addition, measuring sound can be challenging if the ambient level is high at the residential location, or if there is sound coming from multiple establishments. Some cities measure inside a residential dwelling, which doesn’t account for inadequate insulation of the residential building. Measuring sound from indoors is often impractical making enforcement by city staff difficult.
3. **Sound Level at the Establishment Property Line.** The most predictable standard is a sound level measured at the establishment property line that does not change when new residents move in nearby. Some cities use a defined level over the ambient (background) level. This provides a fairly predictable standard for the nightlife establishment since the ambient sound level is likely to be relatively stable. However, there is still risk of the standard unexpectedly changing for the establishment if the

ambient level of the area changes. The most predictable standard is an objective sound level at the establishment property line that doesn't change when the ambient level changes. As long as this objective standard is based on thoughtful planning, customized sound level allowances crafted for the specific location and context, the unique history, character, and community expectations for each location, this can provide predictability and support for nightlife and entertainment, and residential quality of life.

Existing approaches to sound standards and measurement location are detailed in [Appendix I: Existing Approaches to Sound Allowances](#)

Beyond Sound Ordinances: Crafting a Comprehensive and Proactive Sound Management System

In addition to the sound ordinance cities also need policies that proactively address residential quality of life and manage expectations about sound levels; a communication and problem solving strategy to educate stakeholders; resources to support vibrancy while minimizing sound impact; and dedicated compliance and enforcement to ensure accountability. There are four additional key principles that should be emphasized for successful entertainment-related sound management:

Key Principle #5: Anticipate and Address Quality of Life For Nearby Residents

The sound management system should anticipate and address quality of life issues for residents in proximity to nightlife and entertainment establishments and districts. Ultimately, everyone's goal is vibrant nightlife, a livable neighborhood, and ideally residents who value and participate in the nightlife culture. Achieving this goal requires residential developers and residents to have accurate expectations about the level of sound that will be present in the environment.

Agent of Change

The Agent of Change planning principle was developed in Victoria, Australia and states that the responsibility and cost of noise management should be the responsibility of the "agent" (new development) that is being introduced into the area⁴. In this model, the residential developer bears the responsibility of noise management for new residential developments near existing nightlife establishments, and the nightlife establishment developer is responsible for the cost of noise management for a new nightlife establishment near existing residential buildings.

In a regulatory environment where nightlife establishments don't have a predictable standard, such as a subjective nuisance standard or a sound level measured at residential locations, establishments are constantly at risk of complaints, and becoming noncompliant due to new

⁴ <https://greens.org.au/sites/greens.org.au/files/Live%2BMusic%2BTaskforce%2B-%2BReport%5B1%5D.pdf>

residential developments. Implementing the Agent of Change solution not only addresses quality of life for nearby residents, but it is also vital to the establishments' continued existence and it is an essential venue preservation tool. Implementation of the Agent of Change planning principle is discussed in more detail in the [Victoria, Australia](#) and [The UK](#) case studies.

The Agent of Change approach is not the only solution to address quality of life for nearby residents. When appropriately calibrated sound level standards are in place, the solution doesn't have to serve as both a venue preservation tool and a means of safeguarding quality of life, and can focus exclusively on residential development issues.

Strict Building Standards

The strongest intervention to ensure residential quality of life is developing and strictly enforcing building standards on residential development within proximity to an entertainment district. This approach complements the designation of an entertainment-focused district that is explicitly designed and planned to be a high intensity nightlife area. Here, a city clearly communicates its vision for a district with a higher sound level in the environment. If residential developers choose to build there, they are accountable for building units that meet strict standards. This can add a significant cost to construction, but prioritizes both the economic and cultural value of the district and mandates quality of life within the residential units. This approach is discussed in more detail in the [Brisbane, Australia](#) case study

Education and Information

Generally, the US doesn't have strong state-level planning controls, and places a larger emphasis on individual property rights. Cities could add strict standards to their building codes, but this approach might be more challenging to implement in the US due to the housing supply and affordability crisis that exists in many urban areas, as well as the strong emphasis in the US on property rights.

However, when combined with an objective sound level allowances for entertainment establishments that are customized and context sensitive, an approach focused on education and information may provide the blueprint for a successful approach in the US.

This approach requires residential developments within a defined proximity to nightlife establishments to:

- Acknowledge nearby nightlife establishments.
- Conduct a noise assessment that documents current sound conditions.
- Consider recommendations to minimize sound impact to residential and hotel portions of the development.
- Provide a disclosure to future residents about nearby nightlife establishments and that a sound study was completed to understand the sound levels in the area.

This approach does not mandate building standards. Instead, it requires residential developers

to document that they have studied the soundscape where they are building. This includes assessing the impact of legally compliant sound from nearby nightlife establishments. Residential developers are then responsible for building the development accordingly.

Since this approach also requires developers to disclose the presence of nearby nightlife establishments to future residents, potential new residents are encouraged to take this as an opportunity to ask questions about sound mitigation efforts that have been implemented or recognize that their unit may not be as quiet as desired, and then make a decision to live in the unit or not.

This approach doesn't require anything further from nightlife establishments - their sound level is already regulated and appropriate for the context.

Key Principle #6: Invests Resources in Managing Sound Impact

Some cities, like [Brisbane, Australia](#), have dedicated staff who serve as expert resources to establishments and residents. They provide assistance, advice, and information for improving sound management. Similarly, [Austin, TX](#) has an internal sound engineer on staff who serves as a consultant and expert resource. They provide guidance and consultation to venues on sound system technology, selection, design, mixing, sound attenuation, and architectural interventions.

Key Principle #7: Facilitate Stakeholder Education, Communication and Problem Solving

Facilitating ongoing stakeholder education, relationships, dialogue, and problem solving is also a best practice. Cities like [Austin, TX](#), [San Francisco, CA](#), and [Brisbane, Australia](#) emphasize sharing information on the history, character, and vision for each area, providing education on sound level allowances, and promoting dialogue, relationships, and problem solving.

Each of these cities require a sound permit for establishments and have a dedicated office responsible for the permit program. They all take a similar approach by utilizing their nightlife management program as a forum for city staff to build relationships with establishments, create accountability, enhance communication, and serve as a tool for compliance.

Key Principle #8: Proactive Enforcement with a Focus on Relationships and Compliance

In order to support both vibrant nightlife and residential quality of life, cities have to be fair and balanced. Building trust also demands responsive compliance and enforcement.

In US cities, sound enforcement is usually handled by police departments or code enforcement inspectors. Some cities use a business licensing enforcement division that may also administer alcohol licenses. The police department is often not the agency best suited to enforce

entertainment-related sound. Patrol officers often have higher priority calls, like violent crimes in progress, and cannot address lower priority calls, like noise complaints, in a timely way. In addition, if an officer is able to respond to the call, they often don't have the detailed knowledge or the tools needed to effectively handle the call, especially if there are customized rules or conditions in place for entertainment-related sound. The one exception might be a police department nightlife or entertainment unit that is dedicated to nightlife and is specially trained in sound management.

No enforcement system is perfect, but the best practice developed by [San Francisco, CA](#) and then implemented in [Austin, TX](#), is to have dedicated civilian sound enforcement staff. This allows staff to coordinate with the team that conducts reviews and establishes allowances and restrictions. This model creates deeper levels of understanding of what is intended for each district or establishment. In both San Francisco and Austin this approach has been very effective in cultivating a culture that is proactive, maintains a focus on building relationships and trust with both establishments and residents, while solving problems and seeking compliance. Citations and progressive enforcement are tools that are also available and utilized when needed. In both cities, staff are dedicated to sound management and respond to 311 calls in real-time to investigate complaints and determine if they are valid.

Summary: Eight Key Principles for a Comprehensive Sound Management System

1. Amplified sound is an integral part of an entertainment establishment's programming and business model and includes sound to be managed, not noise to be eliminated.
2. There is a proactive approach and system in place that is tailored for entertainment-related amplified sound and is different from the approach to general noise from other sources.
3. There are customized sound level allowances for specific locations and contexts that take into account the unique history, character and future vision for locations rather than a one-size fits all sound level allowances across the City
4. Long-term predictability for all stakeholders is ensured in order to allow:
 - a. entertainment venues to build and sustain their business model; and
 - b. developers of nearby residential projects and nearby residents to have accurate expectations about the level of sound that will be present in the environment.
5. Resources are invested and solutions are made available to venue owners in order to support as much vibrancy as possible at establishments while minimizing sound impact to surrounding areas. This includes providing guidance and consultation to venues on:
 - a. Sound system technology, selection, design, and mixing, and
 - b. Sound attenuation, and architectural interventions.
6. The quality of life for nearby residents is anticipated and addressed. Where impactful levels of amplified sound are expected:
 - a. Residential developments are required to conduct sound studies and disclose the presence of nearby nightlife establishments, and
 - b. Education is provided to residents to ensure accurate expectations.
7. Ongoing stakeholder education that fosters relationships, dialogue, and problem solving is facilitated. This includes:
 - a. Sharing information on the history, character, and vision for each area of the city, and
 - b. Providing education on sound level allowances.
8. Providing dedicated and responsive compliance and enforcement with an emphasis on building relationships and trust, solving problems, and seeking compliance.

PART 2: Five Case Studies

This section examines five case studies, each showcasing different model policies and programs for managing entertainment-related sound. These case studies were utilized to help develop and articulate the essential components of a comprehensive and proactive system for managing entertainment-related sound.

While this paper is focused on best practices for US cities, the Australian and UK case studies are explored for two important reasons. One, the “Agent of Change” planning policy was developed in Australia and later implemented in the UK. It is important to differentiate between the planning and regulatory context in the US vs. Australia and the UK, to understand the reason it was implemented and evaluate how this policy might be applicable to the US context. Two, Brisbane, Australia has two decades of experience with a system for entertainment districts and residential building standards that is arguably the most comprehensive in the world and provides an example that can help cities everywhere.

Victoria, Australia

In June 2003, the Victorian Ministers for Arts and Planning established a live music task force to examine the relationship between live music and residential quality of life.⁵ This initiative was launched in response to the increasing residential population in the state’s urban areas, the threat this posed to the live music industry, and resident concerns about quality of life.

In Australia, regulating noise is generally the jurisdiction of the state government and sound level allowances are very low and focused on prohibiting noise that is a nuisance to residents. Australia also has strong controls related to determining nuisances, enforcing complaints, and noise violations, and a strict approach to abating nuisances and creating conditions on establishment licenses to mitigate those nuisances.

The two components of their strategy explored for this paper are the Agent of Change Policy and Noise Standards.

Agent of Change

The idea of requiring residential buildings that are developed near live music venues and nightlife areas to be responsible for building with higher sound levels in mind, and for new nightlife establishments to be built to limit sound impact on nearby residential buildings, was not entirely innovative. However, the Victoria Live Music Task Force was the first in the world to coin the phrase Agent of Change and define it as a planning principle and policy that would become very influential globally.

The 2003 Live Music Task Force report defined the concept of Agent of Change as follows:

⁵ <https://greens.org.au/sites/greens.org.au/files/Live%2BMusic%2BTaskforce%2B-%2BReport%5B1%5D.pdf>

Establish that for planning purposes, the onus of responsibility for the cost of noise management should fall upon the 'agent of change'. This would mean that where new residential development takes place near existing live music venues that do not change their operation, the residential developer would in principle bear the new compliance costs. Conversely, if new venues are constructed or existing venues change their operation, the venue developer will bear the new compliance costs.

For Victoria, the Agent of Change policy was one of their most important live music preservation priorities. In 2010, after years of inaction by the State Government, 20,000 people marched to the Victorian Parliament to protest existing government policy that was killing live music, and the lack of progress on implementing task force recommendations. It took four more years, but the Agent of Change policy was implemented in 2014⁶.

The policy doesn't change the sound level standards for establishments at all. Instead it requires the new use in the area, whether venue or residential, to be accountable for fully insulating either the venue or the residential building, or both, to ensure that there is compliance with existing sound standards.

This policy defines a live music performance venue, and establishes a buffer of 50 meters around each existing or proposed live music venue. It stipulates the following:

- A permit application for a live music entertainment venue must be designed, constructed, and managed to minimize noise emissions from the premises and provide noise control measures that will protect a noise sensitive residential use within 50 meters of the venue.
- A permit application for a noise sensitive residential use within 50 meters of a live music venue must be designed and constructed to include noise control measures that will reduce noise levels to the level required by the noise standards.

This policy was a major step forward in balancing live music and quality of life, but the details of implementing it are complicated and challenging. In 2018, Music Victoria, the non-profit organization that advocates on behalf of the music sector, conducted a review of the Agent of Change policy. They highlighted some of the challenges related to implementation and recommended improvements to address them.⁷

- One of the key challenges the 2018 review documented is the need to ensure that live music venues are defined and identified during the planning process when a residential project is being built nearby. This process is made more difficult because planning staff

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https://www.planning.vic.gov.au/_data/assets/pdf_file/0024/13479/PPN81-Live-Music-and-Entertainment-Noise-September-2015.pdf

⁷<https://www.live-dma.eu/wp-content/uploads/2019/02/Agent-of-Change-White-Paper-Music-Victoria-20181-1.pdf>

don't always have the capacity to identify all the live music venues and developers might not be motivated to identify them.

- Once the venues are identified, the acoustical study process is complex and requires extensive sound modeling, which can leave room for error. The consultant can intentionally or unintentionally make decisions in the modeling that reduce the requirements for sound insulation of the building. This is a major issue since noise standards haven't changed and venues will not be relieved of their responsibility to meet the requirement. If the model isn't accurate, or if conditions change after the fact, this would render venues out of compliance.
- In addition, venues have to take the time, effort, and expense to participate in an objection to a residential development planning approval.
- The 2018 report also noted that conflict can emerge when developers try to catch venues out of compliance in order to justify reductions in their requirements and expense for insulating the residential building.

Many of these issues could be resolved if establishments are given objective sound level standards at their own property line that legalize their programming and give them a right to continue to operate at that level.

Noise Standards

The Victoria taskforce report was less clear or explicit on how to change noise standards, and not much has changed since 2003 in terms of the State noise standards. However, the committee did make two key recommendations that highlight model policies and practices.

The first recommendation was to create a pathway for existing venues that don't comply with noise standards to remain in place as long as they have an "improvement plan" and can demonstrate their intent to make a good faith effort to use best practices and come into compliance in consultation with regulators and local residential communities.⁸ While this recommendation doesn't involve the modification of noise standards, it is an innovative strategy to prevent venue closures due to non-compliance. However, it doesn't appear that this novel approach has been implemented.

The second Victoria taskforce recommendation is for individual live music venues to prepare and implement "Noise Management Plans." This recommendation envisions a process of venue self-regulation combined with communication, relationship building, and problem-solving with nearby residents to strike a balance between live music and residential quality of life. Its aim is to achieve a fair and balanced approach for existing peacefully side by side. These plans would describe and document the timing and character of the programming at the venue as well as the environment surrounding the venue and nearby residential. It would also describe the

⁸<https://greens.org.au/sites/greens.org.au/files/Live%2BMusic%2BTaskforce%2B-%2BReport%5B1%5D.pdf>

venue's plan to confine the noise impact inside the venue and limit the sound impact outside the venue, and establish a process for receiving and responding to sound complaints. While this would be voluntary, the most significant benefit of this approach was anticipated to be reduced complaints due to good communication and a clear complaint management process. This is a bold vision and noble goal, but unlikely to be achieved with only a voluntary system, and it doesn't appear that it has been implemented in Victoria.

In 2011, the City of Austin utilized a very similar concept to Victoria's Noise Management Plan. Its "Sound Impact Plans" reflects similar goals to those described above. This will be covered in the [Austin case study](#).

The UK

In the UK, managing entertainment-related sound is integrated with and can't be separated from venue licensing. This is very different from the US where alcohol is typically licensed by the state, and entertainment and nightlife managed by the city, often with an ad hoc approach. A few US cities license and regulate both alcohol and entertainment together, but this is more the exception than the rule.

The Licensing Act of 2003 unified the rules and regulations governing the sale of alcohol in the UK with the provision of entertainment and late night refreshment into one Act and transferred the licensing to local authorities. The licensing objectives are:

1. prevention of crime and disorder,
2. public safety,
3. prevention of public nuisance, and
4. protection of children from harm.

While less prominent, recognizing the important role that pubs and licensed establishments play in local communities is identified as a key objective. Moreover, managing the nighttime economy is mentioned six times in the guidance document, including in the recommendation to integrate other strategies and plans, such as planning, transport and cultural strategies, with licensing, because of their interdependence. This focus on interdependence is a great opportunity, and has been highlighted and used as a rallying cry by influential organizations dedicated to grassroots music venues (Music Venue Trust), nighttime industry (Nighttime Industries Association) and music ecosystems (Sound Diplomacy).

The UK has a subjective and low bar for noise determined to be a nuisance requiring abatement. If the noise, "unreasonably and substantially interferes with the use or enjoyment of a home or other premises" it is deemed a statutory nuisance and the local council must serve an abatement notice requiring whoever is responsible to stop or restrict the noise. The Music Venue Trust described this dynamic in 2014:⁹

⁹ <https://www.musicvenuetrust.com/2014/09/what-is-agent-of-change-and-why-is-it-important/>

At the moment, UK law says that whoever is making a nuisance is always responsible for that nuisance. How long it has existed, whether there were any historic instances of the same noise being a nuisance, if somebody moved right next door to the noise and decided it was a nuisance, these are all, unbelievably, currently irrelevant to British law.

This low bar for establishments being considered a nuisance, combined with the strict approach to responding to complaints and abating nuisances, result in nightlife establishments being constantly at risk of being considered a nuisance and being shut down, even from brand new residential development.

Inspired by Victoria Australia, in 2014 the Music Venue Trust began a petition demanding the Agent of Change principle be initiated in the UK.¹⁰

In 2015, a Music Venues Taskforce set up by the Mayor of London to investigate music venue closures identified key issues and proposed a rescue package for music venues including implementing the Agent of Change approach.¹¹ However, there was very little included in this package related to changing noise standards. The only suggestion for providing guidance to venues regarding legal sound levels to venues was via a voluntary “deed of easement of noise.” This would require developers to agree through “a permanent property right” that the noise level impacting the building is understood and acceptable.

In 2018, the Agent of Change policy was added to the UK National Planning Framework¹².

However, it appears that licensing still needs to be reformed because the agent of change policy is not yet working as intended¹³ (see also extensive reviews of the Licensing Act in both 2017 and 2022.¹⁴) Licensing and planning need to be better integrated so that conflicts, including sound, can be anticipated and managed more effectively.

Brisbane, Australia

The Fortitude Valley district in Brisbane is the city’s premier live music and nighttime economy district. Pubs, nightclubs, and live music venues have been an important part of the district since the 1960s. Starting in the mid-1990s, inner city urban renewal began attracting many new residents to the Valley, and the introduction of residential apartments raised concerns regarding

¹⁰ <https://www.musicvenue trust.com/2014/09/what-is-agent-of-change-and-why-is-it-important/>

¹¹

http://musicvenue trust.com/wp-content/uploads/2016/09/londons_grassroots_music_venues_-_rescue_plan_-_october_2015.pdf

¹²

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

¹³

<https://citymonitor.ai/community/culture/uk-planning-system-finally-recognises-agent-change-principle-so-now-whats-happening>

¹⁴ <https://committees.parliament.uk/publications/23014/documents/168608/default/>

the potential impact of residential development on the future of live music and nightclubs.

In 2002, Brisbane City Council sought to address the concerns and conflict created by initiating the development of the Valley Music Harmony Plan. Released in 2004, the goal of the plan was to manage the impacts of music noise on residents in an integrated way without compromising the viability of the music-based entertainment industry or the vibrancy of the Valley.

During this same period a number of research projects focused on modeling sound from venues and analyzing building standards necessary for effective insulation were also undertaken to support the development of the plan. A 2004 paper¹⁵ co-authored by Frank Henry, one of the principal architects and implementers of the Brisbane approach, detailed the findings, recommended standards for both venues and residential buildings, as well as the changes to regulations and State law necessary to implement the plan.

Valley Music Harmony Plan

The Harmony Plan includes five key actions that were succinct and straight forward, but very comprehensive in their implementation and effectiveness. By 2014, all of the actions on the plan were successfully implemented and the plan has been fully operational since then. It provides a vital, living laboratory from which other cities can learn.

1. Special Entertainment District

The foundation of this plan is the creation of a special entertainment district that allows sound regulations for the district to be transferred from state to local government so they can be customized.

2. Sound Insulation Requirement for New Residential Construction

The plan strengthens the requirement for sound insulation of new residential development in the district. These requirements are based on research, and the sound level standards used are designed to focus on reducing the low frequency sound impacts that are specific to amplified music. The sound insulation requirements are quite substantial and strictly enforced during the planning process.

3. Sound Level Limits Set at the Establishment Property Line

The plan establishes sound level limits for establishments locally, instead of defaulting to state regulations, and sets them using an approach that provides predictability for the establishment and at sound levels that not only preserves existing establishments, but allows new establishments to open in the district without unreasonable expectations for sound insulation of the venue. Sound levels are customized for this unique nightlife and entertainment district. They reflect the expectation that this district features a higher density of music and nightlife programming, and that there will be some sound impact in the area. In the core entertainment district sound levels of 90dBC are allowed until 12am on weekdays and 1am on weekends.

4. Expert Resource on Sound Management

¹⁵ Managing Noise Impacts in Brisbane's Fortitude Valley Entertainment Precinct (Henry and Mackenzie)

The plan designates staff to serve as expert resources to establishments and residents and to provide assistance, advice, and information for improving sound management.

5. Communication Strategy to Educate Residents

The plan implements a communication strategy to improve communication among all stakeholders and make potential residents aware of the Valley's entertainment values and sound environment before they move to the Valley.

Austin, TX

Many cities, including Austin, TX,¹⁶ developed Smart Growth¹⁷ planning policies in the late 1990's. While residential development started slowly in Austin, by the late 2000's this trend began to accelerate and has only continued and expanded since then.

In the early 2000s, conflicts began emerging between live music venues and residential buildings and hotels. This came to a head initially in 2001. Austin's outdated sound ordinance was ineffective, and was not successfully mediating conflicts. The issues festered, eventually resulting in the filing of two separate lawsuits against live music venues. During this period, the Police Department drafted a revision to the noise ordinance that was not balanced or supportive of the needs of live music and nightlife. It would have essentially prohibited outdoor live music, which had become a fixture of the live music scene in downtown Austin where there were numerous partially or completely outdoor stages. The live music venues and community organized, and a solution that laid the foundation for Austin's approach to managing entertainment-related sound emerged.

Amidst this process, the key issues and conflicts at stake were surfaced and articulated. Music industry advocates claimed that if the proposed sound ordinance was approved, Austin should consider changing its moniker from "Live Music Capital of the World" to "High-Priced Loft Capital of the World." Will Wynn, a city council member at the time, identified three important components of these tensions:

1. The fact that conflict between live music and smart growth inspired residences was probably inevitable;
2. The reality that the current sound ordinance wasn't working and needed to be fixed, including providing a higher sound allowances for music venues;
3. A desire for shared accountability: if clubs were going to be held responsible for their sound output, other property owners should take into consideration the area in which

¹⁶ <https://services.austintexas.gov/edims/document.cfm?id=60730>

¹⁷ <https://www.lincolnst.edu/sites/default/files/pubfiles/smart-growth-policies-chp.pdf>;
<https://www.epa.gov/smartgrowth/smart-growth-network>

they were building, and ideally build with noise in mind.¹⁸

In 2002, the crisis was averted and a bargain was struck that has been built on over the years and still stands today. Sound levels needed for outdoor live music to exist are allowed, and they are measured at the venue property line providing predictability. Cut off times for music were established to maintain quality of life, and a permitting process was created to keep the venues accountable. In addition, the first two districts were established that recognize the unique history and character of these areas as vibrant nightlife districts. Later hours are allowed for outdoor music in these districts. This set the precedent for customizing allowances based on the context, and highlighted the connection between planning and sound management.

By the late 2000's there was a mixed-use and residential construction boom downtown and conflicts began to emerge again, especially near the downtown entertainment areas. While the biggest impact was downtown, the sound ordinance and permits applied citywide. Austin followed in Victoria's footsteps and in 2008 created a Live Music Task Force. One of its subcommittees focused on sound regulations and enforcement. The process was extremely contentious -some city hall insiders referred to this period as the "Sound Wars." Combining the philosophy, approach, and policy foundation created in 2002, with recommendations for improvements from the task force, stakeholders and policy makers continued to strive for solutions and a policy framework that balanced support for live music and residential quality of life. The basic foundation was maintained, with major revisions added in 2009 and 2011, and various additional tweaks over the next few years. The key components today include:

Customized and Context Sensitive Review

Review criteria were created and a detailed analysis of the proposed venue and context is conducted prior to the issuance of permits. The proposed programming, sound system, and sound mitigating design features of the venue are reviewed, and the history and character of the area, as well as distance to residential uses, is evaluated. The policy foundation, with maximum operating hours and sound levels based on context and distance to residential is set in city code. However, staff have the flexibility and the responsibility to fine tune and adjust the hours and sound levels based on the policy guidelines to meet city council's goal of balancing support for both live music and residential quality of life. The customized sound level for outdoor sound can range from 65dBA/70dBC all the way up to 85dBA/100+ dBC, and is set by a required permit for each establishment. Policy makers recognized that one-size standards don't fit all, and that the standards should be as context-sensitive as possible.

Sound Impact Plan

Similar to the voluntary "Noise Management Plan" envisioned by the [Victoria, Australia](#) Live

¹⁸ <https://www.austinchronicle.com/news/2002-04-26/85712/>

Music Task Force, the City of Austin created the concept of a “Sound Impact Plan.” All of the details from the review, including plans to mitigate sound impacts and permitted hours and sound levels are documented in the Sound Impact Plan. The plan is used to manage entertainment-related sound from venues, enhance sound quality in the venue, while reducing sound impact outside, encourage communication and problem solving, and balance live music and nightlife with residential quality of life. Austin’s approach is not voluntary. The sound impact plan is an essential component of the venue’s permit, and modifications to the plan are used as a tool to address compliance issues.

Liaison Role Between Venues and Residents

Nearby residents and neighbors are notified and involved in the review process, which encourages communication, relationship building, and problem solving. A role for a new staff team was created to administer the permit review, provide a fair and balanced arbiter, and serve as the liaison between venues and nearby residents. The problem solving and mediating role extends beyond the permitting process. When complaints are made it is easy to determine if the venue is compliant or not. Even if the venue is compliant, there is still an effort made to problem solve, but it is done in a spirit of cooperation, rather than via threats to the business.

Expert Resource on Sound Management

The City office that issues sound permits and serves as a nightlife liaison houses an internal sound engineer on staff who serves as an expert resource to establishments and residents. They provide technical assistance, advice, and recommendations for improving sound management - similar to the role in [Brisbane, Australia](#).

Dedicated and Proactive Compliance and Enforcement

Inspired by the [San Francisco, CA](#) approach to compliance and enforcement, in 2021 Austin established dedicated civilian enforcement staff. Staff proactively address compliance and enforcement. They operate with a relationship-based approach and respond to 311 calls from the public in real-time, seek compliance first, but pursue progressive discipline when necessary.

San Francisco, CA

In the late 1990s nightlife and club culture in San Francisco was threatened not by noise complaints and conflicts with residential (that came later), but by over-enforcement by the police department. The police department had responsibility for both licensing and enforcement of bars and nightclubs. Club owners felt this was inappropriate and a conflict of interest, and that the police were unfairly withholding permits and arbitrarily cracking down on clubs and even arresting patrons.¹⁹ In 1999, the San Francisco Late Night Coalition was formed with the goal of creating a new city commission to handle the permitting component. In 2000, a

¹⁹ <https://www.nytimes.com/2009/11/27/us/27sfclubs.html>

civil grand jury recommended that the police be relieved of their permitting responsibility, and in 2003 the Entertainment Commission was created, which assumed authority for entertainment permitting. This permit includes sound management as well as safety and security.

All entertainment venues require a permit from the Entertainment Commission and the staff conduct a thorough review. There are uniform maximum sound level standards, which are 8dB above the ambient level for both dBA and dBC. However, every permit must adhere to individualized conditions, which can include a lower sound level than the maximum, if necessary.

The Entertainment Commission has a dedicated team of staff that administers permits using a concierge approach, serves as a liaison to nightlife establishments, and facilitates mediation with neighbors. They have earned the trust of all stakeholders as a fair, balanced, and honest broker of efforts to balance nightlife and quality of life. They also have dedicated enforcement staff to proactively address compliance and enforcement with a relationship-based approach that responds to 311 calls from the public in real-time, seeks compliance first, but also includes progressive discipline when necessary.

In 2014, a second tech bubble led to an explosion of residential development across the city and into neighborhoods where it hadn't been in the past, threatening the music and dance clubs located there.²⁰ While Australia had been actively working on the Agent of Change policy in [Victoria, Australia](#), and residential building standard requirements near the special entertainment district in [Brisbane, Australia](#), San Francisco pioneered the use of a compatibility policy in the US.

San Francisco created a compatibility ordinance that requires residential developers to conduct sound testing to understand the sound levels in the area, and consider recommendations from the staff and feedback from nearby venues. It also mandates that they disclose to buyers and tenants of residential property that there are permitted entertainment venues nearby, informing them of the potential for noise and other inconveniences. This is a cross between the Victoria and Brisbane approach, which in the US context focuses more on education and awareness rather than strict building standards. The policy applies citywide to new residential development taking place near permitted venues, but focuses on accountability for the residential developer. The goal is to encourage units to be built to a standard that maintains a high quality of life, and to notify new residents in order to raise awareness and reduce complaints. It doesn't apply to venues since their sound level is already regulated by the entertainment permit.

²⁰ <https://www.sfgate.com/bayarea/article/Residential-development-threatens-S-F-s-music-5680418.php>

PART 3: Existing Approaches to Sound Level Allowances

This section delves into details on existing approaches to sound ordinances and sound level allowances.

Subjective Nuisance Standard

In the UK, if the noise “unreasonably and substantially interferes with the use or enjoyment of a home or other premises” it is deemed a statutory nuisance.

Sound Level Measured at Residential Location

A number of US cities and Australian states utilize a sound level measurement at a residential location (see Figure 1). This means that new residential development creates a moving goal post for existing establishments.

Tampa, New York City, Houston, Ft Lauderdale, and Queensland and Victoria Australia use this approach.

Seattle also uses this approach, but utilizes a dBC measurement that is both geared towards amplified sound and high enough to better accommodate some sound impact from nearby entertainment.

Sound Level Measurements at the Establishment Property Line

A number of US cities also use the more predictable sound level measurement at the establishment property line. (see Figure 2)

Dallas, San Antonio, and Orlando each use this approach. However, they are one-size-fits-all standards that are not customized for entertainment, and too low to accommodate any significant amplified sound.

San Francisco uses 8dB above the ambient level for both dBA and dBC, which is much better able to accommodate amplified sound, and can be conditioned lower by the required permit for each establishment if necessary.

Austin uses an objective and customized sound level for outdoor sound that can range from 65dBA/70dBC all the way up to 85dBA/100+ dBC, and is set by a required permit for each establishment.

Customization via Special Districts

Austin, and three Florida cities in the US (Orlando, Tampa, and Ft Lauderdale) use special entertainment districts and Brisbane pioneered this approach in Australia. (see Figure 3).

Special districts where cities have recognized important nightlife and entertainment areas, have proactively planned for nightlife, and have created sound management standards that

acknowledge amplified sound programming and are tailored for it, are the rare exception. While most of the cities mentioned in this paper have created at least one district or one set of standards, it doesn't have to be limited. Austin and Brisbane both have multiple entertainment districts that have different characters, levels of intensity, and standards.

Of the special entertainment districts reviewed, Orlando allows the lowest level of sound in their downtown entertainment district. The max sound level is 75dBA/80dBC until 2am. While the hours are later than the regular citywide standard, the sound level allowance is not significantly higher, it only provides a 5dB increase.

The rest of the cities provide significantly increased hours and sound levels in their entertainment districts. Tampa, where regular standards prohibit anything audible 100' from the establishment after 10pm, allows its three entertainment districts to have sound levels of 85dBA/87dBC until 3am.

Ft Lauderdale's special entertainment district is a planning tool that can be implemented in the city's regional activity centers. The original focus was to serve as an anchor and attraction for economic redevelopment. The district can be as small as two acres, is focused on specific properties, and has to be at least 500 feet from property designated as residential. The district allows a sound level of 85dBA/95dBC until 12am weekdays and 1am weekends, with a step down to 70dBA/80dBC until bars close at 2am or 3am, and overnight level of 65dBA/75dBC.

Brisbane's Fortitude Valley special entertainment precinct includes area A, a large primary area with a 90dBC max, and area B, a secondary area with an 88dBC max. The big difference between the two is that the A area has later nightlife hours and allows 80dBC after hours and overnight, while the B area is closer to residential, has earlier nightlife hours and reduces to 65dBC after hours. The Fortitude Valley A district is quite large, but the B district is quite small and not contiguous. Since the Brisbane entertainment district approach was created to preserve the music-based entertainment industry, the framework allows for additional districts to be created of any size, including an area as small as an individual live music venue.

While Austin uses customized standards, it also uses entertainment districts to designate higher intensity nightlife areas that allow for later hours and higher sound levels. Citywide baseline hours for amplified sound are Sunday-Wednesday: 10:30pm; Thursday: 11pm,; Friday/Saturday: 12am. The three designated entertainment districts have hours as late as 2am. Austin's entertainment districts are very much geared towards an entertainment-first focus. The two initial districts are where nightlife and entertainment has been historically centered in downtown. Amplified music is allowed every night until 2am with sound levels of 85dBA/95dBC, that can be conditioned by the required permit if needed. The Red River Cultural District emerged later as Austin's premier live music district when venues began locating there in the late 1990's. The outdoor live music stages in the district range from capacities of less than 300 all the way up to 2,200. Hours were extended to 12am on Thursday and 1am Friday/Saturday

with sound levels up to 85dBA/100dBC to accommodate full scale outdoor live music performances. While not official districts, Austin's permit process allows other downtown entertainment areas to have generally uniform standards that are treated consistently.

Customization via Permit

Entertainment districts are a great way to preserve an existing nightlife and entertainment area or plan for a new or emerging area. However, there are often existing establishments outside of those districts. Moreover, new nightlife establishments often develop organically, rather than according to a comprehensive plan. In theory new districts could be created, but that is not the most flexible and agile approach to managing sound for establishments that may be located on their own or in an emerging area outside of established districts. The most flexible way to customize sound management for individual establishments is with a special permit. Of the jurisdictions identified and reviewed, Austin and San Francisco are the only US cities that utilize a permit to customize standards citywide. Austin customizes standards citywide based on history, character, location, and context. Sound levels are context-sensitive and the maximum hours are established by policy, but can be conditioned to be more restrictive in the permit if needed. San Francisco maintains a uniform maximum sound level, but can be conditioned to be more restrictive in the permit if needed.

Figure 1 - Entertainment Districts

	Nightlife Hours				Overnight Hours
	Weekdays	Thu	Weekends	Sound Level	Sound Level
Austin 1	2:00 AM	-	2:00 AM	85dBA/95dBC	None/Ambient
Austin 2	10:30 PM	12:00 AM	1:00 AM	85dBA/100dBC	None/Ambient
Ft Lauderdale	12:00 AM	-	1:00 AM	85dBA/95dBC	65dBA/75dBC
Fortitude Valley A	12:00 AM	-	1:00 AM	90dBC	80dbC (73dB octave band)
Fortitude Valley B	11:30 PM	-	12:00 AM	88dBC	65dbC (55dB octave band)
Tampa	3:00 AM	-	3:00 AM	85dBA/87dBC	65dBA/75dBC
Orlando	12:00 AM	-	2:00 AM	75dBA/80dBC	70dBA/75dBC

Figure 2 - Citywide - Measured at Establishment Property Line

	Nightlife Hours				Overnight Hours
	Weekdays	Thu	Weekends	Sound Level	Sound Level
Austin Indoor	2:00 AM		2:00 AM	85dBA	None/Ambient
Austin Outdoor*	10:30 PM	11:00 PM	12:00 AM	up to 85dBA/95dBC	None/Ambient
SF Indoor	2:00 AM		2:00 AM	+8dBA/+8dBC	None/Ambient
SF Outdoor	10:00 PM		10:00 PM	+8dBA/+8dBC	None/Ambient
Houston (permit)*	10:00 PM		11:00 PM	75dBA	n/a - see below
San Antonio	10:00 PM		11:00 PM	70dBA	63dBA
Orlando ²¹	10:00 PM		10:00 PM	70dBA/75dBC	65dBA/70dBC
Dallas	10:00 PM		10:00 PM	65dBA	58dBA
NYC ²²	10:00 PM		10:00 PM	n/a	+7BA
Tampa ²³	10:00 PM		10:00 PM	nuisance	not audible 100' away

Figure 3 Citywide - Measured at Residential Location

	Nightlife Hours			Overnight Hours	Measurement
	Weekdays	Weekends	Sound Level	Sound Level	Location
Seattle ²⁴	10:00 PM	10:00 PM	n/a	65dBC	inside
Queensland ²⁵	10:00 PM	10:00 PM	+10dBA	+8 octave	outside
Victoria ²⁶	10:00 PM	10:00 PM	+5dBA	+8 octave	outside
Ft Lauderdale ²⁷	10:00 PM	10:00 PM	60dBC	55dBC	inside
Houston	10:00 PM	10:00 PM	65dBA	59dBA	outside
NYC	10:00 PM	10:00 PM	n/a	42dBA/+6dBC over 62dBC	inside
Tampa	10:00 PM	10:00 PM	nuisance	not audible	inside

²¹ Chapter 42 - Noise; Sec. 42.03. - Noises to Which the Standards Apply.

²² New York City Noise Code: 24-231 Commercial Music

²³ Chapter 14, Article III, Sec 14-154

²⁴ Chapter 25.08 - NOISE CONTROL; 25.08.410 - Exterior sound level limits; 25.08.501 - Nightlife disturbance

²⁵ Liquor Control Legislation Section 40

²⁶ EPA Victoria Publication 1826.4

²⁷ Chapter 17 Noise Control