



# Draft for consultation



## Minimising noise impact from outdoor community basketball facilities

### Why

Casual recreation benefits both a person's health and general wellbeing, and access to facilities such as basketball courts enhances these opportunities. The purpose of this guidance is to facilitate the establishment of new outdoor community basketball facilities while recognising that noise can impact upon the health and wellbeing of those living nearby.

Basketball facilities vary in size and location, from small pads in public open spaces to multiple court, multi-use facilities in large recreational complexes, resulting in varied noise impacts on the local community.

### Scope

This guidance provides an approach to minimising potential noise impacts on nearby residents when a new outdoor community basketball facility managed by local government authorities is proposed.

It applies to new outdoor community small pads or half court-style facilities in public open spaces<sup>1</sup>, therefore does not apply retrospectively to existing facilities.

### Who is it for

Anyone who plans to install a new, or refurbish an existing, outdoor community basketball facility in a public open space.

### What are the options

Various options have been identified to minimise noise impacts, with separation distances being the most critical consideration. Minimum recommended separation distances are provided as a range to account for the benefits of implementing additional improvements.

Additional improvements include the siting of the facility, soft court surfaces (synthetic turf), perforated backboards, noise barriers, and time restrictions.

These options may be weighted against other design considerations e.g. security, visual amenity, etc.



<sup>1</sup> Outdoor basketball facilities other than in a public open space, full courts, or multiple court facilities are outside the scope of this guideline and should be considered in a broader planning context, with input from an acoustical consultant.

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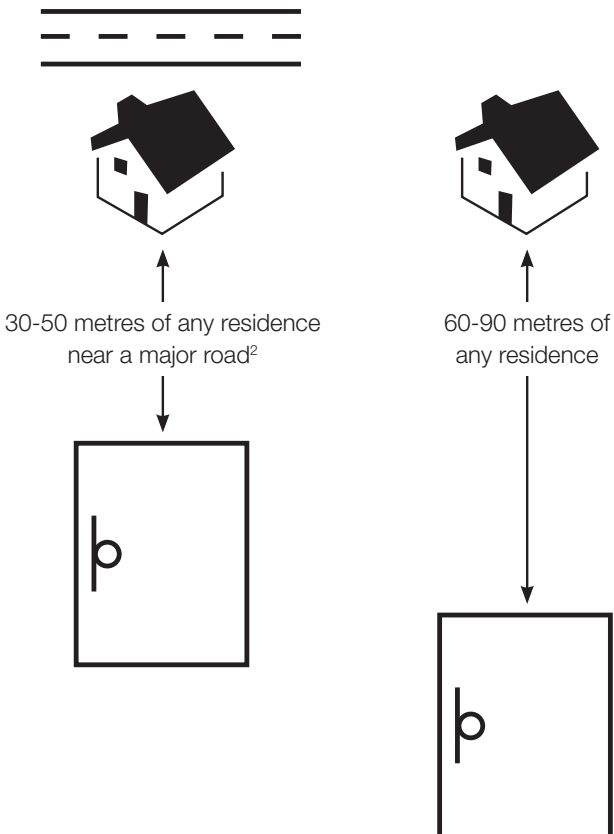
## Small pads



### Facility characteristics

- Maybe found in any public open space, this facility type has a concrete pad with no surface treatment. The pad is not expected to be bigger than 6 x 6 metres and therefore restricts the type of play.
- Noise is mostly from the basketball hitting the ground or backboard. There can also be noise from speaking and shouting.

### Recommended minimum separation distances<sup>1</sup>



<sup>1</sup> The range of minimum separation distances assumes the facility is used during daylight hours and the closest distance reflects potential benefits of implementing additional improvements.

<sup>2</sup> Means a residence less than 100 metres from a road carrying more than 15,000 vehicles per day on average. Such a road will increase the background noise levels and therefore somewhat mask basketball noise.

<sup>3</sup> Open spaces classification and function taken from Classification Framework for Public Open Space (Department of Sport and Recreation, 2012)

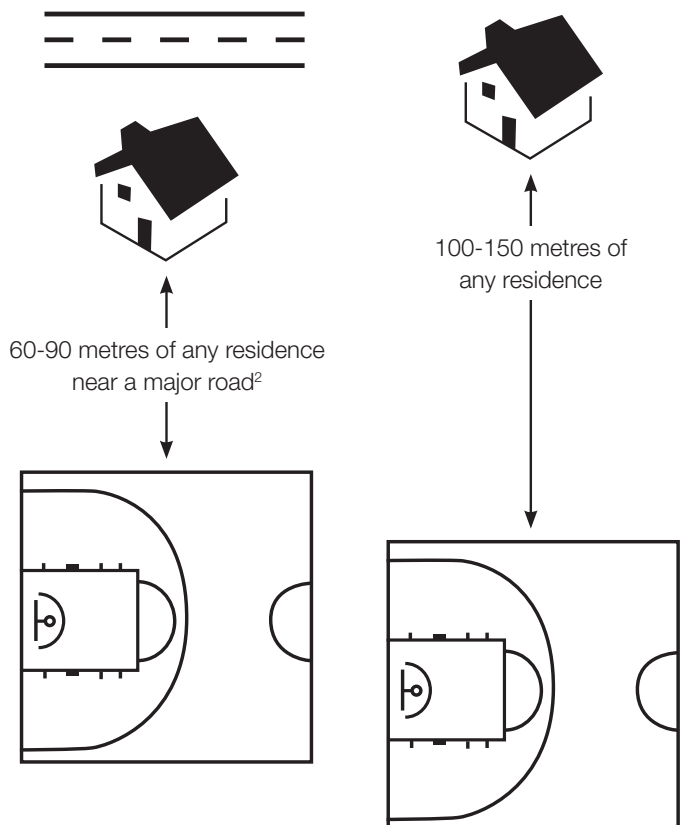
## Half-courts



### Facility characteristics

- Expected in neighbourhood, or larger, open spaces<sup>3</sup>, or as part of dedicated recreational centres. This facility type has a hard surface with treatment and line markings, and facilitates games with more players than 'small pads'.
- Noise from basketball impacts may be more frequent and occur over longer durations than for 'small pads'.
- Noise from speaking and shouting is more likely than for 'small pads'.

### Recommended minimum separation distances<sup>1</sup>





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## Additional improvements

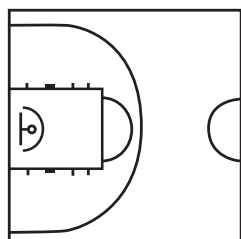
### Siting of facility



Consider locating the basketball facility where recreational facilities already exist. An additional facility is less likely to significantly change the noise environment compared to locating a new facility in a perceived or actual quiet area.



Consider using local topography or noise barriers. Low-height noise barriers can minimise basketball bouncing noise, while higher noise barriers may mitigate noise from backboards or voices, and may protect elevated receivers.



Consider locating basketball facilities behind less sensitive buildings to block basketball noise from sensitive receivers.

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## Additional improvements

### Engineering controls

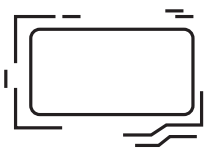


Perforated backboards vibrate less upon impact, resulting in lower instances of high impact noise levels compared to a traditional solid backboard.

Consider using rope nets or no nets on the hoop instead of chain nets that rattle on impact.



Alternative surfaces to hard ground such as synthetic turf or other surfaces reducing ball impact noise may provide a reasonable reduction in noise levels of the ball impact on the ground compared to a hard court.



**Anti-vibration**



Resilient connections between the hoop, backboard and frame can minimise the transmission of vibration and noise between these components.

Periodic maintenance of equipment including checking for loose connections can prevent rattling noise and structural vibrations developing.



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## Additional improvements

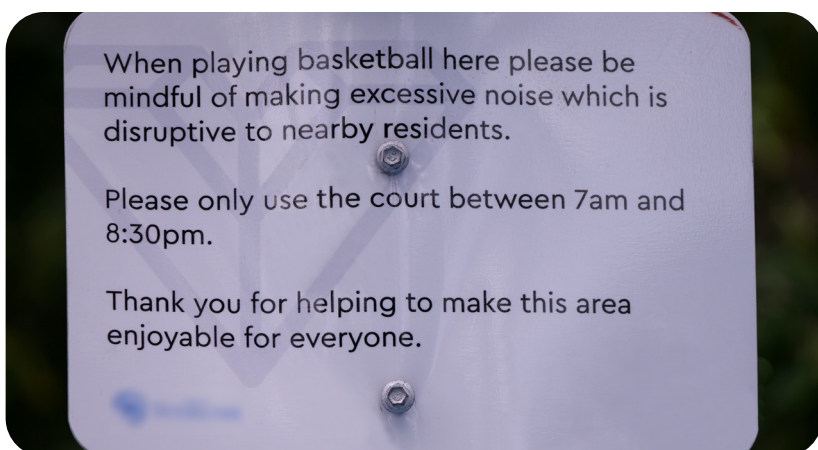
### Facility management



Limiting facility usage outside of daylight hours can reduce the facility's impact on the surrounding community.



Hoop fitted with locking mechanism.



Signage - The hours specified on the sign will likely vary between sites / local governments and should be consistent with the local environment.

#### Disclaimer

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### City of Joondalup Submission

- The draft guideline seeks to provide direction for local governments and their communities about the acceptable location of basketball facilities, however it lacks sufficient clarity and specificity to deliver on its intent. It is suggested that the draft guideline be structured in such a way as to provide a 'deemed-to-comply', acceptable separation distance between a facility (without any noise mitigation measures) and a noise sensitive land use (ie. a residential property). The draft guideline could then introduce specified reductions in distance (ie. 10m / 20m increments) that can be applied if certain noise mitigation measures are implemented in the design).

This would provide the clarity that local governments and their communities require to respond to the debate that exists about acceptable separation distances. It is noted that this may also require complementary changes to the Environmental Protection (Noise) Regulations 1997 to give effect to such an approach.

- The supporting technical information that has informed the development of the draft guideline should be made available for review and comment so that the data and methodology that has informed the draft guideline can be confirmed as accurate and fit for purpose.
- The description of facilities and associated characteristics should better reflect terminology and specifications designed and delivered by local government for these facilities. The draft guideline refers to a 'small pad' with notional pad size of 6m x 6m.

Terminology and sizing is more accurately described as follows:

- The specification for 'full size' basketball court is 28m x 15m (420m<sup>2</sup>) (as per the Department of Local Government, Sport and Cultural Industries (Sport and Recreation) guide)
  - The specifications for a '3 on 3' basketball court is 15m x 11m (165m<sup>2</sup>) (as per the Department of Local Government, Sport and Cultural Industries (Sport and Recreation) guide)
  - The specifications for '1 on 1' basketball court is 9m x 7m (63m<sup>2</sup>) (as per City of Joondalup specification)
- The approach taken in the guideline which supports a reduction in separation distance between a facility and a residence where the residence is near a major road (defined as carrying more than 15,000 vehicles per day) is noted. The principle is supported however applying this principle to 'major roads' only means that this would apply to very few roads and therefore have limited practical benefit. We therefore suggest that the same principle is applied to 'secondary roads' also (ie. roads carrying more than 6,000 vehicles per day), noting that the reduction in separation distance may be less than for a major road.
  - Whilst it is recognised that the draft guideline has been prepared to assist local governments with their facility planning, it is recommended that other representative bodies associated with the sport of basketball – as subject matter experts – are also engaged in the preparation of the draft guideline.