

13.4 Koolbardi Park - Future of Basketball Courts

Location	Carlisle
Reporting officer	Coordinator Project Support
Responsible officer	Strategic Projects Manager
Voting requirement	Simple majority
Attachments	1. B Squared Guide Victoria Park 04 07 2022 [13.4.1 - 7 pages]

Recommendation

That Council removes the remaining basketball infrastructure from the Koolbardi Park basketball court area due to the existing infrastructure being unable to be modified to bring it within acceptable noise levels set by the *Environmental Protection (Noise) Regulations 1997*.

Purpose

The purpose of this report is to advise Council of the results of the acoustical assessment of noise emissions associated with the basketball courts located at Koolbardi Park, Carlisle, and the future use of the basketball facilities at the park.

In brief

- Herring Storer Acoustics Consultants were commissioned to conduct an acoustical assessment of noise emissions associated with the basketball court. The assessment considered the noise levels associated with the use of the basketball court only, namely the bouncing of a basketball and the basketball striking the backboard. Noise levels associated with a basketball bouncing on a court and striking the backboard were measured on site, with the resultant sound pressure levels utilised to calculate the sound power level associated with these noise sources. This was utilised in developing a noise model calibrated to the levels measured on site at the neighbouring premise.
- Significant reductions to the noise impact are calculated to be achievable through the change of court surface. However, strict compliance with the Regulations was not considered to be able to be achieved.
- Removing the opportunity for the basketball ring/backboard during the night period will substantially reduce the overall impact upon the surrounding area – assuming that removing the chance to use the ring/backboard also prevents basketballs from being bounced on the court.
- If the basketball courts are not reinstated, the remaining infrastructure, poles, will need to be removed, for which a quotation for \$1,980 (inc GST) has been received.

Background

1. The issue of noise from the courts has been ongoing since the courts opened in December 2020. The Town has attempted, without success, to reduce the noise effect on residents by restricting court opening hours and having a security firm undertake the opening and closing of gates in accordance with times stipulated in the Environmental Protection (Noise) Regulations 1997. (the "Regulations").
2. The basketball courts were very well used by the community. Key aspects people like about the basketball courts include its accessibility from the local residential area, visibility, and perceptions of safety, particularly for use by children and young people, the quality of the basketball courts and its integration with other facilities at the park, such as the playground and toilets, picnic shelters and barbeques.

3. Officers have consulted with numerous other local authorities who are faced with similar noise issues on basketball courts. To date, no suitable outcome has been found.
4. The Department of Water and Environment (DWER) is working on guidelines for community basketball facilities. However, it is not expected to provide a draft of these guidelines until late 2022 or early 2023, and the guidelines are not expected to resolve the issues that are currently being experienced at the park but rather to ensure future courts built will take into consideration location/noise etc.
5. Students from Monash University have developed an innovative product named B2Squared, that aims to prevent access to sporting facilities past dark to reduce noise pollution. The product is a stand-alone unit powered by solar that extends a hoop blocking rod made to be a physical and social deterrent to those who may not realise the effects of their late-night basketball games. B2Squared is constructed from recycled materials and is designed to last. Although an innovative idea, it will not prevent users from still playing on the courts and creating noise from ball bouncing. The product information is an attachment to this report. Officers did attend an online forum on this product, along with Herring Storer Acoustics.

Strategic alignment

Environment	
Community priority	Intended public value outcome or impact
EN4 - Increasing and improving public open spaces.	
EN5 - Providing facilities that are well-built and well-maintained.	

Engagement

Other engagement	
Stakeholder	Comments
Department of Water and Environment	Seeking guidance on noise issues associated with basketball courts
Reverberate Consulting	Initial Consultant appointed to undertake noise testing
Herring Storer Acoustics	Consultant appointed to undertake an acoustical assessment of noise emissions
B2 Squared	Company created by students at Monash University, innovators of B2 unit for basketball courts
Other local government Authorities	Collaboration with City of Canning, City of Joondalup, City of Stirling, City of Armadale, City of Norwood Payneham & St Peters (SA), City of Moreland (VIC), City of Charles Sturt (SA), City of Melbourne (VIC), City of Hobson Bay (VIC), City of Glen Eira (VIC)

Legal compliance

[Environmental Protection \(Noise\) Regulations 1997](#)

Risk management consideration

Risk impact category	Risk event description	Consequence rating	Likelihood rating	Overall risk level score	Council's risk appetite	Risk treatment option and rationale for actions
Financial						
Environmental	Not applicable.					
Health and safety	Residents' quality of life will be improved with the permanent removal of the poles	Moderate	Possible	Low	Low	TREAT the risk by removing the poles
Infrastructure/ ICT systems/ utilities	Not applicable.					
Legislative compliance	<i>Environmental Protection (Noise) Regulations 1997</i>	Moderate	Possible	Low	Low	TREAT the risk by adhering to the Regulations
Reputation	Negative media	High	Possible	Medium	Low	TREAT the risk by providing media information on reasons for removing
Service delivery	Not applicable.					

Financial implications

Current budget impact	A budget amendment will be required for the removal of poles at a cost of \$1,980 which will be submitted to mid-year review if approved.
Future budget impact	Not applicable.

Analysis

6. Basketball play at Koolbardi Park has impacted the quality of life and wellbeing of some local residents. Differing opinions regarding the proper use of the basketball court as well as the frequency and magnitude of the noise impacts has also caused some tension, negative feelings, and verbal conflict amongst some neighbours and towards basketball court users.
7. Neither the affected residents, nor Council staff anticipated that the positioning of the basketball courts would create any significant noise impact. Council staff have not had any consistent noise complaints related to the use of any other outdoor basketball rings at reserves located throughout the Town.
8. It is recognised that regardless of what Council decides in relation to this matter, there is no single solution that will please all members of the community. There is a likelihood that complaints will continue, mainly due to the divided and varying views of individuals. If the final decision made by Council, irrespective of what it is, is well informed and justified, then the community, regardless of the individual views, should be accepting of the outcome.
9. Option 1- Do Nothing
 - a. Option 1 is to do nothing and to allow the basketball court to remain and operate in accordance with the times allowed under the Regulations (i.e., Mon-Sat – 7.00 am to 7.30 pm / 9.00 am – 7.00 pm Sunday & Public Holidays). The Council had installed signage to discourage basketball play after these times, however it was difficult to endorse and without a constant physical presence onsite which would be resource intensive and impractical, noise and behavioral issues will still exist.
 - b. If Council does nothing, it will be ignoring community concerns and suggestions. Complaints from residents about noise and the after-hours use of the basketball courts will continue. Council resources will be further tied up in handling complaints and monitoring and managing the ongoing use of the basketball court. Therefore, the option to do nothing is not recommended.
10. Option 2 – Retain the basketball court in its current location with additional measures:
 - a. Sound attenuation
 - b. Installation of a device that prevents the after-hour use of the basketball ring (i.e., B2 device)
 - c. Installation of additional signage
 - d. Installation of timed lighting

- e. Education of users
- f. Fencing and locking the court
- g. Pay for the installation of double glazing to windows of residents' dwellings

11. Sound Attenuation

- a. Reducing sound at the source using a barrier can benefit the greatest number of receivers. Different types of sound barriers include fences, walls, and earth mounds. To be effective, a sound barrier must:
 - i. Be solid and continuous (i.e., without any holes or openings)
 - ii. Have mass (i.e., a minimum surface density of five kg/m²); and
 - iii. Break the line of sight between the noise source and the receiver
- b. A sound barrier surrounding the basketball court would create an undesirable obstruction to vision and movement and potentially create safety issues and additional ongoing maintenance requirements. This option is not recommended.

12. Installation of a device that prevents the after-hour use of the basketball ring

- a. There are various products on the market that discourage unauthorised use of a basketball ring by preventing a basketball from being able to pass through the ring. The devices are generally lockable, steel devices which need to be manually installed and removed using a ladder.
- b. Alternatively, there are also removable basketball rings on the market. A bracket is bolted permanently to the backboard, and the ring is manually removed by sliding it upwards out of the bracket. A ladder or lifting tool is needed to install and remove the ring.
- c. There are also adjustable basketball hoops which can be raised, lowered and locked at different heights. An adjustable basketball ring could discourage after-hours use by adults if lowered in height. However, it could similarly encourage others wanting to try to dunk or that do not mind playing with a lower ring. Adjustable basketball systems are also manually operated and could be used in combination with a ring locking device to prevent after-hours use.
- d. Manual locking, removal, or adjustment of the basketball ring on a daily basis would require a resource to perform this function. Council could employ a contractor or train a volunteer to undertake the daily task, but this would likely have cost and/or health and safety implications that would need to be further addressed if it were to be implemented long term.
- e. Monash University students have developed for an automatic ring blocking device, and it has been trialled with success by City of Moreland in Victoria. The students have recently completed improvements to the ring blocking device and have now commenced selling it as a commercial product.
- f. An automatic device would address resource and health and safety issues associated with a manual device, and although an innovative idea, it may not prevent users from playing on the courts with noise issues still occurring. This option is not recommended.

13. Installation of additional signage

- a. Signs are not going to eliminate the after-hours use of the basketball court. However, signs do have a regulatory purpose and contribute to the management of the basketball courts by advertising the rules and expectations for community use.

14. Installation of Timed Lighting - Timed lighting is currently in use at the courts. There is light spill from the nearby park lights, which enables anyone to play after dark. The park lights need to remain in place and illuminated for the safety of park users.

15. Education of Users - Council could take a more friendly approach and develop a campaign to engage with users of the basketball court, particularly regular players, during the warmer months to discuss the benefits of recreation and exercise, educate people about the impacts that after-hours basketball play has on residents and encourage good community behaviour.

16. Fencing and locking the gates - The courts are fenced with two gates that currently remain unlocked. In March 2022 a report was presented to Council outlining the costs of installing self-locking, time-controlled gates at the cost of \$31,000. At that time, it was recommended that the installation of these gates not be approved.

17. Pay for the installation of double glazing to windows of residents' dwellings. No costs have been sourced, and advice from Herring Storer is that this option would not be effective.

18. Option 3 – Remove Remaining Posts – Recommended option for approval.

- a. Remove the basketball posts from Koolbardi Park, and the area becomes usable for tennis courts only.
- b. This option would see the removal of the remaining posts that accommodate the backboard/hoops. There would be a requirement for the poles to be removed and repairs to the surface as they are solidly placed in the ground. An estimated cost for this is \$1,980 (inc GST) and would require a budget amendment at mid-year review.

Relevant documents

Nil

Further consideration

19. The following considerations were raised at the Agenda Briefing Forum held on 4 October 2022:

20. *Include information on whether the consultant has experience in double glazing or whether is it an assumption.*

- a. The Consultant does have experience with the effect that double glazing can have on the attenuation of external noises internally. The allowable noise levels dictated by the *Environmental Protection (Noise) Regulations 1997* are external noise levels i.e. the noise level that can be received at a premise is governed by a measured level outside the house.
- b. The introduction of double glazing (or higher acoustically performing glass – sometimes monolithic glass performs better) can reduce the noise impact inside the house, however, does not alleviate the non-compliance issue outside the house. The other issue to consider in the

above is that if a window system is openable (or door) then there could be a reasonable expectation that the window/door is left open for airflow/ventilation etc – which obviously means the glazing does nothing in regard to attenuation of the noise.

21. Include information on whether there is anything in writing from the acoustic expert that the current products available for resurfacing wouldn't comply.

- a. Two options for resurfacing were included in the report – namely the artificial cricket pitch material and 'modular outdoor sport court tiles'. Whilst both resulted in significant decreases in the noise impact associated with the bouncing of basketballs, neither resulted in compliance – especially if impulsive characteristics are included in the noise level measurements/calculations which is considered to be appropriate.
- b. It is our understanding that a compliant surface purely in terms of noise impact would not be appropriate for playing basketball.

22. Include information on when the multi-use courts were approved and whether basketball identified as a use.

- a. The Lathlain Park Management Plan was approved by the WAPC in July 2017 and included the Zone 2 Activity area, multi-use courts. The grant application made to Lotterywest in 2017 also included mention of multi-use courts. The concept plans were endorsed by Council in August 2017. The concept plans developed by Realm Studios included the multi-use courts and mentions netball, basketball, tennis and volleyball as potential uses.