BIRCHWOOD COMMUNITY SPORTS AND LEISURE HUB
NOISE IMPACT ASSESSMENT

Sound and noise

Our sound environment is made up of a variety of different natural and man made sounds. People can respond to sound in many ways and response can depend on a number of subjective, personal and situational variables.

Noise is typically described as unwanted sound and is related to human response. Sound can be measured using a sound level meter and is typically quantified in decibels (dB) as an indicator of sound pressure levels and loudness. Some examples of decibel levels of common sources, including those measured at the proposed development site, are listed below as a guide.

Amplified music in a bar	**96 dB** LAeq,T
Road traffic dual carriageway 20m from centre	**73 dB** LAeq,T
Bishops Stortford FC match 68m from pitch centre	**67-69 dB** LAeq,15min
Jet aircraft directly overhead Single flight	**63 dB** LAeq,30s*
Average of 12 flights	**55-56 dB** LAeq,25min*
Local road traffic noise - 90-100m from Dunmow Road / Parsonage Lane	**51-53 dB** LAeq,25min*
Ambient sound level late evening (10pm) (local road traffic noise)	**48-49 dB** LAeq,25min*
Rural night time ambient sound level	**25-30 dB** LAeq,T

* Measured at the development site

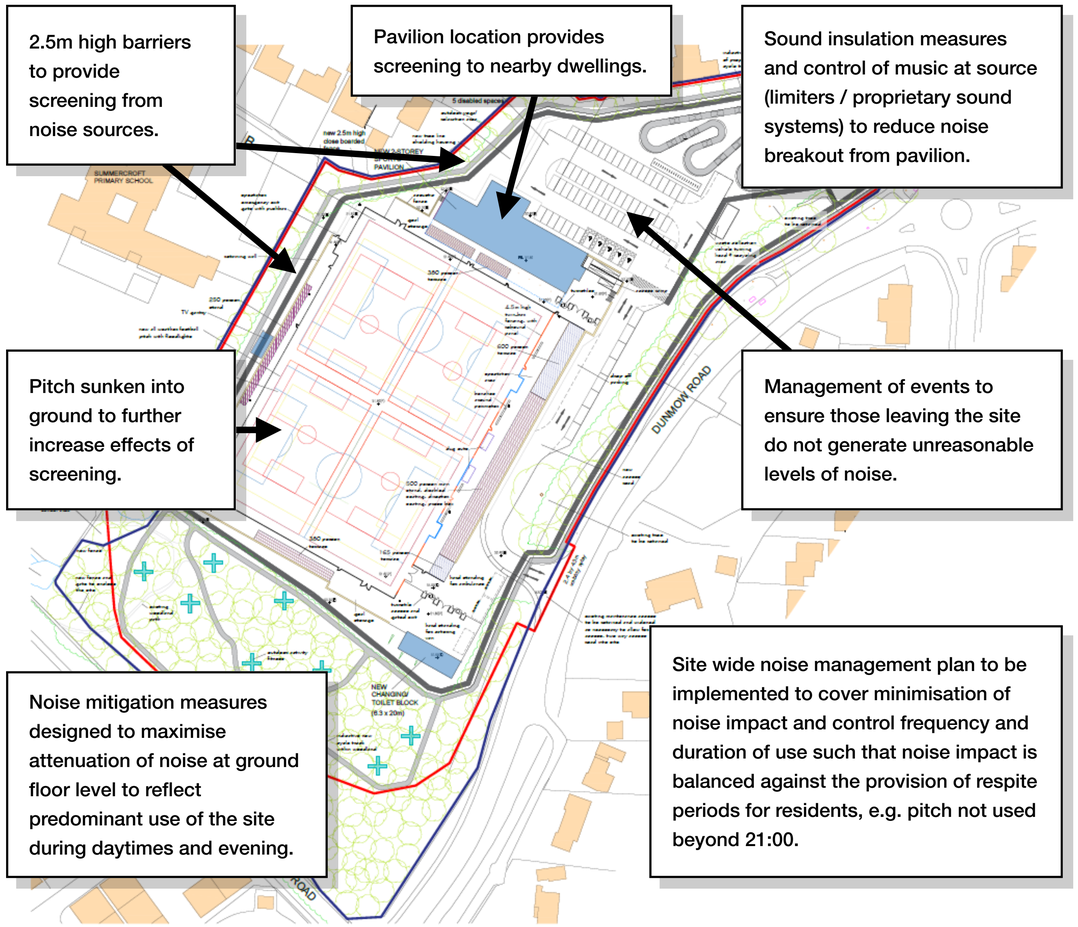
Assessing noise

The nature of noise from an artificial grass pitch (AGP) is one that has distinguishable character and will draw attention due to associated users (speech) and other impulsive noise sources. These types of noises can be more annoying at lower levels than a steady anonymous noise of the same decibel level, such as road traffic noise. However, unlike road traffic noise the noise impact from the AGP will not be constant and will be limited to certain times of the day. Thus, important periods of respite from noise will be available to nearby residents.

The assessment in this case is based on:

- **Average noise** – the average noise level of the AGP should be within 0-3dB of the ambient sound environment. This is based on Sport England guidance.
- **Maximum noise** – maximum noise levels from shouts, ball kicks etc should not regularly exceed 60dB LAmax,f.

This approach aims to minimise impact from average noise such that occurs within the existing sound environment with a level of masking noise from existing road and air traffic sources. It aims to minimise impact from specific sources (e.g. shouts) so that whilst they may be audible, they do not cause unreasonable disturbance.



Conclusions

Noise will be audible at nearby dwellings but not significantly above existing ambient noise levels. At some locations closer to the site higher average and maximum noise levels are predicted to arise at first floor level. Here a balance of frequency and duration of impact and respite will be used to achieve an acceptable sound environment.

The locality is one where a level of noise from education establishments and community use is to be expected. There will be an increase in the use of the site and this will result in a loss of respite for residents compared to the existing sound environment. Predicted noise levels are acceptable and are not expected to result in adverse impact at the majority of locations with limited effect at others. This requires balancing against the planning objectives and the wider needs of the school and community. Such a balance is a planning consideration and not one of noise impact in isolation.

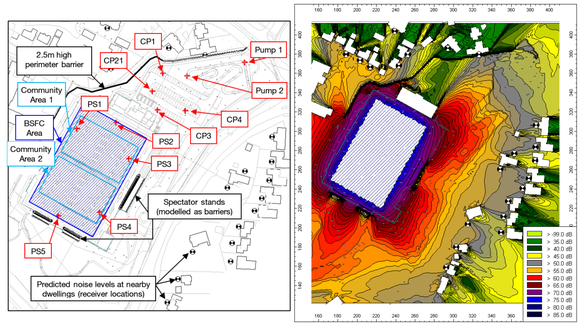
Feedback – part of the proposed control measures for the site includes balancing periods of impact with periods of respite for residents. If you have any comments or feedback on how this could best be provided, please get in touch.

How has noise been assessed?

A comprehensive noise monitoring and mapping exercise has been undertaken including:

- A week long environmental survey measuring background and ambient sound levels at the site
- Monitoring of a school PE lesson
- Monitoring of a community football training session
- Monitoring of Bishops Stortford FC official match

Specialist noise mapping software has been used to predict the impact of various sources of noise at nearby residential dwellings.



Summary and findings of the assessment

Average AGP noise levels at most nearby dwellings were predicted equal to or below the existing ambient sound levels. At all locations the criterion of not exceeding existing ambient sound levels by more than 3dB(A) is achieved.

Predicted AGP maximum noise levels at nearby dwellings were broadly found to meet proposed criterion. At first floor height, boundary screening is less effective and higher predicted noise levels arise. This level of impact will be controlled by frequency and duration of impact so that this level of noise does not arise frequently, for long periods or too late within the evening.

Noise from vehicles arriving at and leaving the site will be audible at the closest locations; however, the existing sound environment is dominated by road traffic noise. Noise associated with the car park should not stand out as a distinctive source from the underlying sound environment.

The noise from the use of the pump track is not expected to cause significant disturbance. The primary source of noise, from voices of users of the track, can be managed and with appropriate noise management controls noise impact can readily be minimised.

The internal layout of the pavilion indicates several multi use spaces. Noise impacts from such uses are amplified music and people leaving the venue during later evening / night time. Music can be controlled through a range of modern methods that can ensure unacceptable noise emissions are prevented.

Details on plant to be installed at the site have not yet been finalised; any associated noise should be assessed against background sound levels.