



NOISE MANAGEMENT PLAN 3G SYNTHETIC PITCH, HAVANT RFC

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A CONCEPT LIFE SCIENCES COMPANY





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1. INTRODUCTION

Resource and Environmental Consultants (REC) Limited have been commissioned by Rugby Football Union (RFU) to provide a Noise Management Plan for the operation of the synthetic turf rugby pitch at Havant RFC on Hook Lane in Havant, to be referred to hereafter as '*the Artificial Grass Pitch (AGP)*'.

This Noise Management Plan outlines the methods by which the operator, RFU, will assess and minimise the potential impacts of noise generated by the use of the AGP. This Noise Management Plan has a specific aim of ensuring that:

- ▶ Any noise impact is considered as part of the usage;
- ▶ Noise is primarily controlled at source by good operational practices and management control; and,
- ▶ All appropriate measures are taken to prevent or, where that is not reasonably practicable, to reduce noise emissions from the usage to ensure no adverse impact at the existing receptors.

All acronyms used within this report are defined in the Glossary presented in Appendix II.

This Noise Management Plan has been produced in order to discharge condition 5 of the planning permission:

"5. Before first use of the artificial sports pitch hereby approved, a noise management plan shall be submitted by the Havant Rugby Club to the Local Planning Authority, which specifies the provisions to make to ensure the control of noise emanating from the Artificial Grass Pitch and adjacent areas. The plan shall be a live document and should include items such as the usage periods of tannoy / PA systems, the frequency of usage of the pitch and additional sports uses are foreseen. The Noise Management Plan shall be reviewed periodically or as required, to address any issues arising, or which may arise from changes to the operation or usage of the facility, and this review shall be submitted for approval by the Local Planning Authority. The Noise Management Plan, once approved by the Local Planning Authority, shall be implemented in full and retained thereafter."

Reason: To protect the occupants of nearby residential properties from noise emanating from this sports facility and having due regard to policy CS16 of the Havant Borough Local Plan (Core Strategy) 2011 and the National Planning Policy Framework 2012."

1.1 Limitations

The limitations of this report are presented in Appendix I.

1.2 Confidentiality

REC has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from REC; a charge may be levied against such approval.





2. NOISE CONTROL MEASURES

2.1 Site Management Responsibility

The Designated Responsible Person (DRP) will have responsibility for ensuring that nuisances and/or adverse impact arising from the usage of the AGP due to noise are minimised. The DRP will have responsibility for keeping a record of any noise related complaints, informing the Local Planning Authority and implementing an appropriate course of action to remedy the noise sources which have generated the complaint. It is assumed the DRP will be the Club Manager.

Havant Rugby Football Club have confirmed that the DRP at the site is to be as follows along with contact information:

- ▶ Simon Richards - 023 9247 7843 - havantRFC@havantRFC.co.uk.

2.2 Physical Control Measures

REC have produced a Noise Impact Assessment (Ref. AC104726-2r2, dated 24th April 2018) which detailed the noise impacts due to the usage of the AGP upon the closest residential receptors, to the east on Hook Lane. The Noise Impact Assessment has shown that the predicted change in noise levels during the most sensitive periods of use, i.e. 21:00 to 22:00 weekdays, results in a none/not significant change that would not be perceptible to the human ear. Accordingly, no adverse impact should take place.

When considering any impact, it is also worth noting that the introduction of the AGP will intensify usage over an entire day but not within any given 1-hour period as the residents are already subject to these noise levels during similar periods. The AGP allows for year-round usage and would not result in higher noise levels than that already exist. The existing matches will remain the same but additional training sessions will now be able to take place where they would normally be restricted due to playing conditions.

A key concern of the LPA is the use of the Tannoy system, as noted in condition 5. The RFU have provided the following information in relation to its proposed usage:

“Condition 9 (PA System):

Whilst the proposal will indeed increase the use of the pitch, the majority of the additional activity will be for training sessions, during which the PA system is not used, or needed - this will remain the same with the proposal.

The club only ever use the PA system on weekend match days, generally from September to beginning of May. It is only used for first team / competition games to announce teams on to the field, run through team sheets, to provide occasional commentary / score updates through the match, and to provide safety and security announcements – this is all part of the match day experience for players and spectators, and contributes to the high-quality atmosphere at the ground.

The Applicant and the club would be keen to retain flexibility over the use of the PA system, such that if the pitch held one-off or occasional games on weeknights, the PA system could be used to contribute to the player and spectator experience. The club use the PA system in a socially-conscious way and will continue to do so – hence our concern over any restrictive wording, and our suggestion for a review condition, allowing the club general flexibility in use, but through which your Environmental Protection Team can investigate any accusations of abuse/nuisance.





The existing pitch is currently used by the Portsmouth Dreadnoughts American Football Team on Sundays during the summer. This is an amateur club and only uses the pitch for matchplay – the club does not host half-time entertainment or cheerleaders, and this use is expected to remain the same. As such, the proposed AGP is not considered to result in additional noise impacts in relation to the use of the pitch for American Football activities.”

Accordingly, the usage of the tannoy will be monitored and any noise complaints associated with its usage that may arise will be reported and addressed. This will be considered a physical control measure.

2.3 Management Control Measures

A range of management control measures can be implemented at the Site including:

- ▶ The tannoy system should be regularly maintained to ensure optimal operation and any problems with such that result in less than typical operation will be addressed immediately; and
- ▶ In relation to the evening periods, the Clubs players and attendees will be notified that they are within close proximity of residential dwellings and all unnecessary noise shall not be permitted. This will particularly apply upon close of the club at 22:00 on weekdays when noise nuisance is likely to arise.





3. NOISE MONITORING

All operational staff will be responsible for reporting any noise problems immediately to the DRP.

Where complaints persist, a scheme of noise monitoring during the time periods when noise complaints arise shall be undertaken in strict accordance with the requirements of the LPA.

The surveys shall be undertaken by a competent person and should encompass at least 1 hour of measurements in accordance with the relevant guidance.





4. NOISE CONTINGENCY MEASURES

Elevated levels of noise may be identified either by receipt of a noise complaint from a third-party suggesting that there is excessive noise from the use of the AGP.

This Section details the contingency measures in place to identify the source of elevated noise levels, bring noise levels back under control and to minimise their impact.

4.1 Noise Complaint Investigation

A Site diary which should include a log of any noise complaints received by the Site shall be kept by the DRP.

The DRP will ensure that:

- ▶ The complaint is investigated to identify the cause and if necessary this may involve direct communication with the complainant;
- ▶ In the event of noise impact being detected, the presence of abnormal on-Site activity is assessed and if necessary preventative action taken that will prevent a reoccurrence of the same problem. These actions must be documented; and
- ▶ The complainant will be contacted and provided with information on the investigations conducted and any remedial actions implemented.

4.2 Elevated Noise Levels

Any elevated levels of noise identified by the monitoring detailed in Section 3 and the complaints procedure identified in Section 4.1 will be mitigated as follows:

- ▶ The DRP will investigate the source of the noise and carry out a range of checks to identify the cause of the complaint. As part of these checks the DRP will consider the need for quantitative noise monitoring;
- ▶ All noise monitoring should be completed with due regard paid towards the methodology prescribed in Sport England's '*Artificial Grass Pitch Acoustics – Design Guidance Note*'. Noise monitoring locations should be agreed with the LPA;
- ▶ The results of any monitoring will determine whether the use of the AGP is causing an unacceptable noise impact at the receptor location; and
- ▶ The DRP will then ensure that the AGP is being operated in accordance with the planning permission and ensure that any improvements required to minimise the noise levels are made.

The DRP will ensure a close liaison with the LPA throughout all stages of the process following an identified elevated noise level.

4.3 Reporting Measures

In the event of elevated levels of noise being identified, the event will be reported into an appropriate management system by a member of operational Staff. Upon notification of an environmental incident, the DRP will complete an incident reporting form. The completed form should then be distributed to all relevant individuals.





5. MANAGEMENT RESPONSIBILITIES & REVIEW

It is anticipated that the DRP will be responsible for the implementation of this Noise Management Plan.

The DRP will be supported by the Site Manager, where relevant. The DRP/Site Manager is responsible for monitoring, auditing and evaluation of Site performance.

5.1 Review of Noise Control Measures

Noise control measures will be reviewed through internal audits as part of the monitoring and auditing process. Internal audits will include, but not necessarily be limited to the following:

- ▶ Spot checks on the higher risk sources of noise, such as the tannoy system and usage of the AGP including crowd noise, to check monitoring and maintenance procedures are being carried out in accordance with this Noise Management Plan.





APPENDIX I LIMITATIONS





1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between REC Limited and the Client as indicated in Section 1.2.
2. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
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Noise Management Plan
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APPENDIX II GLOSSARY OF ACOUSTIC TERMINOLOGY





Noise

Noise is defined as unwanted sound. Human ears are able to respond to sound in the frequency range 20 Hz (deep bass) to 20,000 Hz (high treble) and over the audible range of 0 dB (the threshold of perception) to 140 dB (the threshold of pain). The ear does not respond equally to different frequencies of the same magnitude, but is more responsive to mid-frequencies than to lower or higher frequencies. To quantify noise in a manner that approximates the response of the human ear, a weighting mechanism is used. This reduces the importance of lower and higher frequencies, in a similar manner to the human ear.

Furthermore, the perception of noise may be determined by a number of other factors, which may not necessarily be acoustic. In general, the impact of noise depends upon its level, the margin by which it exceeds the background level, its character and its variation over a given period of time. In some cases, the time of day and other acoustic features such as tonality or impulsiveness may be important, as may the disposition of the affected individual. Any assessment of noise should give due consideration to all of these factors when assessing the significance of a noise source.

The most widely used weighting mechanism that best corresponds to the response of the human ear is the 'A'-weighting scale. This is widely used for environmental noise measurement, and the levels are denoted as dB(A) or L_{Aeq} , L_{A90} etc., according to the parameter being measured.

The decibel scale is logarithmic rather than linear, and hence a 3 dB increase in sound level represents a doubling of the sound energy present. Judgement of sound is subjective, but as a general guide a 10 dB(A) increase can be taken to represent a doubling of loudness, whilst an increase in the order of 3 dB(A) is generally regarded as the minimum difference needed to perceive a change under normal listening conditions.

An indication of the range of sound levels commonly found in the environment is given in the following table.

Table A1 Typical Sound Pressure Levels

Sound Pressure Level	Location/Example
0	Threshold of hearing
20 - 30	Quiet bedroom at night
30 - 40	Living room during the day
40 - 50	Typical office
50 - 60	Inside a car
60 - 70	Typical high street
70 - 90	Inside factory
100 - 110	Burglar alarm at 1m away
110 - 130	Jet aircraft on take off
140	Threshold of pain





Acoustic Terminology

Table A2 Terminology

Descriptor	Explanation
dB (decibel)	The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2x10 ⁻⁵ Pa).
dB(A)	A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. 'A' weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.
L _{Aeq, T}	L _{Aeq} is defined as the notional steady sound level which, over a stated period of time (T), would contain the same amount of acoustical energy as the A - weighted fluctuating sound measured over that period.
L _{Amax}	L _{Amax} is the maximum A - weighted sound pressure level recorded over the period stated. L _{Amax} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall Leq noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
L ₁₀ & L ₉₀	If a non-steady noise is to be described it is necessary to know both its level and the degree of fluctuation. The Ln indices are used for this purpose, and the term refers to the level exceeded for n% of the time. Hence L ₁₀ is the level exceeded for 10% of the time and as such can be regarded as the 'average maximum level'. Similarly, L ₉₀ is the 'average minimum level' and is often used to describe the background noise. It is common practice to use the L ₁₀ index to describe traffic noise.
Free-field Level	A sound field determined at a point away from reflective surfaces other than the ground with no significant contributions due to sound from other reflective surfaces. Generally as measured outside and away from buildings.
Fast	A time weighting used in the root mean square section of a sound level meter with a 125millisecond time constant.
Slow	A time weighting used in the root mean square section of a sound level meter with a 1000millisecond time constant.

