

# ACOUSTIC TECHNICAL NOTE



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<b>To:</b>	
<b>From:</b>	Doug Shearer
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<b>Project:</b>	Hampton Wick Royal Cricket Club
<b>Subject:</b>	Acoustic Assessment

## 1. INTRODUCTION

The pavilion at Hampton Wick Royal Cricket Club (HWRCC) was destroyed in a major fire in September 2023. To inform the planning process for the construction of a new pavilion, RBA Acoustics has been appointed to provide acoustics input to support the planning application.

This report presents the assessment strategy and sets limits for plant noise emissions from the proposed new pavilion.

## 2. SCOPE OF ASSESSMENT

The London Borough of Richmond-Upon-Thames' basic requirements for assessing noise generating developments is outlined within their Supplementary Planning Document (SPD) 'Development Control for Noise Generating and Noise Sensitive Development (Adopted September 2018).

In correspondence dated 17<sup>th</sup> May 2024 with Hedley Pugh, Principal Environmental Health Officer of London Borough of Richmond, the required scope of assessment for the Hampton Wick Royal Cricket Club site was discussed.

It was agreed that the noise impact of the following items do not require assessment as the proposed activities and resultant noise emissions represent no change from the historical situation.

- Noise due to sports activities on the playing fields
- Noise due to traffic accessing the site via the access road leading to Park Road to the North
- Noise due to patrons spectating and using the pavilion facilities.

Therefore, we understand that the impact of the following items require assessment.

- Noise due to any plant items located at the pavilion.
- Noise due to amplified music reproduced at the site.

### 3. PLANT NOISE CRITERIA

The SPD's Section 6.4: Desktop Assessment states:

*"In certain circumstances e.g. the installation of a single air conditioning unit, a desktop noise assessment may be submitted where the applicant can demonstrate that the plant will achieve the set criteria below and therefore negate the need for a full acoustic report. Information supporting the application will need to include:*

- 1. The location of the nearest residential window that may be affected by noise from the proposed plant.*
- 2. Indicate the distance of the window from the source in metres and any natural barrier or shielding to the noise path.*
- 3. The proposed operational hours of the plant.*
- 4. Maximum noise emission criteria of 45dB(A)  $L_{Aeq,1hour}$  daytime (07.00-23.00) and 35dB(A)  $L_{Aeq,15minute}$  night-time.*
- 5. Manufacturers' noise specifications of plant: Sound Power/Sound Pressure Level, octave band spectral levels.*
- 6. Calculations for the predicted noise level 1 metre from the window of the nearest residential property. Include any proposed attenuation measures.*

It has been agreed with Hedley Pugh, Principal Environmental Health Officer of London Borough of Richmond, that this assessment methodology is appropriate for the site.

#### 3.1 Nearest Residential Receptors.

The following are understood to be the nearest residential receptors.

*Rose Cottage, King's Field.*

The receptor is a residence within the grounds of King's Field and accessed via Hampton Court Road and which lies some 225m to the south-east of the pavilion. There are no significant screening structures between Rose Cottage and the pavilion as the majority of the intervening space is given over to cricket pitches, although there are trees to the south of the pavilion, and Rose Cottage itself features a brick perimeter wall some 2m in height.

*Residences on Park Road.*

To the north-east of the pavilion lies Park Road. The nearest residences on Park Road are some 230m from the pavilion with allotments inbetween. The allotments are bounded by a brick perimeter wall some 2m in height.

*Residences on Church Grove*

To the east of the pavilion lies Church Grove. The nearest residences on Church Grove are also approximately 230m from the pavilion with allotments between the two.

## 4. PLANT NOISE LIMITS

At the time of writing, details regarding the specific plant items, their proposed locations, noise levels and operating hours required for mechanically servicing the property are not available, as plant details are yet to be confirmed. Therefore, predictions cannot currently be undertaken to fully satisfy the above requirements.

However, noise emissions can be controlled by the requirement to achieve the plant noise emission criteria detailed in Table 1 being stated as part of the planning conditions for the development.

Our calculation method for predicting noise limits measured at the HWRCC site boundary such that appropriate conditions are maintained the nearest noise-sensitive receptors is summarised below.

- Distance Attenuation
- Screening

Methods for appropriately controlling plant noise emissions may include acoustic screens, attenuators, anti-vibration mounts and enclosures.

A full report detailing plant selections and predicted noise levels can be prepared once such details are available.

Table 1 – Limiting Levels for Plant Items

Assessment Period	Plant Noise Limiting Levels Measured at Boundary of HWRCC Site (dBA)		
	Receptor 1: Rose Cottage (Southern Boundary) (110m)	Receptor 2: Park Road (Northern Boundary) (70m)	Receptor 3: Church Grove (Eastern Boundary) (6m)
Daytime (07:00 – 23:00)	77	79	89
Night-time (23:00 – 07:00)	67	69	79

## 5. AMPLIFIED MUSIC NOISE CRITERIA

It is not clear whether amplified music is proposed for the pavilion. The following criteria have been agreed as applicable for the pavilion site with Hedley Pugh, Principal Environmental Health Officer of London Borough of Richmond.

Noise limit inside the nearest residential property, assuming open windows

- i. NR25 dB  $L_{Aeq, 1hr}$  (07:00-23:00)
- ii. NR15 dB  $L_{Aeq, 15min}$  (23:00-07:00)

## 6. AMPLIFIED MUSIC ASSESSMENT

Our calculation method for setting noise limits measured at the boundaries of the HWRCC site is shown below.

- Attenuation due to Open Window
- Distance Attenuation
- Screening

The resultant noise limits are as follows.

Table 2 – Limiting Levels for Amplified Music

Assessment Period	Music Noise Limiting Levels Measured at Boundary of HWRCC Site (dBA)		
	Receptor 1: Rose Cottage (Southern Boundary) (110m)	Receptor 2: Park Road (Northern Boundary) (70m)	Receptor 3: Church Grove (Eastern Boundary) (6m)
Daytime (07:00 – 23:00)	76	76	89
Night-time (23:00 – 07:00)	67	67	80

## 7. CONCLUSION

RBA Acoustics has undertaken a desktop assessment for plant noise for the proposed Hampton Wick Royal Cricket Club pavilion. As full plant details are not yet finalised, we have set noise limits for the plant based on the distance between the proposed site and the nearest residential receptors, and any screening features in between. Design of plant items to achieve these noise limits is proposed to satisfy the requirements of London Borough of Richmond-Upon-Thames Council in terms of plant noise emissions.

It is not known whether amplified music is planned at the pavilion. In case this will be proposed, we have likewise set maximum noise limits for amplified music such that the requirements of London Borough of Richmond-Upon-Thames Council for noise impact on the nearest residential receptors are met.



Hampton Wick Royal Cricket Club  
Pavilion Site Showing Nearest Residential Receptors  
Project 13608

Figure 1  
5 June 2024  
Not to Scale

