

1.0 ASSESSMENT OF NOISE FROM AFC PORTCHESTER - TECHNICAL NOTE

1.1 Introduction

- 1.1.1 Temple Group Limited were commissioned by Foreman Homes Limited to undertake a noise assessment for the proposed residential development at Land South of Romsey Avenue, Fareham, Following the determination of the planning application and subsequent appeal, a number of issues were raised by interested parties specifically in regard to the potential for restrictions to be placed on the operation of AFC Portchester Football Club. Specifically, they referred to the following common objection:

“The appellant must accept the responsibility as the Agent for Change and mitigate the significant noise and light pollution generated from the established and popular AFC Portchester football club. National planning policy protects existing clubs and businesses from being closed down or having restrictions imposed by residents moving into new developments.”

- 1.1.2 This objection was made by a number of 3rd parties including Malcolm Belcher on behalf of AFC Football Club.
- 1.1.3 A technical note has therefore been prepared in respect of the above issue. This Noise technical note describes the assessment methodology and a review of the conclusions within the Noise and Vibration Chapter submitted in the Updated Environmental Statement (ref: CDAA.1) to support the appeal. It is recommended that this note should be read in conjunction with the Volume 2, Chapter 7 of the submitted Environmental Statement.
- 1.1.4 Due to limitations imposed by COVID-19, AFC Portchester Football Stadium has not been operating under its typical conditions (i.e. number of events, spectators or matches). Therefore, a desktop assessment of activity noise associated with AFC Portchester Football Stadium has been undertaken for the Proposed Development at the Land South of Romsey Avenue, Fareham.
- 1.1.5 This technical note provides further details of the methodology and findings of this assessment.

1.2 Daytime Noise Assessment

- 1.2.1 AFC Portchester Football Club is located to the southeast of the Proposed Development. It consists of a an 11 a side football pitch, a 100 person spectator stand, a club house, changing rooms, and a couple of ancillary buildings including a training centre and boardroom. The football club hosts home games at 3pm on a Saturday afternoon bi-monthly between August and May and on Tuesday evenings from 19:30 to 19:45 approximately once a month. Training sessions take place regularly during the week and at weekends and the clubhouse is also used by other local sporting teams for evening meetings on weekdays.
- 1.2.2 The club house is governed by a planning condition which restricts operational activities to between 09:00 – 23:00 Monday to Sunday, and a condition stating the clubhouse should not be let out for private social functions (P/10/0453/FP & P/12/0463/FP).

- 1.2.3 The club holds one off annual events such as annual fireworks display in November every year, though events such as these are subject to a specific operating licence.

Historic Survey Data

- 1.2.4 As it has not been possible to measure representative noise levels from AFC Portchester Football Stadium at this time, noise levels at the nearest proposed dwelling have been predicted based on historic noise data captured from a similarly sized football ground at an alternate location.
- 1.2.5 An unattended survey was undertaken for a period of one week, capturing 3 days with football games and 4 days without.
- 1.2.6 A Type 1 sound level meter was installed at a distance of 90 m from the nearside edge of the main football pitch at a height of approximately 1.2 m above local ground level. Between the pitch and the microphone position there was no screening and soft ground cover.
- 1.2.7 The sound level meter recorded A weighted L_{eq} , L_{max} , L_{90} and L_{10} parameters in 15-minute intervals. The sound level meter was subject to biennial laboratory calibration and field checked for calibration prior to and post measurement; no significant drift was observed. The microphone was also fitted with a windshield with the corresponding correction applied to the sound level meter.
- 1.2.8 The results of the survey are presented in **Table 1**.

Table 1 Historic Survey Data

Day	$L_{Aeq, 16hr}$ (dB) (07:00-23:00)	Match day
Tuesday*	50.9	Yes
Wednesday	53.7	No
Thursday	51.0	No
Friday	51.9	No
Saturday	52.2	Yes
Sunday	54.6	Yes
Monday	51.9	No

*Note: Daytime levels for Tuesday have been based on a combination of two separate days recorded at the start and end of the monitoring period and is a $L_{Aeq, 13hr}$ value.

Assessment Calculation

- 1.2.9 Noise levels have been compared at the measurement location between match days and non-match days to determine the influence of the activity noise on typical ambient noise levels.
- 1.2.10 Measurements were taken at greater distance from the main pitch (90 m) than would be in place at the Proposed Development (70 m), therefore a distance correction has been applied.
- 1.2.11 The corrected activity noise level has then been summed with the ambient noise levels measured at the Proposed Development, providing a predicted daytime noise level for days where AFC Portchester Football Stadium would be in use.
- 1.2.12 The results of these calculations are presented in **Table 2**.

Table 2 Assessment of football pitch activity noise at the Proposed Development based on historic noise data

Average daytime noise level on non-match days (Historic data) at 90 m (dB L _{Aeq, 16hr})	52.1
Average daytime noise level on match days (Historic data) at 90 m (dB L _{Aeq, 16hr})	52.6
Football Match activity noise at 90 m (dB L _{Aeq, 16hr}) (i.e. non-match day noise subtracted)	42.4
Football Match activity noise at 70 m (dB L _{Aeq, 16hr}) (i.e. distance corrected from 90 m to 70 m)	44.6
Ambient Noise level along southern boundary of Proposed Development (MP3) (dB L _{Aeq, 16hr})	43.0
Predicted Combined Noise Level at nearest proposed dwelling (70 m) during match day (dB L _{Aeq, 16hr}) (i.e. Ambient Noise Level plus Football Match activity noise)	46.8

1.2.13 Based on the historic data, the predicted daytime noise level at the nearest proposed dwelling during match days at AFC Portchester is 46.8 dB L_{Aeq, 16hr}. This is below the WHO guideline noise level for external amenity areas of 50 dB L_{Aeq, 16hr} to avoid moderate annoyance, and therefore unlikely to cause significant effects during the daytime.

1.3 Night-time Noise Assessment

1.3.1 The club house at Portchester Football Club is governed by a planning condition which restricts operational activities to between 09:00 – 23:00 Monday – Sunday, and a condition stating the clubhouse should not be let out for private social functions, though it is understood that it is aspirational for private events to be held at the club in the future.

1.3.2 It has been assumed that the clubhouse is operating in line with their planning permission in which case no activities would take place at the club beyond 23:00 Monday through to Sunday.

1.3.3 However, a further night time assessment has been undertaken to understand should activities extend beyond these hours what the impact would be.

1.3.4 The closest proposed dwellings will be located approximately 170 m away from the clubhouse, while the closest existing noise sensitive receptor on Cranleigh Road is located approximately 290 m away. It should be noted that the majority of the proposed residential dwellings are located further away than existing residential receptors on Heritage Gardens and Cranleigh Road.

1.3.5 This difference in distance from the source equates to an increase in noise level from AFC Portchester activities at the proposed dwellings of up to 6 dB when compared to noise levels at existing residential receptors.

- 1.3.6 If required, mitigating this increase of 6 dB could be achieved through acoustic screening (e.g. acoustic barrier/earth bund at the site boundary), enhanced sound insulation and / or an alternative ventilation strategy at the affected dwellings.
- 1.3.7 Due to low baseline noise levels, it is assumed that standard double glazing such as 4/12/4 ($R_w + C_{tr}$ 27 dB) is installed at the residential properties on Cranleigh Road. Should any mitigation be required and chosen to be installed as enhanced sound insulation, examples of glazing that would provide +6 dB attenuation compared to 4/12/4 are presented in **Table 3**.

Table 3 Examples of enhanced glazing options

Glazing Type	Sound Insulation Performance (dB $R_w + C_{tr}$)
10/12/6	33 (+6 dB increase)
10/12/6.4	35 (+8 dB increase)
10/12/16 Acoustic Laminate	38 (+11 dB increase)

- 1.3.8 The glazing options above are listed as examples of enhanced sound insulation options to demonstrate the feasibility of controlling any increase in noise levels associated with AFC Portchester.
- 1.3.9 If required, specification of precise mitigation requirements should be based on updated survey data captured at the Proposed Development during typical operations of AFC Portchester. Should the development be granted permission, it is recommended that the site suitability assessment is updated during the Reserved Matters stage so that specific calculated assessment of the sound insulation for all elements of the building envelope can be completed based on detailed design proposals to demonstrate that the guideline internal noise levels can be met with the proposed design.

1.4 Conclusion

- 1.4.1 Based on historic data captured at a similarly sized football ground, the assessment indicates that during the daytime it is predicted that ambient noise levels over a 16-hour day will be lower than the WHO external amenity area guideline of 50 dB $L_{Aeq, 16hr}$ at the nearest proposed dwelling on both match days and non-match days. Therefore, it is considered unlikely that significant noise impacts will occur during the daytime at the Proposed Development.
- 1.4.2 There are no events currently taking place at night (23:00 – 07:00) at AFC Portchester in line with their operating conditions, therefore it can be assumed that future residents will not be exposed noise levels greater than those at existing residential receptors.
- 1.4.3 In summary, it is predicted that any noise impacts will be insignificant at the Proposed Development and that no noise restrictions will need to be imposed on the operations of the AFC Portchester Football Stadium under its current use.