

Technical Letter

Site Address:	Padel Court, Trowbridge Park, St Stephens Place, Trowbridge
Project Reference No:	NP-014576
Subject:	Technical Review of Padel Noise Impact Assessment
Client:	Trowbridge Town Council
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Introduction

NOVA Acoustics Ltd has been commissioned to prepare this Technical Note in relation to the proposed covered padel courts at Trowbridge Park, St Stephens Place, Trowbridge.

A noise impact assessment has previously been prepared by KP Acoustics Ltd, titled *Padel Court, Trowbridge Park, St Stephens Place Trowbridge – Planning Compliance Report*, report reference 30520.PCR.01 RevA, dated 29 May 2026. The report assesses the potential noise impact associated with the proposed padel court development, including environmental noise monitoring, 3D noise modelling, assessment of average and maximum padel activity noise levels, and acoustic mitigation measures.

Following concerns raised by Trowbridge Town Bowls Club, NOVA Acoustics Ltd has been asked to review the assessment approach adopted within the KP Acoustics report. This Technical Note does not comprise a full independent noise impact assessment or recalculation of the SoundPlan model. Instead, it reviews whether the methodology, receptor selection, criteria and mitigation assumptions are broadly consistent with the approach that NOVA Acoustics would typically adopt for this type of development.

This review has also been informed by the latest design information and visual material provided by the project team, including confirmation that additional glass screening is proposed where standard padel court construction would otherwise include mesh fencing. The conclusions of this Technical Note are therefore subject to the final design being constructed in accordance with the acoustic assumptions relied upon within the KP Acoustics assessment.

Existing Assessment Background

The KP Acoustics report considers 2no. covered padel courts within Trowbridge Park, arranged in an end-to-end configuration and located broadly parallel with the existing tennis courts. The assessed operational hours are 07:00 to 21:30 hours.

The assessment considers both average operational noise levels from padel activity, expressed as $L_{Aeq,T}$, and short-duration maximum events associated with racket-ball impacts, expressed as L_{Amax} , at the nearest residential receptors.

The environmental noise survey recorded, during the proposed operating hours, a residual sound level of 55dB $L_{Aeq,T}$, a representative background sound level of 48dB L_{A90} , and a median maximum sound level

of 55dB L_{Amax} . The assessment adopts design targets derived from Sport England AGP / WHO guidance and contextual noise change principles, including 50dB $L_{Aeq,1hr}$ at 1m from residential façades and a contextual 58dB L_{Amax} target for maximum padel noise events.

Review of Assessment Approach

The KP Acoustics report adopts assessment criteria based on Sport England AGP / WHO guidance, together with a contextual review of the existing measured noise climate. NOVA Acoustics would typically adopt a broadly similar approach, although the criteria would be presented slightly differently, with separate consideration of average L_{Aeq} noise levels and maximum L_{AFmax} racket-ball impacts.

For clarity, the criteria adopted within the KP Acoustics report and those typically adopted by NOVA Acoustics are summarised below.

Criteria adopted within the KP Acoustics report:

- **Average padel activity noise**
 - o **Residential façade criterion** - The predicted padel noise level should not exceed 50dB $L_{Aeq,1hr}$ at 1m from the nearest residential façade. This criterion is derived from Sport England AGP / WHO guidance and is based on achieving acceptable internal daytime noise levels with a partially open window.
 - o **Internal residential criterion** - The report also references an internal daytime criterion of 35dB L_{Aeq} within residential properties, presented with reference to WHO guidance and broadly consistent with BS8233:2014. Indicative internal levels are derived using an assumed partially open window attenuation, stated as 15dB in the criteria and later referred to as a typical 10–15 dB reduction.
 - o **Contextual change criterion** - The predicted padel noise level is reviewed against the measured residual sound level during the quietest hour of the proposed operating period, identified in the report as 51dB $L_{Aeq,1hr}$. The report uses this to demonstrate that padel activity would remain below the existing residual sound climate. This would ensure that the ambient level does not increase by more than 3dB due to padel activity.
- **Maximum padel noise events**
 - o **Contextual change criterion** - The predicted maximum noise levels from racket-ball impacts are reviewed against a contextual target of 58dB L_{Amax} . This target is based on the typical measured maximum noise climate during the proposed operating hours, with an allowance of approximately 0–3dB.

Criteria typically adopted by NOVA Acoustics:

- **Average padel activity noise**
 - o **Ambient change criterion** - The predicted L_{Aeq} level should not increase the existing ambient sound level, L_{Aeq} , by more than 3dB.
 - o **Background level criterion** - The predicted L_{Aeq} level should not exceed the representative background sound level, L_{A90} , by more than 5dB.

- **Maximum padel noise events**
 - o **Contextual criterion** - The predicted L_{AFmax} level from racket-ball impacts should not exceed the lowest typical existing ambient sound level, L_{Aeq} , by more than 5dB at the most affected receptor.
 - o **Absolute façade criterion** - The predicted L_{AFmax} level should not exceed approximately 58dB L_{AFmax} at the façades of the nearest residential receptors during daytime/evening operation. This is based on achieving an internal level of approximately 45dB L_{AFmax} , assuming around 13dB attenuation from a partially open window.

When the KP Acoustics results are reviewed against NOVA's typical criteria, the assessment remains broadly compliant.

Source levels used within the KP acoustic reports are approximately 88dB L_W (L_{Aeq}). NOVA typically adopt a level of 89dB L_W (L_{Aeq}). Again, this demonstrates consistency between the approaches to the assessment.

For **average padel activity noise**, the highest predicted level is 43 dB $L_{Aeq,1hr}$ at NSR2 and NSR5. This is below all relevant average noise criteria, including:

- 50 dB $L_{Aeq,1hr}$ residential façade criterion;
- 51 dB $L_{Aeq,1hr}$ quietest measured residual level during the proposed operating hours; and
- 48 dB $L_{A90} + 5$ dB background-based criterion.

Therefore, the average padel noise levels would comply with both the KP Acoustics criteria and the criteria typically adopted by NOVA Acoustics.

For **maximum racket-ball impacts**, the highest predicted level is 57dB L_{Amax} at NSR5. This is below the 58dB L_{Amax} façade criterion adopted by KP Acoustics and typically used by NOVA Acoustics.

When assessed against NOVA's most onerous contextual criterion (based on the quietest measured residual level of 51dB $L_{Aeq,1hr} + 5$ dB = 56dB) the predicted level would exceed the criterion by 1dB at NSR5 only. This is considered negligible, particularly as it is based on the quietest measured hour during the proposed operating period. When assessed against the average residual level during the proposed operating hours (55dB $L_{Aeq,T} + 5$ dB = 60dB) the predicted maximum level is 3dB below the criterion.

On this basis, while NOVA Acoustics would present the assessment criteria slightly differently, the assessment outcome would remain unchanged. The predicted average noise levels comply with the relevant criteria, and the predicted maximum racket-ball impact levels are acceptable in context.

Review of Bowling Club as a Receptor

A specific concern raised by Trowbridge Town Bowls Club relates to the fact that the bowling green has not been assessed as a formal noise-sensitive receptor.

In NOVA Acoustics' experience, padel court noise assessments are normally focused on residential receptors, where noise may affect internal living conditions, rest, residential amenity and private gardens. This is of particular concern during early morning or evening periods when residential sensitivity may be higher.

Non-residential outdoor recreational spaces, such as bowling greens, are not typically assessed as formal noise-sensitive receptors unless specifically requested by the Local Planning Authority or Environmental Health Officer. On this basis, the omission of the bowling club as a formal NSR is not considered unusual. The bowling club is an outdoor recreational use within an existing park and sports environment and does not have the same sensitivity as residential dwellings.

It is also relevant that the existing tennis courts are significantly closer to the bowling green than the proposed padel courts. The existing tennis courts operate in a fully open environment, whereas the proposed padel courts would be covered and enclosed with solid/glass elements, providing a greater degree of acoustic containment. Therefore, it is anticipated that noise from padel activity is not likely to present a higher risk to the bowling club than noise from the existing tennis courts.

Review of Mitigation and Design Assumptions

The principal technical caveat identified during NOVA's review relates to the assumed acoustic enclosure of the proposed padel courts.

The KP Acoustics report states that the lower elevations are to be formed by solid, imperforate tempered glass rebound walls to a minimum height of 3m, with a minimum surface density of 10kg/m². The report also states that these mitigation measures have been incorporated into the prediction calculations.

This assumption is acoustically important. Standard padel court construction does not comprise a fully solid glass wall around the entire court perimeter. Instead, padel courts include sections of glass and sections of metal mesh fencing. Metal mesh fencing should not be assumed to provide meaningful acoustic screening.

NOVA understands from the project team that the mesh sections are proposed to be covered externally with glass screening. This is acceptable in principle, provided the final glass envelope is continuous, imperforate and free from holes or gaps.

Particular care will be required where the external glass screen is set back from the court perimeter, as this could create gaps or open returns between the padel court structure and the external glass screening. Any such gaps, open corners, unsealed junctions or door openings could reduce the acoustic effectiveness of the mitigation and result in higher noise levels than predicted.

Therefore, the conclusions of the existing assessment should be considered dependent on the following design requirements:

- the lower court elevations should be enclosed by a continuous solid/glass screen to a minimum height of 3m;
- any mesh sections should be covered with external glass or an acoustically equivalent imperforate screen;
- the screening should be continuous and free from holes, gaps or open acoustic paths;
- set-back screening should be detailed to avoid gaps between the court and the screen;
- particular attention should be given to corners, doors, junctions, returns and interfaces with the roof/upper cladding; and
- metal mesh fencing should not be relied upon as acoustic screening.

Conclusion

NOVA Acoustics Ltd has reviewed the Noise Impact Assessment prepared by KP Acoustics Ltd for the proposed covered padel courts at Trowbridge Park, report reference 30520.PCR.01 RevA, dated 29 May 2026.

The overall assessment methodology is considered broadly consistent with the approach NOVA Acoustics would typically adopt for a padel court development. The assessment considers residential receptors, measured baseline noise data, 3D noise modelling, and both average L_{Aeq} noise levels and maximum L_{Amax} racket-ball impact events.

Although NOVA Acoustics would present the assessment criteria slightly differently, the assessment outcome remains acceptable. The highest predicted average padel activity noise level is 43dB $L_{Aeq,1hr}$, which is below the relevant façade, residual and background-based criteria. The highest predicted maximum level is 57dB L_{Amax} at NSR5, which is below the 58dB L_{Amax} façade criterion. When compared against NOVA's most onerous quietest-hour contextual criterion, this would result in a marginal 1dB exceedance at NSR5 only, which is considered negligible in context.

The omission of Trowbridge Town Bowls Club as a formal noise-sensitive receptor is not considered unusual, as padel court assessments are normally focused on residential receptors unless otherwise requested by the Local Planning Authority or Environmental Health Officer. The bowling green is an outdoor recreational use within an existing park/sports environment and is not considered to have the same sensitivity as residential dwellings. The bowling green is also adjacent to existing tennis courts, of which activity emanating from the courts is likely audible.

The key caveat is that the predicted noise levels rely on the proposed courts being constructed in accordance with the mitigation assumptions adopted in the KP Acoustics report. The lower elevations should therefore comprise a continuous, imperforate glass or equivalent solid screen to a minimum height of 3m, with any mesh sections covered externally and no holes, gaps, open returns or discontinuities.

Subject to these design requirements being secured and implemented, the conclusions of the KP Acoustics assessment are considered reasonable from an acoustic perspective.

DOCUMENT END

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