

TECHNICAL NOTE

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To	From
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Subject

Confirmation of assessment procedure following comments

1 Purpose and Scope

Clement Acoustics have undertaken noise impact assessments for proposed additional tennis courts and addition of a new Padel court at the existing tennis club The Northern, West Didsbury, Manchester.

A 3rd party review of the assessments has been undertaken by JSP Consultants [JSP], with certain comments made in their report RPT1584.

This document has been considered and certain responses and clarifications are provided in this Technical Note accordingly.

2 Consideration of Comments

In order to summarise our responses and clarifications as succinctly as possible, four main areas have been considered as follows:

- The basis of the assessments and standards used,
- Noise sources used in the assessment,
- Comparison of earlier and latest assessments,
- Summary of our findings.

It should be noted that the comments in report RPT1584 appear to be primarily in consideration of the Padel court assessment. This Technical Note therefore also similarly has the same main focus, i.e. assessments described in report 16764-NIA-02 (RevA, RevB and RevC).



2.1 Basis of the Assessments

As stated in report 16764-NIA-02 RevC, British Standard 4142:2014 +A1:2019 '*Methods for rating and assessing industrial and commercial sound*' [BS 4142] was considered as a possible assessment method for determining the acceptability of anticipated noise levels on the closest receptors. However, as also stated, BS 4142 precludes itself from such an assessment in Paragraph 1.3, where it lists types of noise source that it is not intended to be used for.

Consideration was therefore given to alternative assessment methodologies more suited to the nature of proposed activities. The most applicable assessment method was found in 'Artificial Grass Pitches (AGP Acoustics – Planning Implications)' [AGP] issued by Sport England. Although the courts are not strictly AGPs, the nature of sound source is inherently similar to the source covered by the AGP scope, being a competitive sporting activity using a ball.

As stated in 16764-NIA-02 RevC, the criteria proposed in the AGP document can also be related back to World Health Organisation 'Guidelines for Community Noise' [WHO] and can be shown to be comparable to recommended guidance in British Standard 8233: 2014 '*Guidance on sound insulation and noise reduction for buildings*'.

In summary, it can be clearly demonstrated the BS 4142 must not be used for an assessment of this nature. Further, to ensure applications can be considered fairly regardless of where they are and which Local Authority is making the assessment, relevant guidance must be found and applied as intended. This is the approach taken by adopting the AGP document.

RPT1584 indicates that comparison with the background noise must be undertaken. However, the adopted assessment methodology according to AGP does not require this. There is no justification for arbitrarily including a background noise comparison (this is typically done when assessing to BS 4142, but as stated above, this standard cannot be applied).

2.2 Noise Sources Used

As stated in 16764-NIA-02 RevC, the latest assessment includes attended measurements of a Padel court match at an existing site. Report RT1584 confirms that this approach is preferred, and also indicates that the measured levels are comparable to similar levels previously obtained through JSP's own measurements.

RT1584 makes two observations that the assessment should consider (a) impact noise, and (b) maximum noise levels.

Impact noise corrections are typically a factor of BS 4142 assessments, which it has been established cannot be applied. Further, AGP includes hockey as one sport that AGP was designed to consider, which includes high-impact strikes (stick to ball, ball to fence, ball to back boards) using a much harder and faster moving ball than is used in Padel tennis. The AGP standard does not indicate any penalties for impact noise.

Similarly, maximum noise levels are not a consideration of AGP, with assessments based on a 1-hour ambient noise level. Further, even standards that do consider maximum noise levels (e.g. WHO) only apply assessment criteria to night-time activities. With Padel courts only in use as late as 22:00, there is no justification for an assessment of maximum noise levels.

Finally, RT1584 states:

"...it is assumed that a point noise source has been adopted, together with a distance conversion such as the 10 log d1/d2 relationship or the 20 log d1/d2 relationship, where d1 is the source noise distance and d2 is the reception point distance. As noted previously, this approach assumes that the source of noise is located at the edge of the court, or in the centre of the court, and also means that any error in distance d1 will produce large errors in the predicted noise level at distance d2."

This is incorrect. As shown in Figures 6.2 and 7.1, the Padel courts are modelled as area sources. The noise source was input using the measurement data and calibrated to a receiver position 4 m from the side of the court. Noise reduction due to propagation over distance is therefore less than it would be for a point source and is an accurate way to predict noise breakout from the court area. This is particularly robust as no reductions due to the canopy or screens is applied in any direction.

2.3 Comparison of Earlier and Latest Assessments

RT1584 states:

"A major difference between the latest Clement Acoustics report and the first report, is that a 2m high acoustic fence has now been included in the CadnaA predictions. This inclusion suggests that the consultant is not happy about his previous conclusions regarding the acceptability of 2 new padel tennis courts at West Didsbury."

This is again incorrect. The difference between the two reports is the location of the barrier. As stated in Section 6.2 of report 16764-NIA-02, *"it is understood that rear gardens to houses on Elm Road, including 31 Elm Road, currently have solid timber fences, of minimum height 2 m, which would provide screening"* and in Section 6.3 *"Garden fences are present, at the site boundaries described in Section 6.2; Height of the existing fences is 2 m"*.

The assumed screen around the boundary of 31 Elm Road is also visible in Figure 6.1.

If the above was not the case, the applicant would have been required to install 2 m high screens themselves, around the boundary of the gardens. Following investigation works to determine if the boundaries were existing or would need installing, the following was discovered:

- Boundary fences were not existing as understood,
- It would not be possible to install boundary screens as shown, due the presence of large bushes along the boundary.

Following the above discoveries, discussions were had with the residents of 31 Elm Road (ground floor and first floor flats) and 33 Elm Road, and it was determined that, while the residents at 31 Elm Road would like screening to their boundary, the resident at 33 Elm Road would not. This formed the basis of the preferred mitigation strategy.

An alternative route for the screens was found in order to avoid the existing bushes, hence the change in screen location.

The difference between the two assessments is therefore boundary screens along the existing boundary lines, or a screen along a slightly different route to avoid bushes. This explains why the levels are so similar in the two assessments.

2.4 Summary

In summary, the assessments undertaken have been revised to consider changes to court layouts and available mitigation solutions. Revisions have also accounted following a possible site for attended measurements of Padel courts being found.

The assessments have sought assessment criteria that is applicable, relevant and fair. Standards have only been ruled out as un-applicable when this is inherently stated with the standard itself.

The assessment undertaken has made robust assumptions and demonstrates that, according to the guidance of the most clearly applicable standard, the recommended criteria can be met with mitigation as proposed.