BRAIDEN ACOUSTICS LTD

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BASELINE NOISE IMPACT ASSESSMENT

Prepared for : ET Planning Date : 10 Mar 2026

Site : Arkady Industrial Estate, Briscoe Lane, Newton Heath Report No. : 11468

1 INTRODUCTION

Braiden Acoustics has been commissioned by ET Planning to undertake an acoustic survey at the site of Arkady Industrial Estate, Briscoe Lane, Newton Heath in order to support a planning application for the conversion from light industrial use to a go-kart facility.

1.1 PLANNING APPLICATION

Planning application 123295/FO/2019 proposed "Erection of a light industrial and storage/distribution building (Sui Generis) (3251 sqm) with associated car parking and boundary treatment" and was approved 20th May 2020 with Conditions.

An Acoustic Survey was submitted to support the application, report number 10764, date 8th Sept 2019.

The industrial unit was subsequently built, as planned.

There is to be a new planning application, 144104/FO/2025, that proposes "Change of use from the existing warehouse building to an indoor electric go-karting track at 230A, 230B, and 234 Briscoe Lane, Newton Heath, Manchester, M40 2XG.

An invalidation letter, dated 17 November 2025, requested another Acoustic Study for this new application:

> *1) An acoustic study identifying ambient noise levels during daytime, night time and weekends along with details of the noise levels that are currently achieved within the accommodation at various times during operating hours. The study should identify the acoustic treatment and measures necessary to limit the breakout of noise in accordance with a noise study of the premises and a scheme of acoustic treatment.*
>
> *The scheme proposed shall include measures such as acoustic lobbies at access and egress points of the premises, acoustic treatment of the building structure, sound limiters linked to sound amplification equipment, details of the acoustic glazing and acoustically treated ventilation you have installed/propose to use and specified maximum internal noise levels.*

1.2 AIM

This is a desktop survey that will show that the site is far enough away from residential properties for there to be any issue of noise.

2 DESCRIPTION OF SITE

The site is a relatively newly constructed light industrial building with offices, located on Briscoe Lane in Newton Heath, Manchester.

Figure 1
Street View of site

2.1 SITE LOCATION AND NEIGHBOURING USES

The site is in the midst of an industrial area in Newton Heath, Manchester – as Figure 2 depicts. The site faces onto Briscoe Lane surrounding by other industrial uses. To the north is a railway line and to the south, on the other side of Briscoe Lane, is St Philips Park and Cemetery.

To the south west of the site, some 250m, is Philips Park Community Fire Station.

Figure 2
Site location and neighbouring uses showing distance to nearest residential dwellings

NB** It should be noted that the residential / industrial mix of the area has not changed since 2019

2.1.1 Nearest sensitive receivers

The nearest sensitive receivers are the residential dwellings on Bradford Road and Hulme Hall Road, approximately 350m south west from the site. Properties on Ten Acre Lane, to the north east (not shown in Figure 2) are too far away to be considered; being almost twice as far, some 670 metres in distance.

2.2 EXISTING USE

The site is now a newly constructed light industrial unit.

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Figure 3
Newly constructed industrial unit

2.3 PROPOSED USE

It is proposed to convert the new light industrial unit to a go-cart facility.

Figure 4
Proposed site layout

There is to be one large adult track with two smaller kids' tracks.

The entrance will be on Briscoe Lane leading into briefing rooms and toilets; above which, will be offices, storage and staff facilities.

There will be a car park on the north-eastern elevation.

2.3.1 Opening hours

The proposed opening hours are as follows:

Monday – Thursday	11:00 – 22:00,
Friday – Saturday	09:00 – 23:00,
Sunday	09:00 – 22:00.

3 ACOUSTIC CRITERIA AND METHODOLOGY

This is a residential development that may be susceptible to environmental noise. Potential mitigation measures are determined by recommended indoor noise levels from BS 8233 "Sound insulation and noise reduction for buildings" [1] which, in turn, takes guidance from the research based World Health Organisation "Guidelines for Community Noise".

Noise level thresholds are usually given for the night-time – 2300-0700 hrs and day time – 0700-2300 hrs.

3.1 NATIONAL PLANNING POLICY FRAMEWORK (NPPF)

The National Planning Policy Framework is the current document for planning guidance. Paragraph 123 of the NPPF says that planning decisions should aim to:

- avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;
- mitigate and reduce to a minimum, other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;
- recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and
- identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

3.2 BS 8233: 2014

The British Standard BS 8233:2014 "Guidance on sound insulation and noise reduction for buildings" gives guidance on recommended indoor ambient noise levels for residential dwellings.

Room	Criterion	$L_{Aeq,T}$	
		night	day
Bedroom	Sleeping	30	35
Dining Room/Area	Dining	--	40
Living Room	Resting	--	35

Table 1
Recommending indoor ambient noise level thresholds from anonymous noise (taken from Table 4, BS 8233:2014)

NOTE 7 Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved.

Internal noise levels in habitable rooms are calculated using either the simple or rigorous method as described in Annex G in BS 8233:2104.

3.2.1 Noise levels in external living areas

For external living areas such as gardens and balconies, BS 8233:2014 § 7.7.3.2 recommends an upper limit of 55dB $L_{Aeq,day}$ although there is a caveat:

> *However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.*

3.2.2 Maximum noise levels

In the 2014 edition of the Standard, the criterion of 45dB L_{AFMax} inside bedrooms has been removed although there is Note 4:

> *NOTE 4 regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or LAmax,P depending on the character and number of events per night. Sporadic noise events could require separate values.*

The use of the phrases 'may be set' and 'could require' imply that this is a discretionary criterion.

3.3 BS 4142

BS 4142:1999 "Method for rating industrial noise affecting mixed residential and industrial areas" [2] assesses industrial noise with regards to nearby residential dwellings. The guidance is commonly used to compare the equivalent noise from an industrial source only (*specific noise level*), L_{Aeq}, to the background noise level, L_{A90}, at the nearest sensitive receptor (NSR).

This Standard has been recently updated, BS 4142:2014 "Methods for rating and assessing industrial and commercial sound" [3]. Whereas the old standard added 5dB 'penalty' to the Specific Noise Level (SNL) if the noise source has a 'character' that can draw attention that may be described as tonal, intermittent or impulsive, the new standard gives clearer guidance on noise 'character'. Furthermore, the previous Standard gave only one 5 dB penalty whereas the new Standard may not. When added to the specific noise level it forms the *rating level*. The new Standard gives the guidance for the following types of noise character:

> *Where appropriate, establish a rating penalty for sound based on a subjective assessment of its characteristics. This would also be appropriate where a new source cannot be measured because it is only proposed at that time, but the characteristics of similar sources can subjectively be assessed.*
>
> *Correct the specific sound level if a tone, impulse or other characteristic occurs, or is expected to be present, for new or modified sound sources.*
>
> *NOTE 1 The prominence of tonal or impulsive sound from a source can be masked by residual sound. In many cases the amount of masking varies as the residual sound changes in level and possibly character. The source's tonal and/or impulsive characteristics could also vary with time.*
>
> *Consider the subjective prominence of the character of the specific sound at the noise-sensitive locations and the extent to which such acoustically distinguishing characteristics will attract attention.*
>
> *Tonality*
>
> *For sound ranging from not tonal to prominently tonal the Joint Nordic Method gives a correction of between 0 dB and +6 dB for tonality. Subjectively, this can be converted to a penalty of 2 dB for a tone which is just perceptible at the noise receptor, 4 dB where it is clearly perceptible and 6 dB where it is highly perceptible.*
>
> *Impulsivity*

A correction of up to +9 dB can be applied for sound that is highly impulsive, considering both the rapidity of the change in sound level and the overall change in sound level. Subjectively, this can be converted to a penalty of 3 dB for impulsivity which is just perceptible at the noise receptor, 6 dB where it is clearly perceptible and 9 dB where it is highly perceptible.

Other sound characteristics

Where the specific sound features characteristics that are neither tonal nor impulsive, though otherwise are readily distinctive against the residual acoustic environment, a penalty of 3 dB can be applied.

NOTE 2 Where tonal and impulsive characteristics are present in the specific sound within the same reference period then these two corrections can both be taken into account. If one feature is dominant then it might be appropriate to apply a single correction. Where both features are likely to affect perception and response, the corrections ought normally to be added in a linear fashion.

Intermittency

When the specific sound has identifiable on/off conditions, the specific sound level ought to be representative of the time period of length equal to the reference time interval which contains the greatest total amount of on time. This can necessitate measuring the specific sound over a number of shorter sampling periods that are in combination less than the reference time interval in total, and then calculating the specific sound level for the reference time interval allowing for time when the specific sound is not present. If the intermittency is readily distinctive against the residual acoustic environment, a penalty of 3 dB can be applied.

Once a penalty for noise character is added to the Specific Noise Level then this is termed the *Rating Level*.

The background level is then compared to the rating level. It is usual that the rating level due to the source should be below the background noise level at the nearest sensitive receptor; indeed BS 4142 states:

"The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context."

3.4 COUNCIL CRITERIA

It is usual that Councils adhere to noise levels given in BS 8233.

L_{Aeq} 35 dB 16 hours – indoors, daytime (07.00-23.00)

L_{Aeq} 30 dB 8 hours – indoors, night-time (23.00-07.00)

L_{Aeq} 55 dB 16 hours – outdoors, daytime (07.00-23.00)

4 ACOUSTIC ASSESSMENT

The distance to the nearest dwellings is known, as well as the fact there is no direct line of sight to the nearest resident; hence a barrier effect.

A starting point for a basic assessment can be that the noise level in a living room (as the facility will only operate during daytime hours – see Section 2.3.1) should be 35dB(A) according to BS8233. It is then possible to work backwards to see what the upper noise limit of the EXTERNAL noise at the site should be.

BS8233	Value	dB
Noise level in lounge		35
Open window		12
Distance	350	51
Barrier		10
Site (External) Noise Limit		**108**

Figure 5
BS8233 assessment

If it is assumed that an open window has attenuation of 12dB then Figure 5 shows that the potential upper EXTERNAL noise limit at the site is 108dB. This is far in excess of what would be expected from go kart facility. Upper Internal noise levels at this type of facility, worse case, would be 80 – 85 dB(A) with the external noise level obviously lower. Even assuming an external noise of 70 dB(A), then this is still far below the 108 dB limits.

in addition, the residents at Bradford Street / Hulme Hall Lane are at a large road junction with four lanes of traffic and the nearby fire station. Therefore, their local noise climate would dominate and any noise from the proposed industrial site would clearly be inaudible at this location.

5 Conclusion

A desktop acoustic survey has taken place at Arkady Industrial Estate, Briscoe Lane, Newton Heath to support a planning application for the erection of industrial dwellings.

It is clear, from even the most cursory of assessments, that any noise at the proposed site would be inaudible at the nearest resident.

6 References

[1] BS8233: 2014
Sound Insulation and noise reduction for buildings – Code of Practice,
British Standards Institute, 2014.

[2] BS 4142: 1997
Method for Rating industrial noise affecting mixed residential and industrial areas
British Standards Institute, 1997.

[3] BS 4142: 2014
Methods for rating and assessing industrial and commercial sound
British Standards Institute, 2014.

Appendix

A1 PROPOSED SITE LAYOUT

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