SKYLINE PLUS LTD

CONTROL OF NOISE FOR MIXED-USE COMMERCIAL AND RESIDENTIAL DEVELOPMENT IN KIRKBY, MERSEYSIDE

REFERENCE: 25/00489/FUL

LOCATION: LAND TO THE REAR OF SHOPS, GLOVERS BROW, KIRKBY

Introduction

A Control of Noise Assessment (CNA) has been carried out as an essential process to assess and mitigate the potential impact of railway noise on the residential and commercial tenants who would occupy our proposed development.

Noise from railway operations, such as trains, can adversely affect a tenant's health and well-being, and in some cases, may violate local planning and noise regulations. To effectively assess and manage this risk we have taken the following steps:

- Preliminary Information Gathering
- Define Noise Criteria & Thresholds
- Noise Measurement
- Assessment of Noise Impact
- Assessment of Mitigation Strategies

Preliminary Information Gathering *Identify*

the Source of Noise:

We have assessed the specific railway infrastructure causing the noise. This took into consideration the type of trains (freight, passenger), frequency of train movements, train speeds, and the operational characteristics of the railway (e.g. signalling, brakes, crossings).

Site surveillance has confirmed that the only related noise is caused by the passing of the trains themselves, as opposed to any crossing, signalling or other rail-related infrastructure.

Existing Noise Data:

We were unable to obtain existing information from previous studies and so have obtained our own data regarding current noise levels by carrying out our own noise study using calibrated Sound Level Meters. Monitoring has been carried out to assess the extent of noise created by the train passings.

Readings have been gathered both by the trackside and at the nearest point that the building will be.

Distance and Location of Residential & Commercial Units:

We have identified the proximity of the railway line to existing or proposed dwellings. We have mapped out the location of the proposed structure to help assess the likely noise impact from different train movements along the line.

Define Noise Criteria & Thresholds

We have used the Noise Insulation (Railways) Regulation 1996 and the World Health Organisation (WHO) Guidelines to guide our assessment.

Thresholds for Acceptable Noise:

Daytime (07:00 - 23:00):	WHO recommends a target of 55-65 dB LAeq (average equivalent continuous sound level) for daytime residential environments.
Nighttime (23:00 - 07:00):	WHO recommends 45-50 dB LAeq for nighttime environments to prevent sleep disturbance.
Peak Noise (LAFmax):	Consider the maximum instantaneous sound level (e.g., 70 dB LAFmax at night can cause sleep disturbance).

Train-Related Noise Parameters:

Specific to railway noise, our focus is on:

Lmax:	Maximum noise level during a train pass.
LAeq:	The equivalent continuous sound level over a period, typically an hour, to evaluate long-term noise exposure.

Frequency of train movements: The number of train passages per day and night.

Noise Measurements

Name: Trackside - Land at Rear of Glovers Brow Shops (Reading 1)

Duration: 22h:25m

Start Time: Apr 3, 2025 - 3:35 pm

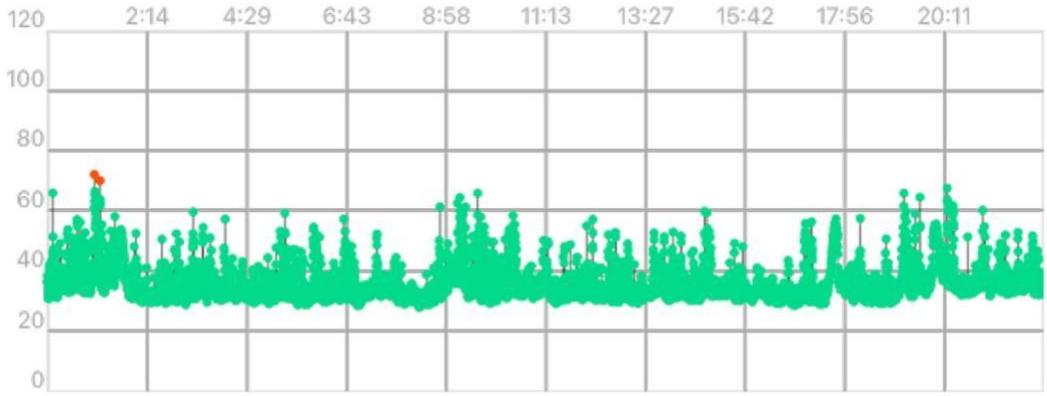
Location: Proposed Development Site - Rear of Glovers Brow Shops

Measurement configurations

Frequency weighting	A
Response time	Fast (0.2s)
Calibration	+0.0 dB
Avg/Leq	44.9 dB
Min	28.1 dB
Max	72.3 dB
Peak	80.5 dB

Measurement results

Standard	NIOSH
Threshold	70 dB
Exchange rate	3 dB
TWA	0.0 dB
Dose	0.0 %
Projected dose	0.0 %



Name: Middle of Plot - Land at Rear of Glovers Brow Shops (Reading 2)

Duration: 4h:28m

Start Time: Apr 3, 2025 - 3:53 pm

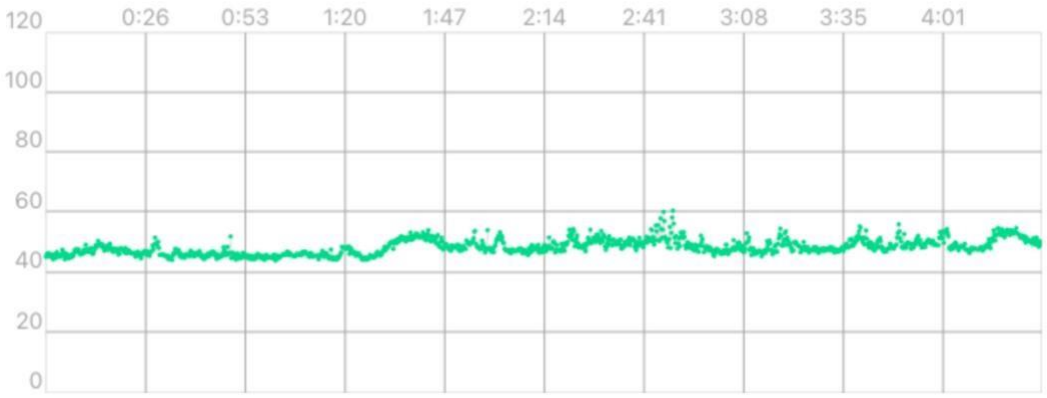
Location: Proposed Development Site - Rear of Glovers Brow Shops

Measurement configurations

Frequency weighting	A
Response time	Fast (0.2s)
Calibration	+0.0 dB
Avg/Leq	49.4 dB
Min	44.1 dB
Max	60.7 dB
Peak	67.2 dB

Measurement results

Standard	NIOSH
Threshold	70 dB
Exchange rate	3 dB
TWA	0.0 dB
Dose	0.0 %
Projected dose	0.0 %



Name: Middle of Plot - Land at Rear of Glovers Brow Shops (Reading 3)

Duration: 19h:33m

Start Time: Apr 4, 2025 - 4:12 am

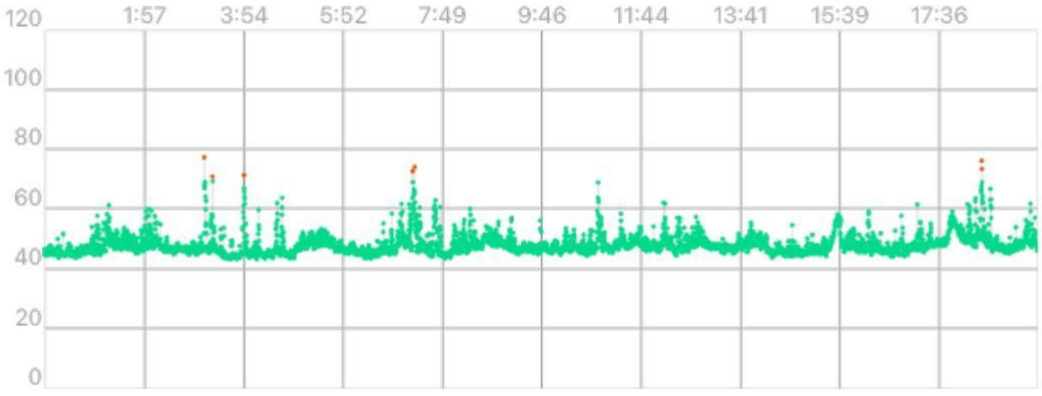
Location: Proposed Development Site - Rear of Glovers Brow Shops

Measurement configurations

Frequency weighting	A
Response time	Fast (0.2s)
Calibration	+0.0 dB
Avg/Leq	52.0 dB
Min	43.4 dB
Max	77.5 dB
Peak	83.0 dB

Measurement results

Standard	NIOSH
Threshold	70 dB
Exchange rate	3 dB
TWA	0.0 dB
Dose	0.0 %
Projected dose	0.0 %



Frequency of train movements:

Daytime train passes: 98

Nighttime train passes: 6

Assessment of Noise Impact

Our findings showed that the Merseyrail's fleet of fully electric trains presented no impact on the noise levels experienced in the area of the proposed development.

At trackside, there was an average increase of circa 7.4dB when trains passed, an increase that had fully dissipated before reaching the area of proposed development.

Ambient noise at the trackside was reported to be significantly lower than the ambient noise at the proposed development area, proving that the passing trains will have zero impact on the tenants in the residential and commercial elements of our proposed development.

Investigation into Mitigation Strategies

Whilst the railway, trains and the rail infrastructure were proven to have no effect on the noise at the proposed development, we have considered the following strategies to mitigating excess noise from the shops, car park and surrounding area:

Sound Insulation: We will consider the sound insulation of our building by using materials that reduce the transmission of noise, such as double-glazed windows, soundproofing in walls and ceilings, and acoustic insulation in floors.

Acoustic Fencing or Walls: We will consider installing noise barriers such as acoustic fences around the perimeter of our development to reduce the amount of noise reaching the building.

Conclusion

We have carried out a Control of Noise Assessment to protect residential and commercial tenants from the noise of a nearby railway via noise measurement and the consideration of the application of mitigation strategies.

Our assessment concludes that the noise generated from the railway will not impact our tenants, however, we are proposing to add an extra layer of protection to mitigate any risk by ensuring materials used have good acoustic properties and that windows are double-glazed. These mitigating strategies will ensure that our tenant's are protected from excessive noise from the surrounding area and its associated negative effects on health and quality of life.