



KASA CONVENIENCE STORES

278A BELLE ISLE ROAD, LEEDS

NOISE ASSESSMENT

2 August 2023

AEC REPORT: P4988/R01/WJK


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DOCUMENT STATUS

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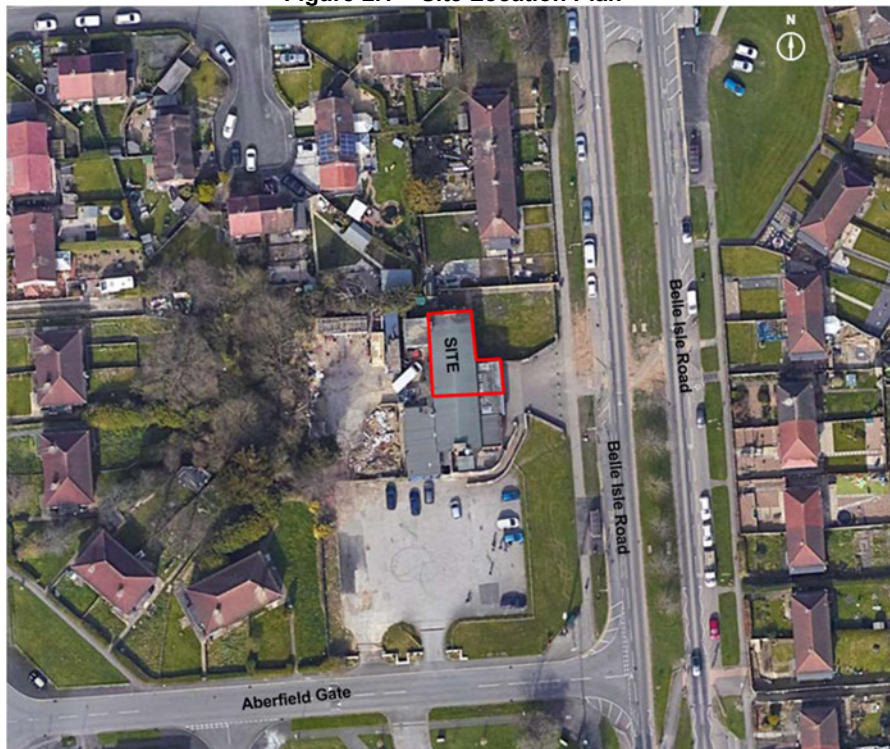
1.0 INTRODUCTION

- 1.1 Acoustic & Engineering Consultants Limited (AEC) has been appointed by the proprietors of Kasa Convenience Stores, Leeds, to undertake a noise assessment as part of an application to extend the licensing hours currently permitted at the premises at 278A Belle Vue Road, Leeds.
- 1.2 This report provides details of the baseline noise survey undertaken and an assessment of the potential noise impact as a result of the extended opening hours.
- 1.3 Acoustic terminology used throughout the report is described in brief in Appendix A.

2.0 SITE AND ITS ENVIRONS

- 2.1 The premises is a convenience store located on Belle Isle Road, Leeds, within a residential area, adjoining a fast-food takeaway and betting shop directly to the south. Belle Isle Road is a relatively busy carriageway with cars and buses to and from Leeds city centre. The site was formerly occupied by a public house.
- 2.2 The nearest residential property to the premises is directly below the convenience store but under the same ownership. There are also residential properties on Belle Isle Road, approximately 25m to the north and 50m to the east, Aberfield Gate, 45m to the south west and Winrose Approach, 65m to the west. A location plan showing the site and surrounding area is provided on Figure 2.1 below.

Figure 2.1 – Site Location Plan



Imagery @2022 Google, Imagery @2023

- 2.3 The current permitted opening hours are 0700h to 2300h from Monday to Saturday and 0900h to 2300h on Sundays.
- 2.4 Leeds City Council's Environmental Action Service have provided the following in relation to the application:

We believe that the applicant has not given enough information about how they intend to meet a licensing objective, which is to prevent public nuisance. We therefore submit a formal objection to your application that includes information specifically associated with Kasa, 278 Belle Isle Road.

Conclusion:

The Environmental Protection Team are putting forward a qualified objection to this application, given the proximity of nearby residences, and the potential for noise from the 24-hour operation of this premises, which may affect nearby residences into the late hours, causing sleep loss and other loss of amenity. The Environmental Protection Team has considered the potential for noise from:

- *Voices of customers entering and exiting or gathering outside of the premises during the late hours. Customers purchasing alcohol late at night may already be intoxicated, decreasing self-control, and increasing the likelihood of raised voices.*
- *Noise from vehicles coming and going from the premises during the late hours, including noise from vehicles engines, car doors slamming, and music from vehicles.*
- *Noise from delivery vehicles and the loading/unloading of deliveries late at night or in the early hours of the morning.*

Having considered the application under the Licensing Act 2003 for the above premises, we consider that the following measures are relevant and reasonable in order to meet the following aim of the license: prevention of public nuisance.

1. Timing of licensable activities:

- *Sale by retail of alcohol (for consumption off the premises): 07:00 – 23:00, Monday to Sunday.*

2. Additional conditions:

We suggest that the following condition is added to the amended premises license:

- *There will be no deliveries to or from the premises between 22:00 and 07:30.*

- 2.5 In addition to the above, West Yorkshire Police have proposed the following measures with regard to meeting the licensing objective of the prevention of public nuisance.

There will be no admittance to the premises after 2300 hrs. The premises will use an external service window hatch after 2300 hrs to serve customers.

Customers shall be discouraged from drinking alcohol or congregating outside the premises.

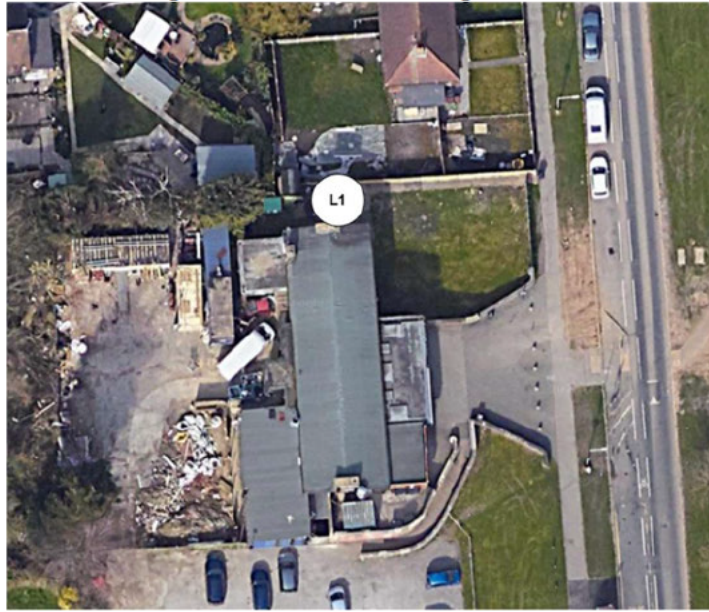
Licensing Act 2003

- 2.6 The guidance issued under Section 182 of the Licensing Act 2003 dated April 2018 is provided to licensing authorities in relation to the carrying out of their functions under the 2003 legislation in the promotion of the four licensing objectives.
- 2.7 The legislation supports a number of key aims and purposes relating to noise, including:
- *Protecting the public and local residents from crime, anti-social behaviour and noise nuisance caused by irresponsible licensed premises.*
 - *Recognising the important role which pubs and other licensed premises play in our local communities by minimising the regulatory burden on business, encouraging innovation and supporting responsible premises.*
- 2.8 The guidance offers a number of general principles in setting parameters within which premises can lawfully operate, including:
- *Must be precise and enforceable.*
 - *Must be tailored to the individual type, location and characteristics of the premises and events concerned.*
 - *Should be proportionate, justifiable and capable of being met.*
- 2.9 In addition to the above, the guidance states that:
- 'Each application must be considered on its own merits..... Conditions attached to licenses and certificates must be tailored to the individual type, location and characteristics of the premises and events concerned. This is essential to avoid the imposition of disproportionate and overly burdensome conditions on premises where there is no need for such conditions.'*

3.0 BASELINE NOISE SURVEY

- 3.1 An unattended baseline noise survey was undertaken by AEC from 2230h on Monday 24 to 1145h on Thursday 27 July 2023 at a location representative of the nearest residential property to the premises to include times that the premises is currently permitted to open and during the extended hours being applied for. The measurement location is shown as L1 on Figure 2.2 below.

Figure 2.2 – Noise Monitoring Location



- 3.2 All measurements were undertaken in general accordance with BS7445-1: 2003 'Description and measurement of environmental noise. Guide to quantities and procedures'. A full measurement procedure is presented in Appendix B.
- 3.3 The measured noise levels are presented in the following Table 3.1.

Table 3.1 – Measured Noise Levels

Date	Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
24/07/2023	23:00	00:15:00	54	54
24/07/2023	23:15	00:15:00	54	54
24/07/2023	23:30	00:15:00	54	54
24/07/2023	23:45	00:15:00	54	53
25/07/2023	00:00	00:15:00	53	53
25/07/2023	00:15	00:15:00	54	53
25/07/2023	00:30	00:15:00	54	53
25/07/2023	00:45	00:15:00	54	53
25/07/2023	01:00	00:15:00	54	53

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Date	Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
25/07/2023	01:15	00:15:00	53	53
25/07/2023	01:30	00:15:00	53	53
25/07/2023	01:45	00:15:00	53	53
25/07/2023	02:00	00:15:00	53	52
25/07/2023	02:15	00:15:00	53	52
25/07/2023	02:30	00:15:00	53	52
25/07/2023	02:45	00:15:00	52	52
25/07/2023	03:00	00:15:00	53	52
25/07/2023	03:15	00:15:00	53	52
25/07/2023	03:30	00:15:00	53	52
25/07/2023	03:45	00:15:00	53	52
25/07/2023	04:00	00:15:00	52	52
25/07/2023	04:15	00:15:00	53	52
25/07/2023	04:30	00:15:00	53	52
25/07/2023	04:45	00:15:00	53	52
25/07/2023	05:00	00:15:00	53	52
25/07/2023	05:15	00:15:00	53	53
25/07/2023	05:30	00:15:00	53	53
25/07/2023	05:45	00:15:00	53	53
25/07/2023	06:00	00:15:00	54	53
25/07/2023	06:15	00:15:00	54	53
25/07/2023	06:30	00:15:00	54	53
25/07/2023	06:45	00:15:00	54	53
Average			53	53
25/07/2023	07:00	00:15:00	54	53
25/07/2023	07:15	00:15:00	55	54
25/07/2023	07:30	00:15:00	55	54
25/07/2023	07:45	00:15:00	55	54
25/07/2023	08:00	00:15:00	55	54
25/07/2023	08:15	00:15:00	55	54
25/07/2023	08:30	00:15:00	55	54
25/07/2023	08:45	00:15:00	55	54
25/07/2023	09:00	00:15:00	55	54
25/07/2023	09:15	00:15:00	55	54
25/07/2023	09:30	00:15:00	56	54
25/07/2023	09:45	00:15:00	55	54
25/07/2023	10:00	00:15:00	54	54

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Date	Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
25/07/2023	10:15	00:15:00	55	54
25/07/2023	10:30	00:15:00	55	54
25/07/2023	10:45	00:15:00	55	54
25/07/2023	11:00	00:15:00	55	54
25/07/2023	11:15	00:15:00	55	54
25/07/2023	11:30	00:15:00	55	54
25/07/2023	11:45	00:15:00	55	54
25/07/2023	12:00	00:15:00	55	54
25/07/2023	12:15	00:15:00	54	54
25/07/2023	12:30	00:15:00	56	54
25/07/2023	12:45	00:15:00	55	54
25/07/2023	13:00	00:15:00	55	54
25/07/2023	13:15	00:15:00	56	54
25/07/2023	13:30	00:15:00	55	54
25/07/2023	13:45	00:15:00	55	54
25/07/2023	14:00	00:15:00	56	54
25/07/2023	14:15	00:15:00	55	54
25/07/2023	14:30	00:15:00	55	54
25/07/2023	14:45	00:15:00	56	54
25/07/2023	15:00	00:15:00	55	54
25/07/2023	15:15	00:15:00	57	54
25/07/2023	15:30	00:15:00	58	56
25/07/2023	15:45	00:15:00	56	55
25/07/2023	16:00	00:15:00	56	55
25/07/2023	16:15	00:15:00	56	55
25/07/2023	16:30	00:15:00	56	55
25/07/2023	16:45	00:15:00	56	56
25/07/2023	17:00	00:15:00	57	55
25/07/2023	17:15	00:15:00	57	55
25/07/2023	17:30	00:15:00	56	55
25/07/2023	17:45	00:15:00	56	55
25/07/2023	18:00	00:15:00	56	55
25/07/2023	18:15	00:15:00	56	55
25/07/2023	18:30	00:15:00	56	55
25/07/2023	18:45	00:15:00	57	56
25/07/2023	19:00	00:15:00	57	56
25/07/2023	19:15	00:15:00	56	56

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Date	Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
25/07/2023	19:30	00:15:00	56	56
25/07/2023	19:45	00:15:00	56	55
25/07/2023	20:00	00:15:00	56	55
25/07/2023	20:15	00:15:00	56	55
25/07/2023	20:30	00:15:00	56	55
25/07/2023	20:45	00:15:00	56	55
25/07/2023	21:00	00:15:00	56	55
25/07/2023	21:15	00:15:00	55	55
25/07/2023	21:30	00:15:00	55	55
25/07/2023	21:45	00:15:00	56	55
25/07/2023	22:00	00:15:00	55	55
25/07/2023	22:15	00:15:00	55	55
25/07/2023	22:30	00:15:00	56	55
25/07/2023	22:45	00:15:00	56	55
Average			56	54
25/07/2023	23:00	00:15:00	55	54
25/07/2023	23:15	00:15:00	55	54
25/07/2023	23:30	00:15:00	55	54
25/07/2023	23:45	00:15:00	54	54
26/07/2023	00:00	00:15:00	54	54
26/07/2023	00:15	00:15:00	54	54
26/07/2023	00:30	00:15:00	54	54
26/07/2023	00:45	00:15:00	54	54
26/07/2023	01:00	00:15:00	54	54
26/07/2023	01:15	00:15:00	54	54
26/07/2023	01:30	00:15:00	55	54
26/07/2023	01:45	00:15:00	54	54
26/07/2023	02:00	00:15:00	54	54
26/07/2023	02:15	00:15:00	54	54
26/07/2023	02:30	00:15:00	54	53
26/07/2023	02:45	00:15:00	54	53
26/07/2023	03:00	00:15:00	54	53
26/07/2023	03:15	00:15:00	54	53
26/07/2023	03:30	00:15:00	54	53
26/07/2023	03:45	00:15:00	54	53
26/07/2023	04:00	00:15:00	54	53
26/07/2023	04:15	00:15:00	54	53

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Date	Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
26/07/2023	04:30	00:15:00	54	53
26/07/2023	04:45	00:15:00	54	53
26/07/2023	05:00	00:15:00	54	53
26/07/2023	05:15	00:15:00	54	54
26/07/2023	05:30	00:15:00	55	53
26/07/2023	05:45	00:15:00	54	54
26/07/2023	06:00	00:15:00	55	54
26/07/2023	06:15	00:15:00	55	54
26/07/2023	06:30	00:15:00	55	54
26/07/2023	06:45	00:15:00	55	54
Average			54	54
26/07/2023	07:00	00:15:00	55	54
26/07/2023	07:15	00:15:00	55	54
26/07/2023	07:30	00:15:00	55	54
26/07/2023	07:45	00:15:00	55	54
26/07/2023	08:00	00:15:00	56	54
26/07/2023	08:15	00:15:00	56	54
26/07/2023	08:30	00:15:00	55	54
26/07/2023	08:45	00:15:00	55	54
26/07/2023	09:00	00:15:00	55	54
26/07/2023	09:15	00:15:00	55	54
26/07/2023	09:30	00:15:00	55	54
26/07/2023	09:45	00:15:00	55	54
26/07/2023	10:00	00:15:00	54	54
26/07/2023	10:15	00:15:00	54	54
26/07/2023	10:30	00:15:00	54	54
26/07/2023	10:45	00:15:00	54	53
26/07/2023	11:00	00:15:00	54	54
26/07/2023	11:15	00:15:00	55	54
26/07/2023	11:30	00:15:00	55	54
26/07/2023	11:45	00:15:00	56	54
26/07/2023	12:00	00:15:00	55	54
26/07/2023	12:15	00:15:00	55	54
26/07/2023	12:30	00:15:00	54	54
26/07/2023	12:45	00:15:00	54	53
26/07/2023	13:00	00:15:00	55	54
26/07/2023	13:15	00:15:00	55	54

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Date	Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
26/07/2023	13:30	00:15:00	55	54
26/07/2023	13:45	00:15:00	55	54
26/07/2023	14:00	00:15:00	56	54
26/07/2023	14:15	00:15:00	55	54
26/07/2023	14:30	00:15:00	58	54
26/07/2023	14:45	00:15:00	55	54
26/07/2023	15:00	00:15:00	55	54
26/07/2023	15:15	00:15:00	55	54
26/07/2023	15:30	00:15:00	56	54
26/07/2023	15:45	00:15:00	55	54
26/07/2023	16:00	00:15:00	56	54
26/07/2023	16:15	00:15:00	56	54
26/07/2023	16:30	00:15:00	55	55
26/07/2023	16:45	00:15:00	55	55
26/07/2023	17:00	00:15:00	59	55
26/07/2023	17:15	00:15:00	56	55
26/07/2023	17:30	00:15:00	57	55
26/07/2023	17:45	00:15:00	57	56
26/07/2023	18:00	00:15:00	58	57
26/07/2023	18:15	00:15:00	58	58
26/07/2023	18:30	00:15:00	58	58
26/07/2023	18:45	00:15:00	58	57
26/07/2023	19:00	00:15:00	58	57
26/07/2023	19:15	00:15:00	57	56
26/07/2023	19:30	00:15:00	57	57
26/07/2023	19:45	00:15:00	59	57
26/07/2023	20:00	00:15:00	58	58
26/07/2023	20:15	00:15:00	59	58
26/07/2023	20:30	00:15:00	58	58
26/07/2023	20:45	00:15:00	58	57
26/07/2023	21:00	00:15:00	58	58
26/07/2023	21:15	00:15:00	58	58
26/07/2023	21:30	00:15:00	58	58
26/07/2023	21:45	00:15:00	58	58
26/07/2023	22:00	00:15:00	58	58
26/07/2023	22:15	00:15:00	58	58
26/07/2023	22:30	00:15:00	58	58

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278A Belle Isle Road, Leeds – Noise Assessment

Date	Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
26/07/2023	22:45	00:15:00	58	56
Average			57	55
26/07/2023	23:00	00:15:00	58	54
26/07/2023	23:15	00:15:00	58	55
26/07/2023	23:30	00:15:00	58	57
26/07/2023	23:45	00:15:00	57	57
27/07/2023	00:00	00:15:00	57	57
27/07/2023	00:15	00:15:00	57	57
27/07/2023	00:30	00:15:00	57	57
27/07/2023	00:45	00:15:00	57	57
27/07/2023	01:00	00:15:00	57	56
27/07/2023	01:15	00:15:00	57	56
27/07/2023	01:30	00:15:00	57	56
27/07/2023	01:45	00:15:00	57	56
27/07/2023	02:00	00:15:00	57	56
27/07/2023	02:15	00:15:00	57	56
27/07/2023	02:30	00:15:00	57	56
27/07/2023	02:45	00:15:00	57	56
27/07/2023	03:00	00:15:00	56	56
27/07/2023	03:15	00:15:00	57	54
27/07/2023	03:30	00:15:00	59	54
27/07/2023	03:45	00:15:00	57	54
27/07/2023	04:00	00:15:00	56	54
27/07/2023	04:15	00:15:00	56	54
27/07/2023	04:30	00:15:00	57	54
27/07/2023	04:45	00:15:00	56	54
27/07/2023	05:00	00:15:00	56	54
27/07/2023	05:15	00:15:00	57	57
27/07/2023	05:30	00:15:00	57	56
27/07/2023	05:45	00:15:00	57	56
27/07/2023	06:00	00:15:00	57	54
27/07/2023	06:15	00:15:00	57	54
27/07/2023	06:30	00:15:00	56	54
27/07/2023	06:45	00:15:00	57	54
Average			57	55
27/07/2023	07:00	00:15:00	57	54
27/07/2023	07:15	00:15:00	56	54

Date	Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
27/07/2023	07:30	00:15:00	57	54
27/07/2023	07:45	00:15:00	57	56
27/07/2023	08:00	00:15:00	56	55
27/07/2023	08:15	00:15:00	55	54
27/07/2023	08:30	00:15:00	54	54
27/07/2023	08:45	00:15:00	54	53
27/07/2023	09:00	00:15:00	54	53
27/07/2023	09:15	00:15:00	54	53
27/07/2023	09:30	00:15:00	54	53
27/07/2023	09:45	00:15:00	54	53
27/07/2023	10:00	00:15:00	53	53
27/07/2023	10:15	00:15:00	54	53
27/07/2023	10:30	00:15:00	54	53
27/07/2023	10:45	00:15:00	53	53
27/07/2023	11:00	00:15:00	54	53
27/07/2023	11:15	00:15:00	53	53
27/07/2023	11:30	00:15:00	54	53
Average			55	53

- 3.4 The dominant noise sources were observed to be from road traffic along Belle Isle Road and the existing external mechanical plant associated with the takeaway and the convenience store on the rear elevation of the building which remained on throughout the survey.
- 3.5 A comparison of the ambient and background noise levels during the periods after the convenience store closed and prior to opening is shown in the following Tables 3.2 and 3.3. The times when the store was open are shown in bold.

Table 3.2 – Measured Noise Levels During Period After Store Closed

Date	Start Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
24/07/2023	22:30	00:15:00	55	55
24/07/2023	22:45	00:15:00	55	54
24/07/2023	23:00	00:15:00	54	54
24/07/2023	23:15	00:15:00	54	54
24/07/2023	23:30	00:15:00	54	54
24/07/2023	23:45	00:15:00	54	53
25/07/2023	00:00	00:15:00	53	53
25/07/2023	00:15	00:15:00	54	53
25/07/2023	00:30	00:15:00	54	53

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Date	Start Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
25/07/2023	00:45	00:15:00	54	53
25/07/2023	21:00	00:15:00	56	55
25/07/2023	21:15	00:15:00	55	55
25/07/2023	21:30	00:15:00	55	55
25/07/2023	21:45	00:15:00	56	55
25/07/2023	22:00	00:15:00	55	55
25/07/2023	22:15	00:15:00	55	55
25/07/2023	22:30	00:15:00	56	55
25/07/2023	22:45	00:15:00	56	55
25/07/2023	23:00	00:15:00	55	54
25/07/2023	23:15	00:15:00	55	54
25/07/2023	23:30	00:15:00	55	54
25/07/2023	23:45	00:15:00	54	54
26/07/2023	00:00	00:15:00	54	54
26/07/2023	00:15	00:15:00	54	54
26/07/2023	00:30	00:15:00	54	54
26/07/2023	00:45	00:15:00	54	54
26/07/2023	21:00	00:15:00	58	58
26/07/2023	21:15	00:15:00	58	58
26/07/2023	21:30	00:15:00	58	58
26/07/2023	21:45	00:15:00	58	58
26/07/2023	22:00	00:15:00	58	58
26/07/2023	22:15	00:15:00	58	58
26/07/2023	22:30	00:15:00	58	58
26/07/2023	22:45	00:15:00	58	56
26/07/2023	23:00	00:15:00	58	54
26/07/2023	23:15	00:15:00	58	55
26/07/2023	23:30	00:15:00	58	57
26/07/2023	23:45	00:15:00	57	57
27/07/2023	00:00	00:15:00	57	57
27/07/2023	00:15	00:15:00	57	57
27/07/2023	00:30	00:15:00	57	57
27/07/2023	00:45	00:15:00	57	57

Table 3.3 – Measured Noise Levels During Period Prior to Store Opening

Date	Start Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
25/07/2023	05:00	00:15:00	53	52
25/07/2023	05:15	00:15:00	53	53
25/07/2023	05:30	00:15:00	53	53
25/07/2023	05:45	00:15:00	53	53
25/07/2023	06:00	00:15:00	54	53
25/07/2023	06:15	00:15:00	54	53
25/07/2023	06:30	00:15:00	54	53
25/07/2023	06:45	00:15:00	54	53
25/07/2023	07:00	00:15:00	54	53
25/07/2023	07:15	00:15:00	55	54
25/07/2023	07:30	00:15:00	55	54
25/07/2023	07:45	00:15:00	55	54
25/07/2023	08:00	00:15:00	55	54
25/07/2023	08:15	00:15:00	55	54
25/07/2023	08:30	00:15:00	55	54
25/07/2023	08:45	00:15:00	55	54
26/07/2023	05:00	00:15:00	54	53
26/07/2023	05:15	00:15:00	54	54
26/07/2023	05:30	00:15:00	55	53
26/07/2023	05:45	00:15:00	54	54
26/07/2023	06:00	00:15:00	55	54
26/07/2023	06:15	00:15:00	55	54
26/07/2023	06:30	00:15:00	55	54
26/07/2023	06:45	00:15:00	55	54
26/07/2023	07:00	00:15:00	55	54
26/07/2023	07:15	00:15:00	55	54
26/07/2023	07:30	00:15:00	55	54
26/07/2023	07:45	00:15:00	55	54
26/07/2023	08:00	00:15:00	56	54
26/07/2023	08:15	00:15:00	56	54
26/07/2023	08:30	00:15:00	55	54
26/07/2023	08:45	00:15:00	55	54
27/07/2023	05:00	00:15:00	56	54
27/07/2023	05:15	00:15:00	57	57
27/07/2023	05:30	00:15:00	57	56
27/07/2023	05:45	00:15:00	57	56

Date	Start Time	Duration	Noise Level	
			Ambient dBL _{Aeq}	Background dBL _{A90}
27/07/2023	06:00	00:15:00	57	54
27/07/2023	06:15	00:15:00	57	54
27/07/2023	06:30	00:15:00	56	54
27/07/2023	06:45	00:15:00	57	54
27/07/2023	07:00	00:15:00	57	54
27/07/2023	07:15	00:15:00	56	54
27/07/2023	07:30	00:15:00	57	54
27/07/2023	07:45	00:15:00	57	56
27/07/2023	08:00	00:15:00	56	55
27/07/2023	08:15	00:15:00	55	54
27/07/2023	08:30	00:15:00	54	54
27/07/2023	08:45	00:15:00	54	53

- 3.6 On the evening of 24 July 2023 between 2230 and 2300h, it was observed that there were 2 groups, each of around 5 people outside the takeaway and outside the convenience store conversing at low level.

External Customer Noise

- 3.7 The potential noise levels from customers outside the premises have been determined using the data and concept of group size presented in the J.H. Rindel, C.I Christensen, A.C. Grade research paper: ‘*Dynamic sound source for simulating the Lombard effect in room acoustic modelling software*’ (Proceedings of Inter-Noise 2012, New York, USA, (2012)).
- 3.8 The sound power level of a person speaking in a *raised voice* is equal to approximately 76dBL_{WA} (ref. ANSI 3.5). Based on the above observations, the predicted noise levels are based on 2 groups of 4 people leaving the premises simultaneously.
- 3.9 Based on the above observations and given that customers will be actively discouraged from congregating outside the premises in accordance with the measures proposed by West Yorkshire Police, it would be reasonable to assume that there would be no more than 10 customers outside the store as a worst-case. The number of speaking persons (NS) at any one time, where N is the total number of persons (10) and G is the assumed group size (in this case 5 people per group) is obtained as follows:

$$\text{Number of speaking persons (NS)} = N/G$$

- 3.10 In this scenario, this equates to 2 people speaking. Taking into account the number of people speaking and the sound power level of raised conversation (76dBL_{WA}) the resultant sound power level would be around 79dBL_{WA}.
- 3.11 Based on a sound power level of 79dBL_{WA} and distance attenuation, the ambient noise level external to the nearest proposed residential properties would be around 53dBL_{Aeq,T} at the nearest noise sensitive property owned by the store owners and 43dBL_{Aeq,T} at the next nearest residential properties on Belle Isle Road.

Noise Associated with Vehicles

- 3.12 Whilst there is no specific guidance in relation to the assessment of noise associated with road vehicles due to the minimal increase in the potential numbers and the difficulties in distinguishing the source noise specifically associated with the premises and from someone arriving home late from work for example, maximum noise levels associated with cars arriving to and leaving the premises have been considered.
- 3.13 In relation to maximum noise levels in bedrooms during the night-time period, Note 4 of The Association of Noise Consultants (ANC) document Professional Practice Guidance (ProPG) on Planning and Noise 'New Residential Development' (2017). states that "*Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. In most circumstances in noise sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45dBL_{Amax} more than 10 times a night.*"
- 3.14 The following Table 3.4 shows the predicted external and internal maximum noise levels at the nearest noise sensitive properties from activities associated with vehicles visiting the premises and assumes that a partially open window provides 15dB attenuation. The source noise levels are based on noise levels previously measured by AEC with the exception of a car idling which is based on the noise limit provided for new cars in accordance with the Vehicle Certification Industry.

Table 3.4 – Predicted Internal & External Maximum Noise Levels

Source	Source Level, dBL _{Amax}	Reference Distance, m	Approximate Distance to Closest Receiver, m	Distance Attenuation, m	Predicted External Level, dBL _{Amax}	Predicted Internal Level, dBL _{Amax}
Car Door Slamming	69	4	25	-16	53	38
Car Start-up	62	10	25	-8	54	39
Car Idling	72	1	25	-28	44	29

4.0 ASSESSMENT

Baseline Noise Levels

- 4.1 The noise levels measured during the baseline noise survey demonstrates that there was not a significant reduction in ambient or background noise levels prior to the premises opening and after it closed. Noise from the premises was not audible at the nearest noise sensitive property when it was open.

External Patron Noise

- 4.2 The calculated noise levels from patrons outside the premises based on 2 people speaking with raised voices would be no greater than the prevailing background noise level measured at the nearest noise sensitive property below the premises. At the noise sensitive properties on Belle Isle Road, the calculated noise level is around 10dB below the measured background noise level. This would equate to an inaudible condition outside the property.

Noise Associated with Vehicles

- 4.3 The calculated maximum noise levels associated with vehicles arriving and departing from the premises are significantly below those recommended in noise sensitive rooms during the night-time period.

5.0 SUMMARY AND CONCLUSION

- 5.1 Acoustic & Engineering Consultants Limited (AEC) has undertaken an assessment of the potential noise impact as a result for an application to extend the opening hours of the Kasa Convenience Store premises at 278A Belle Vue Road, Leeds.
- 5.2 The assessment is based on a combination of a comparison of noise levels measured during a baseline noise survey when the premises was open and closed and supported by calculated noise levels from customers in external areas.
- 5.3 The baseline noise survey and calculations demonstrate that there would be no adverse noise impact resulting from the extended opening hours.

APPENDIX A – Acoustic Terminology in Brief

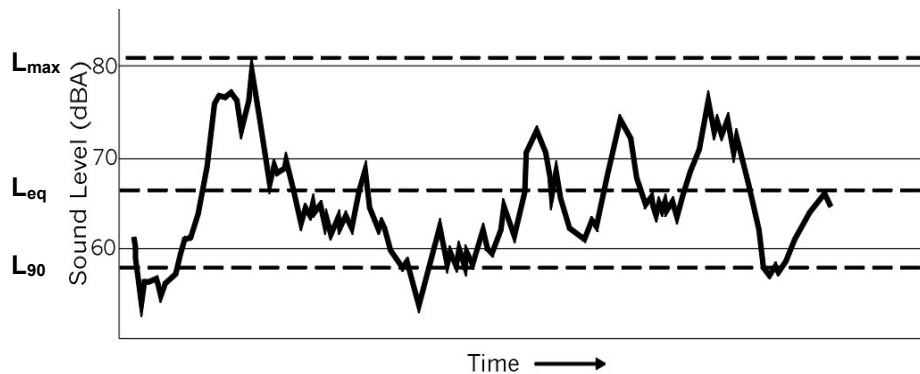
Sound is produced by mechanical vibration of a surface, which sets up rapid pressure fluctuations in the surrounding air. The rate at which the pressure fluctuations occur determines the pitch or *frequency* of the sound. The frequency is expressed in Hertz (*Hz*), that is, cycles per second. The human ear is sensitive to sounds from about 20 Hertz to 20,000 Hertz. Although sound can be of one discreet frequency - a 'pure tone' - most sound is made up of many different frequencies.

The human ear is more sensitive to some frequencies than others, and modern instruments can measure sound in the same subjective way. This is the basis of the A-weighted sound pressure level *dBA*, normally used to assess the effect of noise on people. The dBA weighting emphasises or reduces the importance of certain frequencies within the audible range.

Sound Units

In order to assess environmental noise, measurements are carried out by sampling over specific periods of time, such as fifteen minutes or one hour, the statistically determined results being used to quantify various aspects of the sound.

The figure below shows an example of sound level varying with time. Because of this time variation the same period of sound can be described by several different levels. The most common of these are described below. It should be noted that in many instances in the main body of text, the unit will be preceded by a dB descriptor in the report e.g. $L_{Aeq,T}$ could be written $dB L_{Aeq,T}$



Example of Sound Level Varying With Time

- $L_{Aeq,T}$ The equivalent continuous (A-weighted) sound level. It may be thought of as the "average" sound level over a given time, T. It is used for assessing noise from various sources: industrial and commercial premises, construction sites, railways and other intermittent noises and can be considered as the "ambient" noise level.
- $L_{A10,T}$ The (A-weighted) sound level exceeded for 10% of a measurement period. It is the value often used to describe traffic noise.
- $L_{A90,T}$ The (A-weighted) sound level exceeded for 90% of a measurement period. It is the value often used to describe background noise.

L_{Amax}	The maximum (A-weighted) sound level measured during a given time. 'Fast' or 'Slow' meter response should be cited.
L_{AE}	The sound exposure level is a notional noise level and describes the average L _{Aeq} noise level of an event over a given time period as if it occurred during a one second period. This allows the L _{Aeq} to be determined over a time period with a number of distinct events.
Free-field Level	This refers to the sound level measured outside, away from reflecting surfaces.

Other Acoustics Units

R_w	Single number rating used to describe the <u>laboratory</u> airborne sound insulation properties of a material or building element over a range of frequencies, typically 100-3150Hz.
R_w + C_{tr}	Single number rating used to describe the <u>laboratory</u> airborne sound insulation properties of a material or building element (normally windows) over a range of frequencies, typically 100-3150Hz, adjusted to adjusted by a spectrum adaptation to provide the reduction of traffic noise.
D_{nT,w}	Single number rating used to describe the on-site airborne sound insulation performance properties of a material or building element over a range of frequencies, typically 100-3150Hz, which is calculated in terms of a standardized reverberation time of 0.5 seconds.

APPENDIX B – Noise Survey Details

Date & Time of Survey:	Monday 24 July, 2230 to Thursday 27 July 2023, 1145h.			
Personnel:	Warren King (AEC).			
Equipment Used:	Cirrus CR:171B Real Time Analyser (AEC Kit 3).			
Calibration:	The sound level analyser, which conforms to BS EN 61672-1: 2013 ' <i>Electroacoustics – Sound level meters - Part 1 Specifications</i> ' for Class 1 Type Z meters, was in calibration and check calibrated before and after the measurement periods using a Brüel & Kjær type 4231 (94dB) calibrator. There was no significant drift of calibration. Calibration certificates are available on request.			
Weather Conditions:	Date	Wet/Dry	Avg Temp°C	Wind Direction
	24/07/23	Dry	13°C	Northerly
	25/07/23	Dry	13°C	Westerly
	26/07/23	Dry	15°C	Variable
	27/07/23	Dry	17°C	Westerly
Measurement Locations:	Measurements were undertaken at a single location shown as L1 on Figure 2.2 and described below. L1 – Outside the closest residential property, 25m away from the centre of the nearest carriageway.			
Measurement Details:	Measurements were all undertaken over 15-minute periods and noise levels were measured in terms of L_{eq} , L_{90} , and L_{max} .			
Façade / Free-Field:	L1 - free-field.			
Measured Data:	Full results for the attended measurements are given in Table 3.1. Full 1/3 rd octave band centre frequency data was obtained for all measurements.			

GRAPH B1 – Measured Ambient & Background Noise Levels

