

McDonald's Restaurants Limited

MCDONALD'S, EAST GRINSTEAD #1109

Noise Impact Assessment

Report No. 26-0029-0 R01.2



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Report No.:
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0 NON-TECHNICAL SUMMARY

- 0.1 The McDonald's located at East Grinstead (#1109) currently operates from 07:00 – 23:00, seven days a week. The store is investigating the possibility of extending the operational hours of the store to enable trade 24hrs, seven days a week.
- 0.2 A noise impact assessment was completed between 19th – 20th February 2026 to investigate the existing noise climate with and without the normal operation of the store, and to review the viability of the application.
- 0.3 The McDonald's is located at 165 London Rd, East Grinstead, RH19 1ET. Traffic noise on London Road is the dominant noise source in the area. Some plant noise was barely audible during traffic lulls, competing with other fan noise sources located on London Road. There are multiple commercial buildings on London Road to the east, north and west sides of the store, and some residential properties located to the southwest, south and east sides of store's premises.
- 0.4 An assessment of the potential noise impact due to the extension of operating hours has been undertaken for the four principal noise sources. The significance of each has been assessed with national planning and noise policy regarding the Noise Policy Statement for England 2010, and therefore the National Planning Policy Framework:

Effect Threshold	Subjective / Objective Assessment levels in-front of residential façades			
	People	Vehicles	COD/Store	Roof Plant
Significant observable adverse effect (SOAEL)				
Lowest observable adverse effect level (LOAEL)				✓
No observable adverse effect level (NOAEL)	✓	✓	✓	✓

Table 0: Noise Significance Impact Thresholds for extending hours of operation of the drive thru and in store eating services

- 0.5 It is considered that anticipated noise from people, vehicles and COD noise sources reviewed would meet NOAEL for the proposed extended period; while plant noise was predicted to cause a LOAEL towards the nearest residents. Therefore, some mitigation measures have been advised to minimise noise impact and prevent risks of impact from all noise sources, therefore the aspiration set out by Paragraph 198 of the NPPF and the Noise Policy Statement for England is satisfied. Outlined mitigation strategy is provided in this report.
- 0.6 A Premises Noise Management Plan is also proposed and set out in Appendix C. Such a Plan establishes good practice proactively and will reduce the risk of associated noise impact on the quality of amenity to a minimum. The impact on residents can be expected to be reduced overall by allowing its application, and any increased impact from vehicle noise in the area is expected to be minimal and will be balanced against the benefits.



1 INTRODUCTION

- 1.1 Sustainable Acoustics Ltd is an independent acoustic consultancy who has been commissioned to carry out a noise impact assessment, as part of the planning application for the proposed extension of hours of McDonald's East Grinstead (#1109).
- 1.2 It is understood that the restaurant currently operates between 07:00 – 23:00 seven days a week, and it is currently sought to investigate the viability of applying for an extension to enable trade 24 hours seven days a week.
- 1.3 An overnight noise survey has been undertaken between 21:00 and 08:00 on the 19th – 20th February 2026. The noise survey established the existing activity around the site during operational hours, as well as the night and early-morning periods when the store is currently closed, to inform an assessment of the likely noise impact during the proposed additional hours.
- 1.4 The assessment has been completed with regard for national policy on noise, relevant to England (NPSE), which specifies the approach to be taken to achieve the requirements of the National Planning Policy Framework (NPPF).

2 THE AREA & CHARACTER

- 2.1 McDonald's [#1109] is located at 165 London Rd, East Grinstead, RH19 1ET. The store has in its immediate surroundings multiple commercial or mixed-use buildings (commerce and residential) on London Road, as shown in Figure 1 below. There is King George's Field to the east direction from the store's premises. On St James's Road to the southwest and Moat Road to the north of the store, the buildings are mostly for residential use.

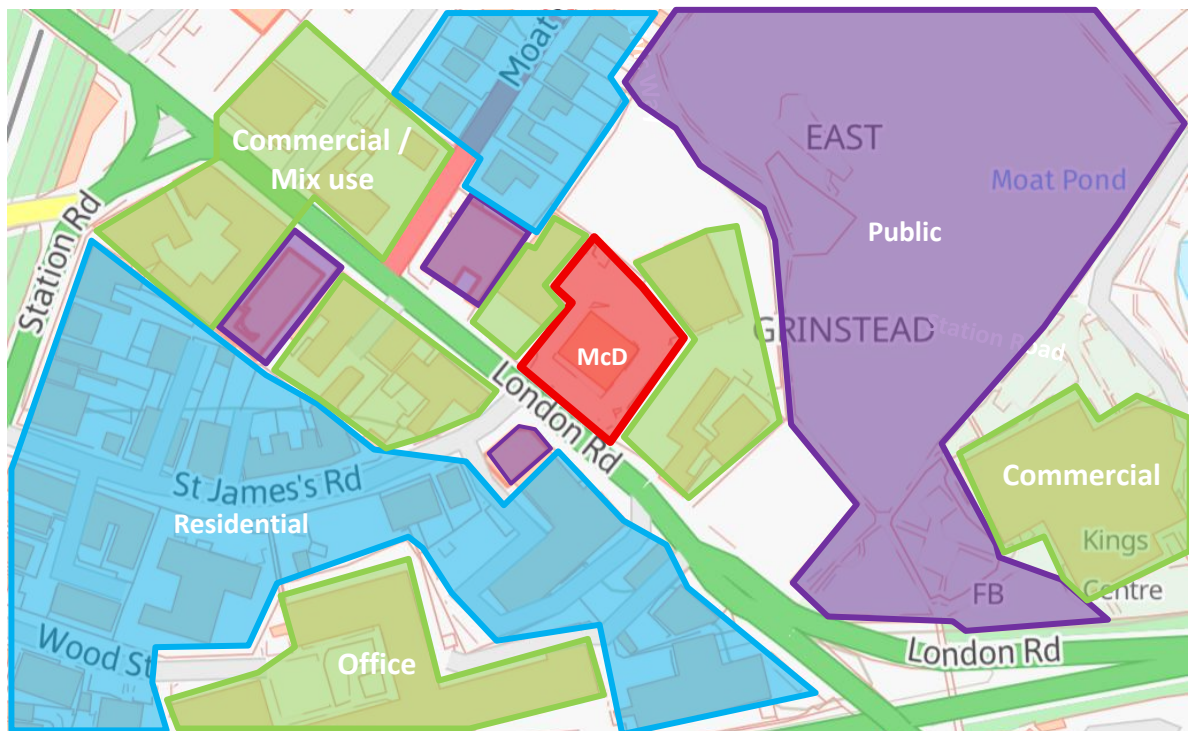


Figure 1: Map of local area with context



- 2.2 The vehicle's access and exit to the site are located on London Road, at the southwest side of the property. From such access, there are independent lanes connecting to the drive-thru and car park areas. The car park of the store has approximately 26 parking spaces, distributed throughout the perimeter of the site on all sides.
- 2.3 The ordering point is at the northeast corner of the store's building, where it has some line of sight from the residential properties on the upper floors of the Parkview House building to the east side.
- 2.4 The main contributor of noise in the area is local traffic on London Road which was observed to dominate the ambient levels. During traffic lulls, some fan noise was clearly audible coming from an air monitoring machine place at the corner of London Road and St James's Road.
- 2.5 Figure 2 shows the store surroundings in more detail, showing the distances from possible noise sources to the closest properties:
- Roof Plant: **52m** from closest noise-sensitive receiver
 - COD: **57m** from closest noise-sensitive receiver
 - Drive thru: **28m** from closest noise-sensitive receiver
 - Parking Space (closest): **26m** from closest noise-sensitive receiver.

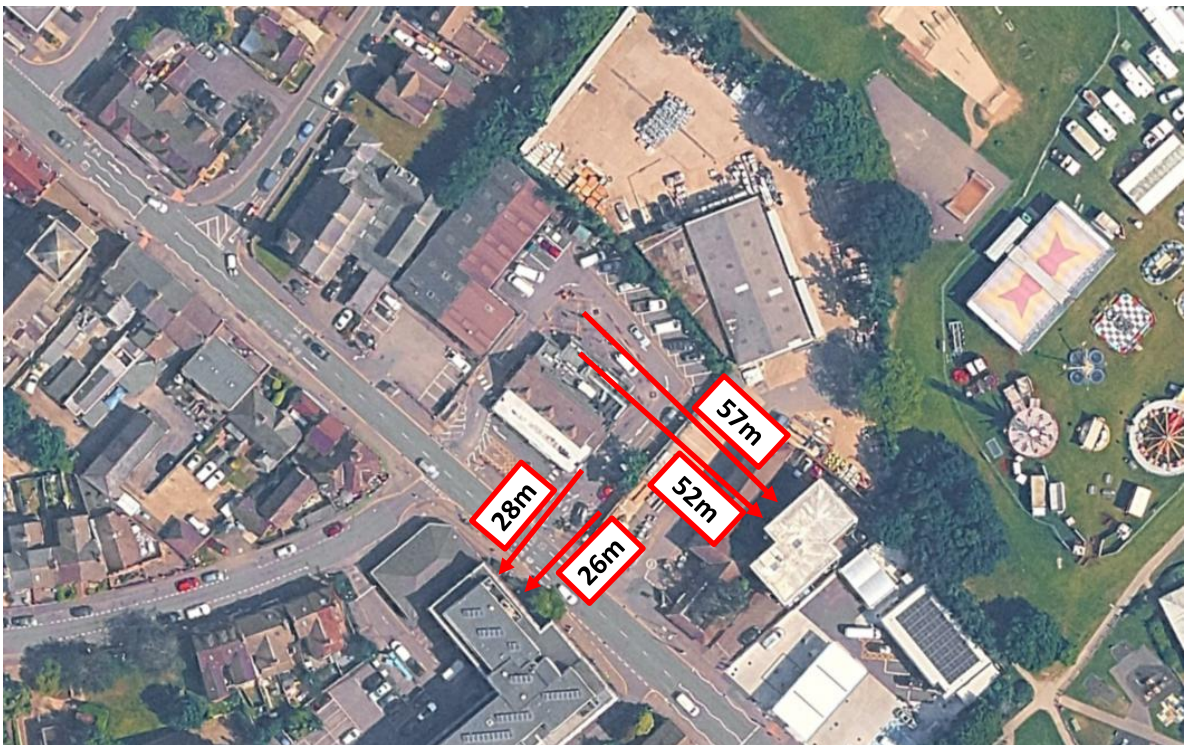


Figure 2: Map of local area with distances to residential properties

- 2.6 It is understood that there have been no complaints regarding plant noise or any other noise source from the current operation of the restaurant. It is also understood that the store has had no problem with anti-social behaviour, however, McDonald's takes a proactive approach on this, as set out in Appendixes C and F.
- 2.7 **Equipment:** The following equipment was used in the surveys.



Equipment	Type	Serial Number	Calibration	
			Date	Certificate no
Long-term unattended monitor				
Svantek Class 1 Sound and Vibration Analyser	958A	59140	17/10/2024	1510147-1S
Microphone	MK 255	12582	17/10/2024	1510147-1S
Preamplifier	SV 12L	57964	17/10/2024	1510147-1S
Short-term attended noise meter				
Rion Class 1 sound level meter	NA-28	170246	05/08/2025	UCRT25/2135
Preamplifier	NH-23	60254	05/08/2025	UCRT25/2135
Microphone	UC-59	26589	05/08/2025	UCRT25/2135
Svantek Calibrator	SV33	155582	16/12/2024	1510742-6

Table 1: The equipment used during the survey between 19th – 20th February 2026

- 2.8 All equipment is within regularly traceable calibration, and the sound level meters were calibrated using field calibrators before and after the survey periods, without any drift observed.

3 NOISE SURVEYS

- 3.1 **Attended survey:** Attended surveys were undertaken at the site between 22:00 and 23:30, and again between 05:30 and 08:00 on 19th – 20th February 2026 to capture the opening and closing periods of the store, as well the periods of time immediately after/prior, where the store was closed. The attended measurements were carried out at the position shown in Figure 3 with red numbered placemarks; chosen to measure and establish the typical noise levels for activities associated with the McDonald's operation, as well as the relative difference on ambient and noise levels from the unattended position on St James's Road to the front of London Road. Observations were also made during the attended measurements, which were at suitable positions to have a view of those arriving and leaving the restaurant. Observations and measurements made during the attended survey are summarised in Appendix A.
- 3.2 **Unattended survey:** Monitoring was also undertaken at one fixed position, shown in Figure 3 with a blue placemark, placed 2.5m high from street level in a proxy position of the residential properties on St James's Road to capture representative ambient and background noise levels at the buildings facades overnight between 19th – 20th February 2026. This position logged noise levels in 1-minute and 15-minute periods over the survey, covering the attended measurements and the intervening hours in the night.
- 3.3 **Conditions:** The weather conditions were clear, between 4 and 5°C, and dry for the duration of the survey. Winds calm and well below 5 m/s for the duration of the survey.
- 3.4 **Locations:** Measurement positions are shown at Figure 3. Attended measurements were taken between 1.2 to 1.5m above the ground and at least 3m from a reflective surface.



Figure 3: Attended and unattended measurement positions

4 NATIONAL NOISE PLANNING GUIDANCE & ASSESSMENT CRITERIA

4.1 The Assessment criteria used in this report is based on the following local and national policies, and national and international standards:

- Mid Sussex District Plan 2014-2031 & Planning Noise Advice Document: Sussex
- BS EN ISO 4142:2012 – Methods for rating and assessing industrial and commercial sound
- The National Planning Policy Framework (NPPF) and Noise Policy Statement England (NPSE)

Full detail of the relevant policies and standards can be found in Appendix B.

5 SUBJECTIVE OBSERVATIONS

5.1 Ambient Noise / Area Comments (noise not associated with store)

The dominant contributing noise source to the prevailing ambient noise climate and character during surveyed hours was local road traffic from London Road, which was noticeably busier during the early morning period. At the corner between London Road and St James's Road it is installed what appears to be an air quality monitor, which is constantly producing a fan noise that periodically ramps up and down in a few minutes cycle. This became the dominant source in the area during traffic lulls.

5.2 People

Few pedestrians were observed in the area with a noticeably higher presence early during the opening hour compared to closing hour in the evening (10 vs 3 respectively), while the count of pedestrians was predominantly lower compared to the vehicle activity during the surveyed period.



No significantly disruptive, deliberate, or aggressive antisocial behaviour was observed during the survey period.

5.3 Vehicles

Considering drive-thru, deliveries and customers arriving by car, there were more vehicles arriving to site during the first hour in the morning compared to the closing hour in the evening (50 vs 34).

Drive-thru was the predominant type of service observed, whereas deliveries were the least frequent events registered during the attended measurements period.

Noises from cars using the store were audible discrete events when arriving/leaving the site and as continuous idling noise when the drive-thru was queueing in addition to the accelerating/braking noise as the vehicles arrived and left the store. The accelerating noise did not stand out any more against the general soundscape than those vehicles using the roundabout and with the existing light-controlled crossings nearby.

Where delivery vehicles were observed, the noise generated by them was no different to the other customer vehicles within the car park.

5.4 COD/Store Noise

During the attended measurement period it was observed that the noise levels from the COD were moderately loud during the evening hours, and louder on the morning hour. A difference of approximately 4dB was measured for the COD settings during the attended measurements. This could be expected due to the increase of the traffic activity and noise levels in the area during the daytime hours.

Customers appeared to have no problem hearing the member of staff through the COD and replied in a normal speech level.

In terms of other store noise, no other significant activity (such as in-store music or refuse trucks) was registered.

5.5 Plant

Plant noise from McDonald's store was dominating the background for the attended measurements taken at the car park to the rear of the store premises, whereas it was not distinguishable for the attended measurements taken to the front on London Road during regular traffic periods. Occasionally during traffic lulls, plant noise from the McD store was barely audible and competing with other fan noise present in the area, produced by what it seems to be an air quality monitor installed at the corner of London Road and St James's Road, which has some intermittent periods or cycles of low and high fan speeds.

McD's roof plant noise was found broadband in character and considered not intrusive, with no particularly tonal characteristics discernible.



6 RESULTS

6.1 Attended survey noise levels

Appendix A summarises the attended measurements noise levels and site observations.

6.2 Customer Count

Predicted customer count for the proposed extended operating hours has been received from the store for a busiest scenario expected broken down per hour.

From the attended measurements observations, an approximate distribution has been calculated and applied to the projected customer traffic as predicted by the store, falling in to the following categories: drive-thru, deliveries, and customers arriving by vehicles and by foot. The resulting table would be as follows:

Period	Drive Thru	Carpark	Delivery	Pedestrian	Total
23:00 - 00:00	7	3	1	1	12
00:00 - 01:00	7	3	1	1	12
01:00 - 02:00	6	2	1	1	10
02:00 - 03:00	6	2	1	1	10
03:00 - 04:00	5	2	0	1	8
04:00 - 05:00	5	2	0	1	8
05:00 - 06:00	6	2	1	1	10
06:00 - 07:00	7	3	1	1	12

Table 2: Projected customer counts during potential opening hours of store

6.3 Unattended survey

The variation of ambient, background and maximum sound levels (L_{Amax} , L_{Aeq} , L_{A90}) between 21:00 – 08:00 19th – 20th November 2025 at the LT1 position, as indicated in Figure 3, are presented in 15-minute results in Figure 4. Similarly, the variation of ambient, maximum and key frequency 1/3rd Octave bands at 25Hz and 31.5Hz are presented in Figure 5 as 1-minute time-history results.

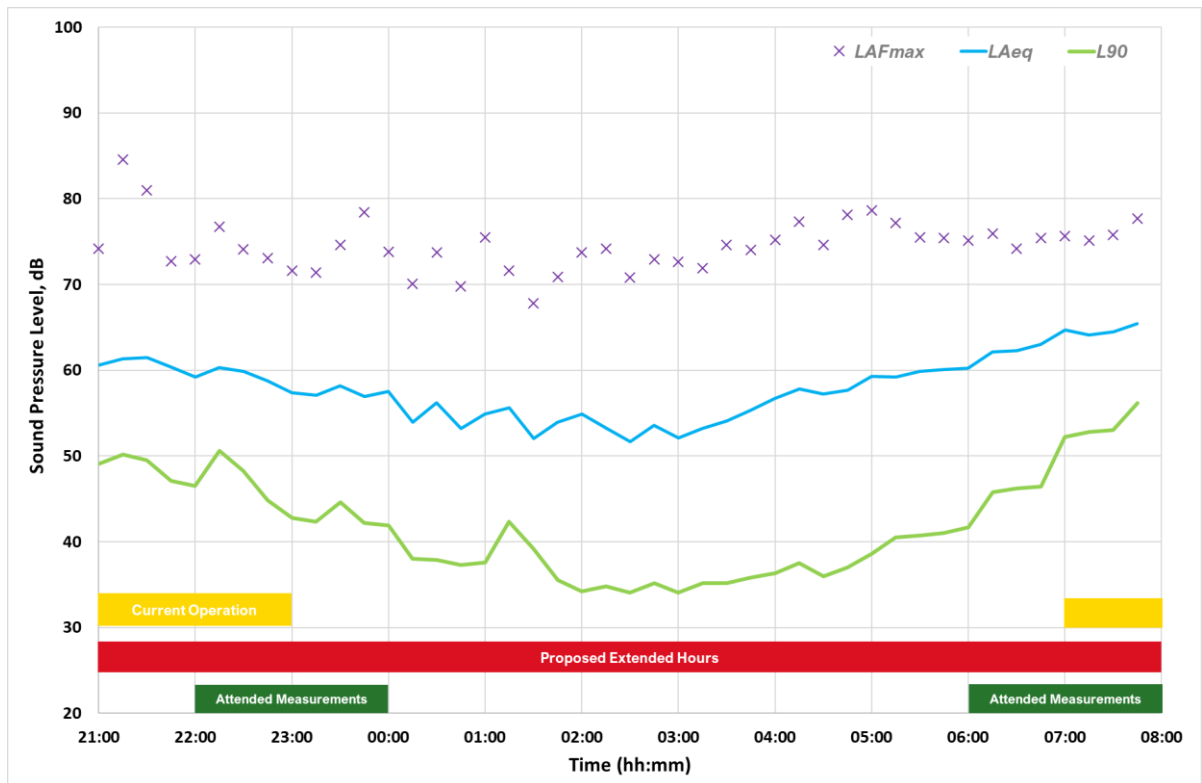


Figure 4: 15-minute time history at unattended position LT1

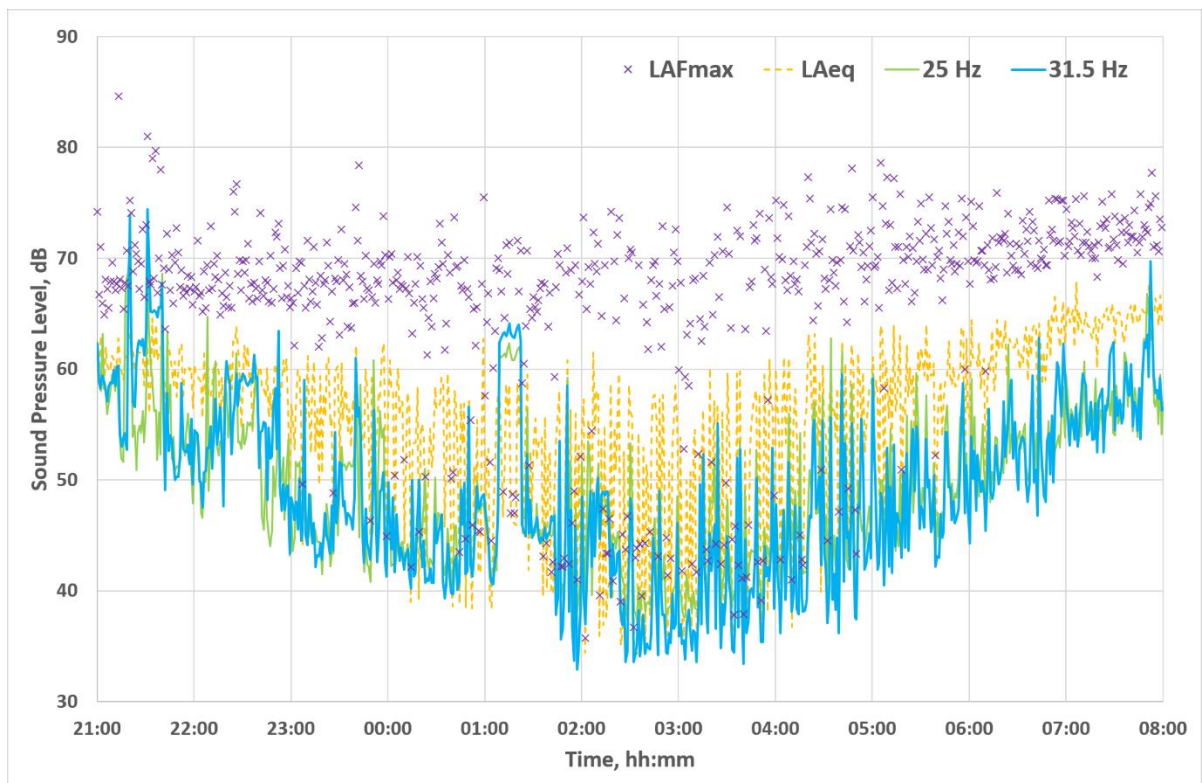


Figure 5: 1-minute time history at unattended position LT1 for ambient, maximum and key frequency levels



7 ASSESSMENT

7.1 People / ASB

7.1.1 Subjectively, no significantly disruptive noise from people was observed during the site visit; and only a few pedestrians were seen moving through the car park.

7.1.2 Assessment of people noise is complex:

- The level and duration of the noise alone do not necessarily provide a comprehensive idea of the actual impact likely – even with the context of the residual background. For example, raised voices will be likely to yield more of an impact than a broadband “anonymous” noise of the same levels due to sociological/psychological factors of sound perception.
- It cannot be intrinsically linked to people using the store for its intended purposes and human behaviour is unpredictable – there is no reason that people noise at any store should achieve anything other than No Observable Effect Level.

7.1.3 It is important to consider that the people noise witnessed during hours the store is already open may be observable at the closest residents, but for events that are sporadic and short-lived, the overall impact is considered not to be significant. An important point to note is that whilst these noise events were observed during the survey when store is currently open, this cannot suggest for certain that these same types of noise would therefore occur between the proposed extended hours, as behaviour of people may change during a more sensitive window of time.

7.1.4 Notwithstanding, it is still considered of great importance that noise from raised voices, vehicle misuse, or otherwise should be prevented where possible by mitigation through tight management.

7.1.5 It is considered that the best way to deal with people noise, both for existing hours and proposed hours, is via proactively implementing the antisocial behaviour policy protocol as outlined in Appendix F; which could be part of a planning condition to be implemented in full to prevent the noise impact occurring in this extended period.

7.1.6 This protocol will include review of noise being made in these hours by customers, to ensure it is not noticeably worse.

7.2 Vehicles – Effect on Ambient Noise

7.2.1 To assess potential noise from the additional opening hours of McDonald's, the noise from vehicles passing by the closest point of the McDonald's store to the residential properties will be added to the existing ambient noise level to establish the worst-case predicted increase in ambient noise level due to the operation of McDonald's. This study will consider both the Drive-thru and the carpark.

Note that this is not a BS4142 assessment, but it is considered an effective way to assess the impact that additional vehicle movements may have at nearby residential receptors. This is supported by the approach taken in environmental statements, and guidance by IEMA and the Calculation of Road Traffic Noise (CRTN). BS 4142 is not aimed at accurately assessing impact for this type of noise, even though it now includes noise from vehicles around commercial sites. This is because the standard aims to assess noise from fixed plant and in this case the vehicles are not operating around the site but passing through it as diverted traffic. The difference in ambient noise level created by the number of vehicles is therefore considered a more robust approach to understand the impact of this type of noise.



- 7.2.2 It is understood the store runs delivery with Uber Eats, Just Eat and Deliveroo platforms. While all these platforms do use motorised scooters, Uber Eats limit these vehicles to engine sizes of 50CC. From site observations it was noticed that a moped movements occur in louder and shorter events, compared to customer's private vehicles using the car park or drive thru. To allow for a worst-case scenario, calculations were done assuming all vehicle movements would have the same acoustic characteristics as delivery mopeds. Other types of vehicles with larger engines used as delivery vehicles were not considered for this part of the assessment.
- 7.2.3 Noise levels from individual cars passing have been measured at other McDonald's stores and were found to be in the 62 - 66 dB(A) range at a distance of 7m perpendicular to direction of travel.
- 7.2.4 Noise level at receiver: In order to undertake propagation calculations, those measurements are implemented together with the following assumptions, as summarised in the table below:

Previously Measured, at other sites	
Measured level of vehicle during movement over a few seconds at McDonald's Carpark, dB (L _{Aeq})	66
Distance from vehicle at the instant the L _{Aeq} was measured, m	7
Estimate of Sound Power of moving source, dB (L _{Aw})	91
Calculations for East Grinstead #1109	
Closest distance to residential window from drive-thru, m	28
Highest incident level of passing vehicle at residential window, dB (L _{Aeq})	54
Approximate total duration of a typical vehicle movement on McD premises (excluding idling), seconds	10

Table 3: Measurements used to approximate noise at window per vehicle – screening omitted

- 7.2.5 The distance of the drive-through to the closest receiver is variable throughout its entire length, where the closet area of the drive-through is of the order of 28m away for a worst-case approach.
- 7.2.6 The calculation for change in ambient noise level is given below in Table 4. The levels have been calculated using a logarithmic average for the noise levels over the extended by considering each of the 3,600 seconds in the period based on the data in Table 3.

	Lowest Existing 15-min Ambient Noise Level at receiver, dB(A)	Estimated vehicle count	Estimated contribution from additional vehicles alone, over the hour, L _{Aeq} , 1hour	Estimated Change to Ambient Noise Level <u>from vehicles alone</u> , dB(A)
23:00 - 00:00	57	11	39	57.1 (+0.1)
00:00 - 01:00	53	11	39	53.2 (+0.2)
01:00 - 02:00	52	9	38	52.2 (+0.2)
02:00 - 03:00	52	9	38	52.2 (+0.2)
03:00 - 04:00	52	7	37	52.1 (+0.1)
04:00 - 05:00	57	7	37	57 (+0)
05:00 - 06:00	59	9	38	59 (+0)
06:00 - 07:00	60	11	39	60 (+0)

Table 4: Calculation of change in estimated ambient noise with additional customer vehicles.



- 7.2.7 It is generally considered that the minimum perceivable change in ambient noise level is 3 dB if the noise in question is steady state, anonymous sources.
- 7.2.8 Based on the worst-case customer counts and using 3 dB as a useful benchmark against which to assess the predicted change in ambient noise levels, the change in noise level as shown in Table 4 is likely to be not perceptible change during the proposed extended operation periods between 23:00-00:00hrs and 06:00-07:00hrs.
- 7.2.9 Vehicle movement noise is already present in the area in relation with the activity observed at the neighbouring commercial activities; therefore, noise from additional vehicles driving past the closest residential property would be expected to be of a similar acoustic character.
- 7.2.10 It is considered that vehicles entering and leaving the site would achieve an **No Observable Adverse Effect Level (NOAEL)**.

7.3 Vehicles – Maximum: Noise Door Slams

- 7.3.1 Car doors being slammed is often a typical maximum noise event to be considered where hours are extended. There may be other maximum events, but their assessment is considered simultaneous with the following one of the door slams.
- 7.3.2 Only door slams from customers not using the drive-thru would be expected.
- 7.3.3 Notwithstanding, guidance from BS 8233:2014 is generally considered to establish aspirational targets for internal ambient noise levels in the case of new housing but the standard no longer provides specific guidance on acceptable maximum noise levels. The guideline value for the onset of sleep disturbance, given in the World Health Organisation (WHO) guidelines, is 45 dB L_{Amax} within bedrooms. ProPG Planning Guidance recommends limiting events exceeding 45 dB L_{Amax} internally to fewer than 10 times per night.
- 7.3.4 If the attenuation through an open window is assumed to be 13 dB, a corresponding target external noise level would be 58 dB L_{Amax} .
- 7.3.5 The loudest typical car door slams would be of the order of 91 dB sound power.
- 7.3.6 The car parking space nearest to a sensitive receptor at an approximate distance of 26m. At this distance, door slams at their worst-case scenario are predicted to be 55dB L_{Amax} externally, (42dB L_{Amax} internally). This prediction is below (-3dB) the suggested threshold for maximum noise level events.
- 7.3.7 Due to this, maximum noise levels from door-slamming at the store carpark for the extended hours between 23:00 and 07:00hrs are considered to have an **No Observable Adverse Effect Level (NOAEL)**.

7.4 Vehicles – Maximum: Mopeds Acceleration

- 7.4.1 Mopeds' acceleration can occur too in short discreet events with high maximum noise levels L_{AFmax} . Maximum mopeds' noise emissions can vary significantly depending on make, model and engine's size. According to The Motor Cycles Etc. (EC Type Approval) Regulations 1999ⁱ that came into force on 30th of November 1999 and with reference to Directive 97/24/EC of the European Parliament and of the Councilⁱⁱ, the maximum permissible sound level emitted by a moped with a maximum speed above 25 km/h would be 71 dBA measured 7.5m from the vehicle's axis line.

ⁱ <https://www.legislation.gov.uk/ukxi/1999/2920/made>

ⁱⁱ <https://www.legislation.gov.uk/eudr/1997/24/2009-09-07?view=plain>



- 7.4.2 Therefore, a maximum level L_{Amax} of 71dB at 7.5m would be assumed as a worst-case approach. This level would be expected only for the delivery movements when leaving the store.
- 7.4.3 Same aspirational levels for both external and internal L_{Amax} as indicated above in paragraphs 7.3.3 and 7.3.4 will be considered.
- 7.4.4 If considered that the shortest distance between the car park's exit and the nearest sensitive receptor is approximately 17m, the resulting outdoor level L_{Amax} would be 64dB. Such level would be above the recommended levels, and therefore context information is also relevant.
- 7.4.5 From the 1-minute L_{AFmax} results measured at the LT1 position, as presented in Figure 5 it is observed that existing maximum levels in the area already exceed the predicted incident level of 64dB for the proposed extended period (23:00-07:00). The statistical distribution of the maximum levels $L_{AFmax,1min}$ over such period is presented below in Figure 6.

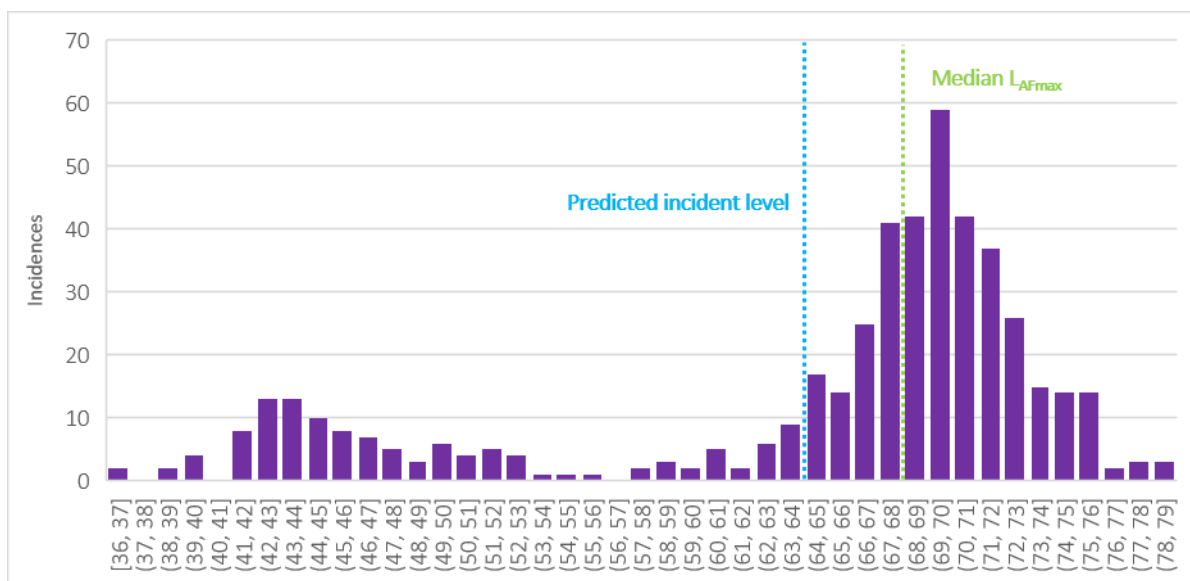


Figure 6: 1-minute L_{AFmax} noise level results between 23:00 and 07:00 at LT1 position histogram

- 7.4.6 From Figure 6 it is observed that the predicted incident level would be 3dB below the median and 4dB below the modal existing maximum levels L_{AFmax} over the proposed extended period. This means that the existing activity in the area is typically 3dB or more above the mopeds' incident levels at least half of the time over the night period. Furthermore, it is predicted that delivery movements will only occur less than 10 times per night, which is still within the noise criteria as set by WHO Guidelines and ProPG.
- 7.4.7 Within this context and with all the considerations above, maximum noise levels from moped's movements at the store carpark for the extended hours between 23:00 and 07:00hrs are predicted to have a **No Observable Adverse Effect Level (NOAEL)**.
- 7.5 **COD**
- 7.5.1 During the attended part of the survey, the COD was perceived to be set at a moderately loud noise level during the attended measurements.
- 7.5.2 It was observed that customers had no problem in hearing the member of staff through the COD and that they replied in a normal voice.
- 7.5.3 The distance from the COD to the closest unscreened receptor is 57m with direct line of sight to the nearest residential property.



- 7.5.4 Based on the highest noise levels measured close to the COD for the loud setting (~65 dB at ~1m), external levels at a worst-case closest distance of 57m would be expected to be of the order of 30 dB $L_{Aeq,T}$ at receiver windows.
- 7.5.5 Assuming again a 13dB noise reduction for an open window, internal levels within the nearest residence from the COD will be 17 dB, which within the recommended levels mentioned in BS 8233: 2014 for nighttime hours, as seen in Appendix B.
- 7.5.6 Considering the lowest 15-minute ambient level during the extended period at the nearest sensitive receptor position from the COD area equal to L_{Aeq} 52dB, a contribution to the ambient level of a COD event of 27dB would show no increase to the existing ambient levels, and therefore it is not expected to be noticeable.
- 7.5.7 Due to these considerations, it is predicted that the COD noise will achieve a **No Observable Adverse Effect Level (NOAEL)**.
- 7.6 **Plant**
- 7.6.1 Subjectively, the extract plant was barely audible and not dominating the background during the survey at the attended measurement position by the near residents on London Road, and only during traffic lulls. From the attended measurements on the rooftop, it was identified one main component to be the dominant noise sources from the plant noise.
- 7.6.2 From the results shown in Figure 4 it is indicated that plant noise is present in the area until midnight, from where background noise will start to ramp down and remain switched off until approximately 6:00am. From the key frequency band results presented in Figure 5 can be observed that even if plant noise is audible and present in the background, it is still not the predominant noise source, and multiple other sources are present during the whole night period.
- 7.6.3 A BS4142 assessment is included below using the lowest L_{A90} value as the representative background level for the proposed extended periods between 23:00-07:00hrs:

Results		Relevant BS4142 clause	Commentary
Measured Sound Pressure Level of plant items (at distance of 1m)	67	Clause 7.3.1	Sound pressure level measured at 1m from the two loudest items of the plant. Referred to as the "ambient" sound in BS 4142
Residual sound level	-	Clause 7.3.3	Sound level measured at same position as ambient sound, when the existing fixed plant item is in lower settings.
Specific sound level	67		Calculated by removing residual noise from the measured plant noise. Given the proximity of the measurement to the plant items, no correction has been considered (allowing for a worst-case scenario).
Calculated Sound Power Level	79		Calculated sound power level from the measurement at 1m, considering a spherical propagation for the loudest item, and quarter-sphere propagation for the second item.



Specific sound level at receiver's window position	36		Calculated summed level at the closest residential window (52m away) with no attenuation due to screening.
Acoustic feature correction	+0	Clause 9.2	No tonality character, as per simplified objective method to assess tonality. Not likely to be noticeable or prominent.
Rating level	36	Clause 9.2	Sound level at 1m from residential, calculated from source measurements. No acoustic feature was considered.
Background sound level	34	Clause 8.3	Lowest 15-minute background sound level between 23:00hrs and 07:00hrs
Excess of rating over background sound level	36 – 34	Clause 11	
BS 4142 Assessment	2dB	Clause 11	
<i>Uncertainty of the assessment</i>	<i>+/- 3 dB</i>	<i>Clause 10</i>	<i>The measurements were taken under repeatable conditions and therefore the uncertainty of the result will be low. However, the uncertainty has been determined from variability in noise levels measured affected by road traffic noise, which is likely to fluctuate.</i>

Table 5: BS4142:2014 Table for plant noise assessment

- 7.6.4 **The conclusion of the assessment is a rating level of +2dB.** The rated plant noise at the nearest unscreened residential property is therefore predicted 2dB above background level during the proposed extended hours, which is considered to have a low impact at the nearest resident location.
- 7.6.5 From the absolute plant noise level of 36dB, considering that the incident interior levels would be 23dB, where 13dB reduction is assumed from an open window. This will be 7dB below the recommended internal noise levels for sleep hours.
- 7.6.6 Due to these reasons, it is considered that plant noise would cause a low impact on the nearest residential properties, therefore it is recommended to implement some mitigation measures to incident noise levels by approximately 5dB this to a No Observable Adverse Effect Level (NOAEL).



8 OUTLINE MITIGATION

- 8.1 The proposed extension of hours of this restaurant is considered unlikely to generate any additional impact when considering noise from people, vehicles and COD; whereas for plant noise it is predicted to cause a low impact.
- 8.2 Some proactive mitigation advice is given in this report, which is considered advisable to minimise as reasonably practicable the risk of complaints due to trading at sensitive hours.
- 8.3 **People:** A premises noise management plan (Appendix C) is to be implemented, which embeds taking proactive best practice steps to further reduce the potential for noise impact on the residential properties. This is considered to be advisory to minimise the risk of noise from people, and in case of antisocial behaviour, and could be included as Informative to any permission.
- 8.4 **Vehicles:** Based on the observations and calculations, it is considered unlikely that any additional mitigation for vehicles is necessary.
- 8.5 **COD:** It is predicted that COD noise levels will have no noise impact at the nearest neighbouring property located 57m away, and no further mitigation is required provided that the settings and noise levels are not modified to the current operation.
- 8.6 **Plant:** It is predicted that in the context the current noise levels in the area, it is still expected that the contribution of plant noise would be just above the existing lowest background levels by 2dB. With these considerations, it is advisable that the kitchen extract speed is reduced during the sensitive night hours in order to keep incident levels below the recommended internal noise levels at the nearest residential properties.

It has been measured at other McD premises, as presented in Appendix D, it is expected to see a 3-4dB reduction of the noise levels for every 5Hz been reduced to the mechanical system speed settings. Therefore, a reduction of 10Hz to the kitchen extract change will drop the predicted noise levels by 6-8dB, enough to reduce the estimated internal levels within the recommended level suitable for night-time resting, as well as 4-6dB below the lowest existing background level, reduction the risk of impact to no observable (NOAEL).

Provided that this is a feasible measure and does not interfere with the premises operation, it is considered that no additional mitigation is necessary. This measure will be part of the Noise Management Plan to be implemented by the store, as seen in Appendix C.

- 8.7 By implementing these mitigation recommendations any extension to the hours of operation is considered to result in an acceptable level of noise impact, which is considered to implement the aims of the national Noise Policy Statement for England (2010) and the NPPF aims to protect residential quality of life whilst balancing the burden on business.



9 NOISE IMPACT ASSESSMENT SUMMARY

- 9.1 Based on the assessments above the significance of the impact from noise from each source in turn is summarised below, assuming mitigation has been applied, with regard for the Noise Policy Statement for England 2010, and therefore the NPPF:

Subjective / Objective Assessment levels in-front of residential façades				
Effect Threshold	People	Vehicles	COD/Store	Roof Plant
Significant observable adverse effect (SOAEL)				
Lowest observable adverse effect level (LOAEL)				✓
No observable adverse effect level (NOAEL)	✓	✓	✓	✓

Table 6: Noise Significance Impact Thresholds for extending hours of operation

- 9.2 No observable impact is acceptable according to Planning National Policy (NPPF) paragraph 198.
- 9.3 Best practice measures have been recommended to reduce and keep noise impact to a minimum, as required by noise policy, should an extension be granted.
- 9.4 It is considered that the evidence supports this application on noise grounds, and the premises noise management plan delivers an overall enhancement to the existing quality of life of residents, as encouraged by the national policy.



10 CONCLUSION

- 10.1 A noise impact assessment has been completed by Sustainable Acoustics Ltd. at 165 London Rd, East Grinstead, RH19 1ET, based on the possibility of extending the opening hours of the store, to allow in-store, deliveries and drive thru trading 24hrs, 7 days a week.
- 10.2 The assessment was completed using a combination of attended and unattended measurements between 21:00-8:00hrs the 19th – 20th February 2026.
- 10.3 The assessment shows that the noise impact in terms of **people, vehicle** and **COD** would be considered to have a **No Observable Adverse Effect Level (NOAEL)** and so acceptable to national planning and noise policy expectations, while **plant noise** is predicted to achieve a **Low Observable Adverse Effect Level (LOAEL)**.
- 10.4 Mitigation measures have been included measures to minimise impact from plant noise and reduce the risk of impact from the other sources as far as is practicable, and to ensure an acceptable noise environment for the neighbouring residential properties is maintained. This measure will reduce the impact from plant noise to **No Observable Adverse Effect Level (NOAEL)**, improving the situation that exists at present.
- 10.5 A premises noise management plan (PNMP) at Appendix C is proposed, which if implemented is extended to proactively minimise any potential risk of noise resulting from plant noise, COD or any kind of antisocial behaviour. This is a precautionary measure as no ASB was observed during the survey, and the risk of it considered to be very low. It is not considered necessary to add a planning condition in relation to this, but this is an option where concerns remain.



APPENDIX A

Acoustic Spot Measurements and Observations



Time	Duration (mm: ss)	L _{Aeq}	L _{Amax}	L _{A90}	L _{eq}								Pos	Remarks	Customer Count
					63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz			
17:12	01:00	67	69	67	69	72	69	66	63	55	45	33	Roof	1m kitchen extract	--
17:14	01:00	66	68	65	78	76	71	61	58	50	42	35	Roof	1m roof plant item	--
17:15	01:00	67	70	66	73	75	75	58	55	50	40	32	Roof	1m roof plant item	--
21:52	00:45	58	69	53	60	57	60	57	53	48	42	36	COD	Drive-thru order, 1m from COD	--
21:53	00:53	58	67	53	65	62	58	52	54	50	45	41	COD	Drive-thru order, 1m from COD	--
22:00	15:00	71	84	56	70	66	65	64	69	63	52	42	MP1	Ambient dominated by constant local traffic. Van nearby idling and some workers noise and bangs on pavement. Plant noise from McD not audible.	DT: 6 CP: 2 Peds: 0 Del: 3
22:26	15:00	61	79	55	65	60	62	56	57	52	44	37	MP2	Ambient dominated by constant local traffic. McD roof plant dominating background. Occasional pedestrians chatting.	DT: 4 CP: 10 Peds: 2 Del: 0
22:42	15:00	70	85	51	76	66	64	64	68	61	50	40	MP1	Ambient dominated by regular local traffic. Nearby van engine hum dominating background. McD plant not audible. Loudish vehicle going into drive-thru.	DT: 5 CP: 0 Peds: 1 Del: 2
22:58	15:00	68	83	45	65	63	61	60	66	60	48	37	MP3	Ambient dominated by regular local traffic. McD plant hum dominating background. Occasional distant aircraft events audible.	DT: 0 CP: 2 Peds: 0 Del: 0



Time	Duration (mm:ss)	L _{Aeq}	L _{Amax}	L _{A90}	L _{eq}								Pos	Remarks	Customer Count
					63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz			
23:14	15:00	69	84	48	66	61	62	62	67	60	53	46	MP1	Ambient dominated by local traffic. Fan noise from air-quality monitor audible during lulls. Plant noise from McD not audible. Car horn event.	--
23:29	00:22	64	66	63	62	63	64	66	56	48	39	32	Air monitor	Air quality monitor cycle, 1m from fan.	--
23:30	00:20	77	79	76	67	72	73	74	71	72	67	58	Air monitor	Air quality monitor cycle, 1m from fan.	--
23:31	00:30	71	75	62	62	68	69	68	67	63	57	45	Air monitor	Air quality monitor cycle, 1m from fan.	--
05:30	15:00	70	86	48	66	62	64	64	69	62	51	41	MP1	Ambient dominated by local traffic. Fan noise from air-quality monitor dominating background. Plant noise from McD audible during lulls. Car horn event.	--
05:46	15:00	71	86	47	65	62	64	64	69	63	51	43	MP3	Ambient dominated by local traffic. Plant noise from McD not audible. Petrol station open with a few cars in. Some people noise present.	--
06:04	15:00	73	89	53	71	65	66	66	71	64	54	45	MP1	Ambient dominated by local traffic. Fan noise from air-quality monitor dominating background. Plant noise from McD not audible.	DT: 4 CP: 1 Peds: 0 Del: 0
06:29	01:19	66	88	57	65	62	66	63	59	60	54	42	Carpark	Delivery truck idling	--
06:31	01:14	64	81	57	64	64	67	61	57	55	53	46	COD	Drive-thru order, 1m from COD	--
06:36	01:09	69	90	56	66	68	67	64	62	63	61	49	Carpark	Delivery truck idling	--



Time	Duration (mm: ss)	L _{Aeq}	L _{Amax}	L _{A90}	L _{eq}								Pos	Remarks	Customer Count
					63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz			
06:37	00:55	65	76	63	77	64	64	60	60	59	55	46	COD	Drive-thru order, 1m from COD	--
06:39	15:00	75	87	58	73	67	68	68	73	67	56	45	MP1	Ambient dominated by local traffic. Fan noise from air-quality monitor dominating background. Plant noise from McD not audible. Petrol station audible and noisy.	DT: 8 CP: 1 Peds: 4 Del: 0
07:00	15:00	76	90	63	75	69	71	70	74	68	57	47	MP1	Ambient dominated by local traffic. Fan noise from air-quality monitor dominating background. Plant noise from McD not audible.	DT: 17 CP: 1 Peds: 5 Del: 0
07:27	00:56	64	80	61	72	61	64	60	59	55	50	42	COD	Drive-thru order, 1m from COD	--
07:29	00:16	62	66	57	72	64	62	61	57	53	47	38	COD	Drive-thru order, 1m from COD	--
07:33	00:25	63	70	60	73	62	60	59	57	56	47	41	COD	Drive-thru order, 1m from COD	--
07:34	00:58	61	70	58	69	63	61	59	56	54	49	42	COD	Drive-thru order, 1m from COD	--
07:43	15:00	76	89	64	73	69	70	69	74	68	58	48	MP1	Ambient dominated by local traffic. Plant noise from McD not audible.	DT: 14 CP: 4 Peds: 1 Del: 0



APPENDIX B

Policies and Standards



National Planning Policy Framework

Current planning policy is based on the National Planning Policy Framework (NPPF), revised in December 2024, which supports a presumption in favour of sustainable development, unless the adverse impacts of that development would outweigh the benefits when assessed against the policies in the Framework, taken as a whole.

The noise implications of development are recognised at paragraph 198, where it is stated that planning policies and decisions should:

- *“mitigate and reduce to a minimum potential adverse impact from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life⁶⁵”*
- *“Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason”*

Noise Policy Statement for England

Paragraph 198 of the NPPF also refers to advice on adverse effects of noise given in the Noise Policy Statement for England³ (NPSE). This document sets out a policy vision to:

“Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development”.

To achieve this vision the Statement sets the following three aims:

“Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- *avoid significant adverse impacts on health and quality of life*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvement of health and quality of life.*

The following descriptive terms are implemented in the NPSE:

No observed effect level (NOEL): this is the level of noise exposure below which no effect at all on health or quality of life can be detected.

Lowest observed adverse effect level (LOAEL): this is the level of noise exposure above which adverse effects on health and quality of life can be detected.

Significant observed adverse effect level (SOAEL): This is the level of noise exposure above which significant adverse effects on health and quality of life occur.

³ Department for Environment, Food and Rural Affairs, *Noise Policy Statement for England*, London, 2010



National Planning Policy Guidance on Noise (July 2019)

This guidance is consistent with the policy within NPSE. The newly refreshed guidance says *“Good acoustic design needs to be considered early in the planning process to ensure that the most appropriate and cost-effective solutions are identified from the outset”*.

It also says noise can override other planning concerns, where justified, *“although it is important to look at noise in the context of the wider characteristics of a development proposal”*.

It makes clear that *“As noise is a complex technical issue, it may be appropriate to seek experienced specialist assistance when applying this policy”*.

The guidance provides the following “Noise Exposure Hierarchy Table”:

Response	Examples of outcomes	Increasing effect level	Action
NO OBSERVED EFFECT LEVEL			
Not present	No Effect	No Observed Effect	No specific measures required
NO OBSERVED ADVERSE EFFECT LEVEL			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
LOWEST OBSERVED ADVERSE EFFECT LEVEL			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
SIGNIFICANT OBSERVED ADVERSE EFFECT LEVEL			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent



Local Policy

Mid Sussex District Plan as adopted in March 2018 provides the following comments in its DP26 policy for developments' 'Character and Design' in relation to noise:

All development and surrounding spaces, including alterations and extensions to existing buildings and replacement dwellings, will be well designed and reflect the distinctive character of the towns and villages while being sensitive to the countryside. All applicants will be required to demonstrate that development:

... does not cause significant harm to the amenities of existing nearby residents and future occupants of new dwellings, including taking account of the impact on privacy, outlook, daylight and sunlight, and noise, air and light pollution (see Policy DP29)...

DP29 for 'Noise, Air and Light Pollution' states later the following:

Sussex local authorities have developed guidance on noise to provide advice for developers and their consultants when making a planning application. This guidance can be viewed at www.midsussex.gov.uk/planningpolicy

The environment, including nationally designated environmental sites, nationally protected landscapes, areas of nature conservation or geological interest, wildlife habitats, and the quality of people's life will be protected from unacceptable levels of noise, light and air pollution by only permitting development where:

Noise pollution:

- It is designed, located and controlled to minimise the impact of noise on health and quality of life, neighbouring properties and the surrounding area;*
- If it is likely to generate significant levels of noise it incorporates appropriate noise attenuation measures;*

From Sussex's Planning Noise Advice Document as issued in November 2023 provides the following guidance for 'Industrial and Commercial Sound Sources':

3.2.1 The rating level of the industrial or commercial sound source should, where practicable, achieve a level no greater than the representative background sound, when measured in accordance with BS 4142:2014 + A1: 2019. There may be instances, for specific sites, where a rating level below background is deemed appropriate. This can be determined through discussion with the Local Planning Authority (LPA). A rating level below background may be required if there are concerns for potential noise creep, for example in a High Street setting. It is considered that meeting this criterion would avoid adverse noise impacts, in the interests of ensuring a good standard of amenity and protecting human health. Where these criteria are not attainable, the noise report should explain why, and how best practicable means will be implemented to control noise in order to satisfy the LPA that the development is acceptable. At all times the reports shall have regard to the context. Good Acoustic Design will be a consideration for any mitigation proposals.



British Standard BS 4142:2014

The British Standard BS 4142:2014, Methods for rating and assessing industrial and commercial sound is an update of the previous edition of the standard and describes methods for rating and assessing sound of an industrial and/or commercial nature, to assess the likely effects of sound on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident. The sound from the industrial/commercial source is rated by taking into account the sound level of the source, known as the specific sound level, and its characteristics, such as tonal, impulsive or intermittency of the source, and applying an appropriate correction to give the rating level of the sound source. To gain an initial estimate of the potential impacts of the sound source, it is compared to the background noise level, and the level by which the rating level exceeds the background noise level indicates the following potential impacts:

Difference	Assessment
Around 10 dB or more	Likely to be an indication of a significant adverse impact, depending on the context.
Around 5 dB	Likely to be an indication of an adverse impact, depending on the context.
0 dB or less	An indication of the specific sound source having a low impact, depending on the context.

The standard states that “where an initial estimate of the impact needs to be modified due to the context, take all pertinent factors into consideration, including the following:

- 1) *The absolute level of the sound*
- 2) *The character and level of the residual sound compared to the character and level of the specific sound*
- 3) *The sensitivity of the receptor”.*

The standard also requires an indication of the uncertainty of the assessment made.

British Standard BS 8233: 2014

The British Standard BS 8233: 2014, *Guidance on Sound insulation and noise reduction for buildings* provides additional guidance on noise levels from sources without specific character in the built environment, based on the recommendations of the World Health Organisation. The criteria desirable levels of steady state, “anonymous” noise in unoccupied spaces within dwellings, from sources such as road traffic, mechanical services and other continuously running plant, are tabulated below:

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35 dB L_{Aeq} , 16 hour	-
Dining	Dining room/area	40 dB L_{Aeq} , 16 hour	-
Sleeping (daytime resting)	Bedroom	35 dB L_{Aeq} , 16 hour	30 dB L_{Aeq} , 8 hour



It is noted, however that where development is considered necessary or desirable, despite external noise level above WHO guidelines, the above target levels may be relaxed by up to 5 dB.

The standard also recommends that for traditional external amenity areas, such as gardens, it is desirable that external noise levels do not exceed 50 dB $L_{Aeq, T}$, and that 55 dB $L_{Aeq, T}$ would be acceptable in noisier environments. However, it is recognised that these values may not be achievable in all areas where development is desirable, and in such locations, development should be designed to achieve the lowest practicable levels.

ProPG

Professional Practice Guidance on Planning & Noise: New Residential Development, published May 2017 by a Working Group of the Institute of Acoustics, Association of Noise Consultants and Chartered Institute of Environmental Health to provide guidance on the approach to the management of noise within the planning system in England. Whilst it is not an official government code of practice, it is endorsed by the appropriate professional bodies and reflects the NPSE, NPPF and Planning Practice Guidance. It is restricted primarily to the consideration of new residential development that will be exposed to transportation noise sources.

ProPG advocates consideration of noise at an early stage and good acoustic design to produce sustainable development. Design target noise levels are based on BS 8233: 2014 with additional guidance on individual noise events at night, how windows and ventilation should be assessed and how the assessment should be considered where target noise levels may be difficult to achieve.

The criteria for the ProPG Stage 1: Initial Site Risk Assessment are reproduced overleaf.

Note also that Appendix A para A.19: "A site should be regarded as high risk where the $L_{Amax, f}$ exceeds or is likely to exceed 80 dB more than 20 times per night."

As an additional note to the final comment at the bottom of Figure 1; NOTE 4 in Figure 2 with ProPG guidance gives the following advice in relation to maximum noise levels: *"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 45dB $L_{Amax, F}$ more than 10 times a night."*

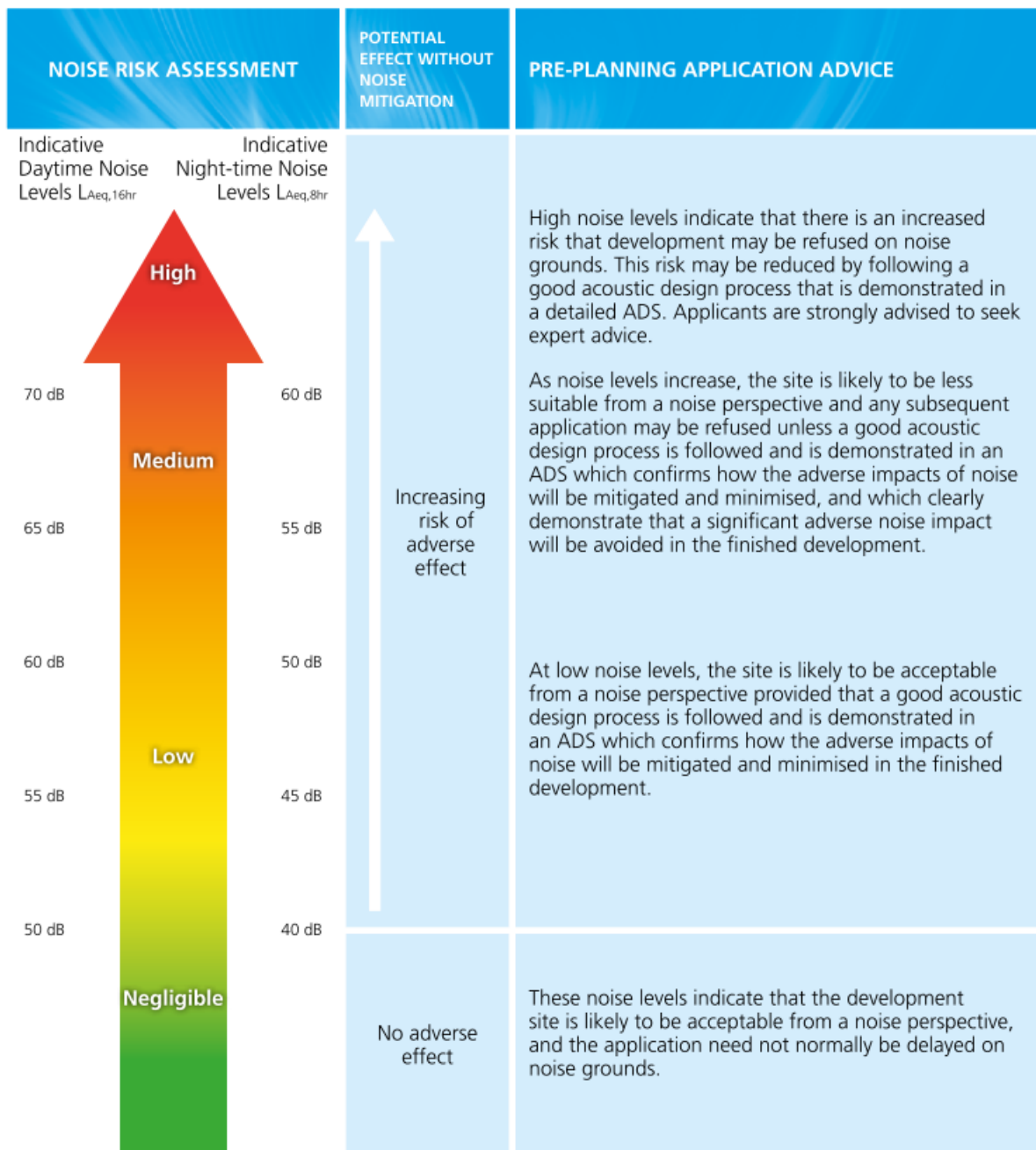


Figure 1 Notes:

- Indicative noise levels should be assessed without inclusion of the acoustic effect of any scheme specific noise mitigation measures.
- Indicative noise levels are the combined free-field noise level from all sources of transport noise and may also include industrial/commercial noise where this is present but is "not dominant".
- $L_{Aeq,16hr}$ is for daytime 0700 – 2300, $L_{Aeq,8hr}$ is for night-time 2300 – 0700.
- An indication that there may be more than 10 noise events at night (2300 – 0700) with $L_{Amax,F} > 60$ dB means the site should not be regarded as negligible risk.

Figure 1. Stage 1– Initial Site Noise Risk Assessment



APPENDIX C

Premises Noise Management Plan



PREMISES NOISE MANAGEMENT PLAN (PNMP): EAST GRINSTEAD #1109

The following measures **must be implemented after 11pm and before 7am**, as part of a proactive management effort to minimise the noise impact caused to nearby residents, created by the operation of the premises, and its customers when inside or in the vicinity of the premises.

These measures include:

Noise Source	Control measure
1. Minimising Vehicle and antisocial behaviour Noise (e.g. Loud music)	Staff shall be vigilant for vehicles that arrive and have either loud music playing, or where the car is being driven deliberately to create noise by revving of the engine or other stunts. Observational records should be made of registration plates in the Incident log where possible, and CCTV footage used to provide evidence of culprits who regularly cause antisocial behaviour. Where these are substantial examples then these should be supplied to the authorities with a copy of the noise log. Drivers should be encouraged to switch engines off when not in use. <u>Members of the management team, who are properly trained are required to quickly and safely challenge those creating unreasonable noise levels and request them to adjust their behaviour, to minimise noise and respect their neighbours. Information on those causing antisocial behaviour (ASB), should it continue, will be recorded as an incident and reported, when required to statutory authorities thereby and minimising and preventing the disturbance caused to neighbours as far as possible. For further information on McDonald's National Policy on ASB see the McDonald's Guidance for Managing Anti-Social Behaviour.</u>
2. People Noise	Signs shall be prominently displayed that ask customers that come into the premises to leave quietly in order to respect our neighbours. At the drive thru, signs should request that customers keep noise to a minimum or may risk not being served. We will work in partnership with the police and other statutory authorities to address any nuisance or crime and disorder that generates noise outside the restaurant within the licence, which could include SIA guarding (Security Industry Authority) on a risk assessment basis to achieve, where it is expected to be necessary to control noise. Customers that are seen to be disregarding the notices and or loitering outside during night-time/early morning hours making noise should be encouraged to come inside if they are eating, rather than be outside, or move on. Where this becomes confrontational an ASB trained Manager will attend and have the power to bar the person. <u>Gatherings of people in the car park who are not waiting to be served, should be challenged by the Manager, notified that they are on CCTV and recorded in the Incident log. Although rare, where there is evidence of antisocial behaviour, of which significant levels of noise are part, information will be made available to the authorities. A phone number will be made available to residents to contact the store, to report evidence of ASB within the boundary of the premises.</u>
3. Kitchen extract and plant noise	The kitchen extract system should be set up such that it reduces its operation speed from 23:00hrs and before 07:00hrs to the lowest setting that does not interfere with the store's kitchen operation. A minimum reduction of 10Hz to the system's speed is expected to do this.

Approved Plan for Store No.: _____, Authorising person: _____, Signature_____

The cover features a vibrant green background with a large, stylized white and yellow wave graphic that curves across the middle. Within the wave, there is a photograph of a McDonald's restaurant at night, with its golden arches and 'McDonald's' signage illuminated. In the bottom left corner, the McDonald's Golden Arches logo is displayed in yellow. The title 'McDonald's Incident Book' is printed in a large, bold, white sans-serif font in the bottom right corner. At the very bottom, a small line of white text provides copyright information: '©2013 McDonald's. 268506. The Golden Arches logo and 'm lovin' it are trade marks of McDonald's Corporation and its affiliates.'

Name/s.....

Telephone Number/s.....

Email/s.....

Work Address.....

[illegible]



APPENDIX D

Plant noise levels



Extract system - Variation of output sound levels with extract speeds

The noise level variation for different speeds has been measured at other McDonald's stores. The noise levels measured for the extract duct and the fan are shown below in Tables C1 and C2.

Speed (Hz)	Noise level measured dB(A)	Calculated sound power level (SWL)
25	63 - 64 *	71 - 72
30	67	75
35	70 - 71	78 - 79
40	73 - 75 *	81 - 83
45	76 - 79	84 - 87

Table C1. Noise levels at different speeds for the kitchen extract duct.

* Calculated level based on other measurements for that store.

Speed (Hz)	Noise level measured dB(A)	Calculated sound power level (SWL)
25	64 - 67 *	72 - 75
30	67 - 69	75 - 77
35	69 - 71	77 - 79
40	71.5 * – 73	80 - 81
45	74 – 75	82 - 83

Table C2. Noise levels at different speeds for the kitchen extract fan.

* Calculated level based on other measurements for that store.

Table C1 shows that the noise levels for the extract duct measured at different stores provide steps of **3 to 4 dB(A) per each 5 Hz setting variation**. Table C2 shows that the noise levels for the extract fan measured at different stores provide steps of typically 2dB(A) per 5Hz speed variation. It is likely that this is partially due to contribution from the extract duct noise. Therefore, the main output difference is from the extract duct rather than from the fan.

It was also possible to calculate the frequency spectrum trend for different speeds as shown in Figure C1 below. Note that for 25Hz and 40 Hz the frequency spectrum was only measured at one store, whereas for the rest of speeds the trend shows the logarithmic average of the different stores.

It is clear that for 30 Hz to 45 Hz settings, there is a trend showing possible tonality around 250 Hz. The spectral shape between 30 Hz, 40 Hz and 45 Hz settings is almost identical other than shifted up for the higher speed settings. However, the measurement for the speed setting of 25 Hz shows a different shape, where the possible tonality has shifted down to the 125 Hz octave band. Not many systems allow the 25 Hz setting, and therefore this data will be revised when there are more opportunities to measure other stores at the speed setting of 25 Hz.

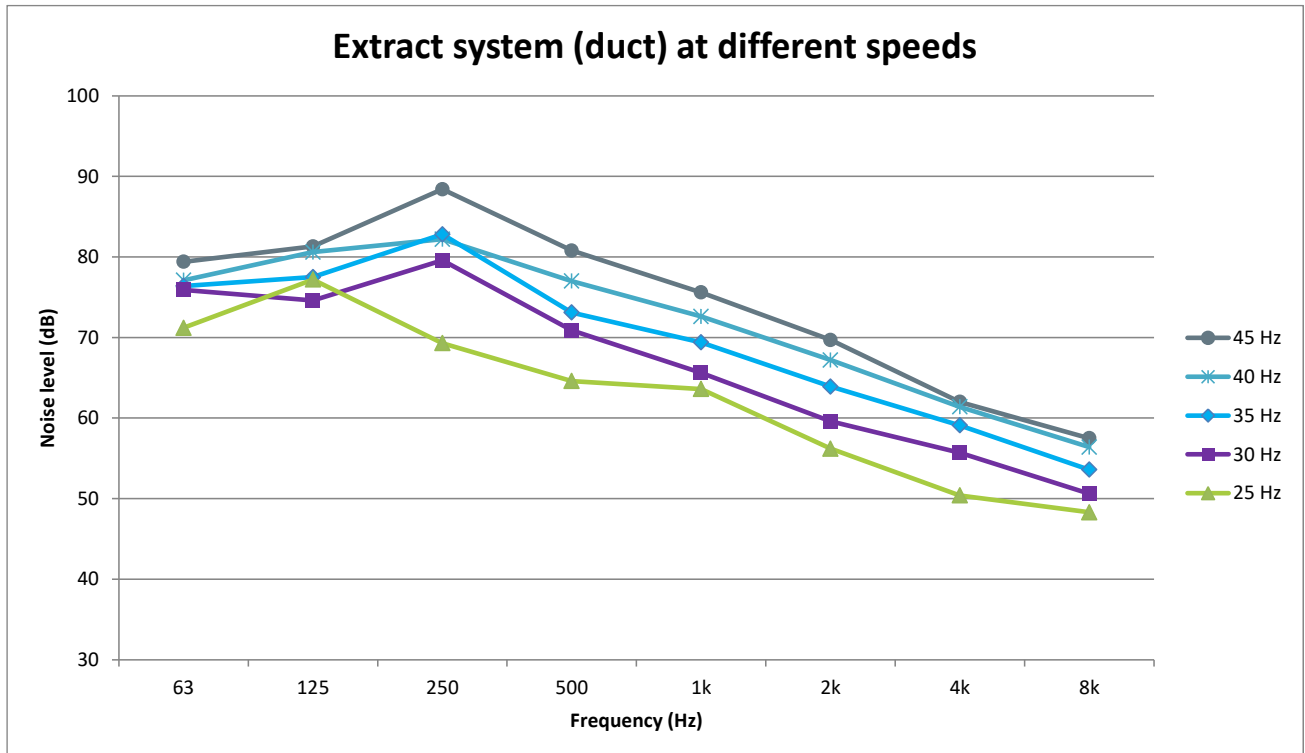


Figure C1. Frequency spectra for different speeds for the kitchen extract (duct).



APPENDIX E

COD noise levels



1 Sound Levels of COD

The Communications Operating Device (COD) systems have been measured at a number of stores for different levels, in order to indicate noise levels for different settings, study variability between stores and provide an average noise level per level setting in order to provide guidance to the COD system management based on measured ambient noise levels and distance to nearest residents.

The measured noise levels at three McDonald's stores (North Cheam, Wandsworth Road and Maidstone) are shown below in Figures D1 – D3. All the systems were 3M although the COD was an older version at Wandsworth Road (Figure D5) rather than the latest one that can be found at most stores as it was at North Cheam and Maidstone.

Subjectively there was a noticeable difference between the main 3 levels measured, and when the systems were set at level 8 it was just audible above the ambient noise levels. North Cheam was the quietest and therefore the noise levels measured were less affected by road traffic noise in the area. At Wandsworth Road there was fairly constant traffic at all times, and the roof plant was clearly audible. At Maidstone the measurements for settings 18 and 13 were affected by a van engine on the other lane of the store drive thru service. This is clearly visible in Figure D4.

When taking the average of the levels measured at the three stores, it is possible to determine that the reduction in noise level is between 6-7 dB per 5 levels of the COD system. Figure D6 shows that the average noise level against McDonald's COD system settings as a best fit a linear trend. Therefore, using this data it is possible to determine what settings each store needs to operate at in a given background noise level, to achieve adequate levels which are not excessively audible at the nearest residential property. The overall noise levels for every setting from 6 to 20 have been calculated and shown in Table D1.

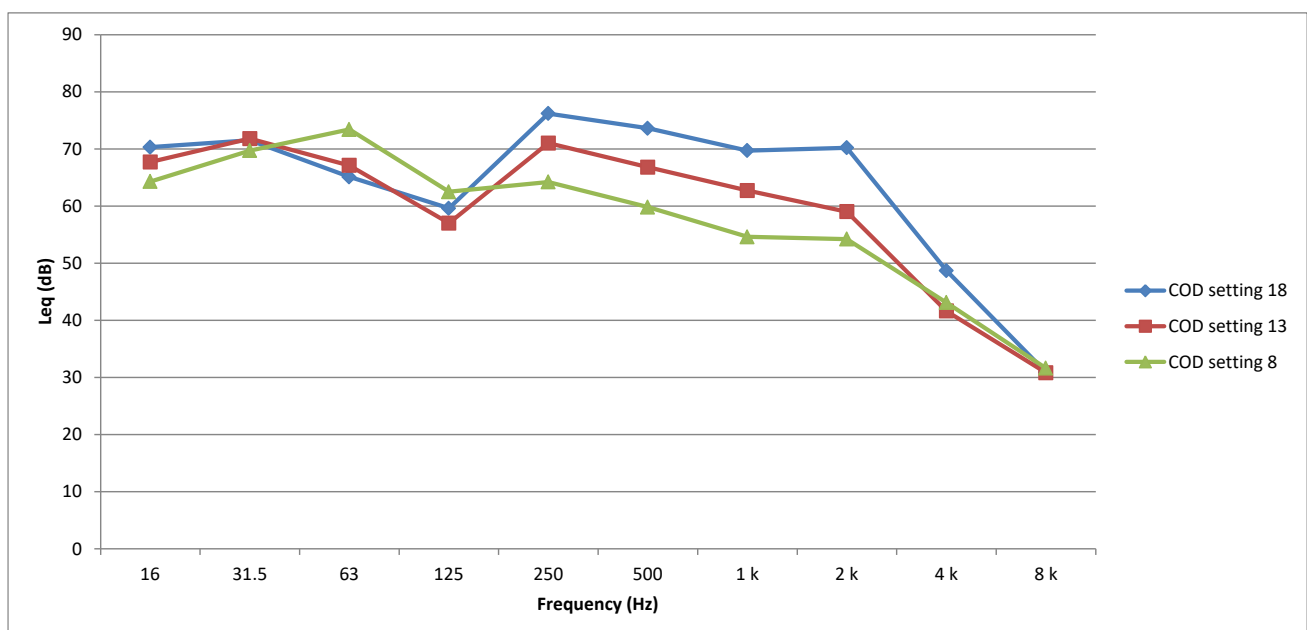


Figure D1. Measurements at 1m from COD - North Cheam

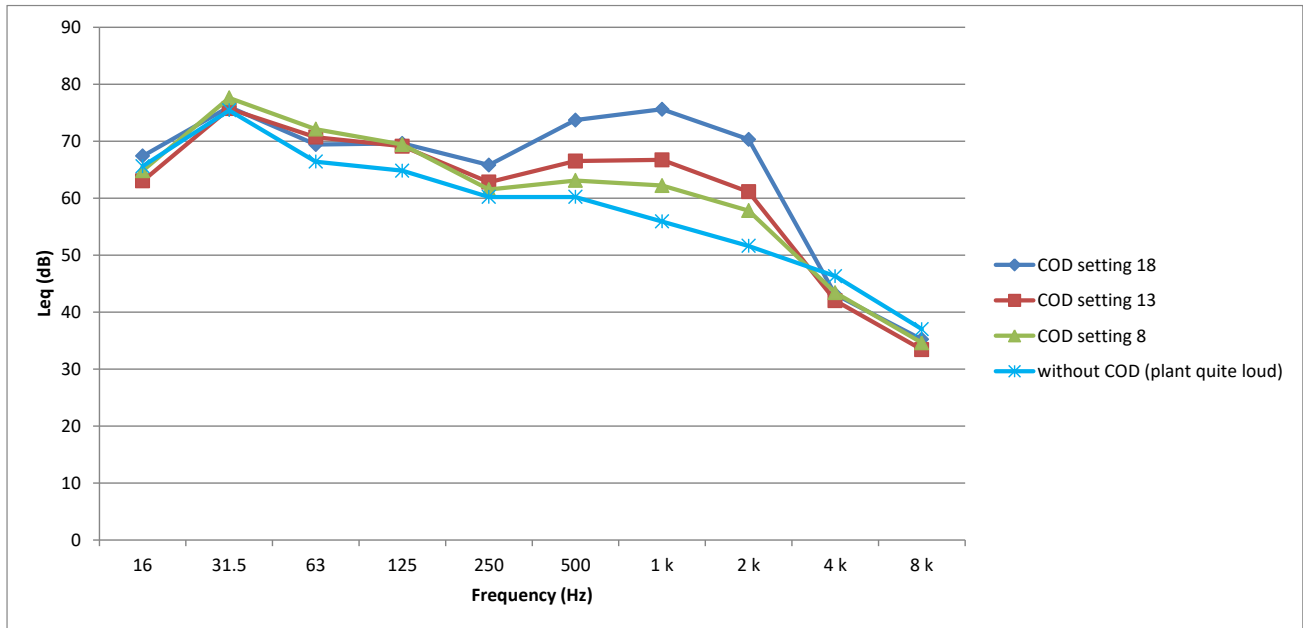


Figure D2. Measurements at 1m from COD - Wandsworth Road

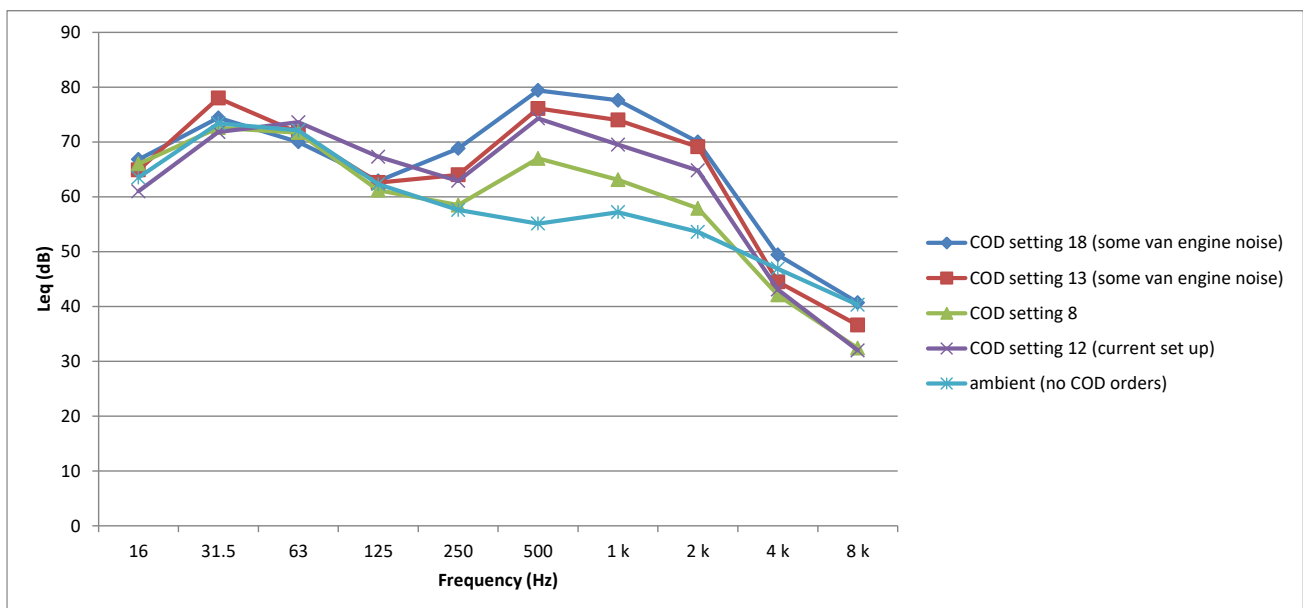


Figure D3. Measurements at 1m from COD - Maidstone

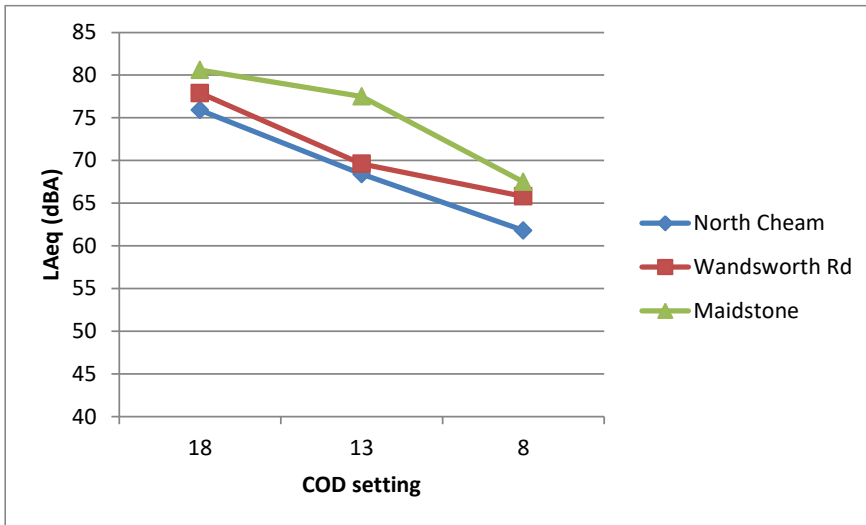


Figure D4. Measurements at 1m from COD – Overalls (dBA) for the 3 stores



Figure D5. Photo of COD system at Wandsworth Road

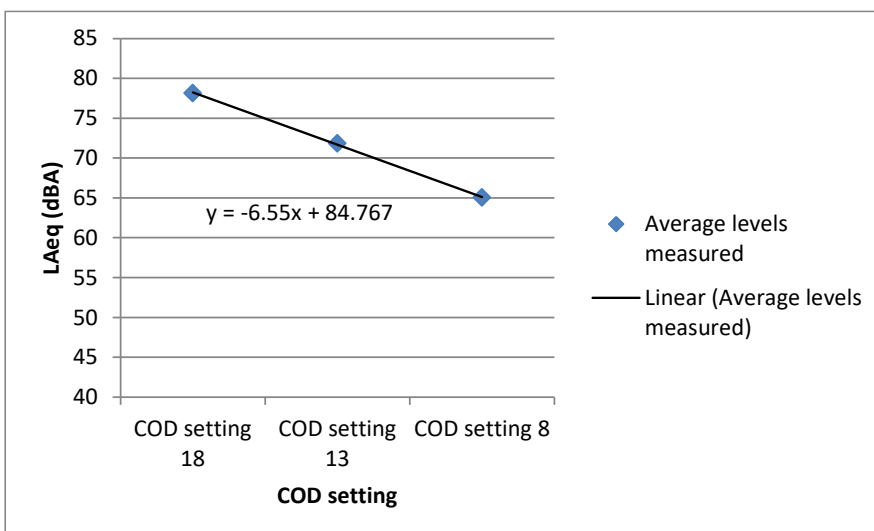


Figure D6. Linear regression fitting average levels from 3 stores



COD setting	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Noise level at 1m from COD (dBA)	62.4	63.7	65.0	66.3	67.6	68.9	70.2	71.5	72.8	74.1	75.4	76.7	78.0	79.3	80.6

Table D1. Noise levels for COD settings 6 to 20 – measured (bold) and calculated based on difference measured and linear regression.

2 Assessment of required COD Levels against ambient noise

Subjectively, when the COD was set to level 8, it was perceived as not loud enough for Wandsworth Road and Maidstone and slightly more audible at North Cheam. The overall ambient noise levels for Wandsworth Road and Maidstone when the COD was not in use were 61 dBA for both stores. This means that a difference of 4dBA is not enough for the COD to be at a workable level. When the setting was 13, it was clearly audible at all stores and at Maidstone, the COD system was set up to 12, which was also subjectively clearly audible. This means that a difference between the COD level and ambient noise levels of 10dBA is more than enough, and 8dBA a reasonable difference for the COD to be at a workable level. Table D2 shows the noise levels for each COD setting at distances with the residential properties between 10 and 60 meters and what the maximum ambient noise levels can be at the COD for the setting to be at a workable noise level.

COD setting	Noise level at 1m from COD (dBA)	Noise levels from the COD at different distances (m)												Max ambient noise level required (dBA)
		10	15	20	25	30	35	40	45	50	55	60		
20	80.6	61	57	55	53	51	50	49	48	47	46	45	72.6	
19	79.3	59	55	53	51	49	48	47	46	45	44	43	71.3	
18	78.0	58	54	52	50	48	47	46	45	44	43	42	70.0	
17	76.7	57	53	51	49	47	46	45	44	43	42	41	68.7	
16	75.4	55	51	49	47	45	44	43	42	41	40	39	67.4	
15	74.1	54	50	48	46	44	43	42	41	40	39	38	66.1	
14	72.8	53	49	47	45	43	42	41	40	39	38	37	64.8	
13	71.5	52	48	46	44	42	41	40	39	38	37	36	63.5	
12	70.2	50	46	44	42	40	39	38	37	36	35	34	62.2	
11	68.9	49	45	43	41	39	38	37	36	35	34	33	60.9	
10	67.6	48	44	42	40	38	37	36	35	34	33	32	59.6	
9	66.3	46	42	40	38	36	35	34	33	32	31	30	58.3	
8	65.0	45	41	39	37	35	34	33	32	31	30	29	57.0	
7	63.7	44	40	38	36	34	33	32	31	30	29	28	55.7	
6	62.4	42	38	36	34	32	31	30	29	28	27	26	54.4	

Table D2. Calculated COD noise levels at distances between 10 and 60m for COD settings 6-20 and correspondent maximum ambient noise level required for the setting to be workable.



APPENDIX F

McDonald's Guidance on Anti-Social Behaviour



McDonald's has launched national Guidance for Managing Anti-Social Behaviour, aimed to reduce the risk of ASB happening at McDonald's premises and to help store managers to know how to best manage Anti-Social Behaviour (ASB) if this happens and to do so safely and effectively.

The Guide defines ASB as *"behaviour likely to cause harassment, alarm or distress to one or more persons"*. The methods and tools described in the Guide have been summarised below:

- All restaurants should have a CCTV system installed that complies with McD minimum standards so it can be used for the purposes of monitoring as well as identification and able to do so in low light.
- Body worn cameras (BWC) are not recommended and at restaurants belonging to McOpCo are not permitted to managers or employees.
- Detecting and preventing ASB:

Loitering: groups of people hanging around can increase the risk of ASB and therefore if an individual or a group is perceived to be loitering, it is recommended to approach them in a safely and effective way (method described on the Guide) in order to dismiss the groups or individuals.

Drug misuse: a list of indications is provided so staff can identify possible problems and for the management team to deal with the problem. A list of tactics that can be implemented to prevent the issue is also provided.

Staff Safe AV: alarm system that helps raise an alert to a monitoring station so an operator can connect to see and hear what is happening. The system consists of a control panel and six activation buttons (3 mobile units, 1 for staff working outside, 1 on the control panel) and is capable of announcements by pressing the control panel activation button, there will be an announcement to tell customers that the premises are externally monitored. The system is also capable of recordings, and these recordings are kept at the Call Centre anytime an audio activation is made. These recordings can be useful as evidence for the Police. An external speaker could be fitted when the restaurant is in a non-residential area, if approved by a Licensing Officer or the Local Authority. This would allow to make announcements from inside the premises to inform individuals or groups outside.

- Use of tools such as classical music, stop free WiFi service and power to charging points inside:

Playing classical music inside the store, groups of teenagers will tend not to want to stay at the premises and therefore they will leave as soon as they finish eating.

It is suggested that some individuals or groups might stay longer than necessary at the restaurant to use the free WiFi and charging points. Although it is desirable for customers to enjoy their stay, it is also desirable to deter loitering that could lead to ASB in or around the premises. Therefore, by temporary suspension of the WiFi and charging points facilities, groups are likely to willingly mobilise.

- Partnership with Police and other forces is encouraged and provides a proactive commitment to trying to manage ASB. Radio Links help the Franchisees and Managers build relationships with the Police and other businesses including Shop Watch, Pub Watch and Retail Radio Links initiatives. The restaurant management team should attempt to deal with issues in the restaurant, however, if there is a persistent problem, the option of using guarding policy should be assessed for the required time.
- Reporting and tracking incidents allow issues to be identified and create plan actions to address them. The process of reporting is explained in detail on the Guide for both crime and ASB.



- As a last resource, it is possible to ban specific people that have caused an issue. This should only be applied when all other resources to stop the problem have not been effective and should always be done with support of an external partner, ideally the local Police.

Note: the use of a mosquito devices was identified as one commercially available way to disperse groups of young people, however, this is not recommended as it introduces another noise source that could cause annoyance to other in the vicinity, especially children or animals with more sensitivity to high frequency.

Two main step guides are also provided in the document:

- **ASB Incident Management: 5 Step Method for Managers**

- 1) Approach and ask for the behaviour to stop, explain that if the behaviour does not change, they will need to leave the premises.
- 2) If the behaviour continues, explain that they need to leave the premises. Dialog should be kept at a minimum. If they do not leave, explain that further action will be taken.
- 3) If they have not left, ask again and explain that the assistance button is going to be used, which would take CCTV footage and pass it to the police, and it could result in a ban from the restaurant and other prosecution from the police. If they still not leaving, Staff Safe takes over and there is no more dialog between the member of staff and the person or group.
- 4) Staff Safe Operator will contact the police and will stop the dialog with the person or group.
- 5) It is likely that the person or group leave before the police arrives, however, an overview together with the incident logbook and CCTV footage should be provided to the Police. If an individual results to be banned from the restaurant, it is crucial to enforce it at all times.

- **ASB Incident Management: 7 Point Plan – Post ASB Incidents Actions**

- 1) All incidents should be recorded in the Incident Log.
- 2) Shift Manager should take a picture from CCTV footage of the individual and attach it to the Incident Log.
- 3) Monthly review of the Incident Log at Manager's meeting. Banning letters should be given to the Police.
- 4) The Police is encouraged to issue the Banning Letter through a home visit.
- 5) Reasons for banning:
- 6) Instant Ban: due to aggressive, abusive, threatening behaviour or damage to property.
- 7) Yellow Card: issued for less significant incidents, three yellow cards would result on a Ban.
- 8) Monthly review of Incident Log and Banning Letters, preferably with the Police.
- 9) Advise other McDonald's in the area of banned individuals.