

Technical Memorandum

Project : MFG East Grinstead, 147-149 London Road
Date : 1 April 2025
Ref : EC18447-8
Author : Jon Mudd BEng(Hons) MIOA

TITLE : Additional Commentary on Potential Noise Impact from Deliveries to MFG East Grinstead

INTRODUCTION

In response to the EHO's queries regarding the BS4142 corrections applied in our noise impact assessment (EC18447-7), dated 8th January 2025, this Technical Memorandum provides specific details of the delivery operations observed on-site. These observations include an updated assessment of typical delivery activities and support the previous conclusion that the noise impact from deliveries within the proposed development will be minimal.

The following three main delivery types were observed by EEC Ltd on-site:

- A 'Booker' delivery providing fresh products for the Londis Service Station;
- A Best Food Logistics delivery to the Pret retail provision within the service station; and
- A fuel tanker delivery for the Jet Service Station.

The EHO raised the following queries when reviewing our noise impact assessment:

'A noise impact assessment has been submitted to address the likely impact of allowing later deliveries, given the nearby residential premises. As part of this assessment, BS4142 methodology has been used, as is appropriate for this type of noise. However, the acoustic correction penalties applied as part of the BS4142 have not been fully justified.'

*The standard suggests the following penalties (to be added together arithmetically)
Tonality: just perceptible at receptor 2dB, clearly perceptible 4dB, highly perceptible 6dB
Impulsivity: just perceptible 3dB, clearly perceptible 6dB, highly perceptible 9dB
Intermittency: if readily distinctive 3dB
Other characteristics: 3dB*

Given that the expected deliveries and collections are likely to include lorry engine noise, refrigeration unit noise, reversing beepers, tailgate noise, lorry door slams, cages being moved, bin emptying etc, it is not clear how the report can justify only using a 3dB intermittency penalty for all deliveries. The adjacent Parkview House overlooks the site so the sounds identified above are likely to be clearly perceptible during the evening period that is relevant for this variation.'



DISCUSSION

In our acoustic assessment, we used library data for typical delivery operations for similar operators, though these were not specific to an MFG operation. A total correction of +3dB was included in our BS4142 assessment for each delivery operation, accounting for the potential that the impulsive nature of some noise might be just perceptible.

The site-specific noise measurements of actual delivery activities, support the findings of the original assessment.

We have provided details of each delivery operation below, along with additional commentary on the expected noise impact.

General Notes:

The service station operates 24/7, meaning customer activity can occur at any time. The A22 London Road runs along the southern boundary of the site and is a main road through the centre of East Grinstead. Traffic flow outside the service station contributes to a consistent level of background traffic noise, as reflected in our noise survey data, with ambient noise levels always exceeding 55dB(A). The predominant noise character is traffic-related, including acceleration and deceleration due to stop-start traffic patterns due to the traffic lights on London Road, directly opposite the forecourt.

Given this existing noise environment, noise from delivery vehicles arriving and departing would not be considered out of character for the area.

Booker Delivery

The Booker delivery is made via a rigid 24ft delivery vehicle with a tail lift. The vehicle pulls into the forecourt and parks in front of the EV charging bays. Stock is unloaded at the rear of the vehicle and taken into the covered bin store area on the east side of the sales building. Once unloading is complete, the vehicle drives forward and exits the forecourt. No reversing manoeuvres are required, thus avoiding noise from reversing alarms. See Figure 1 below illustrating the route of the delivery activity.

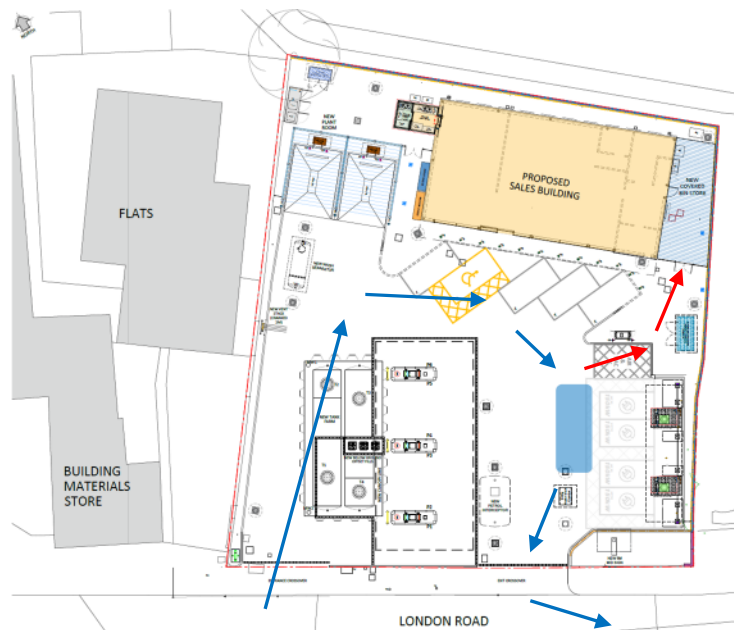


Figure 1: Illustration of Booker delivery and unloading

Stock cages are manoeuvred onto the tail lift, with a maximum of two cages at a time. The ramp on the unloading side is lowered slowly to ground level as the tail lift is lowered, generating negligible noise against the background levels. There are no significant impacts or impulsive noise levels associated with the tail lift operation.

While our library data assumed vinyl-wheeled stock cages, all Booker delivery cages observed on-site had rubberized wheels, significantly reducing rolling noise. Some rattling from the cages was noted.

The witnessed delivery involved unloading four cages into the covered bin store, followed by the loading of four empty cages back onto the lorry, requiring four tail lift operations. The refrigeration unit beneath the trailer remained off throughout the visit. The entire delivery process took 24 minutes.

Noise level measurements indicate that the resultant noise level is 5dB lower than previously used in our BS4142 assessment. A worst-case +3dB correction under BS4142 remains appropriate, as intermittent noise from stock cages would be barely perceptible at Parkview House with the ambient noise levels across the proposed delivery window of 0700-2300hrs consistently remaining above 55dB(A) L_{eq} .

The following image is an update of our CadnaA noise model based on the noise levels measured from the Booker delivery.

quietly moving forward

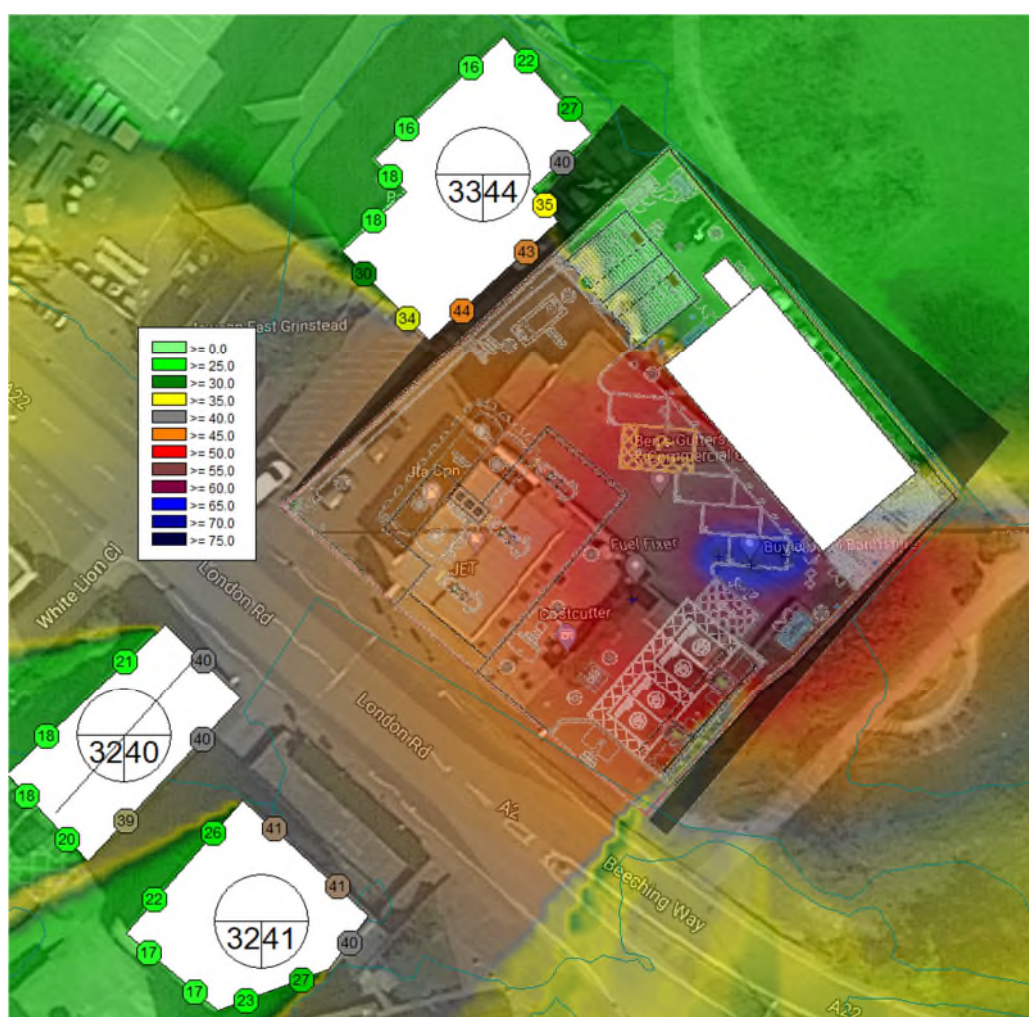
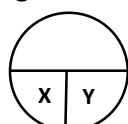


Figure 2: Calculated worst case resultant noise levels from unloading of servicing vehicles for main sales building



X – Noise From Delivery vehicle only
Y – Noise from moving of the stock cages and tail lift.

The resultant noise level is 5dB quieter than the noise levels used in our previous BS4142 assessment. Based on our review of the delivery process a worst case +3dB correction could be applied to the specific noise level under BS4142 with the intermittent noise level from all activities being barely perceptible at the dwellings of Parkview House.

Pret Delivery

The Pret delivery is made via a rigid 24ft vehicle with a tail lift at the rear and a side door for refrigerated stock. The vehicle parks in the same location as the Booker delivery. Refrigerated stock is removed manually from the side door and placed onto a fixed toe sack truck with puncture-proof rubberized wheels, generating negligible noise when being moved.

Figure 3 below illustrates the typical delivery procedure.

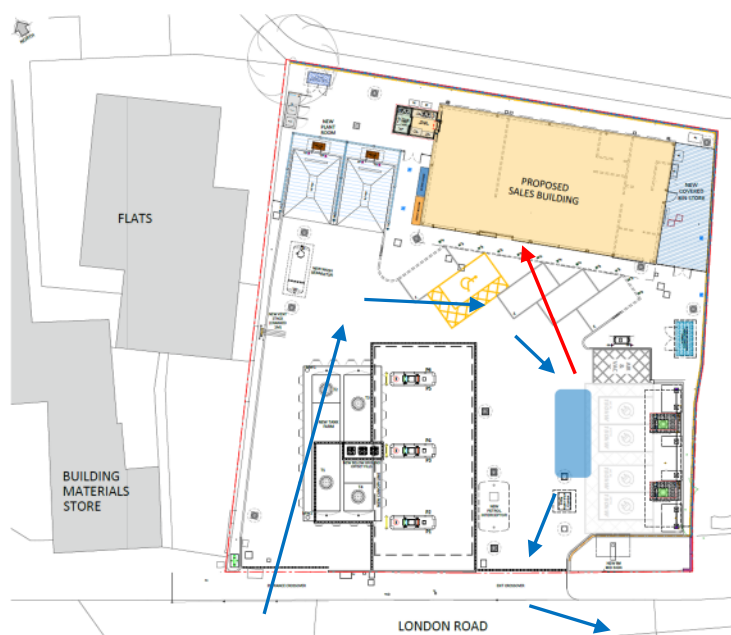


Figure 3: Illustration of Pret delivery and unloading

Palletised stock from the rear is manoeuvred using a pallet truck with rubberised wheels. Goods on the pallet are broken down at the store entrance, with no significant noise generated from this process. The only notable impulsive noise occurs when the tail lift ramps are lowered onto the ground. Measurements indicate an instantaneous noise level of 53dB(A) outside Parkview House windows, similar to typical ambient levels during the proposed extension period. Given that internal noise levels would remain below 43dB(A), less than the 45dB(A) L_{max} threshold typically recognised as leading to sleep disturbance, the noise impact remains low. None of the windows of Parkview House that directly overlooked the forecourt appeared to be bedrooms with the spaces looking to be living rooms and kitchens.

The overall noise level from the delivery operation will be no more than 44dB(A), similar to the Booker delivery.

The refrigeration unit on top of the cab did not operate during the delivery, and the entire process took 20 minutes. It is unlikely that refrigeration will be needed, as the refrigerated section remains closed for most of the delivery.

A worst-case +3dB correction under BS4142 remains appropriate, as based on our observations the intermittent noise from tail lift ramps would be barely perceptible at Parkview House and no need for the vehicle to engage reverse gear.

Fuel Delivery

Fuel deliveries are made via a tanker that parks between fuelling pump stations 2 and 3. The tanker enters the forecourt in forward gear, parks, and turns off its engine. Hoses are connected to underground fuel connections, with no significant noise generated. The manhole covers are lifted using a specialised tool, creating minimal noise. Fuel transfer occurs via gravity feed, eliminating pump noise. Once complete, the

manhole covers are replaced with a minor impulsive noise, which is not considered significant. The tanker then exits the forecourt without reversing. Figure 4 below illustrates the typical delivery route.



Figure 4: Illustration of fuel delivery location and manoeuvre

Based on our observations and subjective impressions, the +3dB correction applied in our BS4142 assessment of the activities is considered sufficient and robust. The only obvious intermittent noise sources are vehicle arrival and departure, of which this event would be just one of many similar events occurring during the delivery period due to the site context. The noise impact from fuel delivery operations is expected to be negligible.

CONCLUSION

EEC Ltd has observed each of the specific delivery operations on site that were previously assessed using library data.

Based on our review and site measurements, actual delivery operations are quieter than those initially assessed. Noise from stock cages is lower due to the use of rubberized wheels. The +3dB corrections applied in our BS4142 assessment—whether for tail lift noise during Pret deliveries or cage rattling during Booker deliveries—are considered robust and sufficient. No additional corrections are necessary. Additionally, all delivery vehicles manoeuvre only in forward gear, avoiding the need for reversing alarms. Deliveries take less than 25 minutes, and refrigeration units are not expected to operate during unloading.

Fuel delivery noise is largely limited to vehicle arrival and departure. Given the existing noise climate, dominated by forecourt activity and stop-start traffic, tanker arrivals and departures do not stand out as intrusive and are part of the existing, established soundscape.

Based on our site-specific survey, the conclusions from the original acoustic assessment (EC18447-7) remain valid, confirming that noise from typical delivery operations within the proposed extended delivery window will have a low impact on Parkview House residents.

quietly moving forward

