LOVEN
acoustics

Attn: Chris Armstrong
McDonald's Restaurants Ltd.
3 Cross Lane
Salford
M5 4BN

Our Ref: LA/1427/03L/ML

7th March 2016

Dear Mr Armstrong,

Broad Street, Leek ST13 5NS
Noise Impact Assessment - Addendum

A revised report of a noise impact assessment carried out in 2015 (Ref: LA/1427/02aR/ML) was provided to support the resubmission of a planning application to Staffordshire Moorlands District Council (SMDC) for the construction of a restaurant and associated drive thru (App. no. SMD/2015/0818). The re-submission of the application included changes to the proposed layout of the site and the updated noise report reflected the consequent change in noise impact predicted to the nearest noise sensitive receptors (NSR).

They change of layout was as a result of the reaction to the original application layout, including concerns from the Environmental Health team at SMDC that the restaurant and drive thru (DT) lane were originally shown to be too close to houses on Sneyd Street which could cause noise disturbance to the residents. Following my discussions with Denis Colgan, Environmental Health Officer at SMDC (EHO), to reduce the noise impact the restaurant was repositioned closer to Broad Street, which experiences higher ambient noise levels from passing traffic than the properties on Sneyd Street, and a buffer zone was created between the DT lane and the boundary with 18 Sneyd Street.

The current application is under consideration but comments have been received from the EHO regarding the updated noise report assessing the revised layout. Whilst he acknowledged that the new layout will improve the noise environment for Sneyd Street residents, he was concerned that the potential disturbance emphasis has been shifted to residents of Broad Street, whose front façades overlook the proposed development.

Martin Loven BSc (Hons) MIOA
14 Friends Field, BURES, CO8 5LH
T: 01787 227920 M: 07891 865856 E: enquiries@lovenacoustics.co.uk
www.lovenacoustics.co.uk

Further discussion with the EHO revealed that although he agreed that the ambient noise levels on Broad Street would sufficiently reduce any impact from McDonald's activities during the day, the reduction in passing traffic during the late evening could mean that noise from customer vehicles around the DT lane close to the Broad Street boundary may be dominant at times. He felt that he would not wish residents on Broad Street to be affected by any further significant noise during later evening hours.

From a technical perspective the revised noise assessment submitted considered the impact of noise from all aspects of the operations of the restaurant including traffic around the DT lane, and in comparison with the ambient noise measured on Broad Street during a 4-day continuous survey it was found that the existing noise levels during the hours that the DT would likely be open - up to 23:00 - were sufficiently high so that the slow-moving vehicles around the DT lane would not be expected to disturb residents. Table 10 in the revised noise report actually indicates that at any time the overall ambient noise levels are predicted to be far higher than that generated by the predicted volume of DT traffic.

However it is accepted that although overall noise levels (L_{Aeq}) are shown to remain high during the evening, background noise levels (L_{A90}) do reduce during the evening, indicating a reduction in general local activity. Therefore notwithstanding the findings of the revised assessment, it has now been proposed that a 1.5m high acoustic barrier be erected on the southern boundary around the DT lane from the customer order points to the site entrance on Broad Street. Figure 1 in the appendix of this document shows the latest site layout and the extent of the proposed fence on Broad Street as well as other proposed acoustic fences.

The newly proposed fence along the DT lane will shield the residents of Broad Street opposite the site from vehicle noise around the entire DT lane that has line of sight from residents living opposite the site. This fence should therefore reduce the noise impact that the EHO is concerned about.

Calculations indicate that at the closest point directly opposite the houses on Broad Street, the attenuation from a 1.5m acoustic fence positioned as shown in Figure 1 will be approximately 9dB for ground floor rooms and 6dB for first floor rooms. The benefit from the fence at second floor windows will be more marginal but should still reach up to 4-5dB attenuation.

All these predicted reductions are significant and should shield vehicle noise in the DT lane to the extent that under normal conditions the vehicle noise would not be discernible as a discrete source at the receptor windows on Broad Street. It should be noted that acoustic fences 2.0m high are also proposed around the rear gardens of 76-78 Broad Street and 18 Sneyd Street to provide significant shielding for those receptors.

Martin Loven BSc (Hons) MIOA
14 Friends Field, BURES, CO8 5LH
T: 01787 227920 M: 07891 865856 E: enquiries@lovenacoustics.co.uk
www.lovenacoustics.co.uk

Appendix

Figure 1. Extent and location of proposed acoustic barriers

Martin Loven BSc (Hons) MIOA
14 Friends Field, BURES, CO8 5LH
T: 01787 227920 M: 07891 865856 E: enquiries@lovenacoustics.co.uk
www.lovenacoustics.co.uk

In conclusion this addendum demonstrates that the proposed acoustic barrier to the boundary of the DT lane and Broad Street will provide between 5dB and 9dB attenuation to residents of Broad Street situated opposite the site. This is predicted to ensure that vehicles around the DT lane will be unlikely to be perceived as a discrete source of noise by the Broad Street NSRs and the noise will not add to the ambient noise levels already experienced by the receptors at any time.

It is therefore considered that the proposed fence will provide sufficient mitigation to assuage the EHO's concerns of DT vehicle noise, which would subsequently not be expected to have an adverse impact on residents' amenity.

If you wish to discuss any of the above, please do not hesitate to contact me.

Yours sincerely,

Martin Loven
BSc (Hons) MIOA

Martin Loven BSc (Hons) MIOA
14 Friends Field, BURES, CO8 5LH
T: 01787 227920 M: 07891 865856 E: enquiries@lovenacoustics.co.uk
www.lovenacoustics.co.uk