TECHNICAL NOTE

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Project: Project Excellence - Wiggs Farm, Coalville

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To: Sam Silcocks / Delilah Green, Harris Lamb Ltd

From: Graham Bowland BSc MIOA – Technical Director

Subject: **Response to Environment Health Officer Comments / Queries**

1. This Technical Note has been prepared in response to comments made by the Environmental Health Officer (EHO) at Hinckley & Bosworth Borough Council (HBBC) relating to the proposed development at Wiggs Farm, Wood Road, Nailstone, Coalville, Leicestershire LE67 1GE, as per Application Ref: 25/00523/FUL.

2. The comments have been made following review of the Environmental Statement, specifically the Noise and Vibration Chapter, which was prepared by Hepworth Acoustics.

3. The Technical Note provides response to each of the comments raised, in turn, as set out below.

4. ***EHO Comment 1****: Table 9.11- what are the daytime Laeq and L90 (16 hours) for each receptor?*

   Response to Comment 1: Table 9.11 has been reproduced and adapted below, focussing on only the daytime period 0700-2300hrs. The table below includes (for reference) the previously presented daytime data, which was split between a 12-hour day and 4-hour evening. The purpose of this was to provide better resolution on typical residual / background noise levels over those periods, and hence allow more robust consideration of the quieter and more sensitive evening period. Nonetheless, the table below also includes the requested data which combines the full period.

   This essentially shows that the overall 16-hour noise levels are only very slightly lower than the previously presented 12-hour 'day' data, but somewhat higher than the previously presented 4-hour 'evening' data.

Measurement Index		Previously Presented Daytime Data Summary				**Requested Overall 16-hr Daytime Summary 2300-0700hrs**	
		'Day' 0700-1900hrs		'Evening' 1900-2300hrs			
		Location 1	Location 2	Location 1	Location 2	**Location 1**	**Location 2**
$L_{Aeq,T}$ 'residual'	Range	44-57	43-53	40-47	39-48	**40-57**	**39-53**
	Logarithmic Average	52	49	44	46	**51**	**48**
$L_{A90,T}$ 'background'	Range	36-54	37-50	32-40	29-40	**32-54**	**29-50**
	Mode	52	43	37	39	**52**	**43**
	Mean	46	43	36	36	**44**	**42**

5. ***EHO Comment 2****: 9.5.35 - Have reverse alarms been used in the model? Are HGV's operated by Pallex and therefore able to be controlled in terms of the type of reverse alarm used? What height has this source been modelled at?*

   Response to Comment 2: Effectively, the potential uplift in noise from a reversing alarm is accounted for within the modelling. Separate to the primary element of the acoustic model (which is the forwards flow of slow-moving HGVs around the site) additional HGV noise has been accounted for at the outdoor loading bays, and also at parking areas, where reversing may briefly take place, on the basis of a 10dB uplift in HGV noise for the duration of that brief event, which is considered a highly robust assumption.

   The main source for forward moving HGVs is modelled at 0.8m above ground. This is based on a cautious extrapolation of CRTN guidelines (which stipulates a source height of 0.5m above ground for road traffic), which has been increased to account for the higher average engine height of the proposed vehicles compared to general road traffic (albeit noting that general traffic includes larger vehicles too). All of the sources within the model have been modelled at a height of 0.6m above ground.

   It is our understanding that the HGVs are (mostly if not all) Pall-Ex operated and so some control and management of alarm types may be possible, subject to separate discussions.

   Notwithstanding the foregoing, it should be stressed that, as set out in the ES Chapter, the site has been meticulously designed to ensure very efficient running and throughput of vehicles with a one-way system clockwise around the building that reduces reversing and other general manoeuvring to an absolute minimum.

6. ***EHO Comment 3****: 9.5.36 / 9.5.39 Is the assessment based on a diesel FLT? Have reverse alarms been used? What is the contribution of this to the predictions at receptors? As above this could be controlled with a Noise Management Plan*.

   Response to Comment 3: The assessment is based on averaged data from sample noise measurements at the existing Pall-Ex site. as well as other sites with similar operations, and includes a range of conventional FLT types including diesel and LPG, but not electric. The source measurements also include peaks of noise from traversing uneven ground and reversing alarms. It is therefore expected that FLT noise at the proposed development will be somewhat lower, using electric FLTs and over a newly created, smooth surface.

   Nonetheless, even based on these cautious assumptions the FLT noise is typically about 8dBA below the overall predicted noise level at the sensitive receptors, and hence that noise does not contribute significantly to the overall level.

   It is agreed that noise emissions for FLTs, as with other aspects, can be controlled in part by adherence to a suitable Noise Management Plan, which can be enshrined by a suitable condition attached to a planning consent.

7. ***EHO Comment 4****: 9.5.40 with regard to scoping out internal noise - Have measurements of internal noise at the existing facility been taken to justify this?*

   Response to Comment 4: Albeit similar to a degree, the profile of internal operational activity at the existing Pall-Ex site differs from that at the proposed development. Nonetheless, it was noted that during external loading activity adjacent to the building at the existing site, other internal noise was not clearly audible.

   Moreover, due to the lower quantum of activity internally compared to externally, and the noise break-out level difference that would be anticipated via the openings in the building (which we would expect to be at least -10dBA based on experience and testing of similar sites), it is inevitable that internal noise break-out will not be a significant contributor to overall noise levels compared to that from the external activity.

8. ***EHO Comment 5****: The maintenance units are not mentioned in the report – details of activities should be provided and hours of use if these are to be restricted. If the operation is to be scoped out of the assessment justification should be provided.*

   Response to Comment 5: Our understanding is that the maintenance unit will be used for general upkeep and maintenance of vehicles, but activities are not anticipated to give rise to significant noise levels.

9. ***EHO Comment 6****: I note that predicted noise levels at receptors and these are significantly above the measured L90 levels without any corrections for noise characteristics. Whereas I understand the reasoning behind using the Laeq in the assessment BS4142 does include mobile sources and although the noise is of transport the nature of the movements (shorter distances in a lower gear) in addition to reverse alarms and loading/unloading/curtain drawing etc. will be different to the noise from the road network. Noise from the operation has the potential to be an issue particularly on a night when there is less masking noise.*

   Response to Comment 6: As noted in the comment, there is a clear rationale for adopting noise criteria based on L_{Aeq} noise levels in this case. While this approach has basis in the provisions of BS 4142 (especially with regard to contextual assessment), as well as being broadly similar to the approach adopted with respect to the nearby consented Aldi Distribution centre, this does not represent a conventional 'initial estimate of impact' as per BS 4142, in terms of the application of acoustic feature corrections.

   Nonetheless, it is not considered that characteristics of the overall generated sound will be substantially different from the residual road traffic noise in this case. The nature of HGV movements will, as noted, be over relatively short distances at times, but will be at low speed, and hence noise levels will be relatively low. It is possible that lower gears will be used (at least by comparison to driving on open roads), however this does not confer higher revs, as speeds will be low.

   It has been discussed above that FLT loading activity noise does not contribute significantly to the overall noise level, and this is even more so the case for curtain side drawing noise and reversing (which as discussed is very minimal). To note, this is the case based on 100% on-time for all FLTs. Accordingly, the overall activity noise will be mainly the accumulated noise of multiple HGV moving forwards around the one-way system with low speed / low revs i.e. this will be the dominant component. This noise will therefore form a relatively steady masking noise, minimising impacts of the relatively low noise output associated with other components of the operation.

10. ***EHO Comment 7****: Please can the consultant provide predicted noise levels for a higher and wider acoustic fence?*

    Response to Comment 7: Whilst reasonable, this request is somewhat open ended. However, although a thorough iterative process was undertaken for the purposes of the assessment, this has been revisited.

    Firstly, the lateral extents of the proposed acoustic barriers have been retained, and iterations have been tested increasing the heights from 3m to 4m and 5m. Further, the lateral extents have been extended by a) joining the two proposed barriers along the south of the site, and b) by extending the more western barrier along the northwest boudary, to a point . These lateral extensions have both been tested at 3m, 4m and 5m.

    This exercise confirms the findings of the assessment that only very limited improvements (i.e. further reductions in noise) of up to 1-2dB can be feasibly achieved in this way. This would therefore result in an enhancement over the proposed substantial acoustic barriers that would be unlikely to be of any acoustically perceptible benefit but would carry significant implications in practicability for the design and realisation of the scheme.

It is therefore considered that the acoustic barriers as proposed represent the best practicable application of noise mitigation of that form.

However, based on the assessment and the foregoing, it is considered that in combination with all proposed embedded noise measures (i.e. inherent to the design), as well as the implementation of a Noise Management Plan, which may be enshrined in an appropriate condition, the proposed development will not give rise to any unacceptable noise impact.