NOISE IMPACT ASSESSMENT

For

Outline Planning Application

On Land South of Blackburn Road,

Longridge

14th August 2020

1.0 Introduction

This report has been requested by the Ribble Valley (RVBC) planning department in anticipation of a consultation response to be received from the Environmental Health Department (EH). The Planning Application 3/2020/0507 is being considered separately by the planning officer. The request for this report also includes the requirement to refer to two previous outline applications which were approved with no objections and remain effective at this time. One comprised land which includes the developable area of the current application site. The second approval was to the west on neighbouring land. This report considers all aspects.

It is understood that there is a requirement to consider the effect of noise. This will be assessed in relation to each of the previous sites and the current outline application.

For the purposes of this report the first two sites already approved will be considered as additional potential new developments and therefore a possible noise source. It is understood that the current proposal, if required, will be mitigated by activating a suitable planning condition. It would be reasonable to assume the land, if developed, will no longer be source a possible year round source of agricultural noise. This currently includes livestock noise and high noise levels from larger agricultural machinery including mowers, forage harvesters, tractors with implements such as hedge-cutters, manure spreaders and the like. It is often assumed that agricultural land is quiet, whereas the true nature of the business is that the industry is now heavily mechanised and often reliant on larger machines throughout the year including those provided by contactors.

Information will be presented for the background noise from the busy arterial Blackburn Road (B6243) which links Longridge with Clitheroe and other towns, other sources in the general locality and background noise from the existing business and distribution buildings. In addition there is a high level of existing traffic noise from both the B6245 Preston Road and B6243 Lower Road affecting some receptors in the locality. Comment and a diagram will be provided showing the range of local meteorological conditions and possible effects on the subject sources and other local sources.

A breakdown of a noise data survey is provided for each of two locations near the boundary of the application area. Comment will be made on the likely model results in relation the levels at both sources and receptors. Also commented on are the likely levels as they reduce, including at identified local receptors some significant distance away.

To bring the assessment to a conclusion, comment will be made on the possible sources, effect, losses over distance, mitigation and the relation to benchmark levels by the time reduced noise levels reach the identified receptors.

2.0 Background details

The site is 0.5km east of the original town limits of Longridge with access from Blackburn Road (B6243) also known as Lower Road. The land is situated in and at the south end of the Ribble Valley close to Longridge Fell and has particular local meteorological conditions which differ from those the on the west side of Longridge. The land currently forms additional mowing/grazing for the business which has been established on the holding over three generations. The land is located circa 50m south of the busy highway Blackburn Road.

Key to this report is the fact that the majority of identified receptors are situated on or in very close proximity to the connector highways. These highways serve as service roads to Longridge and the surrounding area. Destinations include daily traffic flows to Clitheroe and the villages of Ribchester, Dutton and Wilpshire. This extensive rural catchment area being part of the Ribble Valley also supports dozens of rural businesses and many farms. Although in this rural location the majority of identified receptors are subject to relatively high levels of background noise from passing traffic. The farm house to the west is subject to a significant level of background noise from the existing commercial developments which include traffic at unsociable hours and twenty four hour running of externally located refrigeration equipment.

In the immediate area there are three stages of commercial and development land. The existing business/distribution premises, land with outline consent for business use immediately to the south which is being progressed to a reserved matters application and land to the west which has a current outline consent which has been extended until May 2021. Hence the current outline proposals to update the existing consent on the subject land for commercial uses and construction of suitable buildings. The new buildings will lie close to the north east side of the existing buildings and therefore any directional effects will be similar to the existing noise sources. The new buildings will have a diverse range of sound baffling, including insulated roof sheets, closed ridge, insulated cladding to walls and clad doors. The range of baffle techniques including layout of buildings, access routes and positioning of doors all aid the splitting of source noise to different directions and ensure there is no particular concentrated point source. Key observations include the doors being at north /south elevations and not the elevations facing the receptors. The indicative plan submitted shows a suitable layout.

The subject site is at 111m above sea level with level grassland. There is over 100m distance to the perceived most sensitive identified receptor, Hillside School which is understood to be non-residential. The published opening hours are 9.10am to 3.10pm. The peak hours traffic forecast for both the local roads and the site access (8-9am and 5-6pm) fall outside of these times as expected. Other receptors being residential are approximately 130m, 85m and 40m from various different buildings on the site.

There are existing commercial premises nearer to Higher College Farm house than the proposed site. Higher College Farm house has an existing outline consent to convert to commercial office space. In addition the same consent includes B1, B2 and B8 uses (as per the subject application). Some of the existing noise sources including road lie in wind directions which may affect a number of the nearby receptors. Therefore these will provide some substantial background effect noise levels at the subject identified receptors. It is unlikely that any new levels from the proposal will be separately identifiable at such a distance. The existing levels will condition the hearing range of the occupants at the identified receptors.

There are some local residences previously identified as receptors. These dwellings include the former farmhouse known as Higher College Farm and a pair of semi-detached houses known as Woodville Cottages. Both have existing significant noise sources very close to them. Both locations benefit from natural screening between the residences and the subject proposal site.

3.0 Methodology

3.1 Assessment of existing background noise sources

There are a few identified receptors which are all located immediately adjacent to the classified roads. Blackburn Road has already been discussed as a major source of background noise particularly during the day and as intermittent noise at night. Peak daytime traffic flows average one vehicle every 5 to 7 seconds. Typical traffic noise is at levels of 64.3 LAeq to 67.9 LAeq (typical maximum 100.9 LAmax). Details of the background noise from the road are included in Appendix I.

The existing dwelling at Higher College Farm is subject to existing noise levels typically equipment/traffic noise is at levels of 48.1 LAeq to 53.1 LAeq (typical maximum 76.8 LAmax). Details of the background noise from the existing premises/access road are included in Appendix I.

The localised wind effects are varied throughout the year with typical values being 0 to 7% of any particular direction. The school benefits from the fact that wind directions affecting the site are 0 to 4% of all data. The main wind directions are west south west and south east of the average wind directions over a five year period. To a limited extent this carries the background noise of other activities in the area. During the summer months receptor occupiers are more likely to be out in their gardens. This will have already conditioned the hearing of the occupiers at receptor locations to the high levels of local traffic noise, existing businesses and agricultural operations. The meteorological wind from the south west is dominant but this is added to by the regular sea breeze effect from the west and the valley wind effect drawing air into the Ribble Valley. Meteorological data is set out in Appendix II

The north west (2.50%) direction is unlikely to remain established for more than the morning period due to the wind effects described above. The existing background levels at source are from the west side of the access to the subject land and are set out in Appendix I.

The background noise levels of the roads to the north and east during the day essentially dominate the hearing range. The distance from the subject land sources reduce the average low activity level noise from source to below audible levels during the night. There are unlikely to be impulsive, intermittent or other additional noise levels from the subject source at night. However the existing background noise levels continue to some degree through the night

The operation of machinery within the buildings will be operated in a manner and at noise levels well below the thresholds for Noise at Work Regulations and comply with health and safety at work. Typically vehicles manoeuvring within the site will be doing so at very low speeds and therefore low rpm.

The total background noise levels from sources including the existing buildings have attenuated to acceptable (noticeable but not intrusive) on reaching the receptors. Such levels are well below the DEFRA published figures for acceptable levels.

It should be noted that this type land use is not uncommon in the locality so would not be easily identifiable, as would a single enterprise in a more remote area for example. The background levels will be referred to again in the conclusion where the overall effect will be appraised.

3.2 Assessment of existing noise sources

Consideration of the data for background sources also meteorological data is important to consider. The chances are low for a directional match to affect the receptors which are each in a different narrow wind sector. It is clear that a five year average of 2.5% amounts to a number of part days or nine days per annum. The high levels of background noise from the two way traffic on Blackburn Road and Preston Road significantly affect the small number of residential properties in the immediate area.

The subject noise sources from proposed commercial buildings include light industrial which by definition is suited to being located in a residential area. It is noted that the proposed site is outside of both town/village limits and the area is not defined as residential in the local planning documents.

Assumptions include :

No reflections of sound – not applicable (these could be 3dB)
Distance Correction - sound levels halve by distance doubled
Atmospheric Attenuation – meteorological effects have been taken into account
Ground Attenuation – applied as predominantly level land with some significant natural barriers
Shielding Correction 1 – new subject sources will have no shielding from other significant barriers
Shielding Correction 2 - subject background building sources will potentially have some shielding
Shielding Correction 3 - each building will provide some shielding to one or more of the others

4.0 Discussion of Results

The site has the benefit of a current outline consent (now extended) for all of the same proposed uses. A report was submitted for assessment and a planning condition was applied to the approval.

Later in the same year a site on land immediately to the west was also granted outline consent (now extended) for all of the same proposed uses. Despite the proximity of an approval for housing nearby no report was requested or submitted and a different planning condition was applied to the approval.

Last year a smaller site to the south was granted outline planning consent for B1 use with a planning condition being applied to the approval.

There are a few identified receptors which are all located immediately adjacent to the classified roads. Blackburn Road has already been discussed as a major source of background noise particularly during the day and as intermittent noise at night. Peak traffic flows are one vehicle every 5 to 7 seconds.

The data from north west of the site includes typical traffic noise is at levels of 64.3 LAeq to 67.9 LAeq (typical maximum 100.9 LAmax).

The existing dwelling at Higher College Farm is subject to existing noise levels typically equipment/traffic noise. The data from west of the site is at levels of 48.1 LAeq to 53.1 LAeq (typical maximum 76.8 LAmax).

BS4142 states that the Specific Level will have a low impact. On this basis it is concluded that the noise impact of proposed buildings discussed in this report will be low to acceptable. During the night (outside proposed opening hours) it is reasonable to assume that there will be very little noise at all and the occupiers of the nearest dwellings will be within their houses. A room with an open window will provide 10 – 15dB sound reduction. During opening hours for a room facing the proposed development in the dwellings exposed to an average maximum above background noise would result in noise ingress of 5.5 dB; this would be inaudible.

5.0 Conclusions

Noise levels from the existing background and outline proposals have been assessed and quantified based upon attenuation that takes into account the likely source levels and sound insulation effect of the buildings. The sound levels at the identified receptors have been assessed against the background noise levels in the immediate area.

The data from background levels has been assessed and taken into consideration with other local effects, including local meteorological conditions.

To conclude that at all of the residential, business and educational receptors considered, the predicted noise level exposures from the proposed sources would be minimal/ acceptable. These results indicate a negligible impact which is “not noticeable” or “noticeable” or “noticeable but not intrusive”. So no mitigation is recommended nor would be required in this case.

Additional notes :

For any recent residential approvals or residential improvements the residential receptor development may have been exposed to the existing background noise. Both existing commercial and educational premises would be subject existing background noise and have to comply with HSE guidance, Building regulations and local controls for the protection of workers, staff, pupils and visitors. The relevant planning applications and building regulations applications (including for FENSA replacement windows) should have included proposals to achieve the following noise levels in habitable rooms and outdoor areas. These levels are based on “good” internal noise levels for bedrooms and “reasonable” internal noise levels for living rooms, as set out in the relevant British Standard at that time, and for more recent changes as set out in BS8233 2014
Time Area Maximum noise level Daytime noise 07:00 – 23:00 Living rooms 40 dBLAeq (16hr) Outdoor amenity 55 dBLAeq (1hr) Night time noise 23:00 – 07:00 Bedrooms 30 dBLAeq (8hr) 45 dBLAmax.
These levels must have been achieved with windows open. For the purposes of calculation and unless specific window attenuation calculations were provided, noise reduction through a partially open window should be assumed to be 15dBA.

Appendix I

Noise data 2019 from NW of the site access adjacent to Blackburn Road

Time	Duration	L_{Aeq} (dB)	L_{AMax} (dB)	L_{A90} (dB)
21/02/2019 18:00	01:00:00	64.7	81.1	49.4
21/02/2019 19:00	01:00:00	64.3	89.3	42.5
21/02/2019 20:00	01:00:00	61.6	80.5	37.8
21/02/2019 21:00	01:00:00	61.7	91.5	35.7
21/02/2019 22:00	01:00:00	60.0	81.9	34.4
21/02/2019 23:00	01:00:00	56.7	78.3	30.9
22/02/2019 00:00	01:00:00	54.3	77.2	30.8
22/02/2019 01:00	01:00:00	51.3	77.4	30.3
22/02/2019 02:00	01:00:00	51.5	78.9	30.9
22/02/2019 03:00	01:00:00	50.3	80.9	31.1
22/02/2019 04:00	01:00:00	54.1	78.8	32.5
22/02/2019 05:00	01:00:00	58.5	79.0	35.2
22/02/2019 06:00	01:00:00	62.9	82.0	41.2
22/02/2019 07:00	01:00:00	65.7	82.8	47.3
22/02/2019 08:00	01:00:00	67.9	100.9	48.8
22/02/2019 09:00	01:00:00	65.2	85.1	46.8
22/02/2019 10:00	01:00:00	64.9	82.6	46.4
22/02/2019 11:00	01:00:00	64.8	83.7	45.4
22/02/2019 12:00	01:00:00	64.3	82.3	44.4
22/02/2019 13:00	01:00:00	64.4	83.1	45.8
22/02/2019 14:00	01:00:00	64.7	82.1	47.4
22/02/2019 15				
22/02/2019 16				
22/02/2019 17:00	01:00:00	66.2	87.5	49.5

Noise data 2019 from West of the site access adjacent to the existing premises

Time	Duration	L_{Aeq} (dB)	L_{AMax} (dB)	L_{A90} (dB)
21/02/2019 18:00	01:00:00	49.2	65.2	43.9
21/02/2019 19:00	01:00:00	48.2	63.9	40.8
21/02/2019 20:00	01:00:00	44.0	58.7	37.8
21/02/2019 21:00	01:00:00	43.6	68.1	36.5
21/02/2019 22:00	01:00:00	43.5	72.0	35.1
21/02/2019 23:00	01:00:00	37.0	54.7	30.6
22/02/2019 00:00	01:00:00	35.2	52.4	30.4
22/02/2019 01:00	01:00:00	36.2	53.2	30.4
22/02/2019 02:00	01:00:00	40.8	68.7	34.3
22/02/2019 03:00	01:00:00	41.1	66.0	30.7
22/02/2019 04:00	01:00:00	46.9	69.3	32.1
22/02/2019 05:00	01:00:00	47.7	72.3	36.3
22/02/2019 06:00	01:00:00	48.6	67.8	40.4
22/02/2019 07:00	01:00:00	51.6	70.6	45.4
22/02/2019 08:00	01:00:00	53.1	71.9	45.5
22/02/2019 09:00	01:00:00	50.0	69.2	43.4
22/02/2019 10:00	01:00:00	49.2	70.0	43.1
22/02/2019 11:00	01:00:00	49.1	71.4	42.4
22/02/2019 12:00	01:00:00	49.1	75.7	40.3
22/02/2019 13:00	01:00:00	48.5	71.4	39.9
22/02/2019 14:00	01:00:00	52.5	76.8	41.1
22/02/2019 15:00	01:00:00	53.1	75.9	42.7
22/02/2019 16:00	01:00:00	48.1	70.9	42.2
22/02/2019 17:00	01:00:00	50.4	74.3	43.3

Appendix II

Longridge Meteorological Wind Data