Our Ref: NVT/10726/23/10877/v1/Halifax Way,Pocklin

24th January 2023

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Dear Sirs

NOISE VALIDATION TEST OF NEW AGGREGATE WASHER AND GRADER, LAND OF STIRLING ROAD, HALIFAX WAY, POCKLINGTON AIRFIELD

EAST RIDING OF YORKSHIRE COUNCIL PLANNING PERMISSION 22/00624/CM

1.00 INTRODUCTION

1.01 Environmental Noise Solutions Limited has been commissioned by Ashcourt Construction Ltd to carry out a noise validation test of a newly installed aggregate washer and grader, land off Stirling Road, Halifax Way, Pocklington Airfield.

1.02 Planning permission (ref: 22/00624/CM) for the store was granted by East Riding of Yorkshire Council in October 2022, subject to conditions. Conditions 5 to 7 relate to external plant noise as follows:

5. *Noise levels associated with the operation of the wash plant, shall not exceed 53 dB LAeq, 1 hour day (07.00-19.00) and 42 dB LAeq, 1 hour night (19.00-07.00) at the facades of the nearest noise sensitive properties.*

   This condition is imposed in accordance with planning policy ENV1 of the East Riding Local Plan, to ensure the development is imposed in accordance with the approved details and enable any changes in hours of operation to be considered to protect the amenity of local residents from noise.

6. *Noise levels associated with the operation of the wash plant shall not exceed 58 dB LAeq, 1 hour day (07.00-19.00) and 58 dB LAeq, 1 hour night (19.00-07.00) at the facades of the nearest commercial properties.*

   This condition is imposed in accordance with planning policy ENV1 of the East Riding Local Plan, to ensure the development is imposed in accordance with the approved details and enable any changes in hours of operation to be considered on the operation of neighbouring commercial buildings.

7. *Within 3 months of the first operation of the wash plant a further noise impact assessment shall be undertaken and submitted to the Local Planning Authority for approval. The assessment shall demonstrate that the noise levels stated in conditions 5 and 6 being achieved. If the levels are found to exceed the limits mitigation measures should be recommended and implemented to achieve compliance.*

   This condition is imposed in accordance with policy ENV1 of the East Riding Local Plan and in order to protect the amenities of nearby properties from adverse effects due to noise nuisance.

1.03 For reference, the nearest noise sensitive receptors (NSRs) to the plant were identified within ENS report ref: NIA-10300-22-10464-v4 as follows:

- NSR 1 - Residential dwellings along Grangeland Walk

1.05 The objective of the noise validation test was to measure the noise levels associated with the washer and grader at the nearest NSR and commercial properties to the south and south-east of the development, in order to assess against the limits set out in Condition 5 and 6 of Planning Permission ref: 22/00624/CM granted by East Riding of Yorkshire Council.

1.06 This report has been prepared Ashcourt Construction Ltd for the sole purpose described above and no extended duty of care to any third party is implied or offered. Third parties making reference to the report should consult Ashcourt Construction Ltd and ENS as to the extent to which the findings may be appropriate for their use.

1.07 A glossary of acoustic terms used in the main body of the text is contained in Appendix 1 for reference.

2.00 NOISE VALIDATION TEST

2.01 In order to establish noise levels associated with the in-situ operational plant, a noise survey was undertaken during the daytime and evening of Tuesday 17th and the evening of Wednesday 18th January 2023.

2.02 It should be noted that during the majority of the daytime, Ashcourt Construction Ltd runs multiple plant until 1730, therefore it was necessary to measure during the hours between 1730 - 1900 in order to obtain isolated measurements of the grader and washer.

2.02 For the purpose of the assessment, the following noise monitoring positions were adopted (see Appendix 2 for approximate monitoring locations):

- MP1 was located approximately 15 metres south-east of the dwellings on Grangeland Walk at 1.5 metres above ground level (AGL)

- MP2 was located on the pavement to the north west of the commercial premises on Stirling Road at 1.5 metres AGL

2.03 Noise measurements were undertaken at 1.5 metres above ground level using a Bruel & Kjaer 2250 Type 1 integrating sound level meter. A windshield was fitted for all measurements. The measurement system calibration was verified immediately before the commencement of the measurement sessions and again at the end, using a Bruel & Kjaer Type 4231 calibrator. No drift in calibration level was noted. Weather conditions throughout the survey were appropriate for monitoring.

2.04 Measurements consisted of A–weighted broadband parameters, together with linear one-third octave band L_{eq} levels. The table overleaf contains a summary of the measurement data for each measurement session, at each measurement position, rounded to the nearest decibel.

Continued from page 2

Table 2.1 – Noise Measurement Data

Position	Date	Time	L_{Aeq} (dB)	L_{A90} (dB)
MP1	17/01/23	1408–1438	51	47
	17/01/23	1612–1645	53	50
	17/01/23	1742–1816	53	50
	18/01/23	1749–1818	51	49
MP2	17/01/23	1705–1735	54	52
	17/01/23	1821–1850	52	50
	18/01/23	1712–1742	54	51
	18/01/23	1825–1855	52	49

2.05 Noise measurements at MP1 were wholly attributed to road traffic on York Road, with MP2 having a mixed noise contribution from York Road and the washer and grader within the Ashcourt Construction compound.

2.06 It should be noted that due to distance attenuation, and the elevated earth bund along the north-western boundary of the Ashcourt Construction site, noise from the washer and grader was inaudible at MP1 against noise from road traffic along York Road to the south-west.

2.07 The target noise levels stated within condition 5 and 6 are summarised below:

Table 1.1 – Plant Noise Target Levels at NSRs

NSR1	NSR2
53 dB $L_{Aeq,T}$	58 dB $L_{Aeq,T}$

2.13 It is evident that noise associated with the in-situ operational use of the washer and grader is readily compliant with the target levels detailed in Table 1.1.

2.14 Condition 5 & 6 of Planning Permission 22/00624/CM granted by East Riding of Yorkshire Council may therefore be discharged.

I trust the foregoing is sufficient for your needs. Should you have any queries regarding the above, please do not hesitate to contact me.

Yours sincerely

Simon Jefferson
MIOA, Diploma in Acoustics and Noise Control
Environmental Noise Solutions Limited

cc File

Appendix 1
Glossary of Acoustic Terms

Sound Pressure Level (L_p)

The basic unit of sound measurement is the sound pressure level. As the pressures to which the human ear responds can range from 20 µPa to 200 Pa, a linear measurement of sound levels would involve many orders of magnitude. Consequently, the pressures are converted to a logarithmic scale and expressed in decibels (dB) as follows:

$L_p = 20 \log_{10}(p/p_0)$

Where L_p = sound pressure level in dB; p = rms sound pressure in Pa; and p_0 = reference sound pressure (20 µPa).

A-weighting Network

A frequency filtering system in a sound level meter, which approximates under defined conditions the frequency response of the human ear. The A-weighted sound pressure level, expressed in dB(A), has been shown to correlate well with subjective response to noise.

Equivalent continuous A-weighted sound pressure level, $L_{Aeq, T}$

The value of the A-weighted sound pressure level in decibels of continuous steady sound that within a specified time interval, T, has the same mean-square sound pressure as a sound that varies with time. $L_{Aeq, 16h}$ (07:00 to 23:00 hours) and $L_{Aeq, 8h}$ (23:00 to 07:00 hours) are used to qualify daytime and night time noise levels.

$L_{A10, T}$

The A-weighted sound pressure level in decibels exceeded for 10% of the measurement period, T. $L_{A10, 18h}$ is the arithmetic mean of the 18 hourly values from 06:00 to 24:00 hours.

$L_{A90, T}$

The A-weighted sound pressure level of the residual noise in decibels exceeded 90% of a given time interval, T. L_{A90} is typically taken as representative of background noise.

$L_{AF\ max}$

The maximum A-weighted noise level recorded during the measurement period. The subscript ‘F’ denotes fast time weighting, slow time weighting ‘S’ is also used.

Sound Exposure Level (SEL or L_{AE})

The energy produced by a discrete noise event averaged over one second, no matter how long the event actually took. This allows for comparison between different noise events which occur over different lengths of time.

Weighted Sound Reduction Index (R_W)

Single number quantity which characterises the airborne sound insulation properties of a material or building element over a defined range of frequencies (R_W is used to characterise the insulation of a material or product that has been measured in a laboratory).

Weighted Airborne Sound Insulation ($D_{nT,w}$)

Single number quantity which characterises the airborne sound insulation between rooms.

Appendix 2
Plant Location and Noise Monitoring Positions