



AVONMOUTH ASPHALT RECYCLING PLANT

NOISE ASSESSMENT FOR ENVIRONMENTAL PERMIT

Acoustics Report A1971 R01

30th November 2022

Report for:

John Wainwright & Co Ltd,
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Appendix A – Noise Management Plan

1 Introduction

Ion Acoustics is appointed by Land and Mineral Management Ltd (LMM) on behalf of John Wainwright & Co Ltd to provide a BS 4142 noise assessment and noise management plan to support an application for an environmental permit to recycle waste asphalt on land adjacent to Wainwright's existing asphalt facility on Smoke Lane, Avonmouth, Bristol, BS11 0FJ.

This assessment has been informed by a previous noise survey that was undertaken for Planning Permission ref: 14/05738/F regarding the Asphalt Plant and information on the predicted noise levels in the area provided by Government noise maps which show noise levels (dB L_{Aeq}) from major roads accounting for the traffic flows and local topography.

This report documents the BS 4142 assessment and Noise Management Plan, as well as the computer noise modelling exercise undertaken to establish the potential noise impact on nearby receptors. Appropriate noise limits have been derived from the available baseline noise data and the impact derived in line with standard assessment criteria for the operational phases of the development. This report sets out the assessment and demonstrates that the impact of noise from the development will not result in any disturbance to a nearby office which is the only noise-sensitive receptor in the area.

2 Scheme Details

2.1 Site Location

The site is located in between Rockingham Park and Smoke Lane in an industrial and commercial area. There are no residential properties within 2km of the site. To the north and west is a railway line, scrubland and an oil terminal. To the east, across Smoke Lane, are other industrial and commercial units.

However, there are offices belonging to King Lifting approximately 40m to the south-west of the site. In accordance with the guidance set out by the Environmental Agency, offices are classed as a noise sensitive receptor. Therefore, the assessment will only consider these offices. As such, it is anticipated that the building will be unoccupied during the night. Therefore, only a daytime assessment has been undertaken, although the operational hours will be 24/7, so that it is available for road works which would often take place at night.

The offices are shown in Figure 1 below with the application boundary (red line) and the noise monitoring positions from previous noise surveys carried out in respect of the existing asphalt plant.

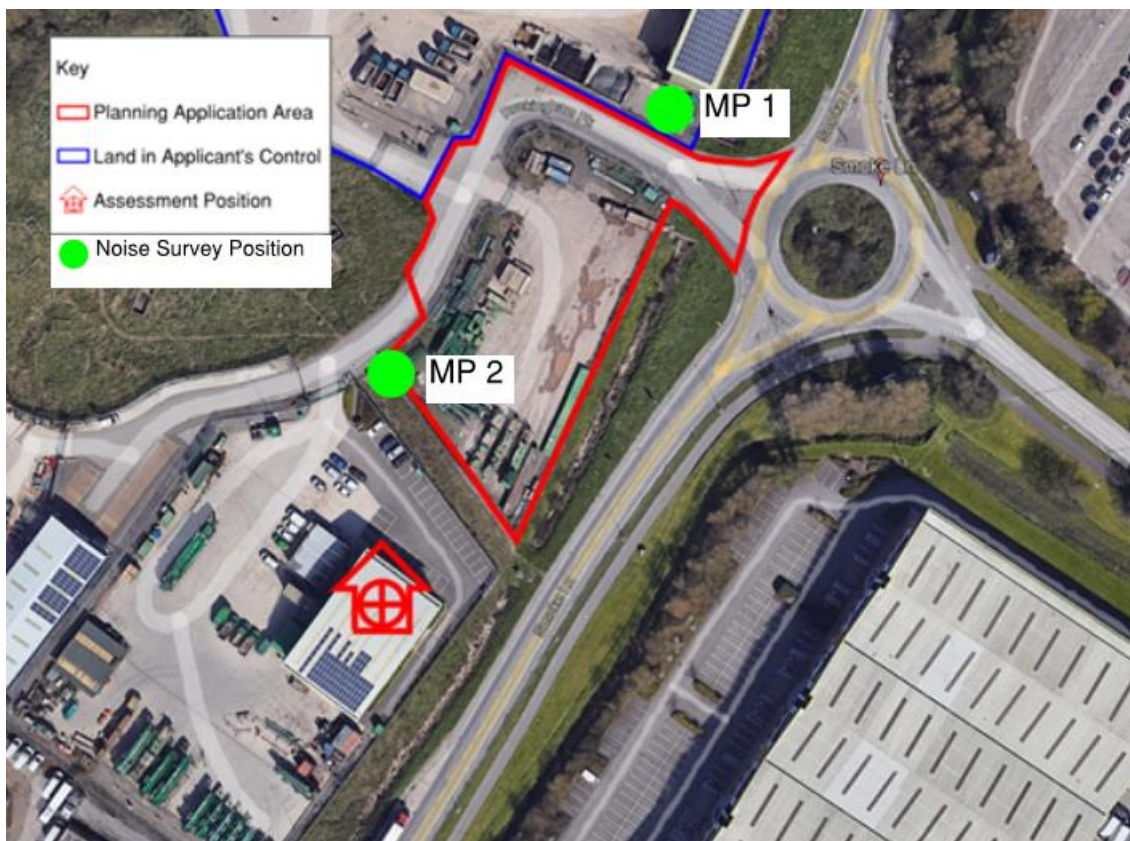


Figure 1 – Site location nearest receptor and noise monitoring locations © Google

2.2 Proposed Development

The proposed development will feature three storage bays, two along the southern boundary and one larger bay along the northern boundary, with 4m high walls formed with concrete blocks.

The larger northern bay will be used to store unprocessed waste asphalt. The waste asphalt will be imported to the site by HGV which will unload directly in the bay.

Once a sufficient volume of waste asphalt has amassed, it will be processed using a crusher. Waste asphalt is much weaker than rock or concrete, meaning the crusher is able to operate at a much lower intensity (and noise level) to reduce the size of the lumps. If required, the material will be screened.

The crushed/screened asphalt material will be stored in two smaller bays to the south of the site. It is estimated that crushing and screening will be undertaken for five working days per month.

An excavator and or a loading shovel will be used to load the crusher, fill the storage bays and load HGVs to transport material to the asphalt plant.

Figure 2 shows the layout of the Development Proposals.

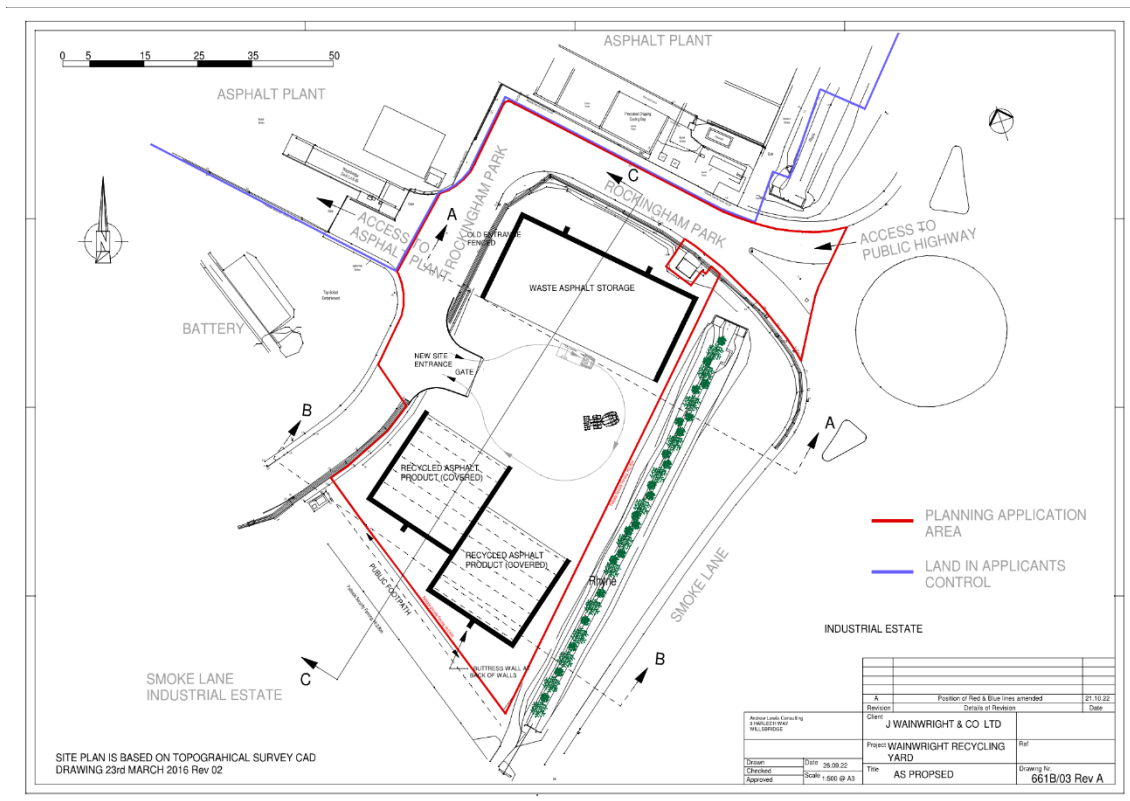


Figure 2 – Proposed Site Layout (image courtesy of J Wainwright & Co Ltd)

Operating Hours

It is proposed that the development will operate 24 hours a day and seven days a week, in conjunction with the existing asphalt plant. This is necessary to meet the demands of customers such as the night-time highway networks.

3 Environmental Permitting Policy and other Guidance on Noise

Environmental permits have conditions that require operators to control pollution – this includes controlling noise and vibration. The 'Noise and vibration management: environmental permits – Updated 31 January 2022'¹ guidance was produced by The Environment Agency, Scottish Environment Protection Agency (SEPA), Natural Resources Wales and Northern Ireland Environment Agency.

The guidance covers:

- *how the environment agencies will assess noise from certain industrial processes*
- *what the law says you must do to manage noise and vibration*
- *advice on how to manage noise – in particular, how to carry out a noise impact assessment and what operators should include in a noise management plan'*

¹ [Noise and vibration management: environmental permits - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/noise-and-vibration-management-environmental-permits)

The guidance goes on to state that 'BS 4142: Methods for rating and assessing industrial and commercial sound' must be used to quantify the level of environmental noise impact from industrial processes.

It should be noted that BS4142 states:

'This standard is applicable ...

for the purpose of:

- 1. investigating complaints;*
- 2. assessing sound from existing, proposed, new, modified or additional sources(s#) of sound of an industrial and/or commercial nature: and*
- 3. assessing sound at proposed new dwellings or premises used for residential purposes.'*

The standard only refers to assessing the impact of sound at residential dwellings. However, in the context of environmental permits it is deemed appropriate to use BS4142 to assess the impact to the existing office near the proposed development site because offices are considered to be a noise-sensitive location according to the EA guidance.

Based on this, the standard, BS 4142 has been used to undertake the assessment presented in this report. This standard is summarised below.

3.1 BS4142: 2014 +A1: 2019 – Assessment Principles

The standard method for assessing noise of an industrial nature affecting housing, is British Standard BS 4142 "Method for rating and assessing industrial and commercial sound". A BS 4142 assessment is typically made by determining the difference between the industrial noise under consideration and the background sound level as represented by the L_{A90} parameter, determined in the absence of the industrial noise. The L_{A90} parameter is defined as the level exceeded for 90% of the measurement time, representing the underlying noise in the absence of short duration noise events such as dog barks or individual cars passing.

The industrial noise under consideration is assessed in terms of the ambient noise level, L_{Aeq} , but a character correction penalty can be applied where the noise exhibits certain characteristics such as distinguishable tones, impulsiveness or, if the noise is distinctively intermittent. The ambient noise level, L_{Aeq} is defined as the steady-state noise level with the same energy as the actual fluctuating sound over the same time period. It is effectively the average noise level during the period. The industrial noise level (L_{Aeq}) with the character correction (if necessary) is known as rating level, L_{Ar} , and the difference between the background noise and the rating level is determined to make the BS 4142 assessment. The standard then states:

- a) "Typically, the greater the difference, the greater the magnitude of the impact.*
- b) A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.*
- c) A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.*
- d) The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound will have an adverse impact or a significant adverse*

impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.”

The standard outlines a number of methods for defining appropriate ‘character corrections’ to determine the rating levels to account for tonal qualities, impulsive qualities, other sound characteristics and/or intermittency.

The standard also highlights the importance of considering the context in which a sound occurs. The standard indicates that factors including the absolute sound level, the character of the sound, the sensitivity of the receptor and the existing acoustic character of the area should be considered when assessing the noise impact.

4 Baseline Noise Climate

A noise assessment was undertaken for the planning application 14/05738/F in association with the main asphalt plant. Daytime and night-time surveys were undertaken in 2014 and 2016 respectively by Barnhawk Acoustics. Details of the assessment are available in the documents supporting the planning application 14/05738/F available on the Bristol City Council’s planning portal.

The noise surveys were undertaken at two locations as detailed in Figure 1 above. A summary of the results is provided in Table 1 below.

Table 1 – Summary of Noise Survey Results

Location	Survey Date	Assessment Period	Measured Sound Levels	
			L _{Aeq, T} dB	Typical L _{A90} dB
MP 1	Tuesday 18/11/2014	Daytime (07:20 – 18:20)	61.6	56.5
MP 2	Tuesday 18/11/2014	Daytime (07:25 – 18:25)	59.6	55.5
	Monday 03/10/2016 – Tuesday 4/10/2016	Evening (18:40 – 23:10)	55.2	49.0
		Night (23:10 – 07:10)	56.2	49.8

It is possible that the due to the age of the measured data it is likely that the baseline noise climate may have changed, not least due to the operating asphalt facility. As the site is in a fairly built-up industrial area surrounded by multiple roads, some information on the predicted noise levels in the area is available from Government noise maps which show noise levels (dB L_{Aeq}) from major roads accounting for the traffic flows and local topography. The predicted noise levels for the L_{Aeq} parameter are shown on the Extrium website² for the 16-hour day.

The daytime contours are shown in Figure 4 below.

² Extrium.co.uk/noiseviewer.html



Figure 4: Daytime Noise Contour ($L_{Aeq,16hrs}$)

The figure above shows noise levels of approximately 63 to 65 dB L_{Aeq} across the façade of the offices. This is slightly higher than the measured data and may reflect a gradual increase in traffic flows. The noise map does not account for industrial noise sources.

The data from the noise map is for a 16-hour day. As noise levels would tend to be lower in the evening, it is likely that the L_{Aeq} over the working day say 8am to 6pm would be higher although there is no information on this, other than the old survey data.

4.1 Noise Target

The noise map indicates relatively high noise levels (dB L_{Aeq}) during the day. However, the BS 4142 assessment is made with reference to the background noise level (dB L_{A90}). This information is not available from the noise map. As the site location is largely industrial with steady-ish traffic flows, the L_{Aeq} and L_{A90} will be quite close. For the purpose of this assessment, based on the results of the previous noise survey, a 5 dB difference between the L_{Aeq} and the L_{A90} background noise levels is assumed during the daytime.

Therefore, assuming a level of 64 dB L_{Aeq} incident on the offices, a typical daytime background noise level of **59 dB L_{A90}** has been identified for the daytime assessment period at the King Lifting Offices receptor.

BS 4142 indicates that if a rating level of the source under consideration is equal to or below the typical background noise, then this is considered a low impact, subject to context. Therefore, a level of 59 dB L_{Ar} is set as the noise target for the asphalt recycling facility. It should be noted that, irrespective of the noise target, noise from the facility will be minimised in accordance with the noise management plan using best available techniques.

5 Noise Modelling

A noise model has been constructed using IMMI³ noise modelling software to predict noise levels to the nearest noise-sensitive receptor locations. Within the modelling software, propagation of noise has been calculated in accordance with ISO 9613-2⁴ with the following input parameters:

- Downwind propagation (noise levels under crosswind and upwind conditions will be less);
- Hard ground between the noise source and the receiver locations ($G = 0$),
- A receptor house of 4m to replicate the likely location of the offices
- Ambient air temperature of 10°C and 70% Relative Humidity; and,
- Barriers and screening influence calculated in accordance with ISO 9613-2.

The input source data for the model is described below.

5.1 External Noise Sources

The plant to be used at the proposed development, along with available manufacturer sound data is presented in Table 2.

Table 2: Noise Sources and Specified Plant

Noise Source	Specified Plant	Manufacturer's Sound Power Data dB L _{WA}
Excavator	Volvo EC380 / EC220	105 dB L _{WA}
Loading Shovel	Volvo L180 / CAT 962	108 dB L _{WA}
Mobile Crusher	Terex I120 / Rubblemaster RM100	112 dB L _{WA} *
Screen	Terex 683	N/A
HGVs	DAF Articulated Flatbed	N/A

* Converted from a sound pressure level of 80.6 dB(A) at 10 metres

No octave band data is available for the specified plant items. However, information provided by BS 5228-1+A1:2014 has been used to derive a likely octave band spectrum for each specified plant item. Data is available also for the screen and HGV for which there was no manufacturer's information. The octave band sound power spectrum used in this assessment is summarised in Table 3 below:

Table 3: Noise Data – Plant Items

Example Equipment	BS 5228 Source Reference	Sound Power Level (dB) in Octave Bands, Hz							Overall, dB L _{WA}
		63	125	250	500	1000	2000	4000	
Volvo EC380	C4.10	103	99	102	103	101	96	90	105
Volvo L180	C4.14	109	108	104	103	103	102	95	108
Rubblemaster RM100	C1.14	111	112	112	109	106	103	99	112
Terex 683	C10.14	121	114	107	106	103	99	97	109
DAF Flatbed Tipping Load	C2.32	108	104	101	98	97	94	91	102

3 IMMI noise mapping <https://www.immi.eu/en/noise-mapping-with-immi.html>

4 ISO 9613-2: Attenuation of sound during propagation outdoors: Part 2: General method of calculation

5.2 Vehicle movements

The information presented in the transport statement for the development indicates that the site would expect up to 30 HGV deliveries of asphalt per day. It is anticipated that these HGVs will then be filled with recycled asphalt and leave site. This would equate to up to 60 movements a day. This would equate to around 4 vehicle per hour entering and leaving the site.

Within the noise modelling assessment, vehicle movements have been modelled as a line source in accordance with the haul road methodology detailed in BS5228-1. Data from previously measured HGV pass bys has been used for this assessment. Table 4 presents the octave band sound power level for measured HGV pass bys used within the noise model.

Table 4: Noise Data for HGV Drive By

Noise Source	Sound Power Levels in Octave Bands, Hz dB							L _{WA} , dB
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	
HGV Pass by into and out of site	79	65	57	56	60	55	54	87

5.3 Noise Generating Activities

It is likely that noise will be generated from different steps in the process of the asphalt recycling. It is assumed that the noise generating activities will not happen 100% of the assessment time. Table 5 presents the anticipated activities along with the specified plant equipment associated with that activity and the assumed % on-time during the assessment period.

Table 5: Anticipated Noise Generating Activities

Process Number	Noise Generating Activity	Associated Plant Equipment	Assumed % On Time
01	HGV entering the site.	HGV Drive by	10
02	HGV dumping load to storage area.	DAF Flatbed Tipping Load	10
03	Dumped asphalt loaded into the crusher	Excavator	50
04	Asphalt being crushed	Crusher	50
05	Crushed asphalt being loaded to Screen	Excavator	50
06	Crushed asphalt being screened	Screen	50
07	Screened asphalt being loaded into recycled asphalt product storage area	Loading Shovel	50
08	Screen asphalt being loaded into HGVs	Loading Shovel	10
09	HGV leaving site	HGV Pass by	10

5.4 Inherent Mitigation Measures

The site is to include a number of inherent mitigation measures which will reduce noise impacts on the nearest receptor location. These include the following:

- As the single receptor is an office, it will not be occupied during the night-time period. Therefore, a night-time assessment has not been undertaken.
- The storage bays will be built using 800mm Concrete Blocks. The bays will have a concrete base with 4m high walls. These walls will offer some attenuation for the noise generating activities in the bays.

6 Operational Noise Assessment

In the first instance, the noise model has been used to calculate specific noise levels at the Kings Lifting Offices. The noise predictions are presented as a noise contour plot in Figure 5 below, showing the predicted specific noise levels (dB L_{Aeq}) and the offices. The contours assume that all equipment is running as defined in Table 5.

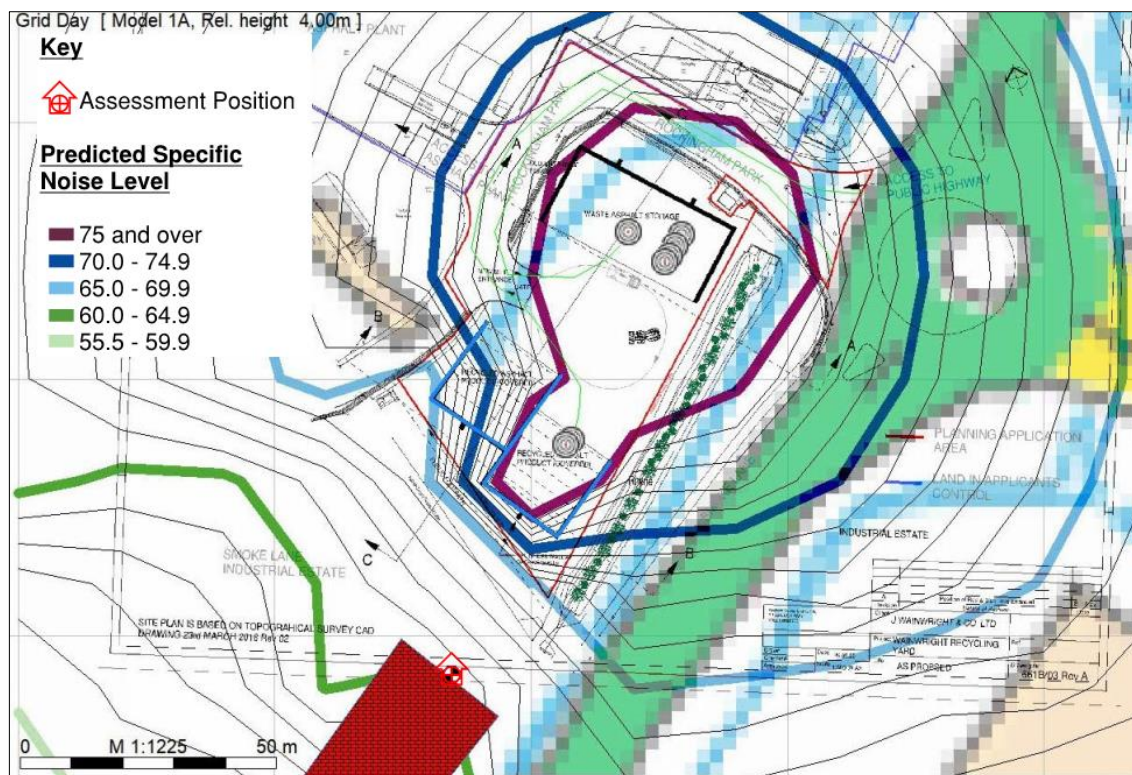


Figure 5: Indicative Daytime Operation Noise Contour Plot, dB L_{Aeq} (Contains Ordnance Data © Crown copyright and database right)

As per the guidance set out in BS 4142, character corrections should be added for each noise generating activity. Based on the impulsive nature of dropping and crushing asphalt it is likely the impulsivity of the noise will be just perceptible. Therefore, a penalty of +3 dB is added to the predicted specific noise level to derive the predicted rating level of the proposed development at the Kings Lifting Offices.

Considering the character corrections stated above, Table 6 presents the potential noise impact at the noise sensitive receptor compared to the derived daytime L_{90} background noise level.

Table 6: Noise Impact Assessment

Assessment Point	Typical Background Noise Level	Rating Level of Proposed Development	Difference	BS4142 Assessment
King Lifting Office	59	63	+4	Less Likelihood of an adverse impact, Depending on the context

6.1 Uncertainty and Context

BS 4142 requires an assessment of context and uncertainty.

As indicated above, the site and its surrounding area is a largely industrial site. The main asphalt plant associated with this proposed development will form part of the baseline noise climate which indicates that this development proposed for the site is not out of keeping with the character of the area.

The predicted specific noise levels are similar to the noise levels predicted by the Government noise maps (as show in Figure 4) Due to the nature of the area and the higher noise climate, it is likely that ventilation and overheating at the King Lifting Offices will not be controlled via opening windows. With windows closed, the noise levels produced by the proposed development are unlikely to adversely affect anyone working in the office.

Considering context and uncertainty, it is not likely that the proposed development will result in an adverse impact.

7 Noise Management Plan

As part of the environmental permit application, a noise management plan is required for the proposed development. A noise management plan has been developed to *provide 'appropriate measures to prevent or, where that is not practicable, minimise noise'*. The proposed noise management plan is presented in Appendix A.

8 Summary

A noise assessment has been carried out for the proposed development to support the application for an environmental permit to recycle waste asphalt on land adjacent to the Wainwright asphalt facility in Avonmouth.

Operational noise targets have been established in accordance with BS4142 to avoid adverse noise impacts. The assessment has indicated that it is not likely that the proposed development will result in an adverse impact. Noise should be minimised in accordance with the noise management plan.



Appendix A – Noise Management Plan



AVONMOUTH ASPHALT RECYCLING PLANT

NOISE MANAGEMENT PLAN

Acoustics Report A1971 NMP1

30th November 2022

Report for:

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1 Introduction

Ion Acoustics is appointed by Land and Mineral Management Ltd (LMM) on behalf of John Wainwright & Co Ltd to prepare a noise management plan as part of the environmental permit application to recycle waste asphalt on land adjacent to Wainwright's existing asphalt facility on Smoke Lane, Avonmouth, Bristol, BS11 0FJ.

This document has been prepared in support of the permit application for the facility and has been informed by the assessment presented within Ion Acoustics report reference A1971 R01 dated 30th November 2022. This Noise Management Plan (NMP) details the following:

- The nearest noise sensitive receptor location including the derived background sound level in the vicinity and the predicted specific noise level;
- Noise source information for all significant sources of noise associated with the operation.
- Best Available Techniques (BAT) to address / abate noise emissions; and,
- An example complaints log to inform an appropriate complaints procedure.

2 Scheme Details

2.1 Site Location

The site is located in between Rockingham Park and Smoke Lane in an industrial and commercial area. There are no residential properties within 2km of the site. To the north and west is a railway line, scrubland and an oil terminal. To the east, across Smoke Lane, are other industrial and commercial units.

However, there are offices belonging to King Lifting approximately 40m to the south-west of the site. In accordance with the guidance set out by the Environmental Agency, offices are classed as a noise sensitive receptor. Therefore, the assessment undertaken herein will only consider these offices. As such it is anticipated that the building will be unoccupied during the night. Therefore only a daytime assessment has been undertaken, although the operational hours will be 24/7, so that it is available for road works which would often take place at night.

The offices are shown in Figure 1 below with the application boundary (red line) and the noise monitoring positions from previous noise surveys carried out in respect of the existing asphalt plant.



Figure 1 – Site location nearest receptor and noise monitoring locations © Google

2.2 Proposed Development

The proposals development will feature three storage bays, two along the southern boundary and one larger bay along the northern boundary, with 4m high walls formed with concrete blocks.

The larger northern bay will be used to store unprocessed waste asphalt. The waste asphalt will be imported to the site by HGV which will unload directly in the bay.

Once a sufficient volume of waste asphalt has amassed it will be processed using a crusher. Waste asphalt is much weaker than rock or concrete, meaning the crusher is able to operate at a much a lower intensity (and noise level) to reduce the size of the lumps. If required, the material will be screened.

The crushed/screened asphalt material will be stored in two smaller bays to the south of the site. It is estimated that crushing and screening will be undertaken for 5 working days per month.

An excavator and or a loading shovel will be used to load the crusher, fill the storage bays and load HGVs to transport material to the asphalt plant.

Figure 2 shows the layout of the Development Proposals.

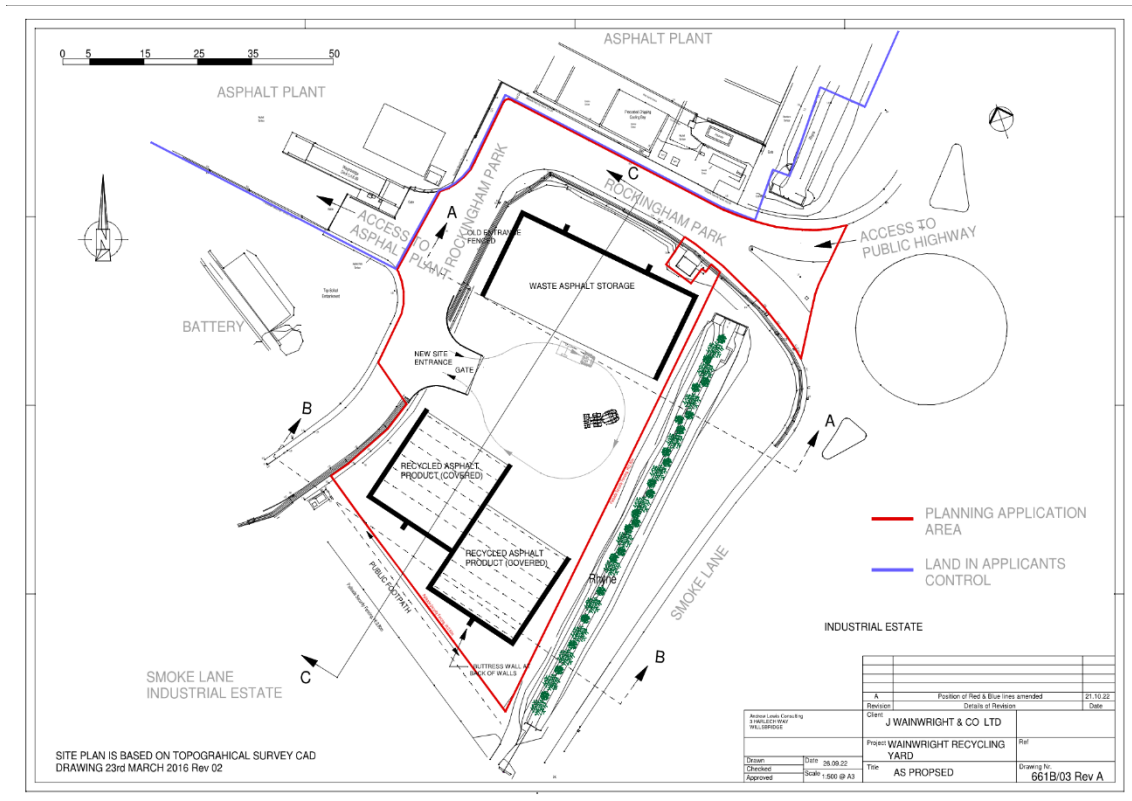


Figure 2 – Proposed Site Layout (image courtesy of J Wainwright & Co Ltd)

Operating Hours

It is proposed that the development will operate 24 hours a day and seven days a week, in conjunction with the existing asphalt plant. This is necessary to meet the demands of customers such as the night-time highway networks.

2.3 Maintenance and Review of the Noise Management Plan

The noise management plan is to be continually adapted to the working practices at the facility as a means to address any noise issues if and when they arise. The management plan will be updated by a competent and appropriately trained person at the Avonmouth site and will be stored in a location where it is easily accessible to relevant personnel. All complaints received are to be addressed by the Site Manager:

3 Baseline Noise Climate

Based on the sources of information as presented in report reference A1971 R01 a typical daytime background noise level of **59 dB LA90** has been identified for the daytime assessment period at the King Lifting Offices receptor.

4 Noise Source Information

4.1 External Noise Sources

The plant to be used at the proposed development, along with available manufacturer sound data is presented in Table 2.

Table 2: Noise Sources and Specified Plant

Noise Source	Specified Plant	Manufacturer's Sound Power Data dB L _{WA}
Excavator	Volvo EC380 / EC220	105 dB L _{WA}
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HGVs	DAF Articulated Flatbed	N/A

* Converted from a sound pressure level of 80.6 dB(A) at 10 metres

No octave band data is available for the specified plant items. However information provided by BS 5228-1+A1:2014 has been used to derive a likely octave band spectrum for each specified plant item. Data is available also for the screen and HGV for which there was no manufacturer's information. The octave band sound power spectrum used in this assessment is summarised in Table 3 below:

Table 3: Noise Data – Plant Items

Example Equipment	BS 5228 Source Reference	Sound Power Level (dB) in Octave Bands, Hz							Overall, dB L _{WA}
		63	125	250	500	1000	2000	4000	
Volvo EC380	C4.10	103	99	102	103	101	96	90	105
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Terex 683	C10.14	121	114	107	106	103	99	97	109
DAF Flatbed Tipping Load	C2.32	108	104	101	98	97	94	91	102

4.2 Vehicle movements

The information presented in the transport statement for the development indicates that the site would expect up to 30 HGV deliveries of asphalt per day. It is anticipated that these HGVs will then be filled with recycled asphalt and leave site. This would equate to up to 60 movements a day. This would equate to around 4 vehicle per hour entering and leaving the site.

Within the noise modelling assessment, vehicle movements have been modelled as a line source in accordance with the haul road methodology detailed in BS5228-1. Data from previously measured HGV pass bys has been used for this assessment. Table 4 presents the octave band sound power level for measured HGV pass bys used within the noise model.

Table 4: Noise Data for HGV Drive By

Noise Source	Sound Power Levels in Octave Bands, Hz dB							L _{WA} , dB
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	
HGV Pass by into and out of site	79	65	57	56	60	55	54	87

4.3 Noise Generating Activities

It is likely that noise will be generated from different steps in the process of the asphalt recycling. It is assumed that the noise generating activities will not happen 100% of the assessment time. Table 5 presents the anticipated noise generating activity along with the specified plant equipment associated with that activity and the assumed % on-time during the assessment period.

Table 5: Anticipated Noise Generating Activities

Process Number	Noise Generating Activity	Associated Plant Equipment	Assumed % On Time
01	HGV entering the site.	HGV Drive by	10
02	HGV dumping load to storage area.	DAF Flatbed Tipping Load	10
03	Dumped asphalt loaded into the crusher	Excavator	50
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05	Crushed asphalt being loaded to Screen	Excavator	50
06	Crushed asphalt being screened	Screen	50
07	Screened asphalt being loaded into recycled asphalt product storage area	Loading Shovel	50
08	Screen asphalt being loaded into HGVs	Loading Shovel	10
09	HGV leaving site	HGV Pass by	10

4.4 Noise Impact Assessment

The noise impact assessment presented in report reference A1971 R01 indicates that, noise from asphalt recycling activities is likely to be less than 5 dB above the derived background sound level at all receptor locations. This would be considered by BS4142 to be a low (below adverse) noise impact.

The site and its surrounding area is largely industrial. The main asphalt plant associated with this proposed development will form part of the baseline noise climate which indicates that this development proposed for the site is not out of keeping with the character of the area. therefore there is likely to be a degree of tolerance to noise of the nature proposed in this assessment.

5 Control Measures and Process Monitoring

The assessment undertaken within the permit application demonstrates that noise from the recycling of asphalt at the Avonmouth site would be of a low noise impact in accordance with BS4142:2014. The assessment includes a number of inherent mitigation measures as detailed in the noise impact assessment. These measures include the following:

- As the single receptor is an office, it will not be occupied during the night-time period where background noise levels will be lower. Therefore a night-time assessment has not been undertaken.
- The storage bays will be built using 800mm Concrete Blocks. The bays will have a concrete base with 4m high walls. These walls will offer some attenuation for the noise generating activities in the bays.

Nevertheless, in accordance with the requirements of any permit, the following additional “Best Available Techniques” (BAT) measures will be put in place before the facility begins recycling asphalt and will remain in place for the duration of the permit.

5.1 Demonstration of Best Available Techniques (BAT)

The applicable Best Available Techniques for reducing noise for the recycling of asphalt activity are summarised in the table below.

Table 4: BAT Summary Table

Noise Source	Operational Noise Description	Actions to be taken to meet BAT and timescales
All	Noise from recycling asphalt facility during unsociable / sensitive hours.	<ul style="list-style-type: none"> • Although the operational hours will be 24/7, so that it is available for road works which would often take place at night, the Kings Lifting Office receptor will be unoccupied in the evening and overnight • Noise will be reduced by the walls of the loading bays which are 4m high and built from concrete block.
All	Wear and tear or other damage could result in aspects of the recycling processing generating additional noise including tonal elements (whine) and / or impulsive noise	<ul style="list-style-type: none"> • Regular maintenance will be carried out on a continual basis and any issues will be rectified as soon as possible. • Timescales: Ongoing
Vehicle movements	Noise from vehicle movements could include acceleration, braking, reversing alarms and loading / unloading of heavy materials at the site. Vehicles including shovel loaders etc in the vicinity would generate noise through the movement of materials etc.	<ul style="list-style-type: none"> • Site speeds restriction to be in place around the permit site and observed at all times. • Engines to be switched off after use i.e. no idling. • All vehicle movements are to adhere to the prescribed routing plan • Timescales: Ongoing

AVONMOUTH ASPHALT RECYCLING PLANT Noise Management Plan

5.1 Onsite Monitoring Procedures

The operations at the site will be continually monitored and checked to ensure all operations are conducted in accordance with BAT.

Table 5: Onsite Monitoring Requirements

Source Reference	Procedure	When will this be carried out?	Actions to be taken to meet BAT
Static Plant and Equipment	All equipment and plant at the facility shall be regularly inspected and maintained to ensure optimum operating effectiveness. The inspections will include any noise control measures i.e. silencers, enclosures and anti-vibration mounts.	Ongoing	Where inspections reveal work is required, this shall be carried out in an expedient manner and a log made to record the procedure.
Internal access roads and tracks	All access roads and haul roads within the site shall be maintained and kept free from pot holes etc	Ongoing	Any pot holes or defects in the access road and / or haul roads shall be addressed to maintain safety and minimise and noise generated by impacts etc.

5.2 Off Site Noise Monitoring

The noise impact assessment has demonstrated that noise from the asphalt recycling activities could exceed the derived background noise level however, no control measures in addition to the BAT detailed above, are required for the operation. That said, on receipt of a valid complaint, it may be useful to undertake a noise monitoring survey in the vicinity to assist in identifying and quantifying any noise impacts. It is noted that the survey is not required as a regular, ongoing compliance matter and should only be undertaken on receipt of a valid complaint to assist in addressing the highlighted issue.

The noise monitoring survey should be undertaken in line with the methodology detailed in section 6 of BS4142.

The noise monitoring locations should be identified at the site, it is likely to be at a location representative of the noise sensitive receptor where the complaint raised.

5.3 Noise Complaint Log

Should noise complaints be received, the following form should be completed and kept on record until the complaint has been resolved.

It is reiterated that the noise management plan relates solely to the process of recycling asphalt at the site. As such, there may be an initial stage of investigation to determine if the source of the noise was active during the process of recycling asphalt.

In all instances, the complaint will be investigated by the site manager and where possible, any measures to address the source of the complaint mitigated as soon as possible. Within 48 hours of the complaint log being completed the site manager should contact the complainant to update them of the progress of the investigation and / or any actions taken to address the source of the noise.

If necessary, additional noise monitoring shall be undertaken to assist in identifying the source of the complaint.

All noise complaints shall be notified to the Environment Agency within 14 days from receipt and shall include details including actions taken / to be taken to address the noise source and complaint.

Noise Complaint Form

Environmental Protection (Noise) Regulations 1997
(To be completed by Complainant)

Name	
Postal Address	
Phone Number (during business hours)	
Email Address	
Address where noise is coming from (the address is required for the complaint to be investigated:	
Type/source of noise	
Time of day the noise occurs	
How often does the problem occur (Daily, Weekly, Monthly or a one off)	
Other Relevant Information	
Signature of Complainant	
Date	
Please send completed form to: reception@wainwright.co.uk	

For site use only	
Date Received	
Reference Number	

Noise Complaint Investigation

Environmental Protection (Noise) Regulations 1997
(To be completed by PSL)

Complaint Reference Number	
Investigated by	
Result of Investigation	
Recommended Actions	
Persons Actioned	
Target Date	
Date Actions Closed	
Signature	
Complainant informed of investigation (Y/N)	

