NOISE IMPACT ASSESSMENT

Moss Lane, Worsley, Manchester M28 3LY

UBU Environmental Limited

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1 Introduction

1.1 General

1.1.1 Oaktree Environmental Ltd (Oaktree) have been commissioned by UBU Environmental Limited to undertake a Noise Impact Assessment (NIA) for their site situated at Moss Lane, Worsley, Manchester M28 3LY.

1.1.2 The report has been written by Josh Ulyatt reviewed internally by Jack Caton of Oaktree, details of the competence are provided in page i of this report. Additional key technical personnel & qualifications table, certificates are available upon request.

1.1.3 UBU Environmental Limited currently operate Environmental Permit (EP) reference EPR/RP3498CT which is listed as an A16 physical treatment of non-hazardous waste comprising the reception, storage, sorting and treatment of construction demolition and excavation (CDE) waste in the form of subsoils and topsoils and municipal wastes in the form street sweepings. The current treatment operations listed under the EP; extracted from Tables S1.1 and S1.2 are shown below:

- The total quantity of waste accepted at the site for the above activity shall be less than 110,000 tonnes a year.
- Treatment consisting only of dewatering, settlement, physical sorting or separation of non-hazardous waste into different

1.2 Application proposals

1.2.1 Specifically, the purpose of this NIA is to accompany an EP variation, the EP variation seeks to vary the EP to:

- Include blending, crushing and screening in the list of activities authorised under the physical treatment of non-hazardous waste activity ref. 1.16.12.
- Add new physical and chemical treatment of waste activity ref. 1.16.14 and the following treatment activities:

  - Washing
  - Centrifuging
  - De-watering
- The throughput of the 1.16.14 activity will be less than 75,000 tonnes per annum
- The total combined throughput will be 185,000 tonnes for the two activities combined

1.2.2 This NIA considers the environmental noise impact as arising from the operation of all plant and processes associated with the site, as at the nearest Noise Sensitive Receptors ("NSRs") during the proposed hours of operation.

1.2.3 Reference should be made to Appendix I which provides existing and proposed layouts of the site.

1.2.4 The environmental noise emissions that shall be arising from the operation of the complete plant have been quantified, modelled, and assessed using proprietary "CadnaA" 3D noise modelling software.

1.2.5 This NIA will focus on the following aspects:

- Identify the nearest pre-existing noise sensitive receptors ("NSRs") that are most likely to be affected by environmental noise arising from plant and/or process noise that is
- Determine the prevailing, pre-existing baseline background noise climate at the worst affected NSR, through direct, environmental noise measurement.
- Identify all significant noise sources associated with the site.
- Calculate the resultant environmental noise level contribution and impact at the nearest NSRs to the site, taking factors such as distance to receptors, acoustic screening, and other environmental features into consideration.
- Carry out an environmental noise assessment of the site in accordance with the assessment methodology that is prescribed in relevant Standards (e.g. British Standard 4142: 2014+A1: 2019) and other acoustic guidance, in order to determine the likely significance of the noise impact generated.

1.3 Pre-application advice

1.3.1 It is important to note, the use of the wash plant has been in operations since 2017 including the trommel and screen associated with it. Pre-application advice was sought by the EA who confirmed these operations require regularising as they are not covered by the current treatment operations. Details of the pre-application received are shown in Appendix II.

1.4 Site location

1.4.1 The site layout of the site including the permitted boundary is shown on Drawing No. MOSS/3448/03. All references to 'the site' shall mean the operations taking place inside the permit boundary.

1.4.2 The site is in the centre of Linnyshaw Industrial Estate just north off Moss Lane in the borough of Walkden. It has long been established for the physical treatment of waste facility with the site operating the CDE Enviro wash plant since 2017. The site is located within an industrial area with residential dwellings located south of the site. The nearest noise sensitive premises are as follows:

- Residential properties 18m south of the site, south of Moss Lane/north off Stoneyside Avenue.
- Residential properties 70m to the south-west of the site off Meadowside Avenue.

1.4.3 The plan overleaf indicates the location of the site in relation to the identified NSRs, and also the corresponding location of the noise monitoring position used in order to inform this NIA.

Figure 1 - Site location and NSRs

1.5 Hours of Operation

1.5.1 The operational hours of the facility have been restricted by planning permission issued by Salford City Council (latest variation 2017). Current operating hours are:

- 07:00am – 22:00pm (Monday – Friday)
- 07:00am – 17:00pm (Saturday)
- 07:00am – 13:00pm (Sunday and bank holidays)

1.5.2 In terms of the fixed plant and machinery, comprising the mechanical treatment of waste, operating hours for this are also restricted by the planning permission and are as follows:

- 07:00am – 21:00pm (Monday – Friday)
- 07:00am – 16:00pm (Saturday)
- No operations (Sunday and bank holidays)

1.5.3 Note there is also a 24-hour emergency provision which is utilised on a regular basis (typically once per month) and relates mostly to road traffic incidents.

1.5.4 It is proposed there will no change to the operational hours of the site.

2 Relevant Noise Guidance

2.1 Environment Agency Guidance

2.1.1 This document has been produced in accordance with the EA's guidance "Noise and vibration management: environmental permits" updated 31 January 2022.

2.2 Noise Policy Statement for England

2.2.1 The Noise Policy Statement for England (NPSE), March 2010, sets out the Government's long-term noise policy, the aims of which are:

"Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- *Avoid significant adverse effects on health and quality of life:*
- *Mitigate and minimise adverse effects on health and quality of life;*
- *Where possible, contribute to the improvement of health and quality of life."*

2.2.2 The first aim of the NPSE is to avoid significant adverse effects, considering the shared UK principles of sustainable development.

2.2.3 The second aim provides guidance on the scenario when the potential noise impact falls between the LOAEL (Lowest Observed Adverse Effect Level) and the SOAEL (Significant Observed Adverse Effect Level), in which case it is stated*, "all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development".* However, it is also stated, *"This does not mean that such adverse effects cannot occur"*.

2.2.4 With regards to the SOAEL, the document states, "It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations", thus acknowledging that this is very much dependent on the noise source, the receptor, and the time of day. Therefore, the NPSE provides the necessary policy flexibility until further guidance / evidence is available.

2.2.5 Other guidance will need to be taken into account when applying the principles of the NPSE, as well the nature of the proposed development and its specific circumstances.

2.3 National Planning Policy Framework

2.3.1 The National Planning Policy Framework, revised in February 2019, states that Planning policies and decisions should also ensure that new development is appropriate for its location, taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- Mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;
- Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

2.3.2 Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.

2.3.3 The revised document also makes reference to the Noise Policy Statement for England.

2.4 Planning Practice Guidance – Noise

2.4.1 Further to the guidance set out in the NPPF advises that the Local Authority should consider the following when decision making:

- Whether or not a significant adverse effect is occurring or likely to occur.
- Whether or not an adverse effect is occurring or likely to occur.
- Whether or not a good standard of amenity can be achieved.

2.4.2 As previously discussed within the NPSE, the guidance discusses the LOAEL and SOAEL and provides scenarios that could be expected for the perception level of noise, plus the associated activities that may be required to bring about the desired outcome. Again, as with the NPSE, no objective noise levels are provided for LOAEL or SOAEL.

2.4.3 It is stated that "the subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation". These factors include:

- The absolute noise level of the source and the time of day it occurs.
- Where the noise is non-continuous (intermittent), the number of noise events along with any patterns of occurrence.
- The frequency of content and acoustic characteristics (tonality etc.) of the noise.
- The effects of noise on the surrounding wildlife.
- The acoustic environment of external amenity areas provided as an intrinsic part of the overall design.
- The impact of noise from certain commercial developments such as night clubs and pubs where activities are often at their peak during the evening and night.

3 Noise Assessment Criteria

3.1 To assess the impacts of existing road traffic and industrial noise from the proposed development, the following documents have been used:

- BS8233:2014
- BS4142:2014+A1:2019 (BS4142)
- World Health Organisation (WHO) Guidelines on Community Noise

3.2 BS8283:2014

3.2.1 This document provides guidance on the relevant level of sound insulation required by a variety of building types affected by general environmental noise and provides recommendations for appropriate internal ambient noise level criteria for a variety of different situations including residential dwellings. The table below includes the proposed noise criteria within BS8283:2014 with regards to residential properties:

Table 1 - BS8233:2014 Internal Criteria

Activity	Location	07:00 – 23:00	23:00 – 7:00
Resting	Living rooms	35 $L_{Aeq, 16hour}$	-
Dining	Dining room	40 $L_{Aeq, 16hour}$	-
Sleeping	Bedroom	35 $L_{Aeq, 16hour}$	30 $L_{Aeq, 16hour}$

3.3 BS4142

3.3.1 BS4142 provides a method for “assessing and rating industrial sound” of an industrial/commercial nature. The method described in the standard uses the rating level from a noise source and the existing background noise level to assess the potential effects of sound on the residential premises upon which sound is incident.

3.3.2 Using this method, the background sound level is subtracted from the rating level. The resulting figure is assessed using the following guidance from the document:

- The greater the difference between the background sound level and the rating level, the greater the impact on the receptor.
- An exceedance of the background level of around 10dB, or more, is likely to be an indication of a significant adverse impact, dependent on the context.
- An exceedance of the background level of around 5dB is likely to be an indication of an adverse impact, dependent on the context.
- The lower the rating level compared to the existing background level, the less likely an adverse impact, or a significant adverse impact. Where the rating level does not exceed the background level, this is indicative of a low impact, dependent on context.

3.3.3 The document introduces a requirement to consider and report the uncertainty in the data as well as also including guidance for applying a correction/penalty for certain adverse acoustic features such as tonality, impulsivity or intermittency. The following table summarises the corrections based on the subjective assessment of the noise.

Table 2 - BS4142:2014 Corrections and Penalties

	Tonality	**Impulsivity**	**Other characteristics**
Just perceptible	+ 2dB	+ 3dB	
Clearly perceptible	+ 4dB	+ 6dB	
Highly perceptible	+ 6dB	+ 9dB	
Readily Distinctive against Residual Environment			+ 3Db

3.4 WHO Guidelines for Community Noise

3.4.1 The WHO Guidelines (1999) recommends indoor night-time guidelines in order to avoid sleep disturbance, the document states these to be 30 dB (LAeq) and 45 dB (LA_{fmax}) for continuous and individual noise events respectively.

3.4.2 The document states that the number of noise events should also be considered and that individual noise events should not exceed 45 dB $(LA_{fmax})_{more}$ than 10 – 15 times per night.

3.4.3 The WHO document also recommends that steady, continuous noise levels should not exceed 55 dB (LAeq) for outdoor living areas (balconies, terraces etc.). However, in order protect the majority of individuals from moderate annoyance, external noise levels should not exceed 50 dB (LAeq)

4 Background Noise Monitoring

4.1 Procedure and Monitoring Locations

4.1.1 Long term unattended monitoring was conducted at the location detailed on Figure 2 below.

Figure 2 - Site location and noise monitoring position

4.1.2 The background survey was conducted by NOVA Acoustics Ltd in compliance with BS7445:2003- Description and measurement of Environmental Noise- Part 1&2. The survey was conducted between 21/06/2024 – 01/07/2024.

4.1.3 The location was chosen in order to be representative of the nearest noise sensitive receptor which has a direct line of site to the site. The noise monitoring position chosen is representative of the amenity areas for the dwellings located on Stoneyside Avenue, in particular the rear gardens of these dwellings.

4.1.4 Whilst access could not be gained to the gardens at the Noise Monitoring Position (NMP), the position was chosen representative of the gardens closest to the site, for example, NMP 1 lies 7 metres from the adjacent carriageway. The National Grid Reference for NMP is SD 74249 03564.

4.1.5 For the background monitoring to be representative of the existing noise climate in the absence of the site being assessed, site management agreed to shutdown periods for weekday and weekend periods, include the following: 09:00-10:00, 12:00-13:00, 15:00-16:00. These periods are seen to be representative of the existing noise climate for the surrounding area about the site.

4.1.6 Oaktree also carried out a further site visit on 16/07/2024 to capture all existing potential noise sources generated site.

4.2 Equipment Used During the Survey

4.2.1 Details of the equipment used by NOVA Acoustics are detailed in the below Table, also in the table is drift from the field calibrated traceable reference signal of 114db at 1kHz.

Table 3 - NOVA Survey Equipment

Description	Model	Manufacturer	Serial No.	Pre Calibration	Post Calibration
SLM	Svantek	SV307	87871	114	114
Leeds Cali 1	Cesva	CB006	901910		

4.2.2 Details of the equipment used during the onsite measurements taken by Oaktree Environmental are detailed below.

Table 4 - Oaktree Survey Equipment

Description	Model	Manufacturer	Serial No.	Calibration Date
Class 1 Sound Analyser	NOR 150	Norsonic	15030504	October 2024
Microphone	Norsonic Type 1225	Norsonic	305208	October 2024
Field Calibrator	NOR 1251	Norsonic	35205	June 2025

4.3 Weather

4.3.1 NOVA installed a weather station during the unattended monitoring but this malfunctioned therefore cannot be relied upon. On this basis, the weather has been recorded for a daily average for the days that the monitoring equipment were on site is detailed in Table 5 below. Times where the rain had occurred and the wind speed exceeded 5m/s had been discounted from the background noise assessment.

Table 5 - Weather Conditions during noise monitoring

Date	Wind Speed (max m/s)	Wind Direction	Cloud Cover	Temperature (C)	Precipitation (inch)
27/06/2024	4.4	W-SW	50%	12-18	0
28/06/2024	3.5	SE	25%	8-22	0
29/06/2024	4.4	SW	50-75%	11-25	0
30/06/2024	5.4(16:20)	NW	25%	12-22	0
1/07/2024	6 (10:50-20:20)	W	100%	7-15	0.1-0.3 for most of the day

4.4 NOVA Acoustics Background results

4.4.1 The results of the background noise monitoring survey are tabulated below in Tables 6 & 7. These tables detail the background results at the times the site was shut down 09:00-10:00,12:00-13:00, 15:00-16:00. With commentary on the background levels measured during the survey in included further in Section 4.5. Nighttime data has been collected as a result of the monitoring being 24/7 for the 5 days' worth of data. There is additional data however has been excluded from the assessment as the site's operations were running.

4.4.2 In order to calculate the $LA90,_{1\ hour}$ figure the equivalent continuous sound pressure level addition formula was used in order to use the $LA90,_{15minute}$ for the remaining values the

Table 6 - Shutdown period Weekday background monitoring results for NMP 1

Measurement Time	LA_{eq}	LA_{max}	LA_{90}
Day 1			
09:00-10:00	N*o data*	N*o data*	N*o data*
12:00-13:00	62	88.9	50
15:00-16:00	62.4	88.9	51.8
Day 2			
09:00-10:00	62.6	90.1	50.2
12:00-13:00	61.8	89.1	50.9
15:00-16:00	61.8	85.6	48.8
15 minute-Day 5(Morning period-All). Site operational			
07:00-08:00	60.5	79.1	53.4
08:00-09:00	62.7	90.0	52.3

Table 7 - Shutdown period Weekend background monitoring results for NMP 1

Measurement Time	LA_{eq}	LA_{max}	LA_{90}	$LA90,_{15minute}$ lowest value
Day 3				
09:00-10:00	61.2	87.9	49.4	46.5
12:00-13:00	59.2	89.7	47.1	46.9
15:00-16:00	51.1	76.9	38.2	38.1
Day 4				
09:00-10:00	51.7	72.6	46.4	45.6
12:00-13:00	51.7	81.9	46.7	46.3
15:00-16:00	51.8	79.9	45.5	45.3

4.4.3 Upon looking at the data for the background levels the representative daytime level chosen is 50dB for a weekday background level. The level chosen to be representative for weekend daytime background is 46dB.

4.4.4 Should It be required, photographs and videos can be provided, along with the noise measurement files to corroborate the above observations. These are available upon request by the EA and other parties i.e. the Local Authority.

4.5 Existing Noise Climate

4.5.1 The existing noise climate constitutes the following as described by NOVA Acoustics Ltd:

4.5.2 At the monitoring location (representative of the rear facade to the gardens of the nearest noise sensitive receptors), noise levels were 'low' when there were no vehicle movements on site. It was observed that large vehicles travelled into and out of site approximately every 10 - 15 minutes. Vehicles into and out of other entrances to the industrial complex were audible and there were no other sources of distant road traffic or audible plant. Sources within the site including the idling of some vehicles and the use of pressure washers. Weather station installed in sand bank to the rear of site. Conversations were had whilst on-site in relation to operations associated with large items of plant linked to the shed. It is understood that additional comment will be provided from 'Eddie Murphy' (understood to be UBU Environmental Ltd) where a breakdown of the permittable activities will be listed.

4.6 Control of Uncertainty

4.6.1 Uncertainty in this assessment was controlled via the following precautions/procedures:

- Both the sound level meter and calibrator have a traceable laboratory calibration, and the meter was field-calibrated both before and after the measurements. The field calibrator is set to 114.0Db at a frequency of 1kHz, which at the time of monitoring had drifted from this calibrated value at the most by 0.0Db.
- The measurement locations are considered representative of the existing noise climate outside the nearest residential dwellings to the proposed development.
- The background monitoring was undertaken during a period where there is a large variety of weather conditions and with wind speed data being held within the weather station details held above in Table 5.

5 Noise Impact Assessment

5.1 Introduction

5.1.1 The most significant noise sources associated with the existing permitted operations comprise the following:

- LGVs/streetsweepers travelling to and from site for the delivery/ collection of waste.
- Manoeuvring of mobile plant around external areas of the site
- Repairs/servicing of vehicles in various workshops on site

5.1.2 The proposed operations seek to comprise further noise generating operations comprising:

- Trommel and screen (in dedicated shed)
- Feed conveyor (trommel to logwash)
- Logwash (2x rotating screws)
- Evowash
- Flocculant dosing system
- Effluent storage tanks

  ***N.B. the above are currently existing and operational at the site*
- Proposed use of a crusher
- Proposed use of a secondary soil screener

5.1.3 The noise generated from the feed conveyors between the trommel, and the wash plant building are considered insignificant in comparison to plant themselves. Noise from the workshops was measured by measuring the noise sources that contribute most to the reverberant sound level inside the garage building all other sources are considered to be very infrequent and do not have a higher sound pressure levels than the noise from the equipment measured.

5.2 Background Levels

5.2.1 With regards to background levels, BS4142:2014 states that "the objective is not simply to ascertain a lowest measured background sound level, but to quantify what is typical during particular time periods" and also "In practice there is no "single" background sound level as this is a fluctuating parameter. However, the level for the assessment should be representative of the period being assessed".

5.2.2 The assessment utilises the range the levels with looking at a large data set and presenting a single a level which is a conservative approach with her values used being for the majority across the day exceeded. The background levels used are shown in Tables 6 and 7 with Day 5 in Table 6 showing the levels in the morning when the site was operating. These levels in particular show that there is not much fluctuation in levels in comparison to when the site is not operating as NMP 1.

5.2.3 The levels for comparison therefore are 50dB background represents the weekday and 46dB represents the weekend.

5.3 BS4142: Assessment

5.3.1 The CadnaA noise models were constructed using OS mapping Opendata and Google Earth satellite imagery, whilst topographical data was imported as a digital terrain model obtained from DEFRA.

5.3.2 The principal noise source at the sensitive receptor (NSR) used during monitoring is the was the movement of the streetsweepers operated by UBU Environmental Limited.

5.3.3 The following assumptions/parameters are made within the models:

- The intervening land between the site boundary and residential properties was modelled with G = 0.0 as it was considered that the land is predominantly acoustically reflective.

- Noise sources were not assumed to be constant, Table 5.1 details the assumed "on-times" as well as the assumptions with regards to geometry of the noise source (height, point or area source etc.).
- Buildings were set as acoustically reflective, with a reflection loss of 0.6 dB. Which equates to an absorption coefficient of 0.11. A maximum order of reflection of 3.0 has been assumed.
- Noise levels were determined at residential properties representing the nearest residential facades. This has been calculated via a receiver's being placed at 1.5m (ground floor) and 4.0m (first floor) respectively. The receivers have snapped to the facades of the NSR at a distance greater than 3.5m which is compliant with BS4142 and BS7445 for measuring in a free field.
- The predicted grid noise levels were free-field, A-weighted, sound pressure levels. The noise contours generated within the model are also at a height of 1.5 m and 4.0m to assess first and ground floor levels.
- Surrounding residential properties were modelled at a height of between 7.0m for the majority of residential dwellings. Commercial building heights have been taken from observations and information taking from planning public access where available.
- Barrier heights and waste storage bays have also been added to the model based on the site layout and aerial imagery. The heights of these barriers have been confirmed with site management and are modelled as being hard and reflective (i.e. concrete). The height of the building that houses the wash plant facility has been modelled at a height of 6.0m.
- In terms of the proposed crushing and screening activities located in the northwest of the site which is currently used a storage area for sweepings and streetsweeper parking area, it is proposed to construct a concrete panel wall to a height of 5.0m adjacent to the proposed crushing and screening activities.

5.3.4 Table 8 below includes the measured noise levels for the anticipated activities, which have either been measured by Oaktree Environmental Ltd or provided by the manufacturer 1/3 octave bands and octave bands have been used where possible.

Table 8 - Measured levels of activities (existing activities)

Activity	Sound Power Level (LAeq)	On-Time	Source/comments
Streetsweeper Pass-by	92.6	40 per hour on weekdays, 15 per hour on weekends	Measurement taken by Oaktree Environmental on site. Modelled as a moving point source located around the site where movements are predicted.
Air Gun	96.0	5 minutes per hour	Onsite measurement taken by Oaktree Environmental. Modelled as an area and vertical area sources within the workshop building
Jet wash	97.9	30 minutes per hour	Measurement taken by Oaktree Environmental on site. Modelled as a point source located externally adjacent to the weighbridge. Modelled at a height of 0.5m.
Grinder	106.1	5 minutes per hour	Onsite measurement taken by Oaktree environmental. Modelled as an area and vertical area sources within the workshop building

Table 9 - Measured levels of activities (existing activities on site which are not permitted)

Tipping of Soil	104.0	5 minutes per hour	Modelled as a point source within the tipping bays at a height of 0.5m
Logwash	104.5	Steady state	Onsite measurement taken by Oaktree Environmental. Modelled as an area and vertical area sources within the logwash building
Flocculant Processing	100.0	Steady state	Onsite measurement taken by Oaktree Environmental. Modelled as an area and vertical area sources within the logwash building
Effluent Tank	92.4	Steady state	Onsite measurement taken by Oaktree Environmental. Modelled as an area and vertical area sources within the logwash building
Trommel & screen	92.0	Steady state	Onsite measurement by Oaktree Environmental. Modelled as an area and vertical area sources within the trommel building

Table 10 - Measured levels of activities (proposed activities on site which are not permitted)

Crusher	111.6	30 minutes per hour	Measurement of crusher taken by Oaktree on alternative site. Modelled as a point source to the northwest of the site at a height of 2.0m
Screener	104.1	30 minutes per hour	Measurement of crusher taken by Oaktree on alternative site. Modelled as a point source to the northwest of the site at a height of 3.0m

5.3.5 With regards to penalties as per BS4142, it is considered that the impulsive nature of the site does not warrant a penalty for the existing operations. However, the existing site does emanate a tonal noise from the site in the form of the use of the street sweepers leaving the site and other vehicle movements associated with the site which will be clearly perceptible at the nearest sensitive receptor (NSR) and therefore a +4dB penalty has been

considered appropriate for the existing site. With regards to the proposed operations, in particular the use of the existing (unpermitted) trommel screen and wash plant and the proposed addition of the crushing and screening activities, these are more impulsive in nature and therefore a +3dB penalty has been added to make up the predicted rating level at the NSR. The total acoustic correction feature/penalty for the proposed site operations is +7Db which takes into account the preexisting street sweeper movements, existing (unpermitted) trommel screen and wash plant and the proposed addition of the crushing and screening activities.

5.3.6 The Figures below detail the existing site operations model for daytime operations (Figure 3), The existing site operations during the daytime for the weekend is presented in Figure 4, this also includes the use of the trommel screen and wash plant which has been in operation since 2017. Presented in Figure 5 is the proposed operations at the site including crushing and screening for daytime weekday. Figure 6 details the proposed operations taking place at the weekend. The following tables (Tables 11 through 14) detail the comparison of the predicted rating levels to the background levels taken by NOVA Acoustics. These tables include an assessment on the NSRs at the first floor (4.0m) and the ground floor (1.5m) receivers.

Figure 3 - Modelling of typical existing daytime noise sources associated with the site as per BS4142:2014. Weekday

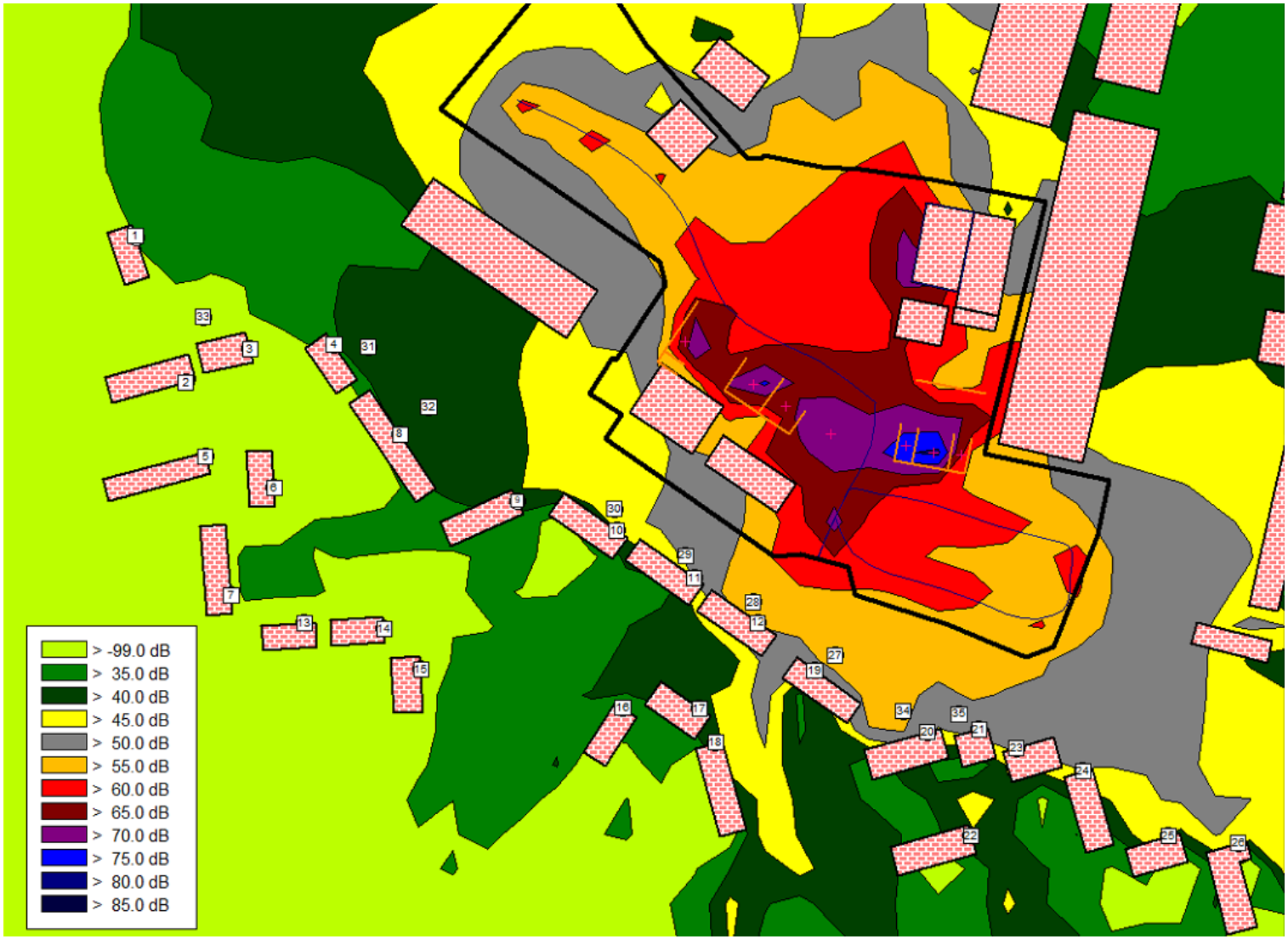


Figure 4 - Modelling of typical existing daytime noise sources associated with the site (all sources active), 1.5m height. Weekend

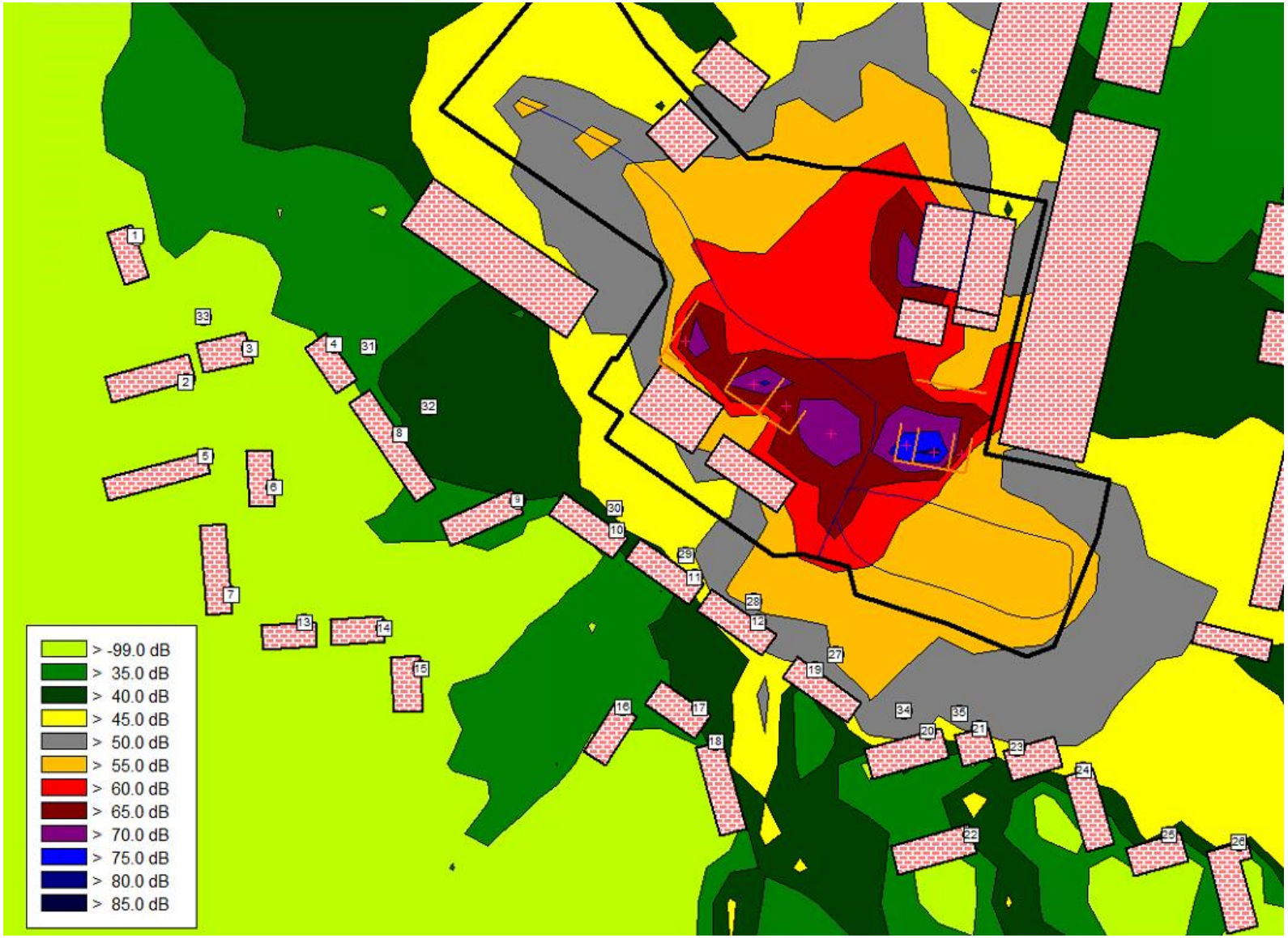


Figure 5 - Modelling of typical proposed daytime noise sources associated with the site (all sources active), 1.5m height. Weekday – Including crushing and screening

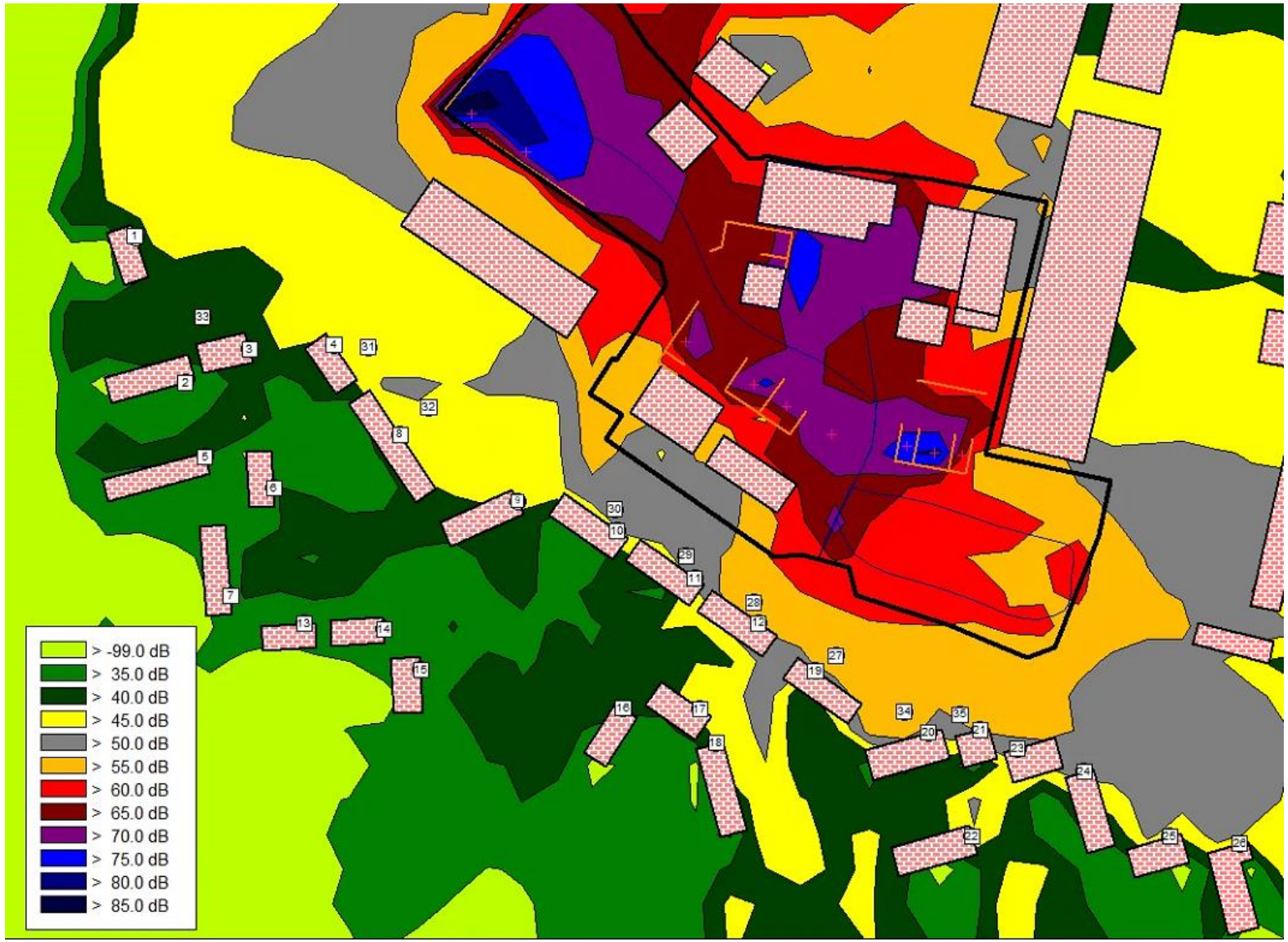


Figure 6 - Modelling of typical proposed daytime noise sources associated with the site (all sources active), 1.5m height. Weekend

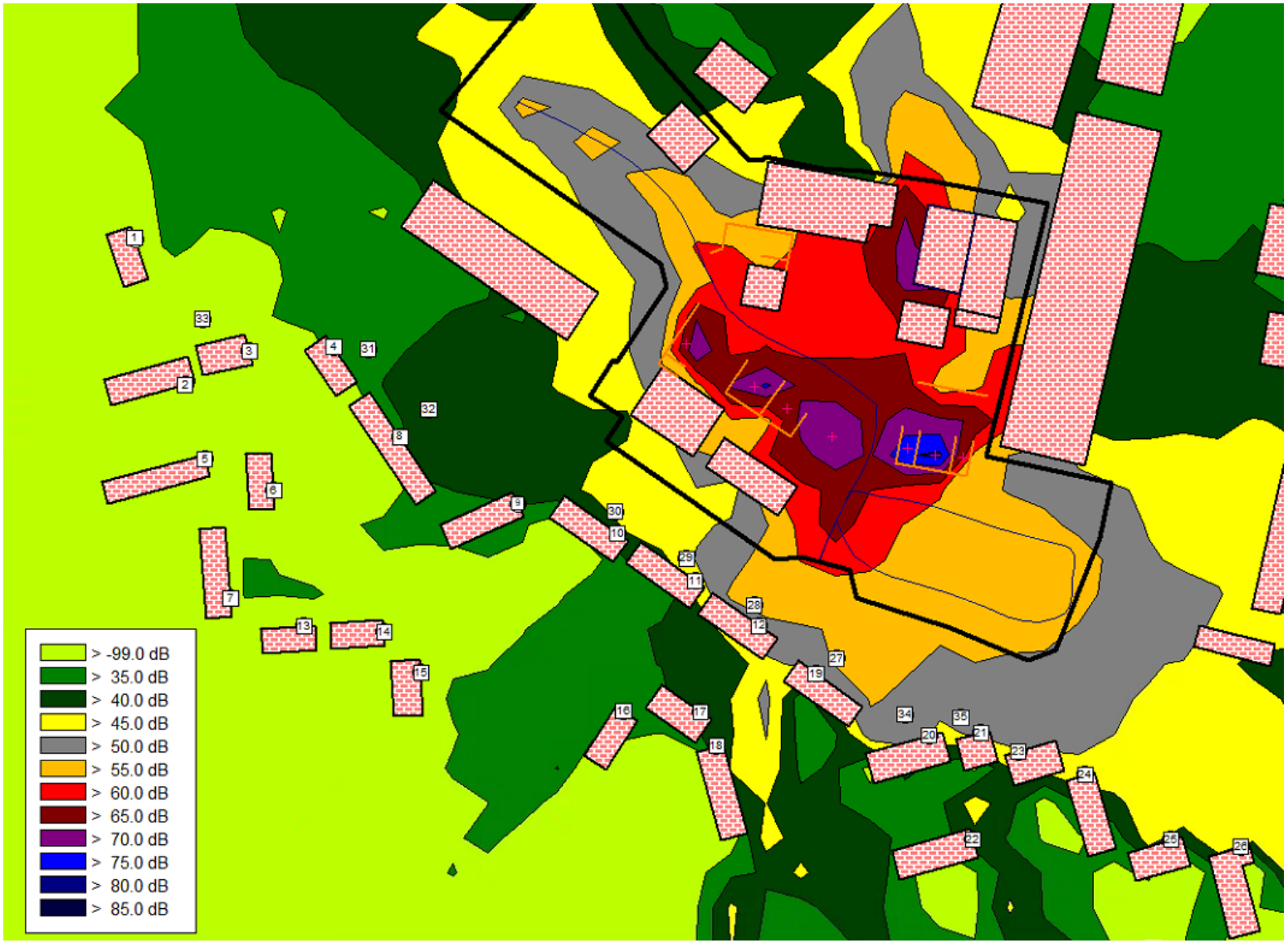


Table 11 - Assessment of typical existing daytime noise sources associated with the site as per BS4142:2014 derived from Figure 3 (Weekday)

Receptor	Floor	Calculated Level	Addition of Relevant Penalties as per BS4142:2014	Resulting Rating Level	Measured Background Level	Difference with Background level	**BS4142 Impact**
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
1	GF	35.6	4	39.6	50.0	-10.4	No Impact
1	1F	37.5	4	41.5	50.0	-8.5	No Impact
2	GF	28.6	4	32.6	50.0	-17.4	No Impact
2	1F	30.5	4	34.5	50.0	-15.5	No Impact
3	GF	29.8	4	33.8	50.0	-16.2	No Impact
3	1F	32.9	4	36.9	50.0	-13.1	No Impact
4	GF	39.2	4	43.2	50.0	-6.8	No Impact
4	1F	39.5	4	43.5	50.0	-6.5	No Impact
5	GF	28.4	4	32.4	50.0	-17.6	No Impact
5	1F	31.1	4	35.1	50.0	-14.9	No Impact
6	GF	30.9	4	34.9	50.0	-15.1	No Impact
6	1F	32.5	4	36.5	50.0	-13.5	No Impact
7	GF	33.5	4	37.5	50.0	-12.5	No Impact
7	1F	34.8	4	38.8	50.0	-11.2	No Impact
8	GF	41.4	4	45.4	50.0	-4.6	No Impact
8	1F	41.8	4	45.8	50.0	-4.2	No Impact
9	GF	41.5	4	45.5	50.0	-4.5	No Impact
9	1F	42.4	4	46.4	50.0	-3.6	No Impact
10	GF	47.5	4	51.5	50.0	1.5	Low Impact
10	1F	48.0	4	52.0	50.0	2.0	Low Impact
11	GF	50.9	4	54.9	50.0	4.9	Low Impact
11	1F	51.3	4	55.3	50.0	5.3	Adverse
12	GF	55.0	4	59.0	50.0	9.0	Adverse
12	1F	55.3	4	59.3	50.0	9.3	Adverse
13	GF	32.5	4	36.5	50.0	-13.5	No Impact
13	1F	34.2	4	38.2	50.0	-11.8	No Impact
14	GF	34.2	4	38.2	50.0	-11.8	No Impact
14	1F	35.8	4	39.8	50.0	-10.2	No Impact
15	GF	33.8	4	37.8	50.0	-12.2	No Impact
15	1F	35.0	4	39.0	50.0	-11.0	No Impact
16	GF	36.9	4	40.9	50.0	-9.1	No Impact
16	1F	38.7	4	42.7	50.0	-7.3	No Impact
17	GF	38.7	4	42.7	50.0	-7.3	No Impact
17	1F	40.3	4	44.3	50.0	-5.7	No Impact
18	GF	43.6	4	47.6	50.0	-2.4	No Impact
18	1F	44.0	4	48.0	50.0	-2.0	No Impact
19	GF	53.7	4	57.7	50.0	7.7	Adverse
19	1F	54.1	4	58.1	50.0	8.1	Adverse
20	GF	44.8	4	48.8	50.0	-1.2	No Impact

20	1F	46.4	4	50.4	50.0	0.4	Low Impact
21	GF	44.3	4	48.3	50.0	-1.7	No Impact
21	1F	45.7	4	49.7	50.0	-0.3	No Impact
22	GF	31.2	4	35.2	50.0	-14.8	No Impact
22	1F	32.7	4	36.7	50.0	-13.3	No Impact
23	GF	44.0	4	48.0	50.0	-2.0	No Impact
23	1F	45.0	4	49.0	50.0	-1.0	No Impact
24	GF	40.9	4	44.9	50.0	-5.1	No Impact
24	1F	42.3	4	46.3	50.0	-3.7	No Impact
25	GF	38.2	4	42.2	50.0	-7.8	No Impact
25	1F	40.2	4	44.2	50.0	-5.8	No Impact
26	GF	38.2	4	42.2	50.0	-7.8	No Impact
26	1F	39.8	4	43.8	50.0	-6.2	No Impact
27	GF	56.4	4	60.4	50.0	10.4	Significant Adverse
28	GF	57.9	4	61.9	50.0	11.9	Significant Adverse
29	GF	52.6	4	56.6	50.0	6.6	Adverse
30	GF	48.8	4	52.8	50.0	2.8	Low Impact
31	GF	40.5	4	44.5	50.0	-5.5	No Impact
32	GF	43.9	4	47.9	50.0	-2.1	No Impact
33	GF	32.8	4	36.8	50.0	-13.2	No Impact
34	GF	49.6	4	53.6	50.0	3.6	Low Impact
35	GF	48.6	4	52.6	50.0	2.6	Low Impact

Table 12 - Assessment of typical existing daytime noise sources associated with the site as per BS4142:2014 derived from Figure 4 (Weekend)

Receptor	Floor	Calculated Level	Addition of Relevant Penalties as per BS4142:2014	Resulting Rating Level	Measured Background Level	Difference with Background level	**BS4142 Impact**
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
1	GF	34.0	4	38.0	46.0	-8.0	No Impact
1	1F	35.8	4	39.8	46.0	-6.2	No Impact
2	GF	28.2	4	32.2	46.0	-13.8	No Impact
2	1F	30.1	4	34.1	46.0	-11.9	No Impact
3	GF	28.8	4	32.8	46.0	-13.2	No Impact
3	1F	31.6	4	35.6	46.0	-10.4	No Impact
4	GF	37.4	4	41.4	46.0	-4.6	No Impact
4	1F	38.0	4	42.0	46.0	-4.0	No Impact
5	GF	28.0	4	32.0	46.0	-14.0	No Impact
5	1F	30.8	4	34.8	46.0	-11.2	No Impact
6	GF	30.0	4	34.0	46.0	-12.0	No Impact
6	1F	31.9	4	35.9	46.0	-10.1	No Impact
7	GF	32.7	4	36.7	46.0	-9.3	No Impact
7	1F	34.1	4	38.1	46.0	-7.9	No Impact
8	GF	39.9	4	43.9	46.0	-2.1	No Impact
8	1F	40.5	4	44.5	46.0	-1.5	No Impact
9	GF	39.5	4	43.5	46.0	-2.5	No Impact
9	1F	41.1	4	45.1	46.0	-0.9	No Impact
10	GF	45.4	4	49.4	46.0	3.4	Low Impact
10	1F	46.4	4	50.4	46.0	4.4	Low Impact
11	GF	48.1	4	52.1	46.0	6.1	Adverse
11	1F	48.8	4	52.8	46.0	6.8	Adverse
12	GF	53.8	4	57.8	46.0	11.8	Significant Adverse
12	1F	54.2	4	58.2	46.0	12.2	Significant Adverse
13	GF	31.9	4	35.9	46.0	-10.1	No Impact
13	1F	33.5	4	37.5	46.0	-8.5	No Impact
14	GF	33.8	4	37.8	46.0	-8.2	No Impact
14	1F	35.3	4	39.3	46.0	-6.7	No Impact
15	GF	33.2	4	37.2	46.0	-8.8	No Impact
15	1F	34.5	4	38.5	46.0	-7.5	No Impact
16	GF	35.8	4	39.8	46.0	-6.2	No Impact
16	1F	38.0	4	42.0	46.0	-4.0	No Impact
17	GF	37.3	4	41.3	46.0	-4.7	No Impact
17	1F	39.2	4	43.2	46.0	-2.8	No Impact
18	GF	41.7	4	45.7	46.0	-0.3	No Impact
18	1F	42.4	4	46.4	46.0	0.4	Low Impact
19	GF	52.4	4	56.4	46.0	10.4	Significant Adverse
19	1F	52.8	4	56.8	46.0	10.8	Significant Adverse
20	GF	43.1	4	47.1	46.0	1.1	Low Impact

20	1F	44.8	4	48.8	46.0	2.8	Low Impact
21	GF	43.0	4	47.0	46.0	1.0	Low Impact
21	1F	44.6	4	48.6	46.0	2.6	Low Impact
22	GF	29.4	4	33.4	46.0	-12.6	No Impact
22	1F	31.1	4	35.1	46.0	-10.9	No Impact
23	GF	43.1	4	47.1	46.0	1.1	Low Impact
23	1F	44.2	4	48.2	46.0	2.2	Low Impact
24	GF	40.3	4	44.3	46.0	-1.7	No Impact
24	1F	41.7	4	45.7	46.0	-0.3	No Impact
25	GF	37.8	4	41.8	46.0	-4.2	No Impact
25	1F	39.7	4	43.7	46.0	-2.3	No Impact
26	GF	37.8	4	41.8	46.0	-4.2	No Impact
26	1F	39.3	4	43.3	46.0	-2.7	No Impact
27	GF	55.0	4	59.0	46.0	13.0	Significant Adverse
28	GF	56.7	4	60.7	46.0	14.7	Significant Adverse
29	GF	49.7	4	53.7	46.0	7.7	Adverse
30	GF	46.7	4	50.7	46.0	4.7	Low Impact
31	GF	39.1	4	43.1	46.0	-2.9	No Impact
32	GF	42.5	4	46.5	46.0	0.5	Low Impact
33	GF	31.2	4	35.2	46.0	-10.8	No Impact
34	GF	48.3	4	52.3	46.0	6.3	Adverse
35	GF	47.5	4	51.5	46.0	5.5	Adverse

Table 13 - Assessment of typical proposed daytime noise sources associated with the site as per BS4142:2014 derived from Figure 5 (Weekday – Including screening and crushing)

Receptor	Floor	Calculated Level	Addition of Relevant Penalties as per BS4142:2014	Resulting Rating Level	Measured Background Level	Difference with Background level	**BS4142 Impact**
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
1	GF	44.3	4	48.3	50.0	-1.7	No Impact
1	1F	45.3	4	49.3	50.0	-0.7	No Impact
2	GF	37.6	4	41.6	50.0	-8.4	No Impact
2	1F	41.2	4	45.2	50.0	-4.8	No Impact
3	GF	42.4	4	46.4	50.0	-3.6	No Impact
3	1F	44.0	4	48.0	50.0	-2.0	No Impact
4	GF	45.6	4	49.6	50.0	-0.4	No Impact
4	1F	48.4	4	52.4	50.0	2.4	Low Impact
5	GF	39.4	4	43.4	50.0	-6.6	No Impact
5	1F	40.7	4	44.7	50.0	-5.3	No Impact
6	GF	38.1	4	42.1	50.0	-7.9	No Impact
6	1F	39.7	4	43.7	50.0	-6.3	No Impact
7	GF	37.9	4	41.9	50.0	-8.1	No Impact
7	1F	39.0	4	43.0	50.0	-7.0	No Impact
8	GF	46.6	4	50.6	50.0	0.6	Low Impact
8	1F	46.5	4	50.5	50.0	0.5	Low Impact
9	GF	45.6	4	49.6	50.0	-0.4	No Impact
9	1F	46.4	4	50.4	50.0	0.4	Low Impact
10	GF	51.6	4	55.6	50.0	5.6	Adverse
10	1F	54.4	4	58.4	50.0	8.4	Adverse
11	GF	52.1	4	56.1	50.0	6.1	Adverse
11	1F	53.1	4	57.1	50.0	7.1	Adverse
12	GF	55.7	4	59.7	50.0	9.7	Adverse
12	1F	56.2	4	60.2	50.0	10.2	Significant Adverse
13	GF	38.9	4	42.9	50.0	-7.1	No Impact
13	1F	39.8	4	43.8	50.0	-6.2	No Impact
14	GF	40.5	4	44.5	50.0	-5.5	No Impact
14	1F	41.7	4	45.7	50.0	-4.3	No Impact
15	GF	39.5	4	43.5	50.0	-6.5	No Impact
15	1F	40.5	4	44.5	50.0	-5.5	No Impact
16	GF	40.2	4	44.2	50.0	-5.8	No Impact
16	1F	42.9	4	46.9	50.0	-3.1	No Impact
17	GF	44.5	4	48.5	50.0	-1.5	No Impact
17	1F	45.8	4	49.8	50.0	-0.2	No Impact
18	GF	45.3	4	49.3	50.0	-0.7	No Impact
18	1F	46.8	4	50.8	50.0	0.8	Low Impact
19	GF	55.5	4	59.5	50.0	9.5	Adverse
19	1F	55.9	4	59.9	50.0	9.9	Adverse
20	GF	55.1	4	59.1	50.0	9.1	Adverse
20	1F	55.0	4	59.0	50.0	9.0	Adverse
21	GF	55.0	4	59.0	50.0	9.0	Adverse

21	1F	55.1	4	59.1	50.0	9.1	Adverse
22	GF	49.2	4	53.2	50.0	3.2	Low Impact
22	1F	49.1	4	53.1	50.0	3.1	Low Impact
23	GF	53.7	4	57.7	50.0	7.7	Adverse
23	1F	53.7	4	57.7	50.0	7.7	Adverse
24	GF	51.8	4	55.8	50.0	5.8	Adverse
24	1F	51.7	4	55.7	50.0	5.7	Adverse
25	GF	49.9	4	53.9	50.0	3.9	Low Impact
25	1F	50.0	4	54.0	50.0	4.0	Low Impact
26	GF	49.6	4	53.6	50.0	3.6	Low Impact
26	1F	49.4	4	53.4	50.0	3.4	Low Impact
27	GF	58.3	4	62.3	50.0	12.3	Significant Adverse
28	GF	58.5	4	62.5	50.0	12.5	Significant Adverse
29	GF	53.8	4	57.8	50.0	7.8	Adverse
30	GF	54.1	4	58.1	50.0	8.1	Adverse
31	GF	47.3	4	51.3	50.0	1.3	Low Impact
32	GF	49.6	4	53.6	50.0	3.6	Low Impact
33	GF	44.1	4	48.1	50.0	-1.9	No Impact
34	GF	58.3	4	62.3	50.0	12.3	Significant Adverse
35	GF	58.1	4	62.1	50.0	12.1	Significant Adverse

Table 14 - Assessment of typical proposed daytime noise sources associated with the site as per BS4142:2014 derived from Figure 6 (Weekend)

Receptor	Floor	Calculated Level	Addition of Relevant Penalties as per BS4142:2014	Resulting Rating Level	Measured Background Level	Difference with Background level	**BS4142 Impact**
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
1	GF	33.8	4	37.8	46.0	-8.2	No Impact
1	1F	35.6	4	39.6	46.0	-6.4	No Impact
2	GF	28.2	4	32.2	46.0	-13.8	No Impact
2	1F	30.0	4	34.0	46.0	-12.0	No Impact
3	GF	28.6	4	32.6	46.0	-13.4	No Impact
3	1F	31.4	4	35.4	46.0	-10.6	No Impact
4	GF	37.3	4	41.3	46.0	-4.7	No Impact
4	1F	37.7	4	41.7	46.0	-4.3	No Impact
5	GF	27.8	4	31.8	46.0	-14.2	No Impact
5	1F	30.4	4	34.4	46.0	-11.6	No Impact
6	GF	30.1	4	34.1	46.0	-11.9	No Impact
6	1F	32.1	4	36.1	46.0	-9.9	No Impact
7	GF	33.2	4	37.2	46.0	-8.8	No Impact
7	1F	34.6	4	38.6	46.0	-7.4	No Impact
8	GF	39.7	4	43.7	46.0	-2.3	No Impact
8	1F	40.3	4	44.3	46.0	-1.7	No Impact
9	GF	39.7	4	43.7	46.0	-2.3	No Impact
9	1F	41.2	4	45.2	46.0	-0.8	No Impact
10	GF	45.1	4	49.1	46.0	3.1	Low Impact
10	1F	45.9	4	49.9	46.0	3.9	Low Impact
11	GF	48.3	4	52.3	46.0	6.3	Adverse
11	1F	49.2	4	53.2	46.0	7.2	Adverse
12	GF	53.8	4	57.8	46.0	11.8	Significant Adverse
12	1F	54.3	4	58.3	46.0	12.3	Significant Adverse
13	GF	32.6	4	36.6	46.0	-9.4	No Impact
13	1F	34.3	4	38.3	46.0	-7.7	No Impact
14	GF	34.0	4	38.0	46.0	-8.0	No Impact
14	1F	35.4	4	39.4	46.0	-6.6	No Impact
15	GF	33.3	4	37.3	46.0	-8.7	No Impact
15	1F	34.8	4	38.8	46.0	-7.2	No Impact
16	GF	36.1	4	40.1	46.0	-5.9	No Impact
16	1F	38.3	4	42.3	46.0	-3.7	No Impact
17	GF	37.9	4	41.9	46.0	-4.1	No Impact
17	1F	40.0	4	44.0	46.0	-2.0	No Impact
18	GF	41.9	4	45.9	46.0	-0.1	No Impact
18	1F	42.8	4	46.8	46.0	0.8	Low Impact
19	GF	52.5	4	56.5	46.0	10.5	Significant Adverse
19	1F	53.1	4	57.1	46.0	11.1	Significant Adverse
20	GF	43.5	4	47.5	46.0	1.5	Low Impact

20	1F	45.5	4	49.5	46.0	3.5	Low Impact
21	GF	43.3	4	47.3	46.0	1.3	Low Impact
21	1F	45.2	4	49.2	46.0	3.2	Low Impact
22	GF	33.0	4	37.0	46.0	-9.0	No Impact
22	1F	34.2	4	38.2	46.0	-7.8	No Impact
23	GF	43.4	4	47.4	46.0	1.4	Low Impact
23	1F	44.7	4	48.7	46.0	2.7	Low Impact
24	GF	40.9	4	44.9	46.0	-1.1	No Impact
24	1F	42.4	4	46.4	46.0	0.4	Low Impact
25	GF	38.5	4	42.5	46.0	-3.5	No Impact
25	1F	40.4	4	44.4	46.0	-1.6	No Impact
26	GF	38.6	4	42.6	46.0	-3.4	No Impact
26	1F	40.1	4	44.1	46.0	-1.9	No Impact
27	GF	55.1	4	59.1	46.0	13.1	Significant Adverse
28	GF	56.7	4	60.7	46.0	14.7	Significant Adverse
29	GF	49.9	4	53.9	46.0	7.9	Adverse
30	GF	46.3	4	50.3	46.0	4.3	Low Impact
31	GF	39.0	4	43.0	46.0	-3.0	No Impact
32	GF	42.1	4	46.1	46.0	0.1	Low Impact
33	GF	30.9	4	34.9	46.0	-11.1	No Impact
34	GF	48.5	4	52.5	46.0	6.5	Adverse
35	GF	47.7	4	51.7	46.0	5.7	Adverse

5.3.7 As per the above tables, the existing site operations assessed the rating level emanating from the site is lower than the background level taken, however, for the dwelling located shown as 28 in the above table (most effected by on site noise), the background level is exceeded and the assessment outcome as per BS4142 is considered to have a significantly adverse effect exceeding by 11.9Db for the weekday operations and or the weekend operations 14.7Db. For the proposed operations the same can be said for the dwelling labelled 28 (most affected property). Looking at the weekday predicted levels, the exceedance at this property is 12.5Db above background and for weekend operations an exceedance of 14.7Db. It is important to note the measurement is derived from the property directly opposite the site (south) and upon using the partial levels within CadnaA, the principal noise source contributing to the rating level here is the streetsweeper movements of which are considered to be an overestimate as a worst-case hour has been chosen. The characteristics of the noise emanating from the street sweepers is a lot like

road traffic in the sense that the noise is more broadband and tonal in nature a lot like the road traffic which will be audible at this NSR on Moss Lane.

5.4 Contextual argument

5.4.1 The existing site has never had a noise complaint in the past and has been operating using the current wash plant since 2017 and an increased throughput since 2020. The difference between the existing vs proposed operations has led to an increase in the rating level at the NSR labelled 28 of 0.6Db for weekday operations. For the weekend operations, there is no difference in the rating level.

5.4.2 In addition, BS4142 discusses at length the need for consideration of context and subjectivity when finalising the assessment outcome after the initial comparison of the rating level to the background level, with the simple arithmetic comparison providing only a preliminary guide. The context to be discussed here is the site has been operating for over 10 years. The site is within an industrial setting and is not out of character for the area.

5.4.3 It should of course be observed that the assessment comprises a potential over estimation of the rating level, with numerous worst-case assumptions being made, for example the orders of reflection and “on-times” assumed within the model are unlikely to be representative of the typical day to day operation of the site. In particular, the street sweeper movements have been overestimated which are the principal contributor to the SPL levels at the receivers.

6 Best Available Techniques

6.1 BAT measures

6.1 The following will be considered when operating the site and associated plant processing. Best practice principles include the following:

- Prevent generation of noise by good design and maintenance
- Daily maintenance checks – operational and maintenance staff
- Preventative maintenance schedule – based on manufactures guidance and historical data, experience. Pro-active and pre-emptive
- Noise monitoring and audits – noise monitoring as part of the daily site inspection any abnormal findings are recorded in the site log and reported to the site supervisor. Rattles, hums, squeaks, relief valves, irregular sounds etc
- Prioritising maintenance activities – short and long-term action plans, monitor reliability.
- Critical spares or supplier identified – spares available on demand.
- Daily operational checks - external doors are closed when not in use, hatchways or access doors left open, acoustic hoods not attached/fixed correctly, engines idling when not in use, suitable PPE being used as required.
- Daily operational checks – perimeter checks to assess noise levels, changes in level tone, intermittent noise, nuisance noise. This noise assessment is subjective, dependent on experience, familiarisation.
- Records – site logs record operational and maintenance issues/findings.
- Communication – open 2-way communication, listen to concerns raised, investigate as required and feedback to group or individual.
- Procurement – equipment selection, noise rating, inclusive attenuation, replacement policy, life cycle of product
- Signage – Appropriate signage denoting noise control areas and quite zones.

6.2 Proposed mitigation (not currently on site or taking place)

6.2.1 Site specific noise control techniques, include the following:

- 5m in height concrete wall constructed in the northwest portion of the site at the current sweeping's storage area and street sweeper parking area. It is proposed the wall is required southwest of this area to mitigate the additional noise arising from the proposed the crushing and screening activities. The concrete wall will comprise an acoustic barrier constructed with hard reflecting material with minimum superficial mass of 15kg/m^2.
- The main contributing source to those sensitive receptors is the HGV movements which ensuring that these regularly maintained with roads and access routes maintained. Ensuring that the speed limit if kept too below 5mph (8km/hr) this will mitigate the effects of the HGVs on those sensitive receptors in particular those located to the west of the site.
- Ensure that the other exit/entrance is sued on Moss Lane to ensure that the impact on the NSR labelled 28 is reduced.
- Ensure that for the majority of the street sweeper movements during the morning period and afternoon period are spaced out across the morning period and kept too less than 20 leaving the site at once. Ensure that the street sweepers are leaving past 08:00 are perhaps later to reduce the sensitivity at the NSR's.
- Following successful commissioning and establishment of routine steady operations, the Operator shall undertake a BS 4142:2014+A1:2019 noise impact assessment following guidance set out in Noise and Vibration Management: Environmental Permits and Method implementation document (MID) for BS 4142, to demonstrate that impacts do not exceed those specified in this NIA.
- Upon completion of the above work, a written report shall be submitted to the EA for approval. Timescales to be agreed with the EA.

7 Conclusion

7.1 Summary & Recommendations

7.1.1 Oaktree have undertaken an NIA for the site situated at Moss Lane, Worsley, Manchester M28 3LY.

7.1.2 The primary receptors are the residential dwellings situated off Moss Lane directly opposite the site. Additional receptors have been included in the model and have been assessed with the building tool on CadnaA software.

7.1.3 The document includes details of the revised site layout which has been reconsidered based on the proposed crushing and screening operations with the installation of a concrete panel wall to a height of 5.0m which surrounds the crushing and screening located in the northwest yard.

7.1.4 In terms of operations at the site the other exit off Moss Lane will be utilised for the exit of the vehicle movements in order to reduce the noise impact on the NSR labelled 28 (most effected NSR).

7.1.5 The noise impact at the NSR labelled 28 for the existing operations has been assessed to BS4142 and the resultant impact is significantly adverse at the NSR the same can be said for the proposed operations. The installation of the concrete wall in the north-eastern yard will reduce predicted noise level emanating from the site. Another strategy to reduce the effects on the sensitive receptors will be to space out the streetsweeper movements throughout the morning and reduce the number per hour. This will reduce the rating level at the receptors by around 5dB which will take the assessment outcome from significantly adverse to an adverse impact.

7.1.6 The contextual argument for the site is another factor to consider for assessing noise at the site. The existing site includes all of the streetsweeper movements of which will be masked by the noise coming from road traffic on Moss Lane. The site itself has been operational for

over 10 years and has never had any noise complaints, the site is within a long-established industrial setting.

7.1.7 It is also proposed that following the installation of the additional mitigation measures and revisions to site layout, additional post-completion monitoring of the site be undertaken within areas representative of the nearest residential receptors to confirm the calculated rating level. Due to the methodology undertaken within the modelling, these are likely to overstate the noise levels and associated impact.

7.1.8 Measured parameters should include LAeq, LAmax, LA90 and LA10 and should be used to re-assess the site prior to revision of the NMP, if required.

Appendix I

Drawings

PLAN UBU3 SITE LAYOUT

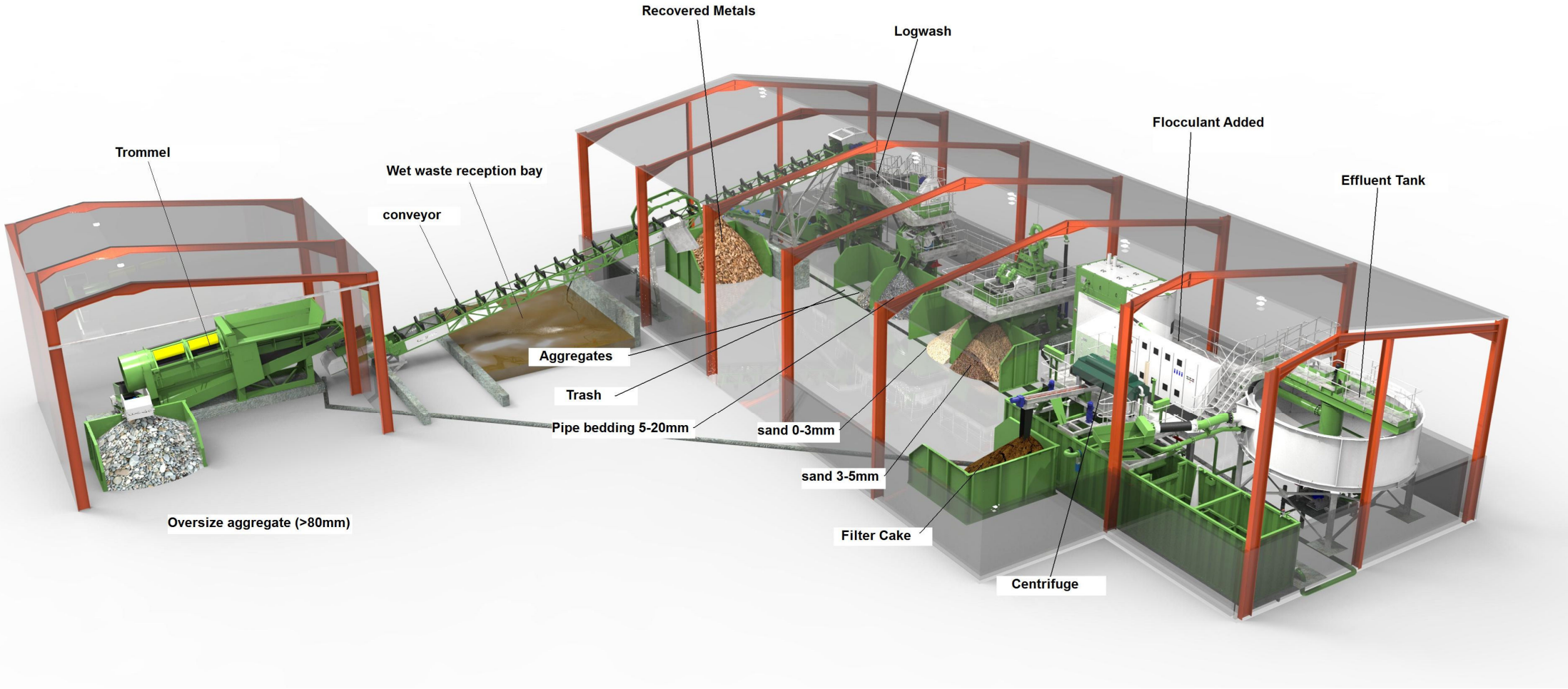
KEY:

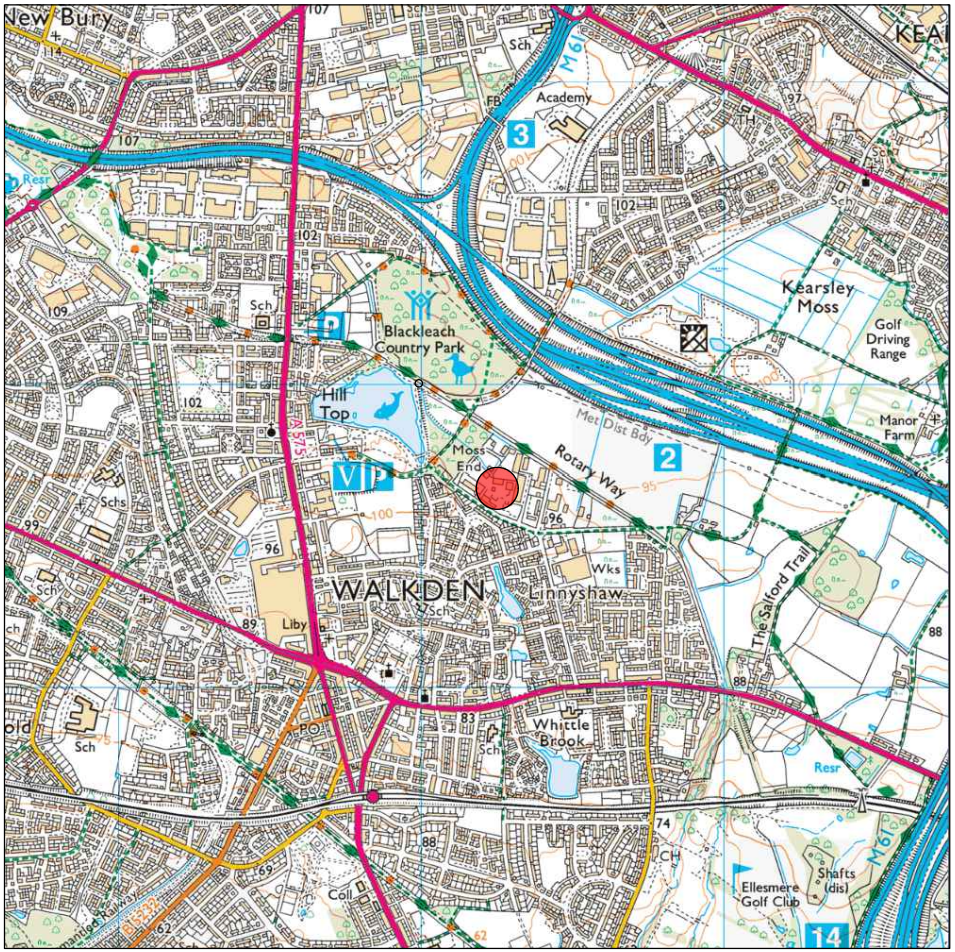
A - Garage
B - Hire Desk
C - Shed
D - Main office
E - Fuelling area
F - Trommel shed
G - Wet waste reception bay
H - Shed housing Wash Plant
J - Sweeper waste (solid) storage bay
K - Aggregates/sand storage bay
L - Sweeper parking
M - sand & stone
N - Inert waste storage

SWEEPER WASTE TREATMENT:

1. Wet fraction tipped at bay G.
2. Solids tipped at bay J
3. Solids tipped into trommel hopper F
4. Trommel screens out >80mm fraction (o/s)
5. Conveyor feeds solids into logwash in shed H, together with pumped sludge from G.
6. Water added to logwash
7. Clean products dropped into bays:
   0-3mm sand
   3-5mm sand
   5-20mm pipe bedding
   20-80mm aggregate
8. Floc dosed to slurry, settled then cenrifuged to produce dried filter cake
9. Water recycled to plant and sweepers

WASHPLANT LAYOUT





N

Scale Bar (1:25,000)

0 200 400 600 800 1000m

NOTES

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REVISION HISTORY

Rev:	Date:	Init:	Description:
-	04.09.24	EG	Initial drawing

KEY:

Site Location

TITLE:
SITE LOCATION MAP

CLIENT:
UBU Environmental Ltd

PROJECT/SITE:
Moss Lane, Worsley Manchester, M28 3LY

SCALE @ A4:	CLIENT NO:	JOB NO:
1:25,000	3448	001

DRAWING NO:	REV:	STATUS:
MOSS-3448-01	-	Issued

DATE:	DRAWN:	CHECKED:
04.09.24	EG	CP

Oaktree Environmental
Waste, Planning & Environmental Consultants

Scale Bar (1:250)
0 2 4 6 8 10m

N

Boundary comprising 2m high concrete panel fence
Boundary comprising 2m high concrete panel fence
Reception storage and treatment area for soils, stones and other wastes
Storage areas for recycled aggregate (non-waste)
Mobile crushing area (indicative only)
Reception storage and treatment area for concrete, stone, brick
Reception storage and treatment area for soils, stones and other wastes
General store
Mobile screening/blending area (indicative only)
Boundary comprising 5m high concrete panel wall for acoustic attenuation
Storage area road sweepers (indicative)
Boundary comprising 2m high concrete panel fence
Boundary comprising 2.4m high palisade fencing
Wash plant shed
Wet waste reception bay
Roller shutter access
Garage
Trommel shed
Open fronted
General store
Hire desk
Boundary comprising 2.4m high palisade fencing
Sweeper waste (Solid) storage area
Sweeper waste (Solid) storage area
Staff/visitor parking
Boundary comprising 2.4m high palisade fencing
Mixed waste skips
Shed
ESS
Weighbridge
Sand & stone storage areas
Office
Fuelling area
Sweeper parking
Boundary comprising 2.5m close board wooden fencing
Sweeper parking
Boundary comprising 2.4m high palisade fencing
Entrance/exit
Boundary comprising 2.5m close board wooden fencing
Sweeper parking
Entrance/exit
Boundary comprising 2.4m high palisade fencing
Boundary comprising 2.4m high palisade fencing
Drain
MOSS LANE
MEADOWSIDE AVENUE
STONEYSIDE
96.0m
30
1
11
21
29

NOTES

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REVISION HISTORY

Rev:	Date:	Init:	Description:
-	05.09.24	JH/CP	Initial drawing

KEY:

- Permit boundary
- Impermeable concrete surfaces
- Freely draining hardstanding surfaces
- Waste storage area
- Non-waste storage area
- Gully
- Manhole
- Inspection cover
- Drainage flow direction
- Silt trap
- Pit
- Interceptor
- Surface water fall direction
- Surface drainage
- Foul drainage
- ACO drain
- Storage bays (height/size vary)
- Buildings

Washplant

Number	Description
1	Oversize Aggregate
2	Trommel
3	Conveyor
4	Recovered metals
5	Logwash
6	Aggregates
7	Pipe bedding
8	Sand
9	Sand
10	Flocculant added
11	Centrifuge
12	Filter cake
13	Effluent tank

TITLE: SITE LAYOUT PLAN
CLIENT: UBU Environmental Ltd
PROJECT/SITE: Moss Lane, Worsley, Manchester M28 3LY
SCALE @ A4: 1:250
CLIENT NO: 3448
JOB NO: 001
DRAWING NO: MOSS-3448-03
REV: -
STATUS: Issued
DATE: 05.09.24
DRAWN: JH/CP
CHECKED: --

Oaktree Environmental
Waste, Planning & Environmental Consultants

Appendix II

Pre-application advice