

# NOISE IMPACT ASSESSMENT

Holroyd Aggregates, Stockfield Road, Oldham, OL9 9LL

**Holroyd Skip Hire Ltd**

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## CONTENTS

DOCUMENT HISTORY:.....	I
CONTENTS .....	II
LIST OF TABLES AND FIGURES:.....	III
LIST OF APPENDICES: .....	III
1 INTRODUCTION .....	1
1.1 GENERAL.....	1
1.2 SITE LOCATION .....	1
1.3 WASTE FACILITY OVERVIEW .....	2
1.4 HOURS OF OPERATION.....	2
1.5 WASTE TYPES AND QUANTITIES.....	2
2 PLANNING POLICY .....	3
2.1 ENVIRONMENT AGENCY GUIDANCE.....	3
2.2 NOISE POLICY STATEMENT FOR ENGLAND.....	3
2.3 NATIONAL PLANNING POLICY FRAMEWORK .....	4
2.4 PLANNING PRACTICE GUIDANCE – NOISE .....	5
3 SENSITIVE RECEPTORS.....	6
3.1 RECEPTOR PLAN.....	6
3.2 LIST OF RECEPTORS .....	6
3.3 OTHER NOISE SOURCES .....	7
4 NOISE ASSESSMENT CRITERIA .....	9
4.2 BS8233:2014 .....	9
4.3 BS4142:2014 .....	9
4.4 WHO GUIDELINES FOR COMMUNITY NOISE .....	10
5 BACKGROUND NOISE MONITORING .....	12
5.1 PROCEDURE AND MONITORING LOCATIONS .....	12
5.2 EQUIPMENT USED DURING THE SURVEY.....	14
5.3 WEATHER.....	14
5.4 RESULTS.....	14
5.5 EXISTING NOISE CLIMATE AT NMP 1 .....	15
5.6 EXISTING NOISE CLIMATE AT NMP 2 .....	16
6 NOISE IMPACT ASSESSMENT .....	17
6.1 INTRODUCTION.....	17
6.2 BACKGROUND LEVELS .....	17
6.3 BS4142: ASSESSMENT .....	18
6.4 CONTROL OF UNCERTAINTY .....	24
7 CONCLUSION.....	25
7.1 SUMMARY & RECOMMENDATIONS .....	25

## List of Tables and Figures:

Table 3.1 – Distances to Selected, Representative Sensitive Locations .....	6
Table 3.2 – Other Noise Emitting Operators .....	7
Table 4.1 - BS8233:2014 Internal Criteria.....	9
Table 4.2 - BS4142:2014 Corrections and Penalties.....	10
Figure 5.1 - Site location and noise monitoring positions.....	12
Table 6.1 – Measured levels of activities.....	19
Figure 6.2 – Calculated noise levels (LAeq) associated with the typical operation the site.....	21
Table 6.3 – Assessment of operations when all noise sources active within single working day (i.e worst case scenario).....	22

## List of Appendices:

**Appendix I - Drawings**

# **1 Introduction**

## **1.1 General**

1.1.1 Oaktree Environmental Ltd has been instructed by Holroyd Skip Hire Ltd to prepare a Noise Impact Assessment (“NIA”) for their waste transfer and treatment facility at Holroyd Aggregates, Stockfield Road, Oldham, OL9 9LL. The site is operated as a household, industrial & commercial (HIC) waste transfer station with treatment.

1.1.2 The site is operated in accordance with an Environmental Management System (EMS) and Fire Prevention Plan (FPP) along with other documents targeted to specific environmental considerations including this NIA. This NIA also accompanies a Noise & Vibration Management Plan (NVMP) which has also been produced by Oaktree Environmental Ltd and should be read in conjunction with this document.

1.1.3 This NMP has been prepared to meet the requirements of The Environmental Permitting (England and Wales) Regulations 2016 and the Environment Agency’s Guidance: “*Noise and vibration management: environmental permits*” published 31/01/2023.

## **1.2 Site Location**

1.2.1 The site is situated at Holroyd Aggregates, Stockfield Road, Oldham, OL9 9LL. The national grid reference for the site is SD 91024 05076.

### 1.3 **Waste Facility Overview**

1.3.1 The site will allow for the reception, storage, sorting and treatment (using fixed and mobile plant) of household, industrial and commercial (HIC) waste to permit recycling and recovery. Recycled/recovered materials include soils, hardcore, wood, plastics, paper/card, scrap metal, etc. Non-recyclable general wastes are bulked up and sent to an appropriately permitted site for disposal or further recovery.

### 1.4 **Hours of operation**

1.4.1 The site will be open during the following hours for the receipt, hand sorting and removal of waste; including depositing, sorting, moving, storing and removing waste:

Monday to Friday	07.30 – 16.00
Saturday	07.30 – 10.00
Sundays, Bank/Public holidays	No operations

1.4.2 The mechanical treatment of waste comprising the use of any screeners, crushers, or balers will only take place during the following hours:

Monday to Friday	10.00 – 16.00
Saturday	No operations
Sundays, Bank/Public holidays	No operations

### 1.5 **Waste Types and Quantities**

1.5.1 The waste types handled on site will be household, commercial and industrial wastes as defined in the Controlled Waste (England and Wales) Regulations 2012 and Section 75 of the Environmental Protection Act 1990.

1.5.2 The maximum amount of waste to be stored on site at any one time is shown on Drawing No. STOCK/2985/03 with residence times for each waste type. The site will not accept more than 75,000 tonnes of waste per annum.

## **2 Planning Policy**

### **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 NPPF, revised in July 2021, 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, Planning Practice Guidance for Noise 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 Sensitive Receptors

#### 3.1 Receptor Plan

3.1.1 A sensitive receptors plan (SRP) has been produced to accompany this NVMP and is shown in Appendix I referenced as on Drawing No. STOCK/2985/04. The receptors highlighted are those which are considered to be at risk by noise generated by the site.

#### 3.2 List of receptors

3.2.1 The receptors listed from the SRP are also shown in the table below with approximate distances to these residential properties.

**Table 3.1 – Distances to Selected, Representative Sensitive Locations**

<b>Boundary</b>	<b>Receptor</b>	<b>Approximate distance from boundary of site (m)</b>
All	Residential properties	165 – 1,000
All	Surrounding waste, industrial and commercial sites on Lansdowne Rd, Middleton Road, Crompton St, Ward St, Peel St and Stockfield Rd	0 - 250
North-west	Woodlands Medical Practice	410
South-east	Dr Sidhus Medical Practice	480
South-east	Werneth Medical Practice	540
West	Saint Luke's Church of England Primary School	480
North-west	St Herbert's RC Primary School	675
North-west	The Radcliffe School	1,000
South-west	Sunshine Nursery and Christ Church of England	675
North-east	St Patricks RC Primary School	945
East	Westwood High	525
North	Burnley Brow Community School	820
North-west	Bare Trees Primary	800
North-east	Northmoor Academy	990
North-east	Westwood Academy	515
East	Richmond Academy	675
South	Freehold Community Academy	575
South-east	Darul Hadis Latifah Northwest	805
West	Stockbrook Children's Centre	500
North-west	Springbank Hotel	450
All	Various small retail, public houses and other leisure facilities	225 – 1,000

### 3.3 Other noise sources

3.3.1 The site is located within an established industrial estate with numerous surrounding commercial/industrial uses. Other land uses which will contribute to the background noise level are tabulated below in Table 3.2 below.

**Table 3.2 – Other Noise Emitting Operators**

<b>Company</b>	<b>Address</b>	<b>Type of Business</b>	<b>Distance &amp; location from site boundary (m)</b>	<b>Possible Noise Issue</b>
V A G Breakers Ltd	Unit 3, Stockfield Road, Chadderton, Oldham, Lancashire, OL9 9HD	ELV facility	20 – 50 / east	Dismantling/treatment of end-of-life vehicles including in/out HGV movements
Oldham Salvage ( U K) Ltd	4, Lansdowne Road, Chadderton, Oldham, Lancashire, OL9 9EF	ELV facility	20 – 50 / north-east	As above
F & F Drum Reconditioners	Land/premises At, Cobden Street, Chadderton, Oldham, Lancashire, OL9 9LE	Materials Recycling Facility	240m / west	Mechanically process of plastic drums including in/out HGV movements
Diodes Zetex Semiconductors Limited	Stockfiled Rd, Chadderton, Oldham OL9 9LL	Supplier/goods manufacturer	50m / south	HGVs and mechanical machines for production

<b>Company</b>	<b>Address</b>	<b>Type of Business</b>	<b>Distance &amp; location from site boundary (m)</b>	<b>Possible Noise Issue</b>
S U E Z Recycling and Recovery U K Ltd	Arkwright Street Resource Recovery Centre, Arkwright Street, Chadderton, Oldham, Lancashire, OL9 9LZ	Household Waste Amenity Site	300 / south-east	Deposit/removal of waste in and out of skips plus in/out HGV movements
Richards & Smirk (Metals) Ltd	Peel Street, Chadderton, Oldham OL9 9LH	Scrap metal facility	15 / west	Sorting, treatment of scrap metal including HGVs in/out
Monarch Metals Ltd	Unit B, Westwood Industrial Estate, Arkwright St, Oldham OL9 9LZ	As above	240 / north-east	As above
FR Commercials Ltd	Ward St, Chadderton, Oldham OL9 9EX	Articulated vehicle and parts selling & despatch	Adjacent / north	Movement of heavy commercial goods including HGVs in/out of the site
CEMEX Oldham Concrete Plant	Peel St, Chadderton, Manchester OL9 9LN	Concrete manufacturer	210 / south-west	As above
Hanson Ready-Mixed Concrete	Forge Mill, Peel St, Chadderton, Oldham OL9 9LN	Concrete manufacturer and supplier	230 / south-west	As above

3.3.2 Other sources of noise comprise birdsong and noise generated by other vehicle movements on surrounding industrial estates and other nearby road networks. As can be seen from the NIA, the background noise levels are extremely high for this area.

## 4 Noise Assessment Criteria

4.1 In order 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
- World Health Organisation (WHO) Guidelines on Community Noise

### 4.2 BS8233:2014

4.2.1 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 BS8233:2014 with regards to residential properties:

**Table 4.1 - BS8233:2014 Internal Criteria**

Activity	Location	07:00 – 23:00	23:00 – 7:00
Resting	Living rooms	35 LAeq, 16hour	-
Dining	Dining room	40 LAeq, 16hour	-
Sleeping	Bedroom	35 LAeq, 16hour	30 LAeq, 16hour

### 4.3 BS4142:2014

4.3.1 BS4142:2014 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.

4.3.2 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.

4.3.3 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 4.2 - BS4142:2014 Corrections and Penalties**

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

## 4.4 WHO Guidelines for Community Noise

4.4.1 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<sub>fmax</sub>) for continuous and individual noise events respectively.

- 4.4.2 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.
- 4.4.3 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 to protect the majority of individuals from moderate annoyance, external noise levels should not exceed 50 dB (LAeq).

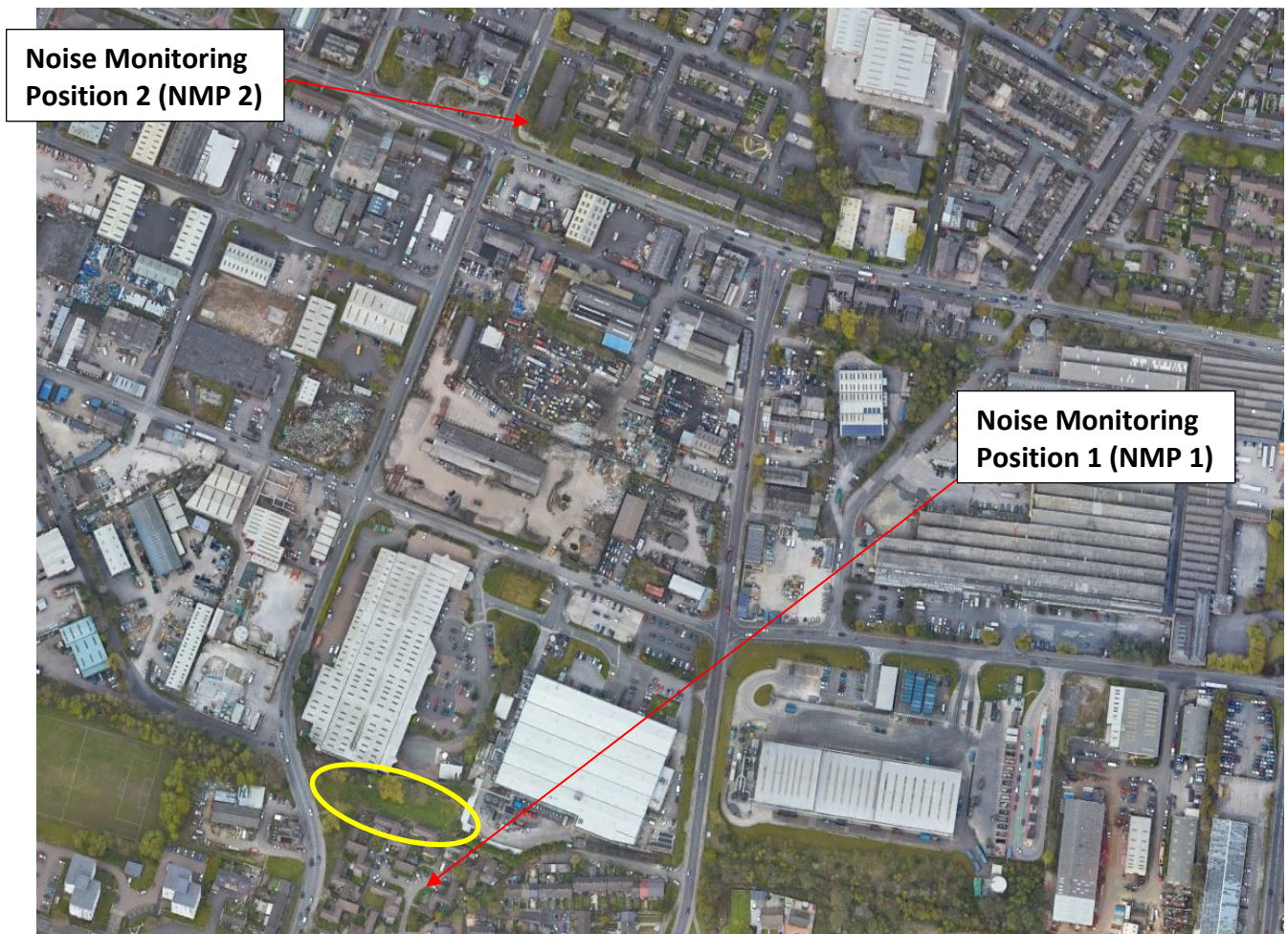
## 5 Background Noise Monitoring

### 5.1 Procedure and Monitoring Locations

5.1.1 A background noise survey was completed on the 18<sup>th</sup> April 2023 in accordance with BS 7445-1: 2003 by Thomas Benson of Oaktree Environmental Ltd.

5.1.2 To ensure that the background monitoring survey is representative of the existing noise climate in the vicinity of the noise sensitive receptors in the absence of the activities associated with Holroyd Skip Hire Ltd, it was agreed with site management that waste related activities would cease for several hourlong periods whilst monitoring was undertaken. Figure 5.1 below details the location of the monitoring positions.

Figure 5.1 - Site location and noise monitoring positions





- 5.1.3 Locations chosen were chosen to be representative of the nearest noise sensitive receptors. These being the dwellings located off Middleton Road and the cluster of housing located at Whitstable Close, Geneva Walk and Petworth Street.
- 5.1.4 NMP 1 was located to the south of the properties off Whitstable Close. It should be noted that the external amenity area circled in yellow on figure 4.1 (i.e. the area representative of the nearest facades of the properties on which noise from the proposed operations will be incident) was extremely noisy due to the close proximity of industrial processes being undertaken directly adjacent to this area. While no formal monitoring was undertaken to confirm this, a rough estimate would be that noise levels are considerably above 60dB (A). NMP 1 is shielded from this noise source to some degree.
- 5.1.5 NMP 2 was located within the external amenity areas of the residential flats to the north off Middleton Road.
- 5.1.6 As Saturday's operational hours comprise tipping, sorting and loading HGVs with also housekeeping and maintenance, with no processing of wastes or, monitoring was undertaken during the weekday only. Also, given the high background noise associated at the site, the three-hour working on Saturday would not present as issue.
- 5.1.7 Considering the nature of the background noise survey (i.e. during pre-agreed shutdowns of an already existing facility), attended measurements were undertaken as a pose to longer duration, unattended measurements. This allowed for a significant level of observation to be made with regards to the existing noise climate and the sources it is comprised of. As previously discussed, BS4142:2014 provides significant weight to context when determining the level of impact.

## 5.2 Equipment Used During the Survey

5.2.1 Details of the equipment used during the survey are shown in the table below:

**Table 5.1- Survey Equipment**

Description	Model	Manufacturer	Serial No.	Calibration Date
Class 1 Sound Analyser	NOR 150	Norsonic	15030504	October 2022
Microphone	Norsonic Type 1225	Norsonic	305208	October 2022
Field Calibrator	NOR 1251	Norsonic	35205	April 2022

## 5.3 Weather

5.3.1 The weather during the background surveys is summarised in the table below:

**Table 5.2 – Weather Conditions during noise monitoring**

Date	Wind Speed (max)	Cloud Cover	Temperature	Precipitation
Saturday 18/04/2023	Max gusts of 3.5m/s	25-75%	7°C-14°C	None recorded whilst onsite.

## 5.4 Results

5.4.1 The results of the background noise monitoring survey are tabulated below in Table 5.3-5.4. Commentary on the background level and survey is included further on in Sections 5.5-5.6.

**Table 5.3 -Weekday background monitoring results for NMP 1**

Measurement Time	LA <sub>eq</sub>	LA <sub>max</sub>	LA <sub>90</sub>	LA <sub>10</sub>
07:30-08:30	53.3	70.4	50.8	54.3
11:30-12:30	55.4	82.7	51.1	56.1

**Table 5.4 -Weekday background monitoring results for NMP 2**

<b>Measurement Time</b>	<b>LA<sub>eq</sub></b>	<b>LA<sub>max</sub></b>	<b>LA<sub>90</sub></b>	<b>LA<sub>10</sub></b>
08:35-09:35	63.2	81.6	56.8	66.3
09:55-10:55	62.2	81.1	54.5	65.5

## **5.5 Existing Noise Climate at NMP 1**

- 5.5.1 During the monitoring contributors to the background sound level were observed to comprise primarily industrial noise from the north of the site. In particular this arose from an external process associated with Diodes Zetex Semiconductors Limited. This was present in the form of a constant, tonal hum, similar to that of an extraction or ventilation system. This was considered to be extremely invasive.
- 5.5.2 Within the external amenity area to the north of the dwellings off Whitstable Close and within areas of the northern facades of these properties, it is considered that background levels are likely to be >60dB (A).
- 5.5.3 Discussions with local residents indicated that this active for the majority of the day, with noise commencing in the early morning and continuing late into the evening.
- 5.5.4 The monitoring position was chosen to be the to the south of these properties, rather than in this area, partly for access reasons. This area was observed to be noticeably quieter than that to the north.
- 5.5.5 Additional, minor contributors include road traffic, birdsong, movements within local gardens and barking dogs.
- 5.5.6 Occasionally distant commercial noise was audible in the form of distant bangs/crashes and audible plant noise (engines revving etc.). However, the contribution of these is relatively minor.

5.5.7 Should It be required, photographs and videos can be provided, along with the noise measurement files in order to corroborate the above observations. These are available upon request by the LA/EA.

## 5.6 **Existing Noise Climate at NMP 2**

5.6.1 Whilst undertaking the monitoring at NMP 2, it was evident that background levels are significantly influenced by road traffic along Middleton Road, which was constant and also includes public transport and commercial/industrial movements.

5.6.2 Additional contributors such as birdsong, noise from the industrial estate to the south and passers-by are considered to be limited.

5.6.3 As stated previously, photographs and videos can be provided, along with the noise measurement files in order to corroborate the above observations. These are available upon request by the LA/EA.

## **6 Noise Impact Assessment**

### **6.1 Introduction**

6.1.1 It is considered the most significant noise sources associated with the development are:

- The tipping of incoming wastes,
- Sorting of tipped wastes via the onsite plant (however, a significant portion of this is done by hand),
- Loading of outgoing HGVs,
- Operation and loading of the 3no. external soil screeners,
- Operation and loading of the internal crusher,
- Operation and loading of the external crusher.

6.1.2 Workshop noise has been excluded from the assessment as it was considered that the contribution of minor repairs and use of hand tools is likely to be negligible when compared to the waste processing activities.

6.1.3 It should also be considered that the noise levels listed above will not be active during every working day. Typically crushing may be undertaken one day a week, depending on demand, whilst screening may take twice a week.

### **6.2 Background Levels**

6.2.1 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”*.

6.2.2 With this in mind, the assessment will utilise the range of levels from Tables 5.3-5.4.

### 6.3 **BS4142: Assessment**

6.3.1 The CadnaA noise models were constructed using OS mapping Opendata and Google Earth satellite imagery, whilst topographical data was downloaded from DEFRA in the form of a digital terrain model.

6.3.2 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.
- Buildings were set as acoustically reflective, with a reflection loss of 1 dB.
- Noise levels were determined at residential properties representing the nearest residential facades.
- The predicted grid noise levels were also calculated as free-field, A-weighted, sound pressure levels. The noise contours generated within the model are also at a height of 2.0 m, assumed to be the worst-case scenario.
- Surrounding residential properties were modelled at a height of between 4.5m and 6.0m for the majority of residential dwellings whilst surrounding commercial/agricultural buildings are based on onsite observations.
- Barrier heights and waste storage bays have also been modelled based on the heights provided within the site layout and fire plan. These have been modelled as being hard and reflective (i.e. concrete).
- Onsite stockpiles have not been included within the model.
- Octave bands derived from Oaktree measurements have been utilised within the model rather than a single sound pressure or power level.

6.3.3 Table 6.1 below includes the measured noise levels for the anticipated activities, which have been measured by Oaktree Environmental. The table also includes relevant data from the CadnaA model (geometry, “on-times” etc.).

**Table 6.1 – Measured levels of activities**

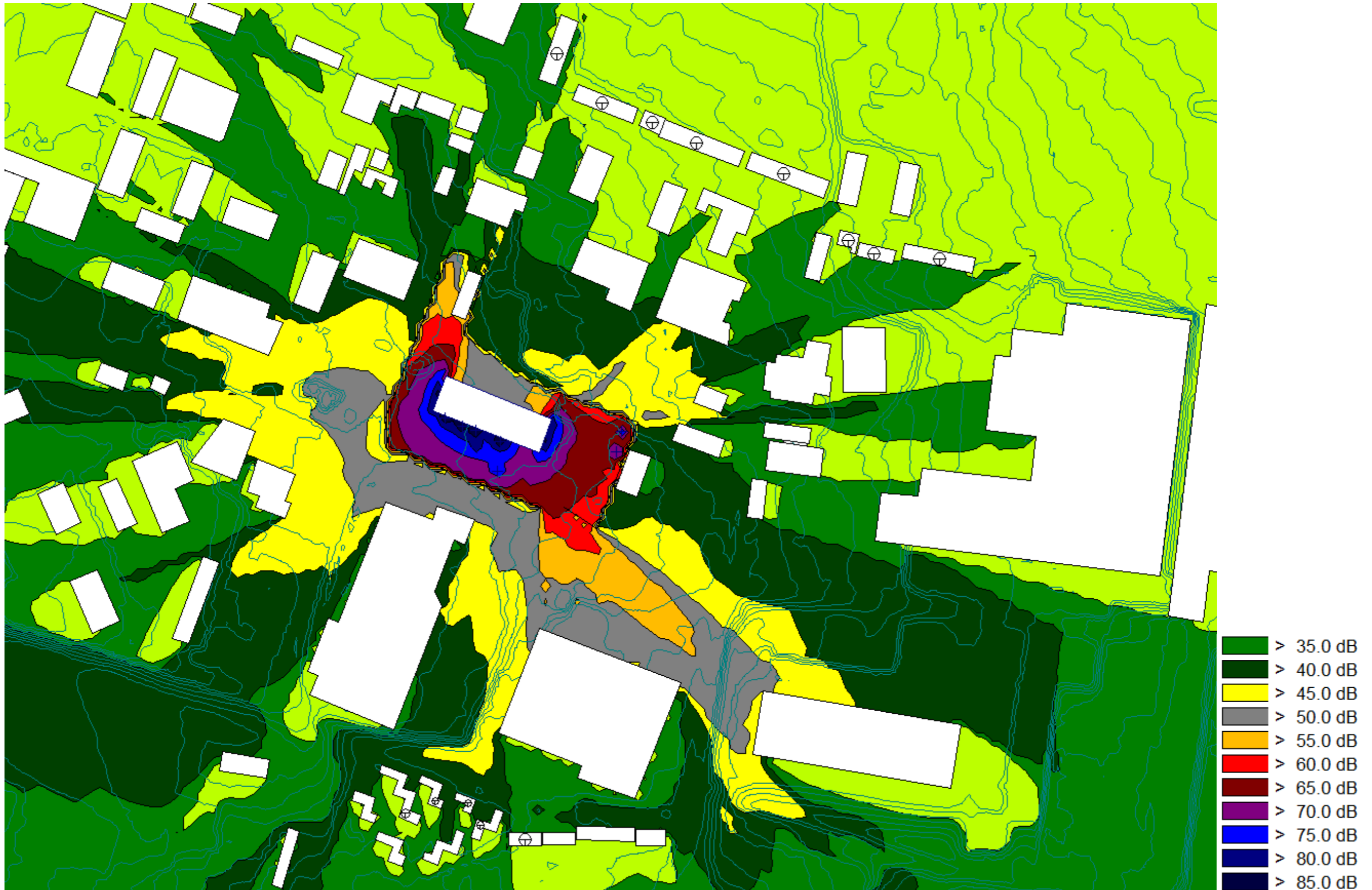
Activity	Noise Level (LAeq)	Source/comments
Operation of the internal crusher	82.6 at 5m	<p>Measured onsite by Oaktree Environmental.</p> <p>Modelled as an internal noise source within the radiating building. The building is assumed to have an internal surface area of 2211m<sup>2</sup> with low absorption.</p> <p>The building comprises brick facades which are open fronted to the east and west gable ends. The roof comprises asbestos cement and acrylic glass, however in order to provide a worst-case assessment, acrylic glass has been assumed across the entirety of the roof.</p> <p>The “on-time” is assumed to be 480 minutes.</p>
Operation of the soil screeners	83.0 at 6.7m	<p>Measured onsite by Oaktree Environmental.</p> <p>Modelled as 3no. point sources at a height of 1.5m. The vast majority of the noise was observed to arise from the motor which was from ground level to 1.0m and therefore this may be considered an overestimation.</p> <p>An “on-time” of 240 minutes has been assumed for each screener.</p> <p>As these screeners are linked to the same bay, these are loaded by a single loading shovel. Therefore, this has also been included within the model using the “sorting/movement” of material as a surrogate measurement.</p>
Operation of the external crusher	76.2 at 8.3m	<p>Measured onsite by Oaktree Environmental.</p> <p>Modelled as a. point sources at a height of 1.5m. An “on-time” of 480 minutes has been assumed.</p>

Loading of HGV with telescopic handler	76.4 at 3m	<p>Oaktree measurement at of similar activity, whilst this value corresponds to the loading of a HGV with soil via a telescopic handler, the figure is commensurate with the proposed activity.</p> <p>Modelled as a point source operating at 1.5m. Assumed to be operating for 160 minutes per day based on the worst-case scenario of 1 HGV being loaded per hour, taking up to 20 minutes.</p>
Mechanical sorting of material	77.4 at 3m	<p>Oaktree measurement at of similar activity.</p> <p>Modelled as a point source operating at 1.5m (again, likely to be worst-case). Assumed to be operating for 240 minutes per day (i.e. 50% of the time). Considering that much of the sorting is undertaken by hand, this is a realistic assumption.</p>
Tipping of incoming wastes	72.6m at 8m	<p>Oaktree measurement at of similar activity.</p> <p>Modelled as a point source operating at 0.5m. An “on-time” of 100 minutes has been assumed (i.e. 50 loads in a day taking approximately 2 minutes to tip).</p>

6.3.4 Table 6.3 details the predicted noise levels (in dB A) associated with the application site at the relevant receptors. These are based on the results of the modelling provided overleaf in Figure 6.2.



Figure 6.2 – Calculated noise levels (LAeq) associated with the typical operation the site



6.3.5 With regards to impulsive and tonal penalties as per BS4142:2014, some occasional bangs/crashes are associated with the operation of the sites telehandlers (scraping on the floor, reversing alarms, falling material etc.) whilst the crusher and screening activities do contain a perceptible tonal element due to engine noise and the constant “whirring” of parts.

**Table 6.3 – Assessment of operations when all noise sources active within single working day (i.e worst case scenario)**

	Calculated noise level at dwellings off Middleton Road (dB A)	Calculated noise level at dwellings off Whitstable Close (dB A)	Comments
Calculated noise level as per figure 5.2	43	45	As per Figure 6.2. Noise levels are typically 37dB (A) at the dwellings off Middleton Road, however noise levels have been calculated as 43dB at the gable end of the eastern most block.
Addition of relevant penalties as per BS4142:2014	+8 = 51	+8 = 53	As per Sections 6.3.5
Comparison to weekday background levels	$51 - 54.5/56.8 = 3.5$ to 5.8 below.	$53 - 50.8/51.1 = 1.9$ to 2.2 above	Low impact as per BS4142:2014. See discussion within subsequent sections.

6.3.6 As per Table 5.3, the rating level associated with the operation of the site is below that at which an adverse impact is considered possible (i.e. +5dB above background) and therefore the associated impact is considered to be low.

6.3.7 As stated within previous sections, the background within the vicinity of the dwellings at Whitstable Close has likely been considerably underestimated due to the location of the monitoring position.

6.3.8 It should also be observed that the assessment comprises a worst-case scenario assessment with regards to activities. Crushing will typically only take place once a week and screening up to twice a week. In addition, onsite stockpiles and some intervening

features have not been included within the model which would likely afford the residential dwellings further mitigation.

6.3.9 As discussed previously, BS4142 also emphasises the need for the consideration of context and subjectivity in assessing commercial and/or industrial sound and that the comparison of the rating level to the background level alone is insufficient.

6.3.10 This is reflected in the recently revised Environment Agency guidance which also advises that context should be taken into account, stating that: “*context in which a noise occurs is critical to assessing the severity of the pollution. Not every receptor will have the same response to the same noise pollution*”. Although the EA guidance differs to planning guidance, it is considered important to use in this contextual argument.

6.3.11 BS4142 allows the context of the situation to inform the assessment outcome. Whilst context allows you to interpret impact thresholds (to a degree), there are practical limits to the extent of the interpretation. It is unlikely you could adjust the assessment outcome beyond the next band (for example, modifying a BS 4142 outcome of more than 10dB to be less than an ‘adverse impact’).

6.3.12 The EA guidance lists several factors that may impact the context of a noise source. Of these, it is considered that the following are likely to reduce the impact of the onsite activities:

- The fact noise operates during weekdays rather than weekends,
- The proposed hours are between 08:30-16:30, which would not be considered unreasonable,
- The nature of the noise (i.e. not meaningful sound – general industrial machinery which would not be considered out of character for the area),
- Where the sound occurs,
- The residual acoustic environment,
- The land use at the receptor (i.e. the open spaces comprise soft landscaping rather than formal private gardens).

- The fact the site lies within an established industrial area and has not been recently introduced.

## 6.4 **Control of Uncertainty**

6.4.1 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 measurement locations are considered representative of the existing noise climate outside the nearest residential dwellings to the proposed development.
- Background monitoring was undertaken during favourable weather conditions (e.g. dry and under 5m/s wind speed).

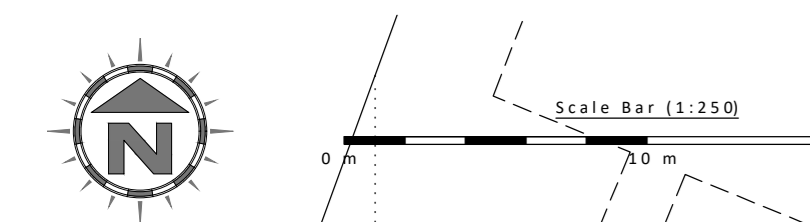
## **7 Conclusion**

### **7.1 Summary & Recommendations**

- 7.1.1 Oaktree Environmental Limited have undertaken a Noise Impact Assessment for the operation of a waste transfer station at Holroyd Aggregates, Stockfield Road, Oldham, OL9 9LL.
- 7.1.2 The primary receptors are the residential dwellings off Middleton Road to the north and Whitstable Close to the south.
- 7.1.3 The site has been assessed with regards to BS4142:2014 and it is considered that the impacts associated with the proposed operation of the site are acceptable based on the comparison of the calculated rating level to the proposed background level.
- 7.1.4 In addition, noise emissions will be controlled and regulated via the site Noise Management Plan.
- 7.1.5 Therefore, based on the above, noise levels associated with the proposed development are acceptable and it should be considered that no further mitigations or assessment is required at this time.

# **APPENDIX I**

# **DRAWINGS**

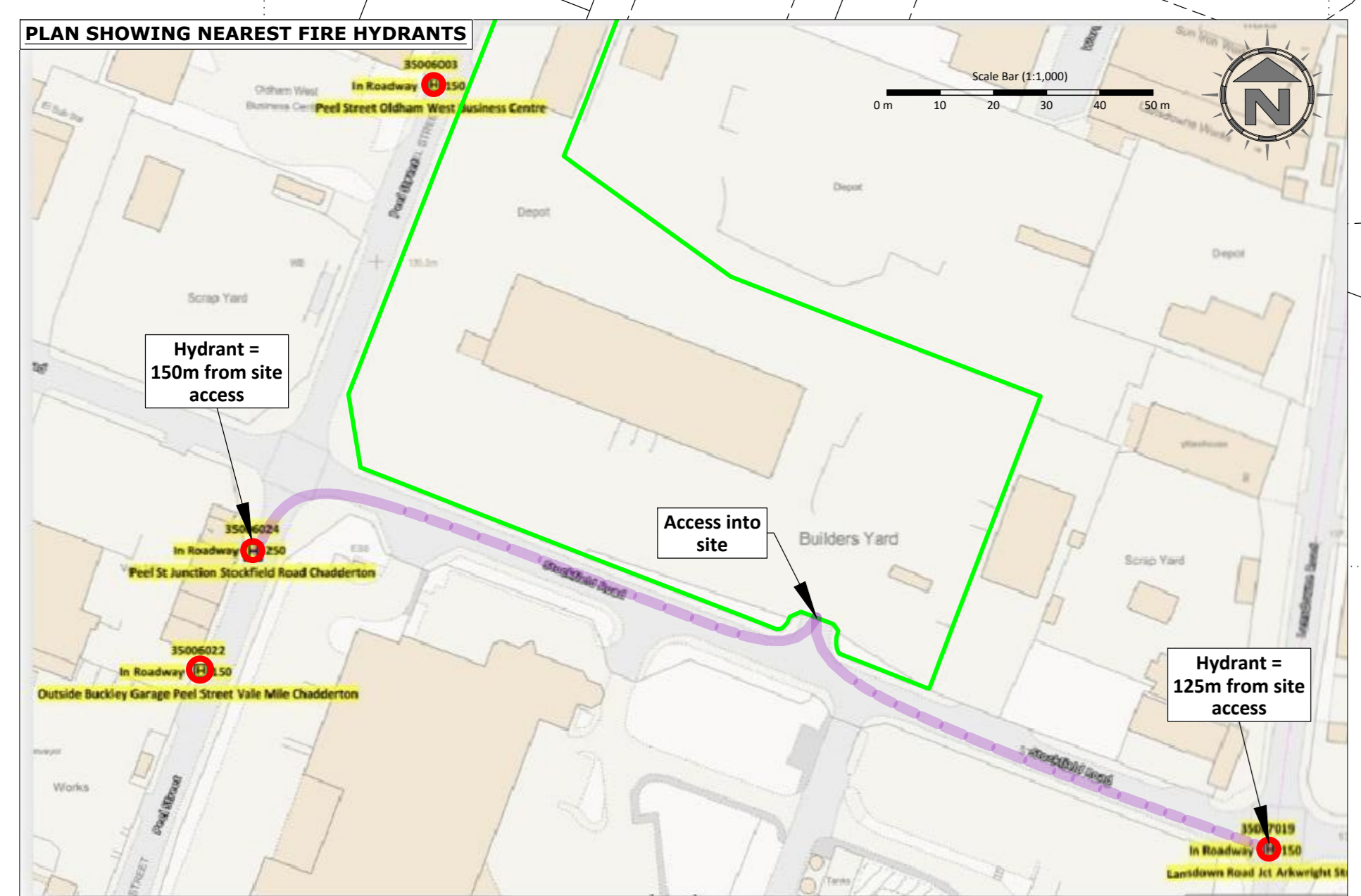
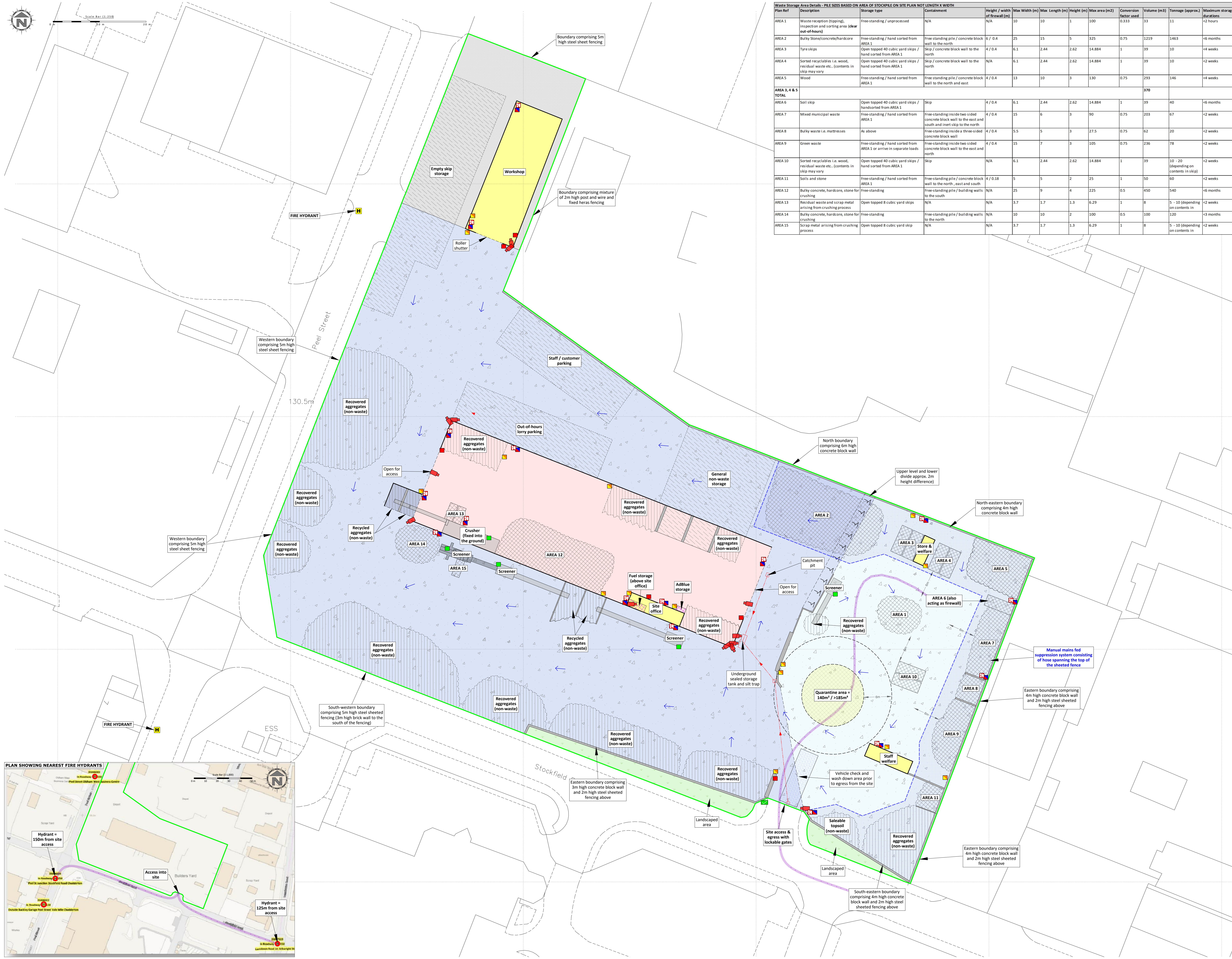


Plan Ref	Description	PILE SIZES BASED ON AREA OF STOCKPILE ON SITE PLAN NOT LENGTH X WIDTH	Storage type	Containment	Height / width of fire wall (m)	Max Width (m)	Max Length (m)	Height (m)	Max area (m <sup>2</sup> )	Conversion factor used	Volume (m <sup>3</sup> )	Tonnage (approx.)	Maximum storage durations
AREA 1	Waste reception (tipping), inspection and sorting area (clear out-of-hours)		Free-standing / unprocessed	N/A	N/A	10	10	1	100	0.333	33	11	<2 hours
AREA 2	Bulky Stone/concrete/hardcore		Free-standing / hand sorted from AREA 1	Free-standing pile / concrete block wall to the north	6 / 0.4	25	15	5	325	0.75	1219	1463	<6 months
AREA 3	Tyre skips		Open topped 40 cubic yard skips / hand sorted from AREA 1	Skip / concrete block wall to the north	4 / 0.4	6.1	2.44	2.62	14.884	1	39	10	<4 weeks
AREA 4	Sorted recyclables i.e. wood, residual waste etc. (contents in skip may vary)		Open topped 40 cubic yard skips / hand sorted from AREA 1	Skip / concrete block wall to the north	N/A	6.1	2.44	2.62	14.884	1	39	10	<2 weeks
AREA 5	Wood		Free-standing / hand sorted from AREA 1	Free-standing pile / concrete block wall to the north and east	4 / 0.4	13	10	3	130	0.75	293	146	<4 weeks
<b>AREA 3, 4 &amp; 5 TOTAL</b>											<b>370</b>		
AREA 6	Soil skip		Open topped 40 cubic yard skips / hand sorted from AREA 1	Skip	4 / 0.4	6.1	2.44	2.62	14.884	1	39	40	<6 months
AREA 7	Mixed municipal waste		Free-standing / hand sorted from AREA 1	Free-standing inside two sided concrete block wall to the east and south and inert skips to the north	4 / 0.4	15	6	3	90	0.75	203	67	<2 weeks
AREA 8	Bulky waste i.e. mattresses		As above	Free-standing inside a three-sided concrete block wall	4 / 0.4	5.5	5	3	27.5	0.75	62	20	<2 weeks
AREA 9	Green waste		Free-standing / hand sorted from AREA 1 or arrive in separate loads	Free-standing inside two sided concrete block wall to the east and north	4 / 0.4	15	7	3	105	0.75	236	78	<2 weeks
AREA 10	Sorted recyclables i.e. wood, residual waste etc. (contents in skip may vary)		Open topped 40 cubic yard skips / hand sorted from AREA 1	Skip	N/A	6.1	2.44	2.62	14.884	1	39	10 - 20 (depending on contents in skip)	<2 weeks
AREA 11	Soils and stone		Free-standing / hand sorted from AREA 1	Free-standing pile / concrete block wall to the north, east and south	4 / 0.18	5	5	2	25	1	50	60	<2 weeks
AREA 12	Bulky concrete, hardcore, stone for crushing		Free-standing	Free-standing pile / building walls to the south	N/A	25	4	4	225	0.5	450	540	<6 months
AREA 13	Residual waste and scrap metal arising from crushing process		Open topped 8 cubic yard skips	N/A	N/A	3.7	1.7	1.3	6.29	1	8	5 - 10 (depending on contents in)	<2 weeks
AREA 14	Bulky concrete, hardcore, stone for crushing		Free-standing	Free-standing pile / building walls to the north	N/A	10	10	2	100	0.5	100	120	<3 months
AREA 15	Scrap metal arising from crushing process		Open topped 8 cubic yard skip	N/A	N/A	3.7	1.7	1.3	6.29	1	8	5 - 10 (depending on contents in)	<2 weeks

NOTES  
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Rev	Date	Int	Description
-	08.06.22	CP	Initial drawing
A	05.09.22	CP	Client comments
B	11.04.22	CP	EA & client comments

- Key:
- Proposed permit boundary
  - Waste storage areas
  - Non-waste storage areas
  - Hazardous waste storage areas
  - Non-waste fuels, oils and other liquids storage
  - Temporary waste storage areas (clear prior to shutdown)
  - Waste recycling / storage buildings (impermeable concrete floor)
  - Other buildings i.e. workshops/offices
  - Covered storage areas
  - Impermeable concrete surface / sealed drainage (upper level)
  - Impermeable concrete surface / sealed drainage (lower level)
  - Landscaped / vegetation / grassed areas
  - Contaminated surface water drainage
  - Surface water drainage fall direction
  - Gully's
  - Manholes
  - Quarantine area (with 6m buffer zone) based on AREA 13
  - Hose reels (indicative location)
  - Fire fighting equipment / extinguishers (indicative location)
  - Plant shutdown (indicative location)
  - Manual fire alarms (break glass / horns) - indicative location
  - Spill kits (indicative location)
  - Access route for emergency services
  - Fire hydrants
  - Fire assembly points
  - Out of hours plant storage
  - Pan, tilt and zone cameras with 360° 50m coverage



**Oaktree Environmental Ltd**  
Waste, Planning and Environmental Consultants

**DRAWING TITLE**  
SITE LAYOUT & FIRE PLAN

**CLIENT**  
Holroyd Skip Hire Ltd

**PROJECT/SITE**  
Holroyd Aggregates, Stockfield Road, Oldham OL9 9LL

**SCALE** B A0  
1:250

**CLIENT NO**  
2985

**JOB NO**  
001

**DRAWING NUMBER**  
STO/2985/03

**REV**  
B

**STATUS**  
Issued

**DRAWN BY**  
CP

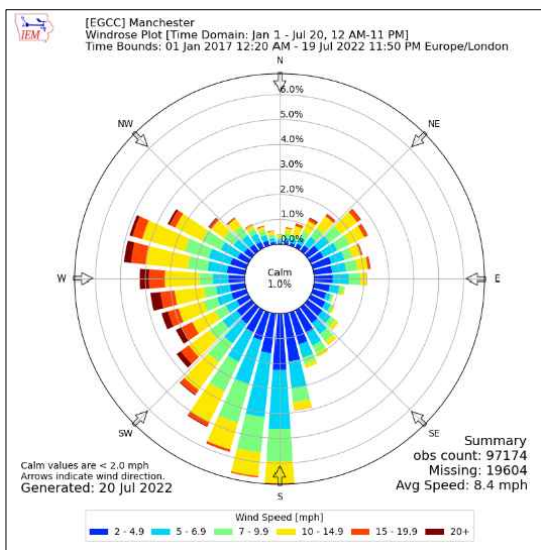
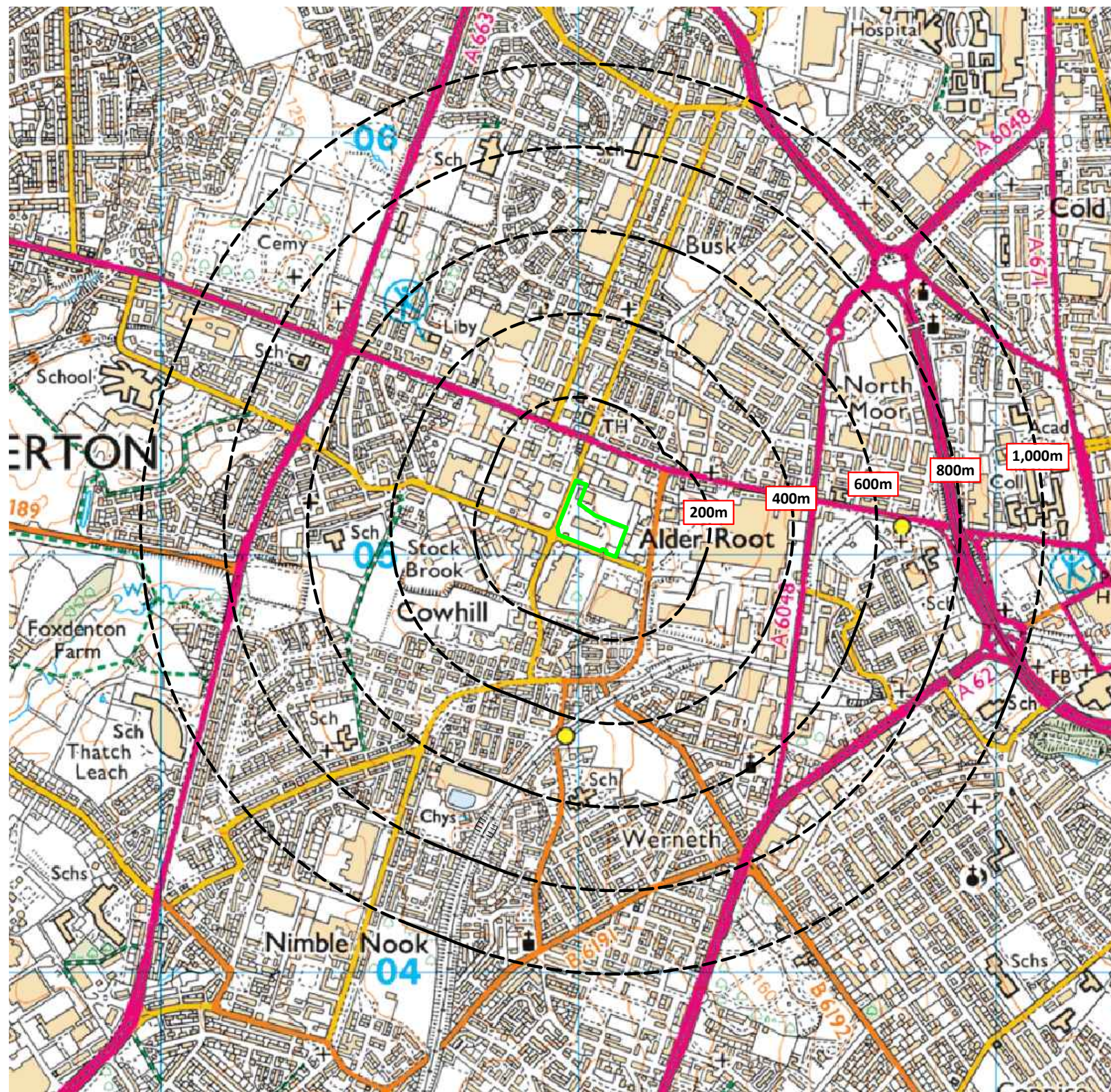
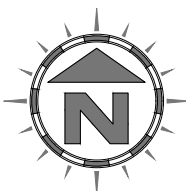
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**DATE**  
11.04.23

Lime House, Road Two, Winford, Cheshire, CW7 3QZ  
t: 01606 558833 | e: sales@oaktree-environmental.co.uk

**KEY:**

- Permit boundary
- Surface water body ( pond / pool / lake)
- Stream, river, beck
- Buildings includes Agricultural, industry, commerce and retail - could also include small houses)
- Residential blocks
- Class A roads
- Class B roads
- Class C roads
- + Places of worship
- Public footpath
- Sch Schools



Compass Wind Rose for Manchester (EGCC)  
 Period 2017-2022  
 - source: Iowa State University

**NOTES**

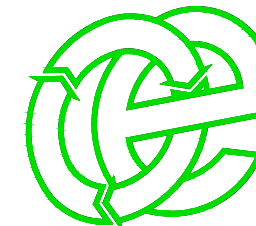
1. Boundaries are shown indicatively.
2. Wind rose data shows the prevailing wind direction to be blowing north & east from the south & west.

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**REVISION HISTORY**

Rev:	Date:	Init:	Description:
-	05.09.22	CP	Initial drawing

**Oaktree Environmental Ltd**  
 Waste, Planning and Environmental Consultants



**DRAWING TITLE**  
 RECEPTOR PLAN

**CLIENT**  
 Holroyd Skip Hire Ltd

**PROJECT/SITE**  
 Holroyd Aggregates, Stockfield Road, Oldham  
 OL9 9LL

<b>SCALE @ A3</b> 1:12,500	<b>CLIENT NO</b> 2985	<b>JOB NO</b> 001
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<b>DRAWING NUMBER</b> STO/2985/04	<b>REV</b> -	<b>STATUS</b> Issued
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<b>DRAWN BY</b> CP	<b>CHECKED</b> --	<b>DATE</b> 05.09.22
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