NOISE & VIBRATION MANAGEMENT PLAN

41 Ashton Vale Rd, Bristol BS3 2HW

ETM Recycling Ltd

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1 Introduction

1.1 Site history / background

1.1.1 Oaktree Environmental Ltd have been instructed by ETM Recycling Ltd to prepare a Noise & Vibration Management Plan (NVMP) which will outline the methods by which ETM Recycling Ltd will assess and minimise the potential impacts of noise generated through the operation of the site situated at 41 Ashton Vale Rd, Bristol BS3 2HW.

1.1.2 The document comprises a full Noise Impact Assessment (NIA) as per BS4142:2014 with mitigation/good practice measures derived from this assessment used to inform the NVMP. These mitigation measures will be put in place by the management of ETM Recycling Ltd.

1.1.3 The site is a Household, commercial & industrial waste transfer station with treatment and operate Environmental Permit (EP) Ref. EPR/EP3794SH. This NVMP has been produced to accompany the following variations to the permit:

i) Increase the annual throughput from 150,000 tonnes per annum (tpa) to 300,000 tpa.
ii) Make a minor increase to the permit boundary
iii) Be able to operate the site i.e. mechanical treatment plant and plant/machinery on a 24/7 basis.
iv) Update the wording of the second paragraph in Table S1.1; activities, to allow transfer and treatment of waste to take place outside of a building.

1.1.4 Contact details for Oaktree Environmental are as follows:

Oaktree Environmental Ltd	Contact:	Thomas Benson
Lime House	Position:	Senior Consultant
2, Road Two	Tel:	01606 558833
Winsford Industrial Estate	E-mail:	thomas@oaktree-environmental.co.uk
Winsford CW7 3QZ		

1.2 Site location

1.2.1 The site is located on Land at 41 Ashton Vale Rd, Bristol BS3 2HW as shown on Drawing Nos. AVR/2369/01 & 02. The national grid reference for the site is ST 56367 71194.

1.2.2 The site is located within a predominantly industrial setting with surrounding land uses comprising; the existing ETM Recycling Ltd site, civil engineering contractors, several vehicle repair and recovery workshops as well as numerous units which are used for a variety of commercial/industrial uses.

1.3 Facility overview

1.3.1 The permit boundary is outlined in green on Drawing No. AVR/2369/02. All references to 'the site' in this document shall mean this area and the associated infrastructure, plant and equipment.

1.3.2 The recycling centre allows 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 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. Waste treatment processes which can be carried out on site are summarised below:

- Compacting (by loading shovel/360° excavator)
- Sorting (with loading shovel/360° excavator or by hand)
- Screening (by using appropriate mechanical screening plant and equipment)
- Separation (by using appropriate mechanical screening plant and equipment)
- Shredding (by using appropriate plant and equipment)
- Baling (by using appropriate plant and equipment)
- Magnetic separation of ferrous metals
- Cutting (using hand-held equipment)
- Blending (by loading shovel / 360° tracked excavator and trommel)

1.4 Proposed Hours of operation

1.4.1 It is proposed that the site is to operate 24/7 which includes manoeuvring of plant and vehicles, loading and unloading of wastes and the operation of the treatment plant.

2 Planning Policy

2.1 Noise Policy Statement for England

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

2.1.2 "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."

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

2.1.4 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".

2.1.5 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", 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.

2.1.6 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.

2.2 National Planning Policy Framework

2.2.1 The NPPF, revised in 2019, replaces the Planning Policy Guidance Note 24 (PPG 24) and does not make reference to any other relevant noise guidance, other than the NPSE.

2.2.2 With regards to noise, the NPPF states the planning process should "contribute and enhance the natural and local environment", with regards to noise this means "preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affect by unacceptable levels" of, amongst other things, noise.

2.2.3 The NPPF 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:

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life,

b) 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 Planning Practice Guidance – Noise

2.3.1 Although this NVMP is being submitted to the Environment Agency, it is important to set out the appropriate guidance set out in the NPPF which 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.

2.3.2 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.

2.3.3 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. AVR/2369/04. 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

Boundary	Receptor	Approximate distance from site boundary (m)
North	Residential dwellings off Blackmoors Lane	245
South	Residential dwellings off Silbury Road	285
South	Residential dwellings off Fraynes Close	300
South	Ashton Drive	540

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 the Table below.

Table 3.2 – Other Noise Emitting Operators

Company	Address	Type of Business	Approximate distance from site boundary (m)
Bristol City Timber	39 Ashton Vale Rd, Bristol BS3 2HW	Timber merchant	Adjacent
David Lloyd Bristol Long Ashton	Ashton Rd, Bristol BS3 2HB	Large gym and sports centre including external playing pitches and pool	5m west
Manheim Bristol Auctions	Ashton Vale Rd, Ashton Vale, Bristol BS3 2AZ	Auction house	15m south
Flynn Ltd	54 Ashton Vale Rd, Bristol BS3 2HQ	Civil engineering yard	20m north
Masters Garage	54 Ashton Vale Rd, Bristol BS3 2HQ	Vehicle repair	25m north
Simbars Ltd	46 Ashton Vale Rd, Bristol BS3 2HQ	Manufacturer	30m north
Avdon Bristol	Longbrook Trading Estate, Ashton Vale Rd, Bristol BS3 2HT	Manufacturer	50m east
Avonline Networks	42 Ashton Vale Rd, Bristol BS3 2HQ	Network build and construction (depot/yard)	50m northeast
Cutline Glass	Unit 4, Longbrook Trading Estate, Ashton Vale Rd, Bristol BS3 2HT	Stained glass manufacturer	100m northeast
Babcock International	Coventry House, Ashton Vale Rd, Bristol, BS3 2HQ	Repair and goods inwards yard	100m northeast
EMF metal fabrications	42 Ashton Vale Rd, Bristol BS3 2HQ	Metal fabricators	125m northeast
Long Ashton Park & Ride	Bristol BS3 2HB	Park and ride serving Bristol area	275m south and west

3.3.2 Additional noise emitting operators are also located within 200-750m including additional warehouses, manufacturers, builders yards, car and transit centres and Ashton Gate Stadium and associated sports bar.

4 Noise Assessment Criteria

4.1 General

4.1.1 In order to assess the impacts of existing road traffic and industrial noise on the proposed development, the following documents have been used:

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

4.2 BS8283:2014

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 BS8283:2014 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 $L_{Aeq, 16hour}$	-
Dining	Dining room	40 $L_{Aeq, 16hour}$	-
Sleeping	Bedroom	35 $L_{Aeq, 16hour}$	30 $L_{Aeq, 16hour}$

4.3 BS4142:2014

4.3.1 BS4142:2014 provides a method for assessing and rating 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

	Tonality	**Impulsivity**	**Other characteristics**
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_{fmax})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.

4.4.2.1 The WHO document also recommends that steady, continuous noise levels should not exceed 55 dB (LAeq)on 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).

5 Survey

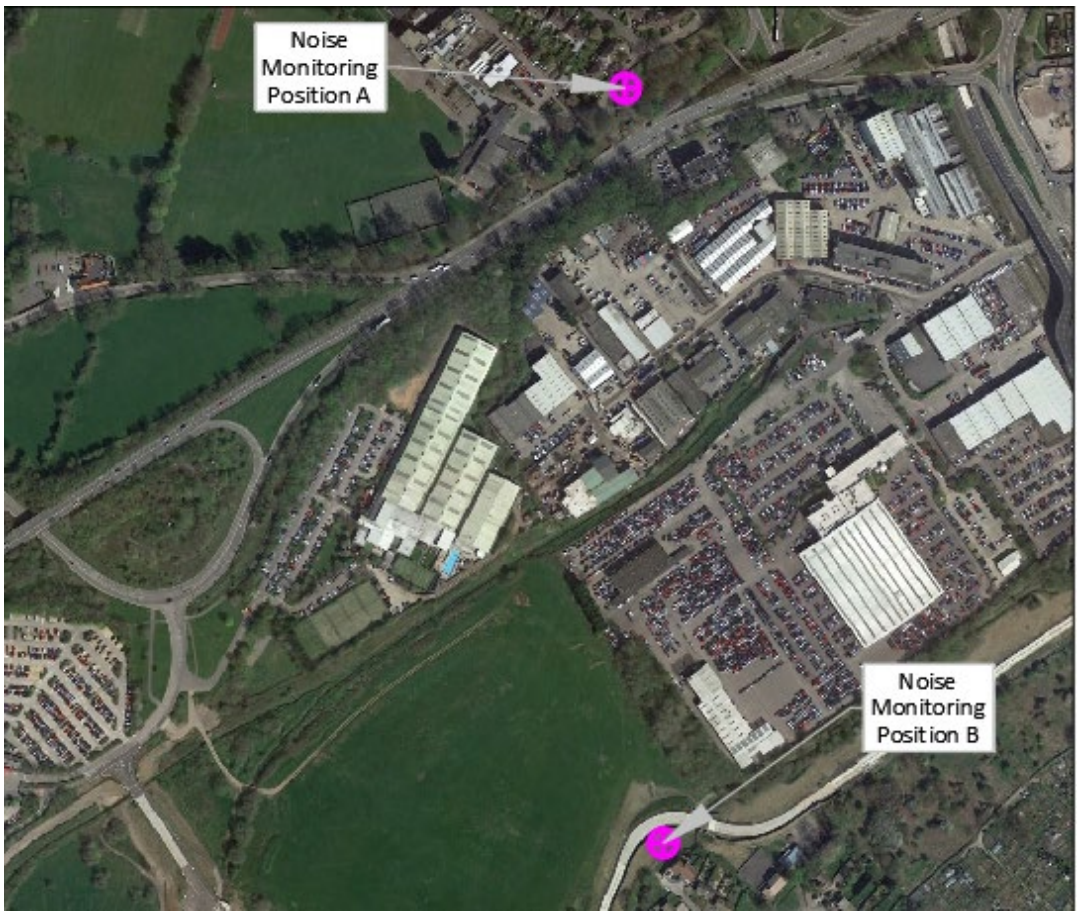
5.1 Procedure and Monitoring Locations

5.1.1 An initial noise survey was completed between Friday 15th January 2021 and Sunday 14th February 2021 in accordance with BS 7445-1: 2003 by Thomas Benson of Oaktree Environmental Ltd. Attended background level measurements were taken at locations representative of the nearest noise sensitive receptors within the vicinity of the site.

5.1.2 The Pollution Planning team at Bristol City Council were contacted via email (dated 12th December) for comments prior to the survey, however no feedback was received.

5.1.3 The measurement locations are presented within the Noise Monitoring Plan within Figure 6.1, below:

Figure 5.1 - Site location and noise monitoring position



5.2 Neighbouring Land Use and National Restrictions

5.2.1 It should of course be noted that the background monitoring was undertaken during a period of significant national restrictions taking place during January and February 2021. At this time people are asked to stay at home, except for specific purposes and to avoid meeting people with whom you do not live (including working from home where possible). The closure of schools and certain business and venues is taking place during this time. Further discussion regarding how these restrictions may have affected the results are provided further on in this chapter, however from onsite observations the following noise emitting operators/sites were not active during this time:

- David Lloyd Bristol Long Ashton (5m west) – Large sports and gym centre including external sports pitches and swimming pool. This site was not in use at all during the monitoring and therefore noise arising from; road traffic, external sports and fixed machinery such as ventilation etc. will not be reflected during this round of monitoring.
- Manheim Bristol Auctions (15m south) – Whilst some movements were observed from workers moving stock, it appeared that the site remained closed to the Apublic and no auctions were observed to have taken place during the monitoring.
- Flynn Ltd (20m north) – It is understood that work within the civil engineering yard has ceased completely.
- Long Ashton Park & Ride (275m south/west) – Vehicle movements within this area were extremely limited during the monitoring with very few vehicle movements observed. Obviously during less restricted times this would change considerably.
- Ashton Gate Stadium (470m east) – Ashton Gate Stadium has a seated capacity of 27,000 which are currently unable to attend games. Evidently noise would arise from associated road traffic, pedestrians, fans attending pubs/eateries etc.

5.2.2 In addition, Ashton Park School and associated sports centre adjacent to the closest residential receptors at Blackmoors Lane was also largely closed to the majority of students and extremely limited movements were observed.

5.2.3 Whilst the impact as a result of the covid-19 lockdown/restrictions is hard to quantify, studies have shown that in varying urban environments, noise levels have reduced on average 5.4dB (LAeq), with example locations ranging from a reduction of 1.2-10.7dB (A)[1]. Road traffic levels are likely to be considerably lower than would normally be the case as a result of; many people choosing to work from home, schools being closed and non-essential retail including pubs/restaurants being closed.

5.3 Weather conditions

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

Date	Wind Speed (max)	Cloud Cover	Temperature	Precipitation
15/01/2021	Max gusts of 3.5m/s although generally more still. Wind direction is E when blowing	95-100%	-1 - 1^{oC}	None recorded whilst onsite
23/01/2021	Max gusts of 4.0m/s later on in the day. Wind direction is N/W	50-100%	2 - 6^{oC}	None recorded whilst onsite
25/01/2021	Max gusts of 2.5m/s although generally more still. Wind direction is S/SW	100%	-1 - 2^{oC}	None recorded whilst onsite
26/01/2021	1.0 – 2.0m/s. Wind direction is S	100%	-1^{oC}	None recorded whilst onsite

[1] Francesco Aletta, Tin Oberman, Andrew Mitchell, Huan Tong, and Jian Kang (2020). "Assessing the changing urban sound environment during the COVID-19 lockdown period using short-term acoustic measurements". Noise Mapp. 2020; 7:123–134

Date	Wind Speed (max)	Cloud Cover	Temperature	Precipitation
30/01/2021	Max gusts of 4.5m/s although generally more still. Wind direction is N/NE	100%	2-5 ^{oC}	None recorded whilst onsite.
31/01/2021	Max gusts of 3.8m/s although generally more still. Wind direction is NE/E	100%	-1 - 1^{oC}	None recorded during early morning monitoring. Light rain had fell prior to evening monitoring, stopping approximately 19:00. Short outbreaks of rain continued throughout the evening with monitoring undertaken between rainfall.
14/02/2021	Max gusts of 3.2m/s. Wind direction is S/SE	100%	1-2 ^{oC}	Light rainfall following 06:50-07:50 measurement. Sporadic rainfall between 08:00 and 10:30 with monitoring undertaken during times when this ceased.

5.4 Equipment Used During the Survey

5.4.1 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	02/10/2020
Microphone	Norsonic Type 1225	Norsonic	305208	02/10/2020
Field Calibrator	NOR 1251	Norsonic	35205	03/03/2020

5.5 Results

5.5.1 The results of the background noise monitoring survey are tabulated overleaf in tables 5.2 and 5.3. In addition, the individual 15-minute LA_{90} values for each measurement are provided within Table 5.4 and 5.5.

5.5.2 The L(t) graph for the measurements is displayed within Appendix III. Commentary on the background level is included further on in Section 5.4 and 5.5.

Table 5.2 - Measurement Results for NMP A (Blackmoors Lane)

Measurement Time	LA_{eq}	LA_{fmax}	LA_{90}	LA_{10}
15/01/2021 07:15-08:15	64.6	73.4	61.6	66.5
15/01/2021 12:15-13:15	63.9	80.3	60.1	66.1
15/01/2021 15:45-16:45	64.9	86.4	61.3	66.5
23/01/2021 07:05-08:05	60.2	74.1	52.3	63.7
23/01/2021 10:35-11:35	62.9	72.6	59.1	65.3
25/01/2021 19:15-20:15	60.9	84.5	53.7	63.3
25/01/2021 22:46-23:46	54.4	74.3	39.7	58.9
26/01/2021 02:10-03:10	38.4	35.7	37.0	35.4
30/01/2021 19:00-20:00	60.2	72.7	54.4	63.1
30/01/2021 22:30-23:30	54.9	74.9	43.8	59.3
31/01/2021 00:45-01:45	52.5	68.2	39.3	57.1
31/01/2021 19:20-19:35	58.8	68.7	50.6	62.9
31/01/2021 20:15-20:35	58.8	74.8	49.3	62.8
14/02/2021 06:50-07:50	56.9	69.9	46.3	61.1

Table 5.3 - Measurement Results for NMP B (Silbury Road)

Measurement Time	LA_{eq}	LA_{fmax}	LA_{90}	LA_{10}
15/01/2021 08:25-09:15	45.9	67.2	42.9	47.3
15/01/2021 13:25-14:25	45.6	74.3	41.1	46.6
15/01/2021 16:55-17:55	47.9	64.4	45.4	49.9
23/01/2021 08:16-09:16	49.7	66.1	46.8	51.5
23/01/2021 11:55-12:55	48.3	69.9	45.8	49.5
25/01/2021 20:25-21:25	46.2	59.3	43.0	48.4
25/01/2021 23:55-00:55	38.9	57.2	32.3	42.0
26/01/2021 03:20-04:05	41.8	71.6	36.1	44.7

Measurement Time	LA_{eq}	LA_{fmax}	LA_{90}	LA_{10}
30/01/2021 20:10-21:10	47.2	64.4	43.9	49.1
30/01/2021 23:35-00:35	39.5	51.5	36.5	41.7
31/01/2021 01:50-02:50	36.9	53.4	33.5	39.1
31/01/2021 21:05-21:35	43.3	72.6	39.6	45.3
31/01/2021 23:30-00:30	41.0	57.4	36.7	43.7
14/02/2021 08:30-09:30	46.1	72.1	42.7	47.3
14/02/2021 10:02-10:17	48.6	66.4	46.1	49.6

Table 5.4 – 15 min LA90 values for NMP A (Blackmoors Lane)

Measurement Time	LA90	Measurement Time	LA90
15/01/2021 07:15-07:30	61.8	15/01/2021 07:30-07:45	61.6
15/01/2021 07:45-08:00	62.1	15/01/2021 08:00-08:15	61.2
15/01/2021 12:15-12:30	60.1	15/01/2021 12:30-12:45	60.5
15/01/2021 12:45-13:00	59.9	15/01/2021 13:00-13:15	60.0
15/01/2021 15:45-16:00	60.7	15/01/2021 16:00-16:15	61.3
15/01/2021 16:15-16:30	62.3	15/01/2021 16:30-16:45	61.3
23/01/2021 07:05-07:20	51.8	23/01/2021 07:20-07:35	52.0
23/01/2021 07:35-07:50	52.2	23/01/2021 07:50-08:05	53.3
23/01/2021 10:35-10:50	58.5	23/01/2021 10:50-11:05	59.1
23/01/2021 11:05-11:20	58.8	23/01/2021 11:20-11:35	59.7
25/01/2021 19:15-19:30	55.7	25/01/2021 19:30-19:45	53.1
25/01/2021 19:45-20:00	52.6	25/01/2021 20:00-20:15	53.7
25/01/2021 22:46-23:01	41.4	25/01/2021 23:01-23:16	40.3
25/01/2021 23:16-23:31	40.5	25/01/2021 23:31-23:46	37.7
26/01/2021 02:10-02:25	38.4	26/01/2021 02:25-02:40	35.7
26/01/2021 02:40-02:55	37.0	26/01/2021 02:55-03:10	35.4
30/01/2021 19:00-19:15	55.4	30/01/2021 19:15-19:30	53.6

Measurement Time	LA90	Measurement Time	LA90
30/01/2021 19:30-19:45	54.7	30/01/2021 19:45-20:00	54.5
30/01/2021 22:30-22:45	45.3	30/01/2021 22:45-23:00	43.9
30/01/2021 23:00-23:15	43.3	30/01/2021 23:15-23:30	43.4
31/01/2021 00:45--01:00	40.6	31/01/2021 01:00-01:15	40.8
31/01/2021 01:15-01:30	39.4	31/01/2021 01:30-01:45	37.7
31/01/2021 19:20--19:35	50.6	31/01/2021 20:15-20:30	49.6
31/01/2021 20:30-20:45	49.1	14/02/2021 06:50-07:05	45.4
14/02/2021 06:50-07:05	46.3	14/02/2021 06:50-07:05	46.1
14/02/2021 06:50-07:05	48.5		

Table 5.5 – 15 min LA90 values for NMP B (Silbury Road)

Measurement Time	LA90	Measurement Time	LA90
15/01/2021 08:25-08:40	44.1	15/01/2021 08:40-08:55	43.3
15/01/2021 08:55-09:10	44.3	15/01/2021 09:10-09:25	41.5
15/01/2021 13:25-13:40	40.4	15/01/2021 13:40-13:55	41.1
15/01/2021 13:55-14:10	41.6	15/01/2021 14:10-14:25	41.9
15/01/2021 16:55-17:10	45.5	15/01/2021 17:10-17:25	45.7
15/01/2021 17:25-17:40	45.2	15/01/2021 17:40-17:55	45.5
23/01/2021 08:16-08:31	46.7	23/01/2021 08:31-08:46	46.5
23/01/2021 08:46-09:01	46.9	23/01/2021 09:01-09:16	47.4
23/01/2021 11:55-12:10	45.8	23/01/2021 12:10-12:25	46.2
23/01/2021 12:25-12:40	45.4	23/01/2021 12:40-12:55	45.8
25/01/2021 20:25-20:40	44.1	25/01/2021 20:40-20:55	44.3
25/01/2021 20:55-21:10	42.8	25/01/2021 21:10-21:25	42.1
25/01/2021 23:55-00:10	33.8	26/01/2021 00:10-00:25	31.1
26/01/2021 00:25-00:40	33.1	26/01/2021 00:40-00:55	32.3
26/01/2021 03:20-03:35	34.8	26/01/2021 03:35-03:50	38.1

Measurement Time	LA90	Measurement Time	LA90
26/01/2021 03:50-04:05	36.4	30/01/2021 20:10-20:25	44.3
30/01/2021 20:25-20:40	44.3	30/01/2021 20:40-20:55	43.7
30/01/2021 20:55-21:10	43.4	30/01/2021 23:35-23:50	37.5
30/01/2021 23:50-00:05	36.1	31/01/2021 00:05-00:20	36.2
31/01/2021 00:20-00:35	36.5	31/01/2021 01:50-02:05	34.2
31/01/2021 02:05-02:20	33.4	31/01/2021 02:20-02:35	33.6
31/01/2021 02:35-02:50	33.3	31/01/2021 21:05-21:20	40.3
31/01/2021 21:20-21:35	39.3	31/01/2021 23:30-23:45	38.5
31/01/2021 23:45-00:00	37.8	01/02/2021 00:00-00:15	36.1
01/02/2021 00:15-00:30	36.0	14/02/2021 08:30-08:45	42.7
14/02/2021 08:45-09:00	42.9	14/02/2021 10:02-10:17	46.1

5.6 Existing Noise Climate at Blackmoors Lane

Weekdays

5.6.1 During the monitoring it was evident that the noise climate was dominated by road traffic from the adjacent A370 which includes a mixture of; private vehicles, public transport, heavy goods vehicles and emergency vehicles.

5.6.2 As expected, road traffic is busier during the usual "rush hours", however traffic does continue throughout the day with heavy goods vehicles and emergency vehicles audible. Indeed, several ambulances and police cars and associated sirens were observed during the 23:00-07:00 monitoring periods.

5.6.3 As stated previously, Ashton Park School and associated sports centre adjacent to the closest residential receptors at Blackmoors Lane were closed to the majority of students and extremely limited movements were observed, however some limited movements from caretakers and staff were noted between 07:00-08:45 in the morning and 15.45-16.45 in the afternoon.

5.6.4 The cycle lane leading from Blackmoors Lane to the south also appears exceedingly busy with up to 15 cyclists and a similar number of joggers observed per hour at its most active. Whilst these are not expected to contribute significantly to the existing noise climate they confirm that the receptors lie in a busy, inner city area.

5.6.5 Additional noise sources include birdsong primarily from the small landscaped area to the south of Blackmoors Lane and comings/goings associated with local residents (leaving for work, couriers, takeaway drivers etc.).

Weekends

5.6.6 As per the previous weekday surveys it is apparent that the primary sources with regards to the existing noise sources comprised road traffic and contributions from passing pedestrians and movements from residents.

5.6.7 Of course, road traffic is expected to have been reduced from weekday levels however at times this was not particularly noticeable.

5.6.8 The limited movements associated with the adjacent school also ceased over the weekend. However, levels of cyclists and joggers using Blackmoors Lane remain unchanged.

5.6.9 At no time during the monitoring was noise from the industrial estate to the south audible.

5.7 Existing Noise Climate at Silbury Road

Weekdays

5.7.1 The monitoring survey at this receptor revealed that background levels at this receptor are considerably lower than those at Blackmoors Lane. Indeed, there is not a constant noise source such as that of the road traffic at the previous monitoring location.

5.7.2 The existing noise climate generally comprises dog walkers, cyclists and joggers heading northwards via the path north of the dwellings and more occasional vehicle movements from local residents and couriers/post workers etc.

5.7.3 Distant road traffic from the A370 and South Bristol Link Road as well as the Rail Line to the east are also audible at times.

5.7.4 Additional noise sources include birdsong and very low level contributions from the industrial estate to the north and east.

5.7.5 As discussed previously, the access road for the Long Ashton Park & Ride is located to just 30m north of these receptors, however at the time of monitoring the significant restrictions on non-essential business and travel meant that vehicle movements were significantly reduced. During the daytime a maximum of 2no. bus movements were observed per hour, of course this could change considerably as restrictions are eased.

5.7.6 It is also noted that access road for Long Ashton Park & Ride is approximately 2m above that of Silbury Road with a recently constructed 2m acoustic screen placed at the edge of this area.

Weekends

5.7.7 During the weekend monitoring at this location contributors to the background noise level remained largely unchanged with occasional vehicle movements, birdsong and dog walkers, joggers etc providing the majority of noise events. However, the distant contributions from local industry appeared to cease from Saturday afternoon.

5.7.8 Distant road traffic is also audible at quieter times over the course of the weekend.

6 Noise Levels Associated with the Proposed Development

6.1 Introduction

6.1.1 The noise sources associated with the development during the proposed extension hours will primarily comprise the loading and operation of the materials recycling facility which will be located as shown on Drawing No. AVR/2369/03.

6.1.2 Noise Levels Used Within the Assessment

6.1.3 In order to adequately assess the impact of the proposed development on the closest noise sensitive receptors, it is necessary to determine the noise levels associated with the proposed operations and items of plant/equipment.

6.1.4 With this in mind, Oaktree Environmental attended site on 15th January 2021 in order to undertake specific measurements of individual items of plant which make up the treatment plant. Table 7.1 overleaf includes the sound power levels and distance from the plant.

6.1.5 For measurements taken at the existing yard, electronic noise files, photographs and videos can be provided, if required.

6.1.6 Weather during the survey was dry and cloudy with wind speed varied from 1-3m/s whilst onsite however was much lower within the vicinity of the plant due to the recently constructed acoustic screen and surrounding structures.

6.1.7 It should be noted that whilst care has been taken to remove any uncertainty from the assessment and measurements, the treatment plant operates as a system rather than individual items of plant and therefore onsite measurements taken by Oaktree will contain some contribution from neighbouring items of plant. The greatest example is likely the flip flop screen and single drum separator measurements, which are located very close to the double drum separator which is one of the noisier items of plant. Whilst measuring these items the double drum separator is clearly audible.

6.1.8 In addition to the onsite itemised measurements, offsite monitoring was undertaken in order to corroborate the calculations/assumptions made further on in the report. A measurement was undertaken within the adjacent field 45m from the site boundary. This measurement is also included within Table 6.1.

Table 6.1 – Noise levels Associated with Washing Plant

Activity	Noise Level (LAeq)	Additional Notes
Primary sizer, loading hopper & bag splitter including loading via grab	87.1 at 2m	The measurement will also include a limited contribution from 2no. excavators which were sorting waste during the measurement. The noise source is between 1 and approximately 3m in height and is adequately screened by the 8m acoustic fence and open fronted portal frame building.
Long object separator and associated discharge/conveyors	82.7 at 3m	Main noise source heights between approx. 3.0 and 5.0m in height. The main noise sources (discharge shoots and operational sections) are adequately screened, however some conveyors are above the height of the 8m screen.
Overband magnet and associated discharge/conveyors	86.6 at 3m	Main noise source heights between approx. 3.0 and 5.0m in height. The main noise sources (discharge shoots and operational sections) are adequately screened, however some conveyors are above the height of the 8m screen.
Waste screener	86.6 at 1m	Th waste screener is up to 9-10m in height.
Flip flop screener	83.0 at 1m	The flip flop screen is up to 9-10m in height. The measurement will also include a limited contribution from the double drum separator which was audible during the measurement.
Double drum separator	87.0 at 1m	Main noise source between 6-8m but up to 10m in height.
Single drum separator	83.5 at 1m	Main noise source between 6-8m but up to 9m in height. The measurement will also include a limited contribution from the double drum separator which was audible during the measurement.
RDF discharge conveyor	81.7 at 1m	Noise source approximately 3-4m from ground level.
Eddy current separator	82.7 at 1m	Noise source approximately 3-4m from ground level.
Ballistic separator	89.1 at 1m	Noise source approximately 3-4m from ground level.
Noise level of operations over 15-minute reference period at a point 45m from site	59.9	This figure has been derived from a 15minute section of a measurement whilst the plant is in operation (60.3dB (A)) minus the noise level over the following 15minute with the plant turned off at the same location (49.6dB (A)).

6.1.9 Table 6.2 below which also includes the sound power levels for the remaining activities, which have been either measured by Oaktree Environmental at the existing yard, from an existing measurement or from relevant literature (i.e. BS5228-1:2009).

6.1.10 For measurements taken at the existing yard, electronic noise files, photographs and videos can be provided if required.

6.1.11 Unfortunately, the unloading of wastes/aggregates could not be measured whilst onsite. Previously the figure submitted for this activity was 80dB (A) at 10m (BS5228:2011 Table C.1 Ref 11). However, this value corresponds to the dumping of brick wastes. Having visited the site and observed the nature of the material (fine gravel, sand, silt etc.) this is a likely very large exaggeration of the risk. It should also be noted that BS5228:2011 which utilises historic data which is likely to over exaggerate noise levels from certain activities (due to age of machinery etc.).

Table 6.2 – Noise levels Associated with External Operations

Activity	Noise Level (LAeq)	Source	Notes
Telescopic handler loading wagon	76.4 at 3m	Oaktree measurement of similar activity	
Loading shovel moving material	77.4 at 3m	Oaktree measurement of similar activity	
Tipping of wastes/materials	80.0 at 10m	BS5228-1:2009+A1:2014	See Section 6.1.11

7 Noise Impact Assessment

7.1 Introduction

7.1.1 Table 7.1 overleaf includes the calculation of noise levels arising from the operation of the treatment plant whilst Table 7.2 includes an assessment of the proposed development (treatment plant and additional noise sources) compared to the background noise levels at the nearest residential receptor as per BS4142: 2014.

7.1.2 All distances used in the calculations presented in Table 8.1 have been produced based on the location of the activity on the Site Layout Plan.

7.2 Screening

7.2.1 Screening will be provided to the receptors via a mixture of structures including the newly constructed onsite acoustic screen which comprises solid concrete to 6m and a further 2m close boarded timber panel fencing to 8m and the 10m open fronted portal frame building (refer to Drawings provided in Appendix II). In addition, further screening is provided to those on Blackmoors Lane and Silbury Road as a result of the intervening commercial buildings and acoustic screen/topographical fall associated with the Park & Ride respectively which ensure no line of sight between the receptors and the site, appendix II provides further details on these.

7.2.2 BS5228: Part1: 2009 considers that should the noise source be obscured from the receptor, an attenuation figure of 10dB may be expected as a rule of thumb. In reality, for the majority of items of plant, the screening provides a greater level of attenuation dependent on the height of the noise source. For items of plant partially/mostly obscured by the screening, BS5228 considers that an attenuation figure of 5dB may be assumed when the top of the plant is just visible to the receiver over the noise barrier.

7.2.3 Attenuation due to onsite screening within Tables 7.1-7.3 has been applied to individual items of plant based on the height of the noise source when compared to the building/acoustic screen whilst a final, additional attenuation figure has been subtracted due to the screening provide by the intervening commercial buildings and acoustic screen/topographical fall associated with the Park & Ride which are closer to the receptor.

7.3 Background levels

7.3.1 With regards to background levels, BS4142:2014 stresses the importance of ascertaining the typical background level rather than utilising the lowest. With this in mind, rather than use the lowest or highest 15-minute LA_{90} the median figure for each extension period has been used. Therefore, the following figures will be used within the assessment:

Table 7.1 – Median 15 minute LA90 figures for each relevant extension period

Extension period	Location	Median LA90
Weekday 18:00-23:00	Blackmoors Lane	53.1
	Silbury Road	43.5
Weekday 23:00-06:00	Blackmoors Lane	37.7
	Silbury Road	33.8
Saturday 18:00-23:00	Blackmoors Lane	54.2
	Silbury Road	44.0
Weekends 23:00-06:00	Blackmoors Lane	40.7
	Silbury Road	35.2
Sunday 07:00-23:00	Blackmoors Lane	48.8
	Silbury Road	39.3

7.4 Assessment of Site Operations – BS4142:2014

7.4.1 Table 7.1 includes the determination of the noise levels associated solely with the operation of the treatment plant at the nearest residential receptors. Table 7.1-7.3 include an assessment of the proposed development (treatment plant and additional noise sources) compared to the background noise levels at the nearest residential receptor as per BS4142: 2014.

7.4.2 All distances used in the calculations presented in Tables 7.1-7.3 have been produced based on the location of the activity on the Site Layout Plan.

7.4.3 With regards to the corrections/penalties as per BS4142:2014 a total value of 5dB has been applied, 3dB for tonal properties (conveyors, motors etc.) whilst a 2dB for the impulsive nature of the noise (crashes and bangs etc.).

7.4.4 The calculations have been undertaken over an hourly reference period with the entirety of the plant assumed to be operating for the full 60 minutes.

Table 7.2 – Calculation of noise levels associated with the operation of the treatment plant

Operation	Calculated noise level at Blackmoors Lane (dB A)	Calculated noise level at Silbury Road (dB A)	Comments
Feed hopper including loading via loading shovel	87.1-20log(310/2) = 43.3 -10 = 33.3	87.1-20log(320/2) = 43.0 -10 = 33.0	Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Long object separator including conveyors within Area 3	82.7-20log(320/3) = 42.1 -10 = 32.1	82.7-20log(305/3) = 42.6 -10 = 32.6	Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Overband magnet including conveyors within Area 4	86.6-10log(325/3) = 45.9 -10 = 35.9	86.6-10log(305/3) = 46.5 -10 = 36.5	Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Waste Screener	86.6-20log(333/1) = 36.2	86.6-20log(290/1) = 37.4	Distance based on location as per Site Layout & Fire Plan within Appendix II. No attenuation has been applied due to the height of this item of plant.
Flip flop screen	83.0-20log(330/1) = 32.6	83.0-20log(290/1) = 33.8	Distance based on location as per Site Layout & Fire Plan within Appendix II. No attenuation has been applied due to the height of this item of plant.

Operation	Calculated noise level at Blackmoors Lane (dB A)	Calculated noise level at Silbury Road (dB A)	Comments
Double drum separator	87.0-20log(320/1) = 36.9	87.0-20log(295/1) = 37.6	Distance based on location as per Site Layout & Fire Plan within Appendix II. No attenuation has been applied due to the height of this item of plant.
Single drum separator	83.5-20log(320/1) = 33.4	83.5-20log(295/1) = 34.1	Distance based on location as per Site Layout & Fire Plan within Appendix II. No attenuation has been applied due to the height of this item of plant.
RDF discharge conveyor	81.7-20log(315/1) = 31.7 -10 = 21.7	81.7-20log(310/1) = 31.9 -10 = 21.9	Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Eddy current separator	82.7-20log(310/1) = 32.9 -10 = 22.9	82.7-20log(310/1) = 32.9 -10 = 22.9	Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Ballistic separator	89.1-20log(310/1) = 39.3 -10 = 29.3	89.1-20log(305/1) = 39.4 -10 = 29.4	Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).

Operation	**Calculated noise level at Blackmoors Lane (dB A)**	**Calculated noise level at Silbury Road (dB A)**	**Comments**
Calculated sound level from washing plant at nearest residential receptor	$10\log((10^{33.3/10}) + (10^{32.1/10}) + (10^{35.9/10}) + (10^{36.2/10}) + (10^{32.6/10}) + (10^{36.9/10}) + (10^{33.4/10}) + (10^{21.7/10}) + (10^{22.9/10}) + (10^{29.3/10})) = 43.4$dB (A)	$10\log((10^{33.0/10}) + (10^{32.6/10}) + (10^{36.5/10}) + (10^{37.4/10}) + (10^{33.8/10}) + (10^{37.6/10}) + (10^{34.1/10}) + (10^{21.9/10}) + (10^{22.9/10}) + (10^{29.4/10})) = 44.1$dB (A)	When compared to 15-minute measurement undertaken by Oaktree Environmental (provided in Table 6.1) this seems to be relatively accurate. Should the 59.9dB (A) figure provided in Table 6.1 be corrected to 280m for Balckmoors Lane and 285m for Silbury Road, the resultant figures are 44.0 and 43.9dB (A) respectively.

Table 7.3 – Assessment of noise levels associated with the site as per BS4142:2014 over hourly reference period (i.e. 07:00-23:00)

Operation	Calculated noise level at Blackmoors Lane (dB A)	Calculated noise level at Silbury Road (dB A)	Comments
Operation of wash plant	43.4dB (A)	44.1B (A)	As per Table 8.1
Telescopic handler loading wagon	76.4+10log(45/60) = 75.2 75.2-20log(290/3) = 35.5 -10 = 25.5	76.4+10log(45/60) = 75.2 -20log(320/3) = 34.5 -10 = 24.5	Distance based on location as per Site Layout & Fire Plan within Appendix II. Assumed to be operating up to 45 minutes for each hourly reference period based on discussions with site management. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Movement of wastes/aggregates using loading shovel	77.4+10log(45/60) = 76.2 76.2-20log(275/3) =37.0 -10 = 27.0	77.4+10log(45/60) = 76.2 76.2-20log(310/3) = 35.9 -10 = 25.9	Distance based on location as per Site Layout & Fire Plan within Appendix II. Assumed to be operating up to 45 minutes for each hourly reference period based on discussions with site management. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).

Operation	**Calculated noise level at Blackmoors Lane (dB A)**	**Calculated noise level at Silbury Road (dB A)**	**Comments**
Unloading/tipping of wastes/aggregates	80.0+10log(10/60) = 72.2 74.0-20log(290/10) = 42.9 10 = 32.9	80.0+10log(15/60) = 72.2 74.0-20log(320/10) = 43.9 10 = 33.9	Distance based on location as per Site Layout & Fire Plan within Appendix II. Assumed to be operating up to 15 minutes for each hourly reference period based on discussions with site management. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Calculated sound level	10log ($10^{43.4/10}$) + ($10^{25.5/10}$) + ($10^{27.0/10}$) + ($10^{32.9/10}$) = 43.9dB (A)	10log ($10^{44.1/10}$) + ($10^{24.5/10}$) + ($10^{25.9/10}$) + ($10^{33.9/10}$) = 44.6dB (A)	
Acoustic Correction Feature (BS4142:2014)	+5 = 48.9dB (A)	+5 = 49.6 dB (A)	As per Section 7.4.3
Attenuation due to additional screening	-5 = 43.9	-10 = 39.6	As per 7.2.1-7.2.3
Median 15minute LA90 value for the 18:00-23:00 (weekday) extension period	53.1- 43.9 = 9.2dB (A) below median LA90 value	43.5 - 39.6 = 3.9dB (A) below median LA90 value	As per Table 7.1 Discussed further within Sections 7.4 and 7.5
Median 15minute LA90 value for the 18:00-23:00 (Saturday) extension period	54.2 - 43.9 = 10.3 below median LA90 value	44.0-39.6 = 4.4 below median LA90 value	As per Table 7.1 Discussed further within Sections 7.4 and 7.5

Operation	**Calculated noise level at Blackmoors Lane (dB A)**	**Calculated noise level at Silbury Road (dB A)**	**Comments**
Median 15minute LA90 value for the 07:00-23:00 (Sunday) extension period	48.8-43.9 = 4.9 below median LA90 value	39.3-39.6 = 0.3 above median LA90 value	As per Table 7.1 Discussed further within Sections 7.4 and 7.5

Table 7.4 – Assessment of noise levels associated with the site as per BS4142:2014 over 15 minute reference period (i.e. 23:00-07:00)

Operation	Calculated noise level at Blackmoors Lane (dB A)	Calculated noise level at Silbury Road (dB A)	Comments
Operation of wash plant	43.4dB (A)	44.1B (A)	As per Table 8.1
Telescopic handler loading wagon	76.4-20log(290/3) = 36.7 -10 = 26.7	76.4-20log(320/3) = 35.8 -10 = 25.8	Assumed to be operating for the full duration of each 15-minute reference period. Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Movement of wastes/aggregates using loading shovel	77.4-20log(275/3) =38.2 -10 = 28.2	77.4-20log(310/3) = 37.1 -10 = 27.1	Assumed to be operating for the full duration of each 15-minute reference period. Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).

Operation	**Calculated noise level at Blackmoors Lane (dB A)**	**Calculated noise level at Silbury Road (dB A)**	**Comments**
Unloading/tipping of wastes/aggregates	80.0+10log(5/15) = 75.2 75.2-20log(290/10) = 46.0 -10 = 36.0	80.0+10log(5/15) = 75.2 75.2-20log(320/10) = 45.0 -10 = 35.0	Assumed to be operating for 5 minutes per 15 minutes. Distance based on location as per Site Layout & Fire Plan within Appendix II. 10dB subtracted based on the plant height and surrounding screening (see submitted plans and Table 6.1).
Calculated sound level	10log ($10^{43.4/10}$) + ($10^{26.7/10}$) + ($10^{28.2/10}$) + ($10^{36.0/10}$) = 44.3dB (A)	10log ($10^{44.1/10}$) + ($10^{25.8/10}$) + ($10^{27.1/10}$) + ($10^{35.0/10}$) = 44.7dB (A)	
Acoustic Correction Feature (BS4142:2014)	+5 = 49.3dB (A)	+5 = 49.7 dB (A)	As per Section 7.4.3
Attenuation due to additional screening	-5 = 44.3	-10 = 39.7	As per 7.2.1-7.2.3
Median 15minute LA90 value for the 23:00-06:00 (weekday) extension period	37.7 – 44.3 = 6.6 above	33.8 - 39.7 = 5.9 above	
Median 15minute LA90 value for the 23:00-06:00 (weekends) extension period	40.7 - 44.3 = 3.6 above	35.2 - 39.7 = 4.5 above	

7.4.5 Therefore, the preliminary assessment shows that with regards to the proposed weekday operations, the rating level between 0.3dB (A) above or up to 10.6dB (A) below the typical background level measured at these times and therefore the impacts associated with noise as a result of the proposed operation of the site at these times is negligible to very low.

7.4.6 The assessment with regards to night time noise levels demonstrates that the rating level is between 3.6-6.6dB (A) above the typical background level measured at these times. BS4142:2014 states: *"An exceedance of the background level of around 5dB is likely to be an indication of an adverse impact, dependent on the context".*

7.4.7 In this instance, the context of the site and its surroundings should be considered. Including;

- That the site is within a busy, inner-city urban area,
- The operation lies within an already operational waste site, bordered similar industrial/commercial land uses,
- The noise levels fall comfortably within the WHO criteria for external amenity areas.

7.4.8 It should also be noted that the assessment overleaf likely comprises an over-estimation of the risk due the following factors:

- The background monitoring undertaken during a period of significant national restrictions taking place during January and February 2021. At this time people are asked to stay at home, except for specific purposes and to avoid meeting people with whom you do not live (including working from home where possible). A review of surrounding land uses and the national restrictions impact on the background noise level is provided within Section 5.2. It would not be unreasonable to assume that the measured LA90 figures for night time levels are considerably lower than would normally be the case, and that an increased level of road traffic/activity as a result of the reopening of pubs/restaurants and other night time venues would see a significant increase.

- The treatment plant operates as a system rather than individual items of plant and therefore onsite measurements taken by Oaktree will contain some contribution from neighbouring items of plant. The greatest example is likely the flip flop screen and single drum separator measurements, which are located very close to the double drum separator which is one of the noisier items of plant. Whilst measuring these items the double drum separator is clearly audible.
- A greater level of attenuation is likely provided by the screening than that used within Tables 8.1-8.3 for the majority of items of plant. Given the close proximity of the wall to the plant, the actual level of attenuation may be as much as 15-20dB (A) given the associated path differences. Whilst individual calculations may be undertaken to demonstrate this, it is considered that this is not necessary in this instance.
- Tonal/corrections likely over-estimate the impact, a 5dB penalty has been applied (3dB for tonal properties and 2dB for the impulsive nature of the noise). However, it may be considered more appropriate to remove the impulsive penalty due to the rarity of these events. Indeed, the tonal penalty could be lessened for the assessment at Blackmoor Lane given the constant, tonal nature of the background sound level as a result of road traffic along the A370.
- The calculations do not take into account any attenuation due to absorbant ground cover. Given the presence of 230m+ of soft, grassy ground between the proposed operations and the receptors at Silbury Road it would not be unreasonable to expect an additional, conservative reduction of 3dB (A).
- A 5dB attenuation figure has been applied due to the intervening commercial buildings between the site and the residential receptors at Blackmoors Lane. This is a worst-case figure and the actual level of attenuation provided is likely much higher given that the site is not visible from Blackmoors Lane.

7.5 Assessment of Site Operations – BS8233:2014

7.5.1 BS8233:2014 provides recommended guideline values for internal noise levels within dwellings which are similar in scope to guideline values contained within the World Health Organisation (WHO) guidance document.

7.5.2 In some instances it may be more appropriate to assess night time noise levels using the internal criteria within this standard in order to give an indication of the likelihood of noise complaints given the context of the other standards (i.e. BS4142:2014 gives an indication with regards to external noise levels and is not intended to be applied to the derivation of indoor sound levels arising from external noise sources or the assessment of indoor sound levels - it is reasonable to assume that residents would not expect to be utilising external amenity areas between 23:00 and 07:00).

7.5.3 Whilst BS8233 is not intended for the assessment of noise generating activities, it does serve to give an additional layer with regards to the indication of the likelihood of noise complaints. Indeed, source of the noise levels aside, assuming 15dB (A) attenuation from an open window (WHO Guidelines for Community Noise) it is possible to calculate that noise levels as a result of the proposals would be between 19.7-24.3dB (A) within the nearest dwellings during the night time (in lieu of acoustic penalties as per BS4142:2014 and over the 15-minute reference period). These figures are comfortably within those quoted by the standard (provided in Table 4.1).

7.5.4 Therefore, the noise levels associated with the operations within dwellings (19.7-24.3dB A) would be extremely unlikely to cause annoyance to residents indoors at these times. For reference, 20dB (A) is commensurate with the faint rustling of leaves as 30dB (A) is to a whisper. Again, as per the reasons explained in Section 7.4.11, these noise levels may in turn be a likely overestimation.

8 Noise Management and Controls

8.1 Noise Sensitive Receptors

8.1.1 As discussed previously, the site lies within an industrial / residential setting with the nearest noise sensitive residential receptors located between 280-285m from the site boundary.

8.1.2 The proposed operation and layout of the site has been planned in order to contain all the required operations and activities within the site including the recent construction of the acoustic screen and open fronted waste building, thus limiting the impacts from noise on the above receptors.

8.1.3 In terms of potential noise impact, whilst the development proposed will be operated using the Best Practicable Means at all times, this site-specific NVMP has been prepared in order to ensure the noise levels at the site can be managed appropriately and reduce any impact on the surrounding receptors.

8.2 Noise Sources

8.2.1 It is considered the most significant noise activities with regards to noise levels would comprise the operation of the treatment plant, movement/sorting of wastes, tipping of wastes and loading of HGVs.

8.2.2 It is considered that the treatment plant is the noisiest activity associated the site, this is located externally but is surrounded by concrete walls and fencing to a total height of approximately 8.0m which provides significant noise attenuation, as per Drawing No. AVR/2369/03. It is considered due to the assessment in the previous sections, the impact associated with activities would be identified as low.

8.2.3 Notwithstanding the above, in order to further limit the potential for noise related impacts associated with the site, the relevant control measures associated with regards to these sources are included within the noise management table in Section 8.1**.**

8.3 Noise Management Table

8.3.1 A site-specific NVMP table overleaf details the above noise sources and how the current and proposed infrastructure on site will reduce the impact of noise to surrounding properties.

8.3.2 In addition to the existing controls in this NVMP, the complaints procedure further discussed in Section 9 will be used in the event that any noise complaints are received. If a noise complaint is received and the applicant has been made aware, immediate action will take place reviewing and identifying whether any changes to existing procedures are required or if new procedures need to be put in place. Any changes which may be required will be implemented immediately.

Table 8.1 – Noise Management Table

Source(s)	Receptor(s)	Consequences	Probability of noise disturbance	Remedial Action/ Recommendations/ Comments	Assessment Outcome following actions / recommendations
HGVs travelling to and from the site for delivery/collection of products	As detailed on Sensitive Receptors Plan	Noise pollution	Low	Site management will aim to ensure that vehicle movements are spread out evenly throughout the day. All drivers are required to enter and exit the site with due consideration for neighbours. The existing access road to the site will be maintained in good state of repair to prevent unnecessary noise being generated. Implementation of a 5mph speed limit onsite. All skip lorries operated by ETM Recycling Ltd be fitted with chain socks in order to reduce the noise produced by the loose chains banging on the side of the skip. All vehicles associated with the site be fitted with white noise reversing alarms Engines to be switched off when not in use.	Very low
Vehicles tipping waste deliveries into the waste reception areas	As detailed on Sensitive Receptors Plan	Noise pollution	Low	The waste tipping areas are located within bays and surrounded by concrete perimeter walls which will offer acoustic screening. Drivers must lower the tipper body before driving away from the tipping area. Drop heights will be kept to a minimum to reduce noise levels. Management will ensure that all vehicles involved in the tipping of waste operated by ETM Recycling Ltd are functioning suitable i.e. vehicles must be well maintained and operated with silencers and moving parts to be regularly lubricated. All vehicles will benefit from white noise reverse alarms and be fitted with chain socks in order to reduce the noise produced by the loose chains banging on the side of the skip/containers.	Very Low / Negligible

Source(s)	Receptor(s)	Consequences	Probability of noise disturbance	Remedial Action/ Recommendations/ Comments	Assessment Outcome following actions / recommendations
Loading of waste into mechanical treatment plant using (i.e. telehandler/ 360^{o} excavator)	As detailed on Sensitive Receptors Plan	Noise pollution	Med	Drop heights will be kept to a minimum in order to reduce the produced levels of noise / vibration Management will ensure that all loading plant operated by ETM Recycling Ltd is functioning suitably i.e. moving parts to be regularly lubricated. The main plant treatment area is located at the furthest point from the closest residential receptors and is also screened by acoustic walls/portal framed building. Operatives will be informed to turn off engines when the plant is not in use and no revving of engines will be permitted at the site. Any malfunctions in plant i.e. missing screws/bolts which result in excessive noise will be de-commissioned until an alternative loading plant sourced.	Low
Operation the of the mechanical treatment plan	As detailed on Sensitive Receptors Plan	Noise pollution	Med	Any malfunctions in plant i.e. missing screws/bolts which result in excessive noise will be de-commissioned until an alternative part of the plant is sourced or repaired. Drop heights into the loading conveyor will be reduced to a minimum. The main sections of the treatment plant are bounded by insulated cladding in order to reduce noise emissions from the plant. The treatment plan is situated externally, and surrounded by acoustic walls, thus reducing the noise levels associated with this activity. The plant shall adhere to the hours specified in Section 1.4.	Low
Loading waste into HGVs/skip wagons	As detailed on Sensitive Receptors Plan	Noise pollution	Med	Drop / loading heights will be kept to a minimum to prevent excessive noise. The loading areas are surrounded by concrete perimeter walls which will offer acoustic screening. Plant operatives will be instructed / trained to not scrape or bang the loading shovel bucket on the floor creating noise/vibration prior to deposit.	Low

Source(s)	Receptor(s)	Consequences	Probability of noise disturbance	Remedial Action/ Recommendations/ Comments	Assessment Outcome following actions / recommendations
Manoeuvring of plant around external areas of the site	As detailed on Sensitive Receptors Plan	Noise pollution	Med	Management will ensure that all site vehicles operated by ETM Recycling Ltd are functioning suitable i.e. vehicles must be well maintained and operated with silencers and moving parts to be regularly lubricated. The site will be surfaced with concrete and will be flat and maintained in good state of repair to prevent unnecessary banging of vehicles on uneven ground. A maximum speed limit of 5mph will be maintained. Drivers will be informed to turn off engines when the vehicle is not in use and no revving of engines will be permitted at the site. All vehicles will benefit from white noise reverse alarms.	Low
Small vehicles travelling to and from the site (e.g. staff and visitor's cars, courier van deliveries etc.)	As detailed on Sensitive Receptors Plan	Noise pollution	Low	All those working on and visiting the site to be made aware of need for considerate driving and keeping vehicles well maintained. Small vehicles will arrive marginally earlier than the main site operating hours.	Very Low / Negligible
Repairs	As detailed on Sensitive Receptors Plan	Noise pollution	Low	If repairs to the site are required, the work is to be undertaken with due regard for the possible noise nuisance and during the normal working day. Repairs will be undertaken outside of the permitted area. In the event of major repair work being undertaken which is likely to cause significant noise and disruption, neighbouring residents and the EA will be notified in advance.	Very Low / Negligible

8.4 Monitoring and recording

8.4.1 **Assessment** - Site management i.e. The site manager, compliance manager or TCM will subjectively monitor noise levels in and around the entire site perimeter throughout the day. Should it be deemed necessary by site management, monitoring using an appropriate Type 1 Sound Level Meter will be carried out while the site is operational should it be observed that unacceptable levels of noise are being emitted from the site.

8.4.2 The results of monitoring exercises and any remedial action taken will be entered into the site's diary or log book which is available for the EA to inspect upon request. The name of the inspector will be stated in the site's diary / inspection form for each day of operation.

8.4.3 Should the monitoring conclude that a certain activity is giving rise to noise which is causing unacceptable impacts, steps will be made to reduce the impact of this activity and will be agreed with the EA prior to commencement.

8.4.4 Site management will be suitably trained to carry out these duties and delegate to operational staff. Further information regarding training and technical competence is provided within the site's EMS.

8.5 Monitoring

8.5.1 Operational staff will continuously monitor noise emissions whilst the treatment plant is in operation and will control noise levels using the procedures listed above, asking site management for advice as required. Work procedures will be stopped/adjusted should it be evident significant noise is being generated which has the potential to cause annoyance.

8.5.2 Site management will also be required to make a note of any unavoidable events such as plant failure, in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the EA or directly, any circumstances which led to that complaint as a result of elements outside of the

operator's control would be able to be attributed (or, at least, in part) to the cause of the complaint.

8.6 Emergencies

8.6.1 In the event of any unforeseen circumstances i.e. faulty equipment, the site manager will make an assessment of whether to cease activities/all operations with the main emphasis on site will be to reduce any noise impacts.

9 Actions when complaints are received

9.1 Complaints procedure

9.1.1 If any noise complaints are received, the relevant operator will complete a 'complaints and events log' and detailed individually on the complaints form (in Appendix II), both of which will be kept for inspection on request by the LA, EA or third parties. Details of information to be completed are dates, nature of complaint, weather conditions at the time of the complaint, investigation details, action taken and a signature (as a minimum).

9.1.2 The operator would also be required to make a note of any unavoidable events plant/equipment malfunctions in the site diary, rather than just actual complaints received. This will ensure that if complaints are received retrospectively from either the Council/EA or third parties, any circumstances which led to that complaint as a result of elements outside of the operator's control would be able to be attributed to the cause of the complaint.

9.1.3 It must be noted that the site lies adjacent to several industrial uses, so in the event of a complaint, the operator will substantiate the complaint by carrying out noise monitoring to identify whether the complaint is valid. If the complaint is valid, the site will implement the complaint procedures check and if required, amend site operations.

9.1.4 If the source cannot be ascertained with 100% confidence, site management will either suspend or reduce the likely noise generating activities.

9.1.5 If the source is within the site's control, site management will take appropriate action to ensure the issue has been rectified. This may take the form of the following:

i) Investigating the source to prevent a re-occurrence.
ii) Suspending operations which are not being conducted using best-practice controls.
iii) Investigate noise mitigation measures

iv) Logging findings of a – c in the site diary / complaints form and also in the reporting template within the EP.

9.2 Complaints recording

9.2.1 Any complaints received in relation to noise and vibration will be recorded on the form shown in Appendix II. This form will normally be completed, signed and dated by the site manager, compliance manager or TCM, if they are not available, the office manager

9.3 Key responsibilities

9.3.1 The table below outlines the key responsibilities and the staff member responsible for each task.

Table 9.1 – Key Responsibilities

Task	Staff position responsible
Noise monitoring and ongoing assessment	Site manager + operative
Vehicle maintenance	Specialist contractor
Overseeing of deliveries	Site manager + operative

10 Training

10.1 Training regime

10.1.1 All employees and sub-contractors of ETM Recycling Ltd involved with potentially noisy operations will receive training in noise and vibration monitoring and complaint reporting.

10.1.2 Training will be given to all relevant persons to make sure they are competent in completing noise and vibration survey forms, noise and vibration complaint report forms and the site diary to ensure sufficient monitoring of noise and vibration can be carried out and any problems addressed correctly.

10.1.3 When selecting new plant and equipment, consideration shall be given to the need to meet all legislation and statutory guidance on noise levels and to minimise levels of noise from selected equipment.

10.2 Vehicle / plant preventative maintenance training

10.2.1 This training is provided specifically for the vehicle and plant operators in order to ensure that all plant and machinery is checked regularly to prevent any occurrences which may lead to any adverse impacts on the environment or human health.

10.2.2 Training will be based on the preventative maintenance schedule supplied by the plant/equipment manufacturer.

10.2.3 The same training will be provided to senior management enabling a dual-level maintenance programme.

10.3 Liaison with neighbours

10.3.1 In the extreme event of a significant, but temporary, increase in noise and vibration from the site, neighbours will be contacted to advise them of the occurrence and action being taken to remediate the issue on site.

10.3.2 An open-door policy will be encouraged by the operator to enable any complaints from neighbouring premises (if received) to be dealt with immediately. The complainant will then be supplied with remedial actions taken and any procedures or measures put in place by the operator to reduce or ideally eradicate the likelihood of a subsequent complaint.

11 Conclusion

11.1 Summary & Recommendations

11.1.1 Oaktree Environmental Ltd has undertaken a full Noise Impact Assessment in line with per BS4142: 2014 for the proposed activities to take place at the site which is located at 41 Ashton Vale Rd, Bristol BS3 2HW.

11.1.2 The Noise Impact Assessment has been undertaken in order to determine the impacts associated with the proposed operation of the site 24 hours a day, 7 days a week. The assessment includes a comparison of the rating level from the proposed operations against the measured background sound level for each proposed extension period.

11.1.3 The site benefits from being within an established industrial estate, with the nearest receptors located approximately 250m from the site boundary.

11.1.4 It should of course be noted that the background monitoring was undertaken during a period of significant national restrictions taking place during January and February 2021. At this time people are asked to stay at home, except for specific purposes and to avoid meeting people with whom you do not live (including working from home where possible). A review of surrounding land uses and the national restrictions impact on the background noise level is provided within Section 5.2. It would not be unreasonable to assume that the measured LA90 are considerably lower than would normally be the case, Whilst the impact as a result of the Covid-19 lockdown/restrictions is hard to quantify, studies have shown that in varying urban environments, noise levels have reduced on average 5.4dB (LAeq), with example locations ranging from a reduction of 1-11dB (A). It should therefore be considered that the assessment comprises a worst-case scenario assessment.

11.1.5 The overall impact associated with the proposed extension of operating hours is considered low based on the; BS4142:2014 assessment within Tables 7.1-7.3, the following discussion regarding context and attenuation etc. and the BS8233:2014 assessment.

11.1.6 It should therefore be considered that noise does not constitute an impediment to the grant of the proposed application to extend the existing operations to 24 hours a day, 7 days a week.

11.1.7 This NVMP also produced by Oaktree Environmental Ltd will contain the relevant control measures required in order to further minimise the noise levels associated with the operation of the site as well as providing a methodology for responding to and investigating noise complaints.

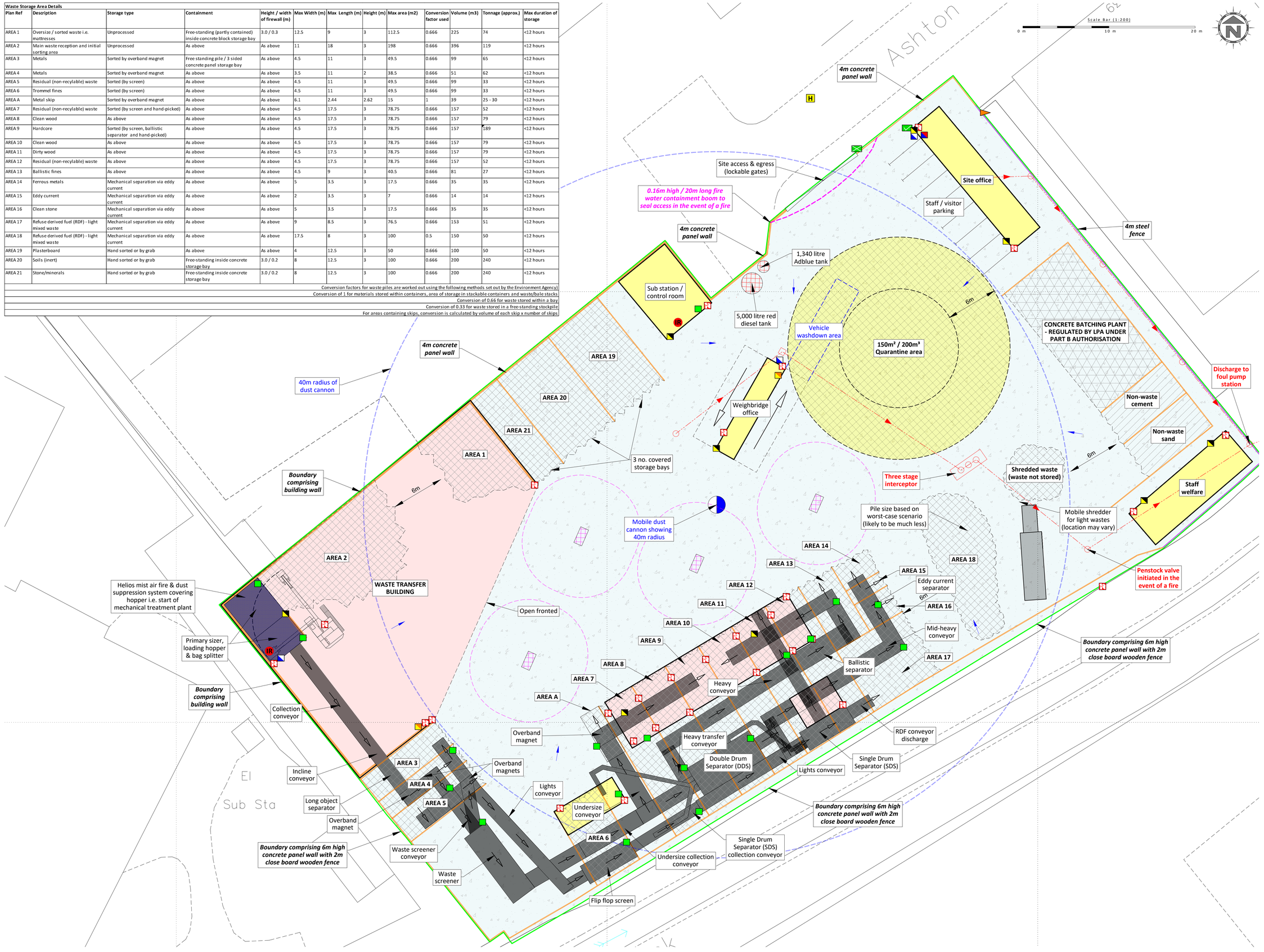
Appendix I

Drawings

Waste Storage Area Details

Plan Ref	Description	Storage type	Containment	Height / width of firewall (m)	Max Width (m)	Max Length (m)	Height (m)	Max area (m2)	Conversion factor used	Volume (m3)	Tonnage (approx.)	Max duration of storage
AREA 1	Oversize / sorted waste i.e. mattresses	Unprocessed	Free-standing (partly contained) inside concrete block storage bay	3.0 / 0.3	12.5	9	3	112.5	0.666	225	74	<12 hours
AREA 2	Main waste reception and initial sorting area	Unprocessed	As above	As above	11	18	3	198	0.666	396	119	<12 hours
AREA 3	Metals	Sorted by overband magnet	Free standing pile / 3 sided concrete panel storage bay	As above	4.5	11	3	49.5	0.666	99	65	<12 hours
AREA 4	Metals	Sorted by overband magnet	As above	As above	3.5	11	2	38.5	0.666	51	62	<12 hours
AREA 5	Residual (non-recylable) waste	Sorted (by screen)	As above	As above	4.5	11	3	49.5	0.666	99	33	<12 hours
AREA 6	Trommel fines	Sorted (by screen)	As above	As above	4.5	11	3	49.5	0.666	99	33	<12 hours
AREA A	Metal skip	Sorted by overband magnet	As above	As above	6.1	2.44	2.62	15	1	39	25 - 30	<12 hours
AREA 7	Residual (non-recylable) waste	Sorted (by screen and hand-picked)	As above	As above	4.5	17.5	3	78.75	0.666	157	52	<12 hours
AREA 8	Clean wood	As above	As above	As above	4.5	17.5	3	78.75	0.666	157	79	<12 hours
AREA 9	Hardcore	Sorted (by screen, ballistic separator and hand-picked)	As above	As above	4.5	17.5	3	78.75	0.666	157	189	<12 hours
AREA 10	Clean wood	As above	As above	As above	4.5	17.5	3	78.75	0.666	157	79	<12 hours
AREA 11	Dirty wood	As above	As above	As above	4.5	17.5	3	78.75	0.666	157	79	<12 hours
AREA 12	Residual (non-recylable) waste	As above	As above	As above	4.5	17.5	3	78.75	0.666	157	52	<12 hours
AREA 13	Ballistic fines	As above	As above	As above	4.5	9	3	40.5	0.666	81	27	<12 hours
AREA 14	Ferrous metals	Mechanical separation via eddy current	As above	As above	5	3.5	3	17.5	0.666	35	35	<12 hours
AREA 15	Eddy current	Mechanical separation via eddy current	As above	As above	2	3.5	3	7	0.666	14	14	<12 hours
AREA 16	Clean stone	Mechanical separation via eddy current	As above	As above	5	3.5	3	17.5	0.666	35	35	<12 hours
AREA 17	Refuse derived fuel (RDF) - light mixed waste	Mechanical separation via eddy current	As above	As above	9	8.5	3	76.5	0.666	153	51	<12 hours
AREA 18	Refuse derived fuel (RDF) - light mixed waste	Mechanical separation via eddy current	As above	As above	17.5	8	3	100	0.5	150	50	<12 hours
AREA 19	Plasterboard	Hand sorted or by grab	As above	As above	4	12.5	3	50	0.666	100	50	<12 hours
AREA 20	Soils (inert)	Hand sorted or by grab	Free-standing inside concrete storage bay	3.0 / 0.2	8	12.5	3	100	0.666	200	240	<12 hours
AREA 21	Stone/minerals	Hand sorted or by grab	Free-standing inside concrete storage bay	3.0 / 0.2	8	12.5	3	100	0.666	200	240	<12 hours

Conversion factors for waste piles are worked out using the following methods set out by the Environment Agency)
Conversion of 1 for materials stored within containers, area of storage in stackable containers and waste/bale stacks
Conversion of 0.66 for waste stored within a bay
Conversion of 0.33 for waste stored in a free-standing stockpile
For areas containing skips, conversion is calculated by volume of each skip x number of skips



NOTES

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REVISION HISTORY

Rev	Date	Init:	Description:
-	05.12.17	CP	Initial Drawing
A	06.02.18	CP	EA comments
B	01.02.21	CP	New draft
C	08.03.21	CP	Client comments/submission

Key:

- Permit boundary
- Waste storage areas
- Temporary waste waste storage areas
- Out-of-hours mobile plant storage
- Hazardous fluid storage (double bunded tanks)
- Quarantine area
- Hardstanding surface
- Waste storage and treatment building
- Other buildings (offices, etc.)
- Unsurfaced / vegetated areas (tree covered)
- Mains water point
- Spill kit & containment kits
- Fire water containment equipment
- Fire fighting equipment (extinguishers, etc.)
- Access routes for emergency vehicles
- Fire alarms including break glass and horns
- Surface water fall direction
- U-channel drain
- Underground drainage (foul)
- Manhole
- Gully
- Plant /electrics shut off
- Fire assembly point
- Fire doors / escapes
- CCTV cameras (indicative)
- Emergency services box
- 0.3m wide concrete panel wall (height varies)
- 0.2m wide concrete panel wall (height varies)
- 0.15m high concrete kerb
- H Fire hydrants
- IR Infra red / heat detection camera and
- Proposed wind sock

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

DRAWING TITLE
SITE LAYOUT & FIRE PLAN

CLIENT
ETM Recycling Ltd

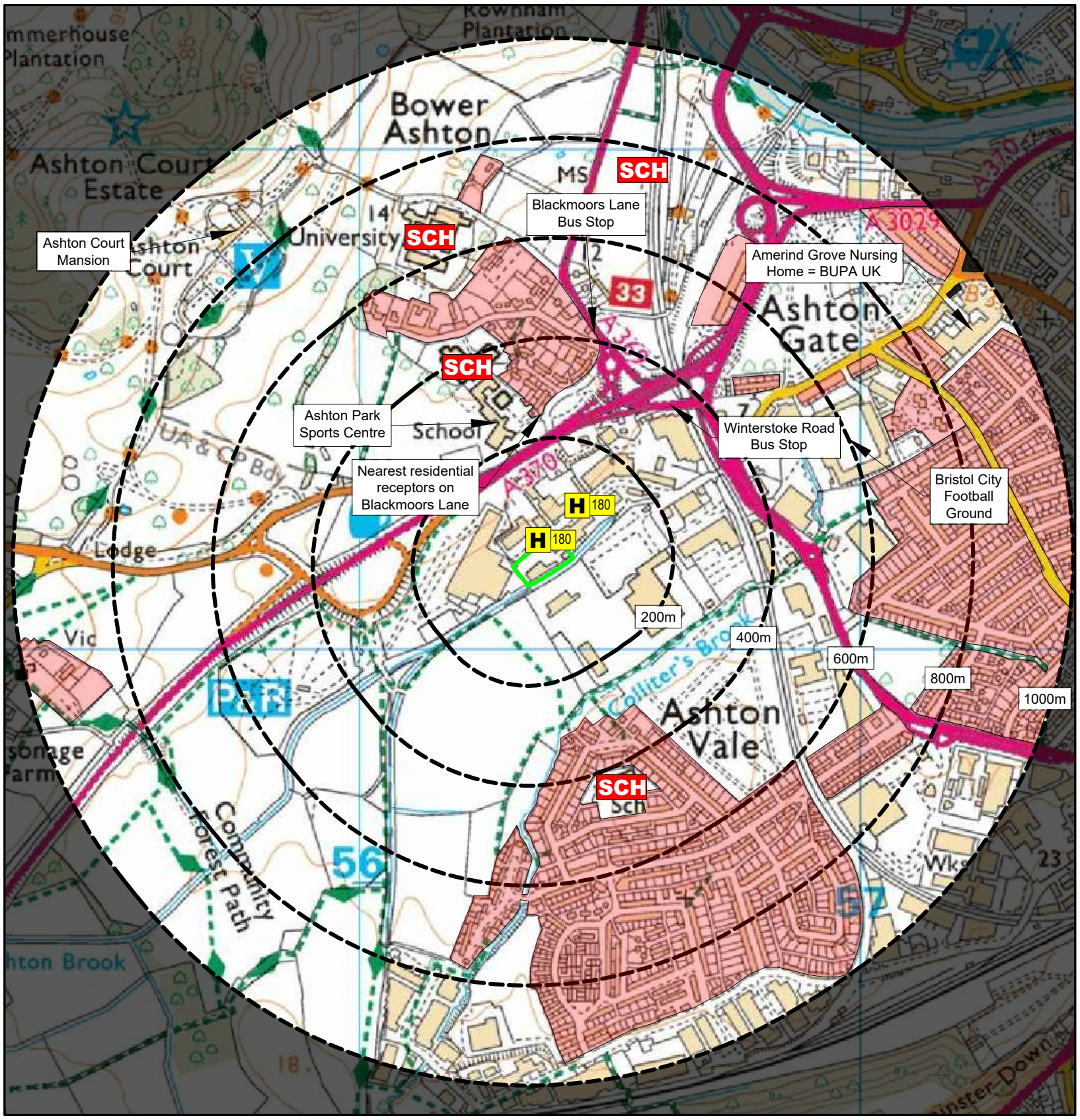
PROJECT/SITE
41 Ashton Vale Road, Ashton Bristol BS3 2HW

SCALE @ A1	JOB NO	CLIENT NO
1:200	005	2369

DRAWING NUMBER	REV	STATUS
AVR/2369/03	C	Issued

DRAWN	CHECKED	DATE
CP	-	08.03.21

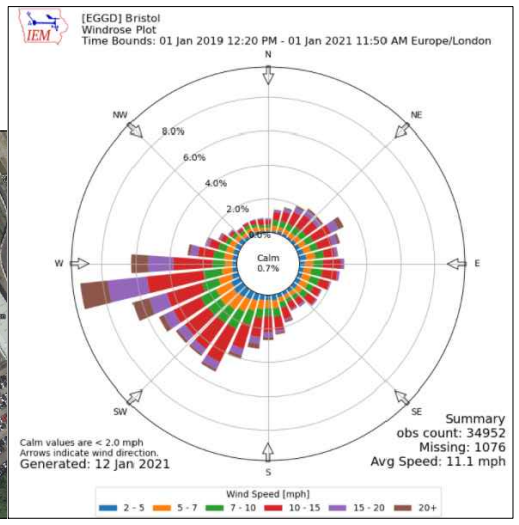
Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
t: 01606 558833 | e: sales@oaktree-environmental.co.uk



KEY:

- Permit boundary
- Surface water body (river / stream / pond / pool / lake)
- Residential blocks / workplaces
- Woodland habitats
- H 180 — Fire hydrant & water main size (mm)
- Mixture of retail, commercial, industrial & recreational premises
- Mixture of A, B, C roads
- Railway line
- SCH — Schools

Google capture showing adjacent sites (not to scale)



Compass Wind Rose for Bristol (EGGD) Period 2019-2021

Scale Bar (1:10,000)

0 m 100 200 300 400 500 m

Oaktree Environmental Ltd

Waste Management and Environmental Consultants

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Client: ETM Recycling Ltd			
Site: ETM Recycling Facility, 41 Ashton Vale Road, Ashton Bristol BS3 2HR			
NGR: ST 56367 71194			
Date: 08 March 2021		Printed At: A3	
Title: RECEPTOR PLAN	Scale: 1:10,000	Revision: A	Drawn By: CP
Drawing No: AVR/2369/04	Client No: 2369	Job No: 005	Checked:

Notes:

(1) Drawing is for indication only.
(2) Wind rose data shows the prevailing wind direction to be blowing from the WSW towards ENE.

Revision Details:

Rev:	Description:	Date:
-	Initial drawing	30/11/17
A	Variation copy	08/03/21

Appendix II

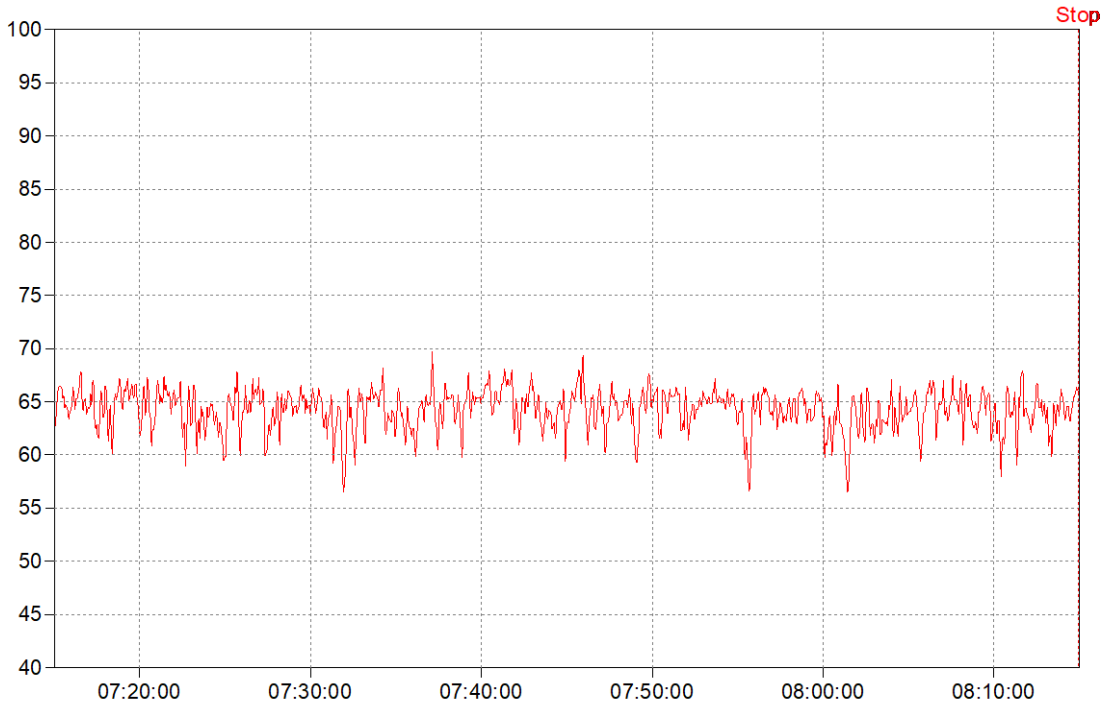
Photographs of Screening/Specification

Appendix II

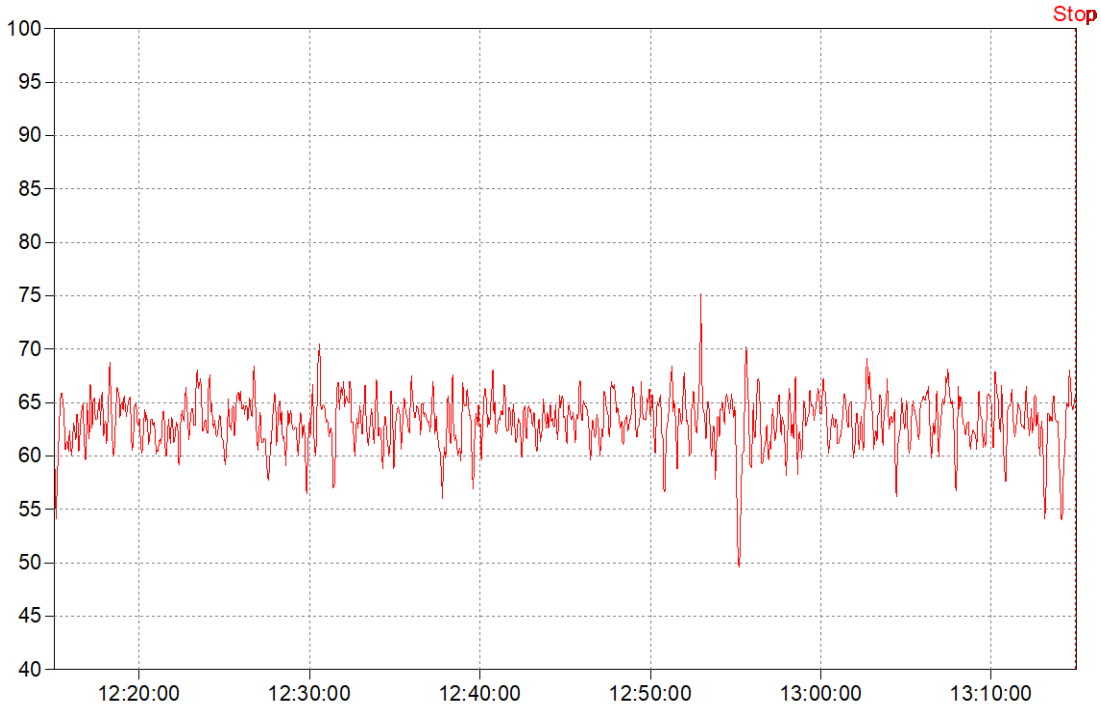
Appendix III

L(t) Graphs

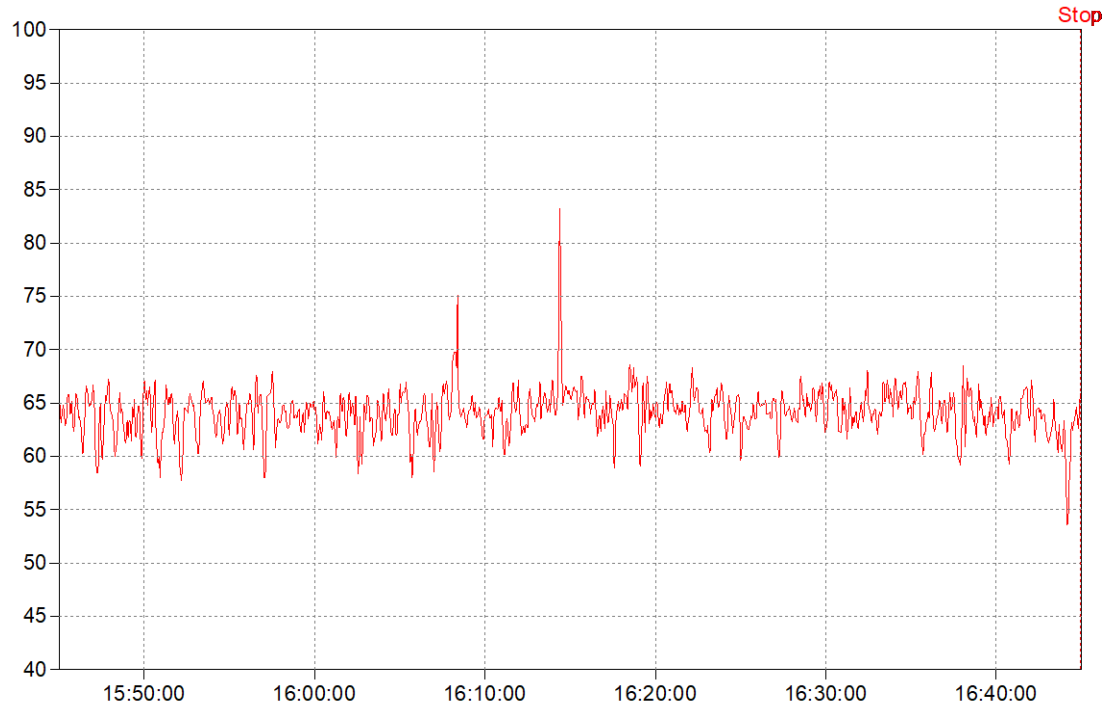
L(t) graph for 7:15 – 08:15 measurement at Blackmoors Lane – 15/01/2021



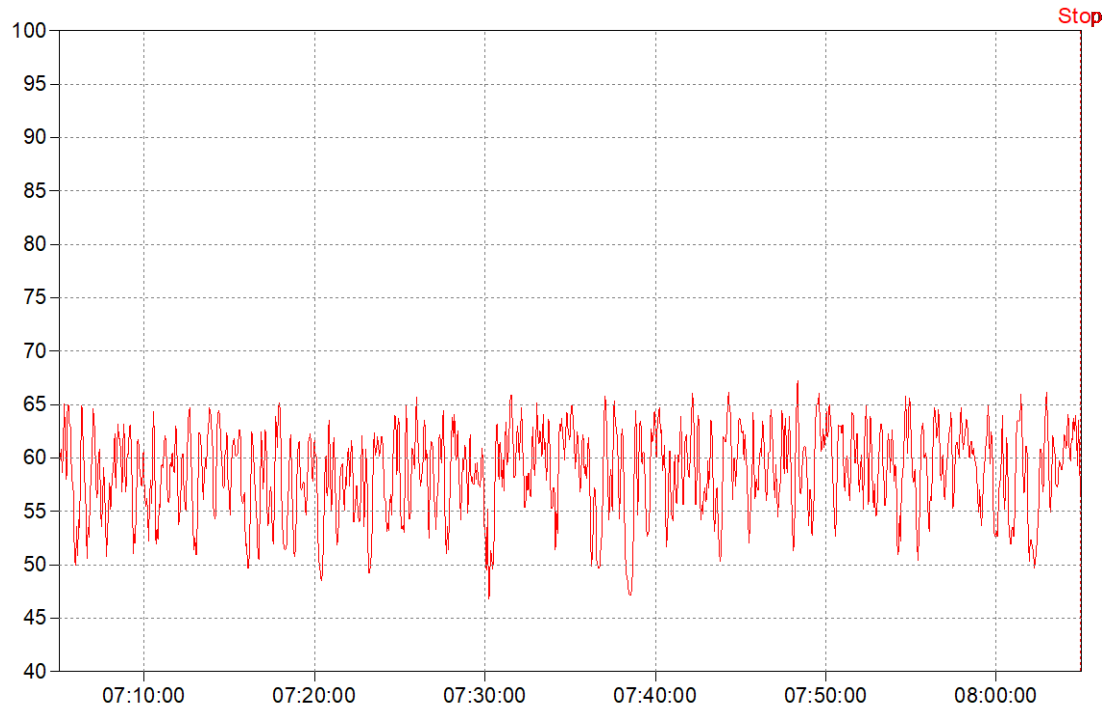
L(t) graph for 12:15 – 13:15 measurement at Blackmoors Lane – 15/01/2021



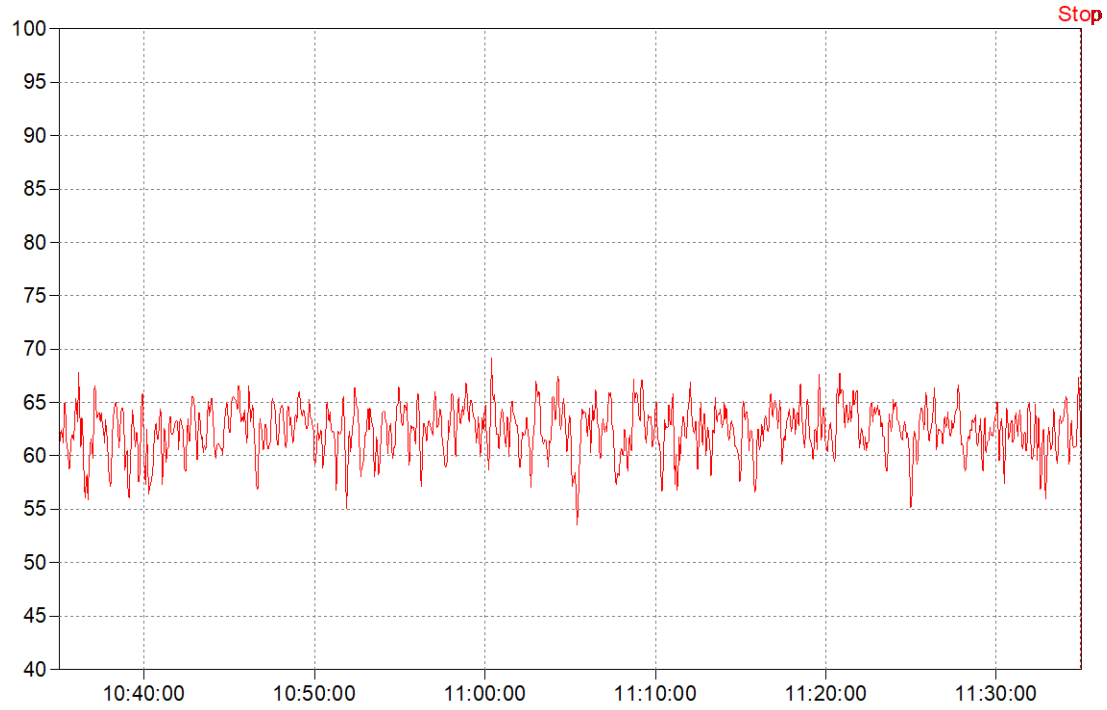
L(t) graph for 15:45 – 16:45 measurement at Blackmoors Lane – 15/01/2021



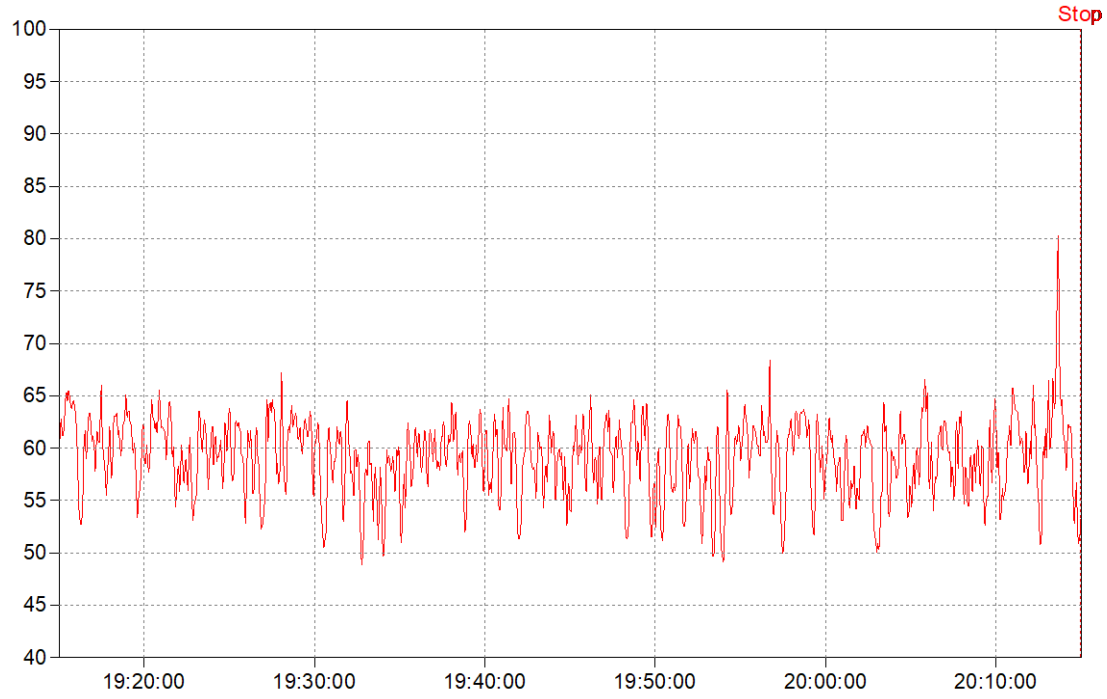
L(t) graph for 07:05 – 08:05 measurement at Blackmoors Lane – 23/01/2021



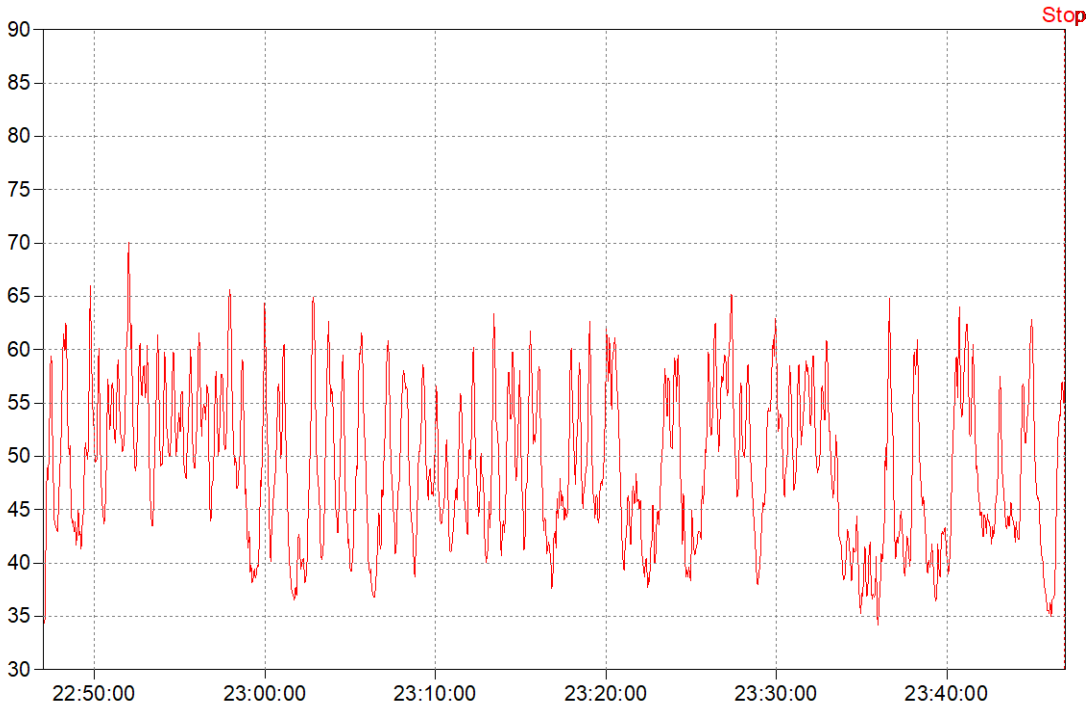
L(t) graph for 10:35 – 11:35 measurement at Blackmoors Lane – 23/01/2021



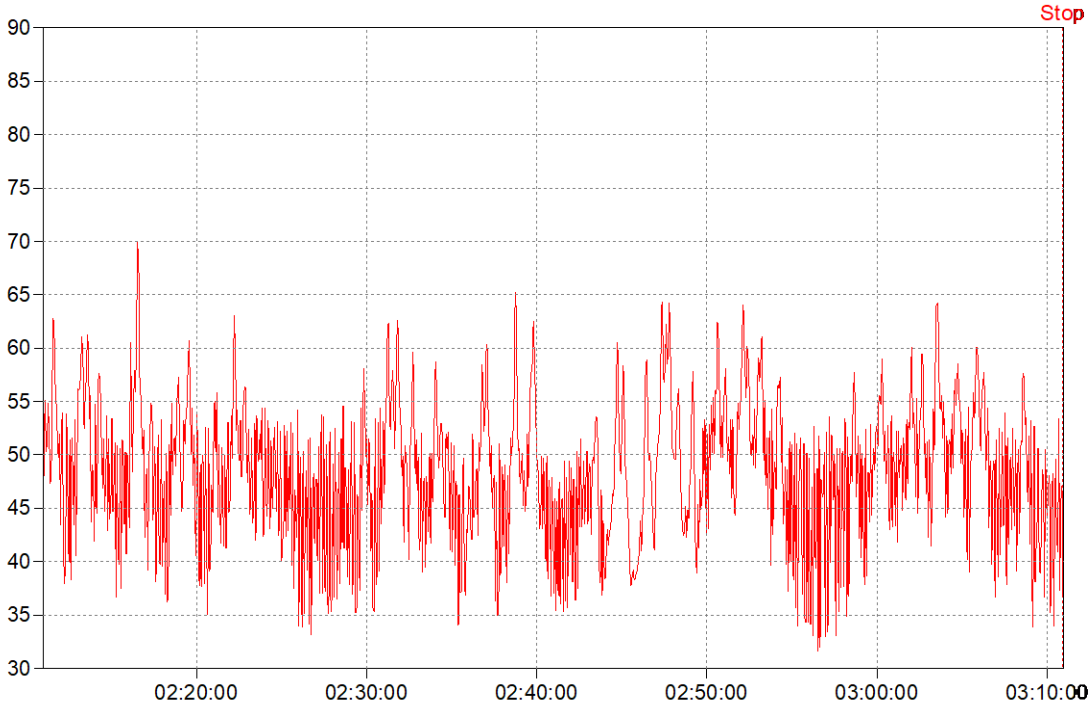
L(t) graph for 19:15 – 20:15 measurement at Blackmoors Lane – 25/01/2021



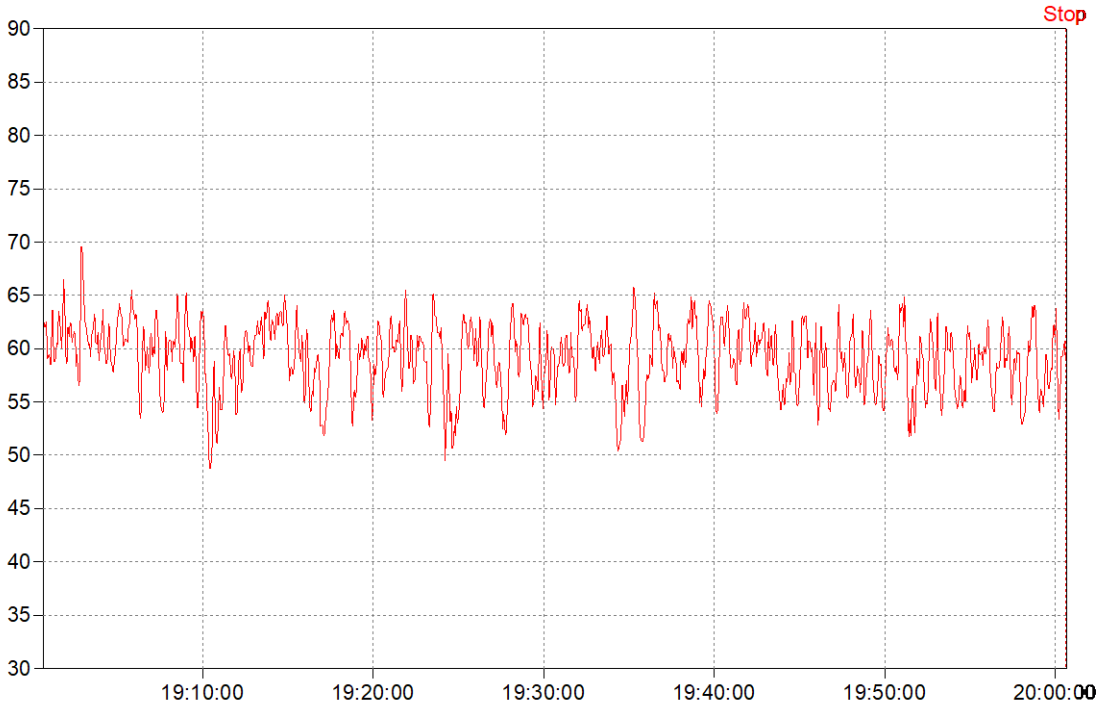
L(t) graph for 22:46 – 23:46 measurement at Blackmoors Lane – 25/01/2021



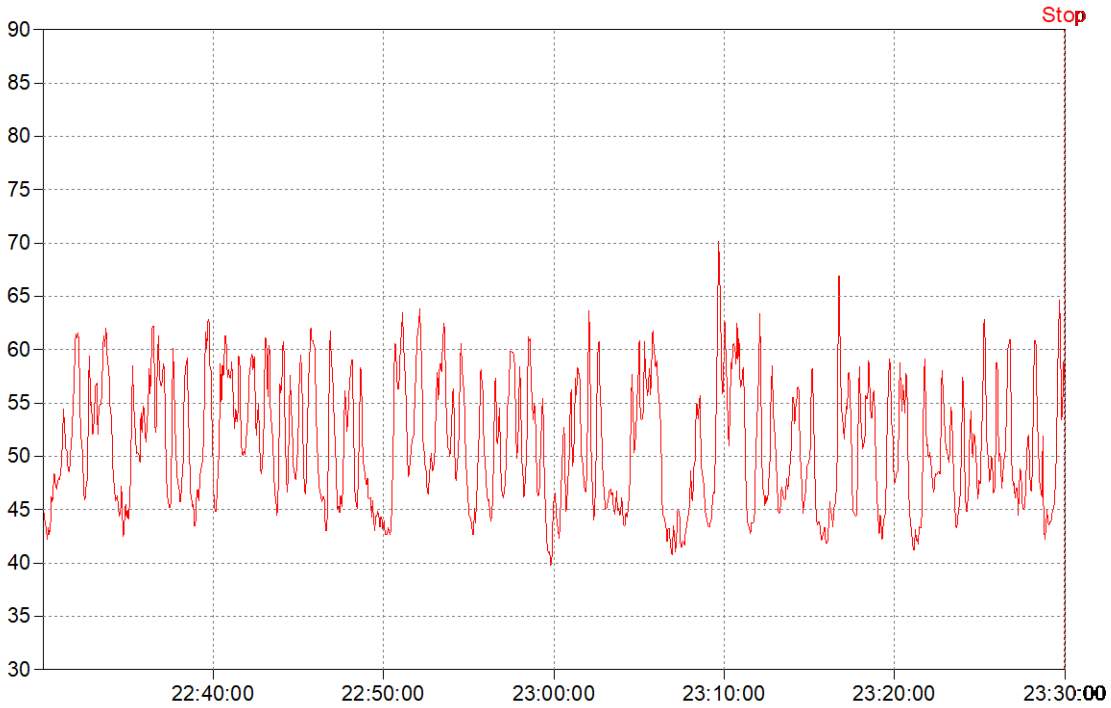
L(t) graph for 02:10 – 03:10 measurement at Blackmoors Lane – 26/01/2021



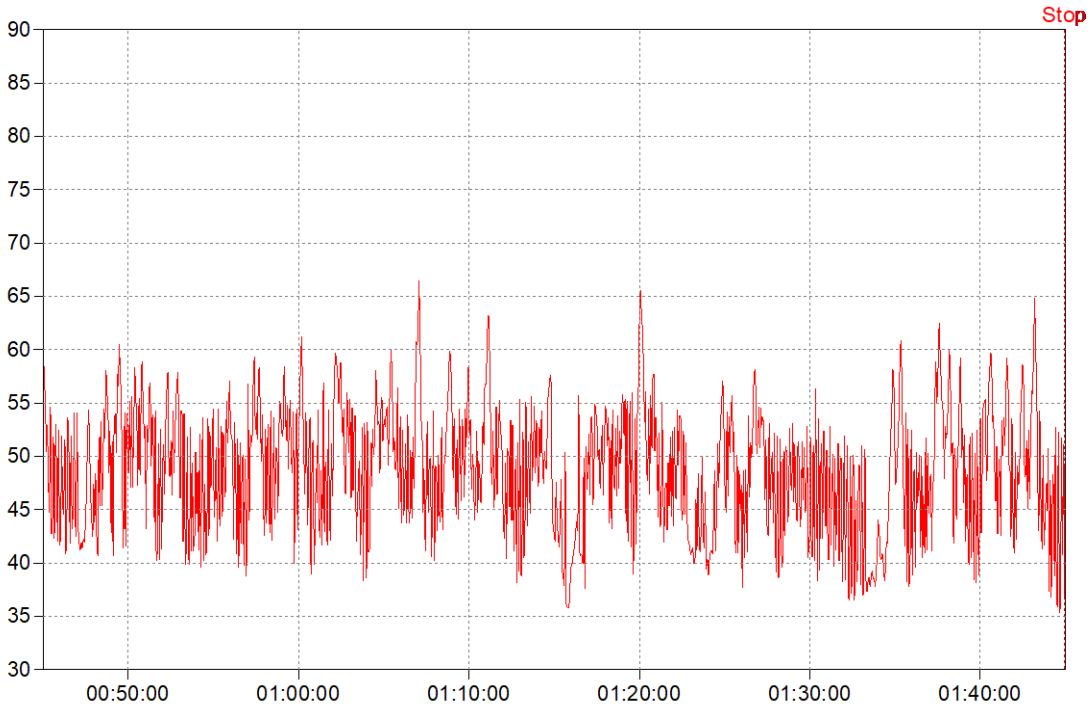
L(t) graph for 19:00 – 20:00 measurement at Blackmoors Lane – 30/01/2021



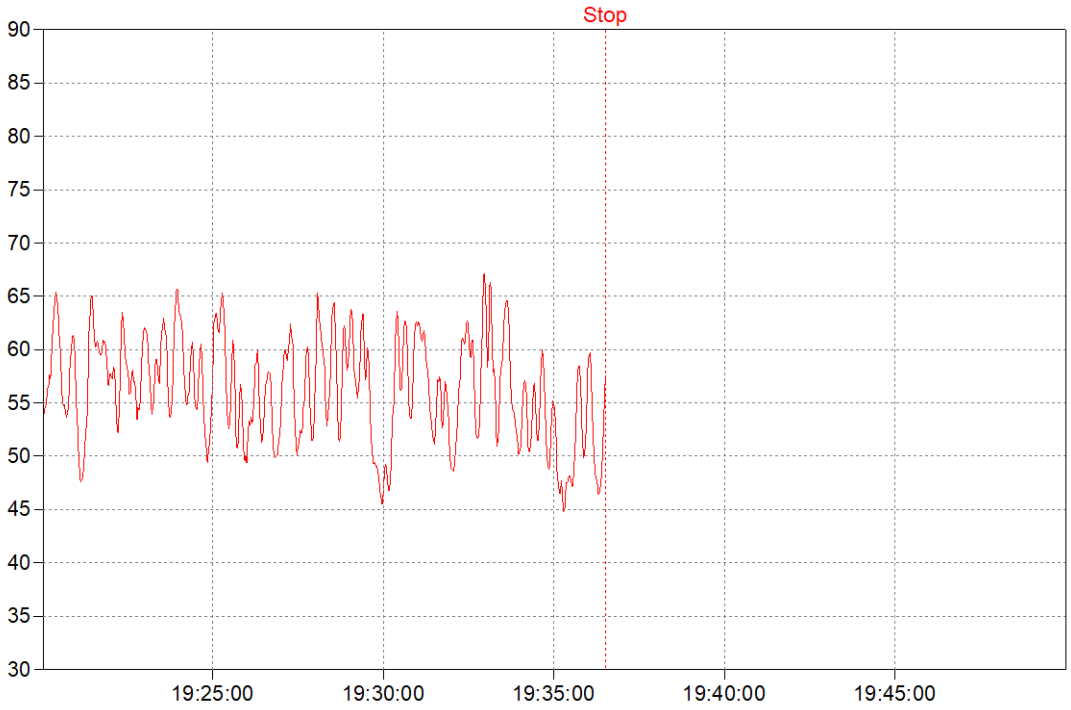
L(t) graph for 22:30 – 23:30 measurement at Blackmoors Lane – 30/01/2021



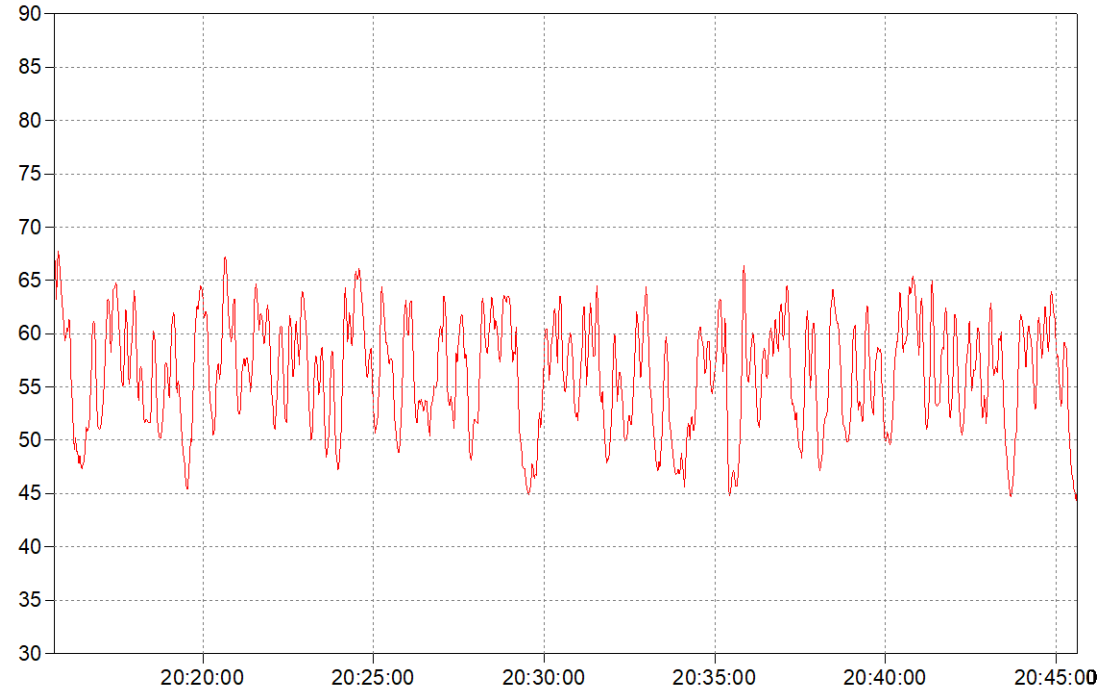
L(t) graph for 00:45 – 01:45 measurement at Blackmoors Lane – 31/01/2021



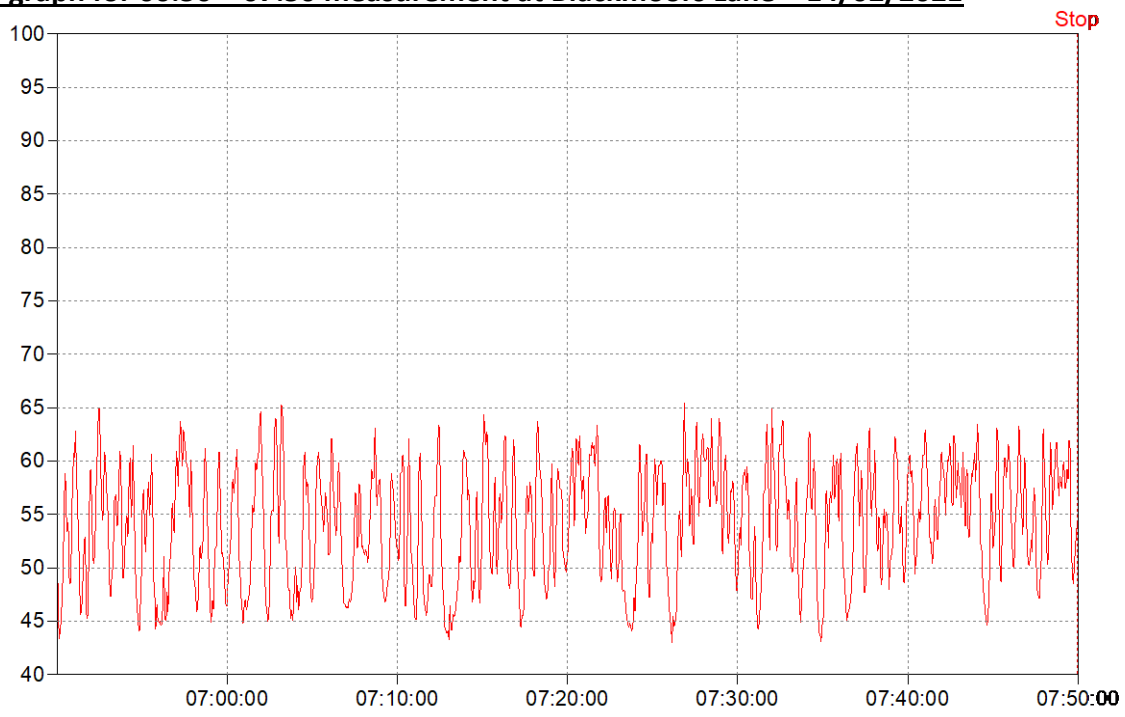
L(t) graph for 19:20 – 19:35 measurement at Blackmoors Lane – 31/01/2021



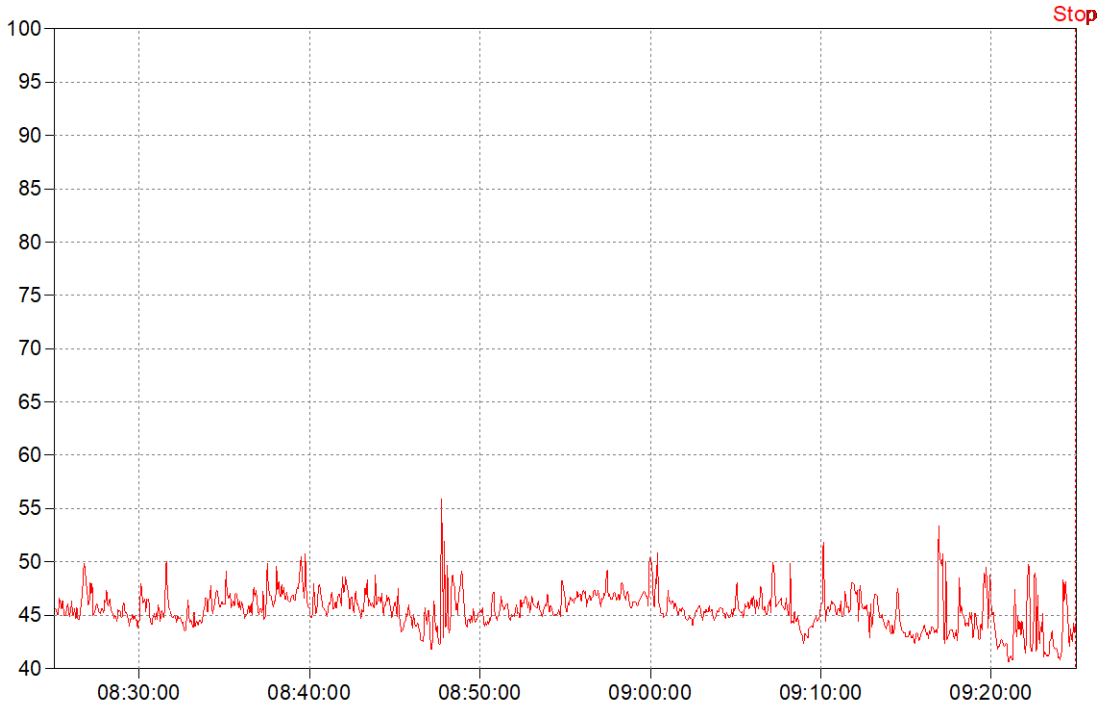
L(t) graph for 20:15 – 20:45 measurement at Blackmoors Lane – 31/01/2021



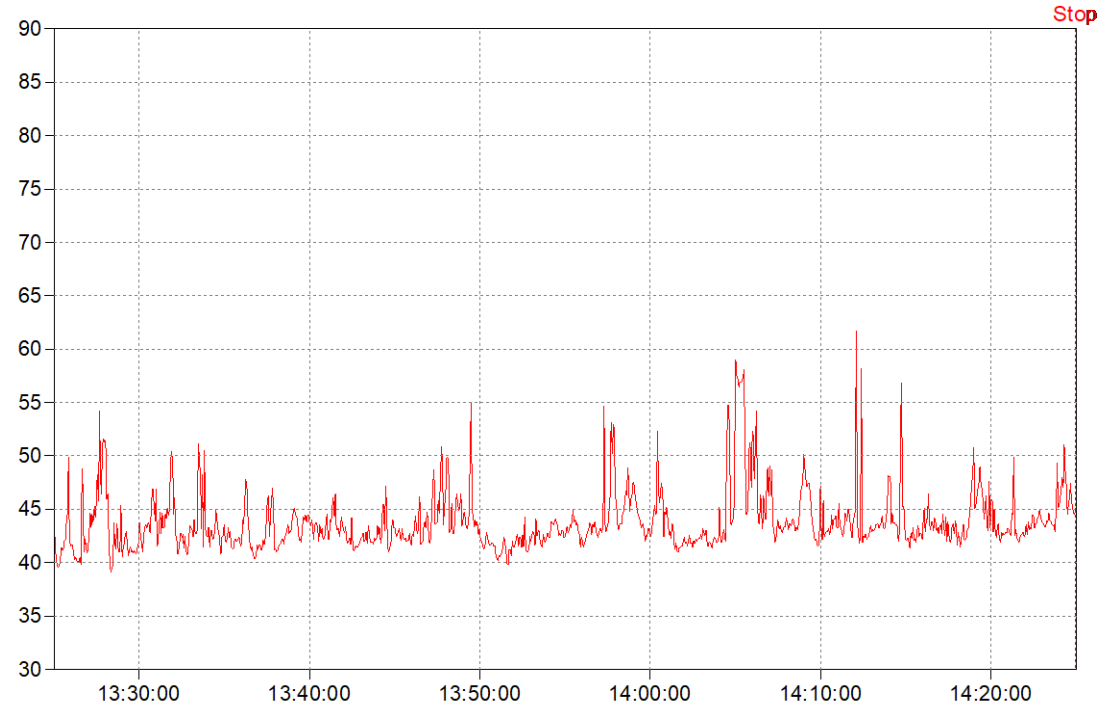
L(t) graph for 06:50 – 07:50 measurement at Blackmoors Lane – 14/02/2021



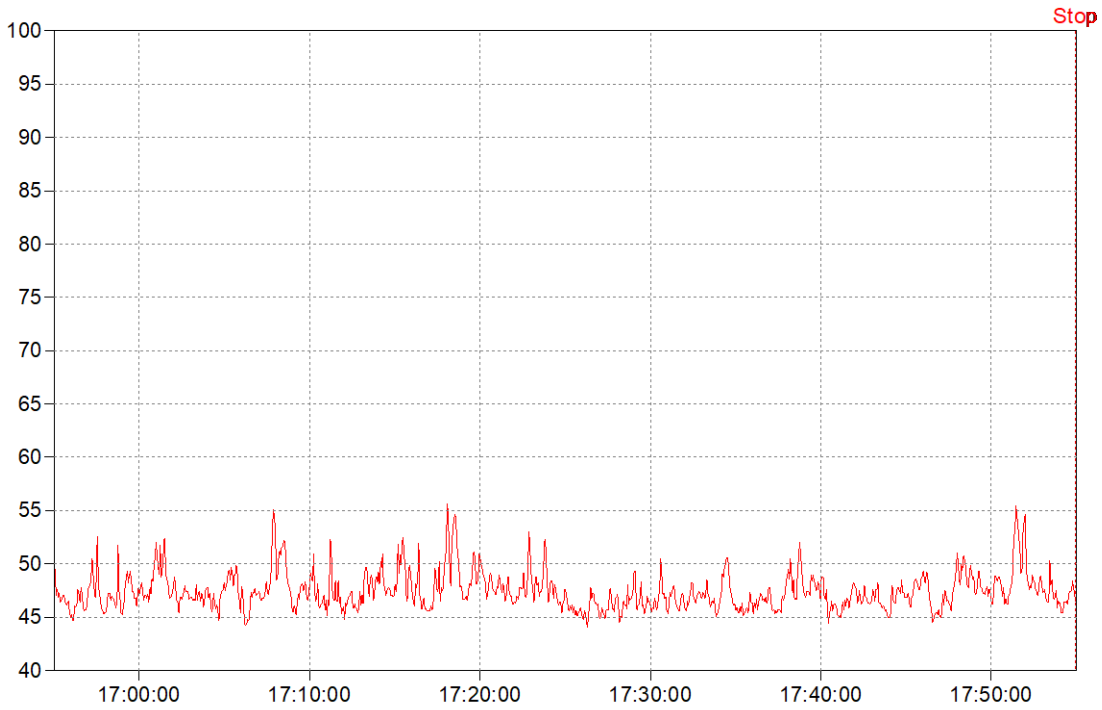
L(t) graph for 08:25 – 09:25 measurement at Silbury Road – 15/01/2021



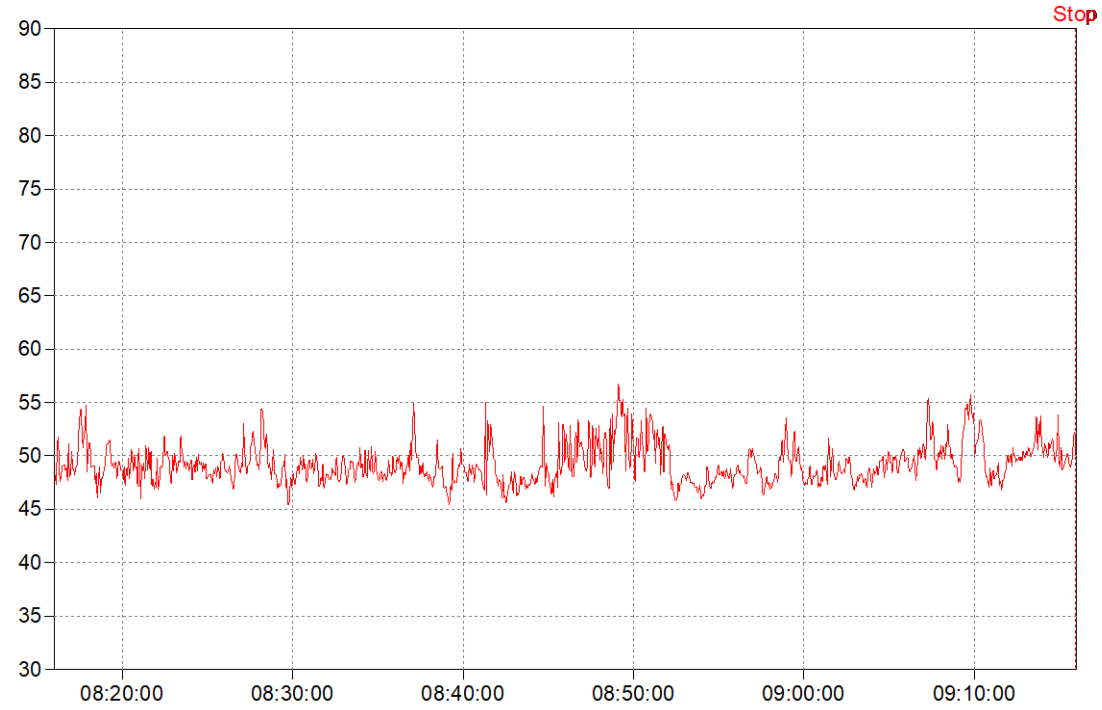
L(t) graph for 13:25 – 14:25 measurement at Silbury Road – 15/01/2021



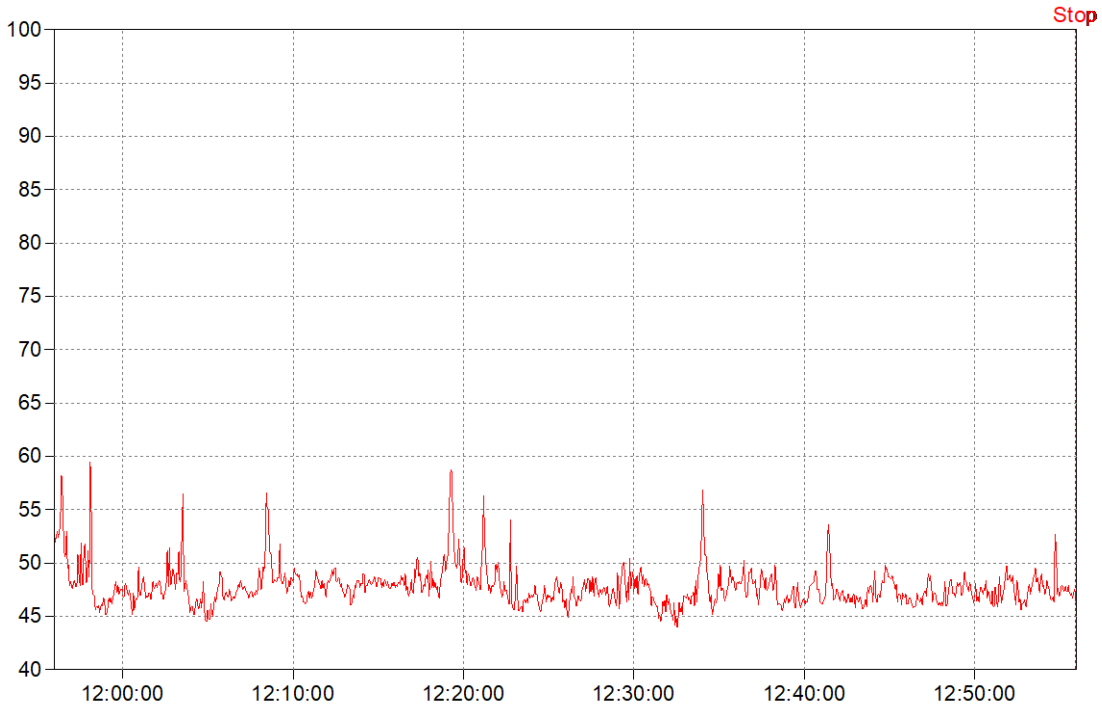
L(t) graph for 16:55 – 17:55 measurement at Silbury Road – 15/01/2021



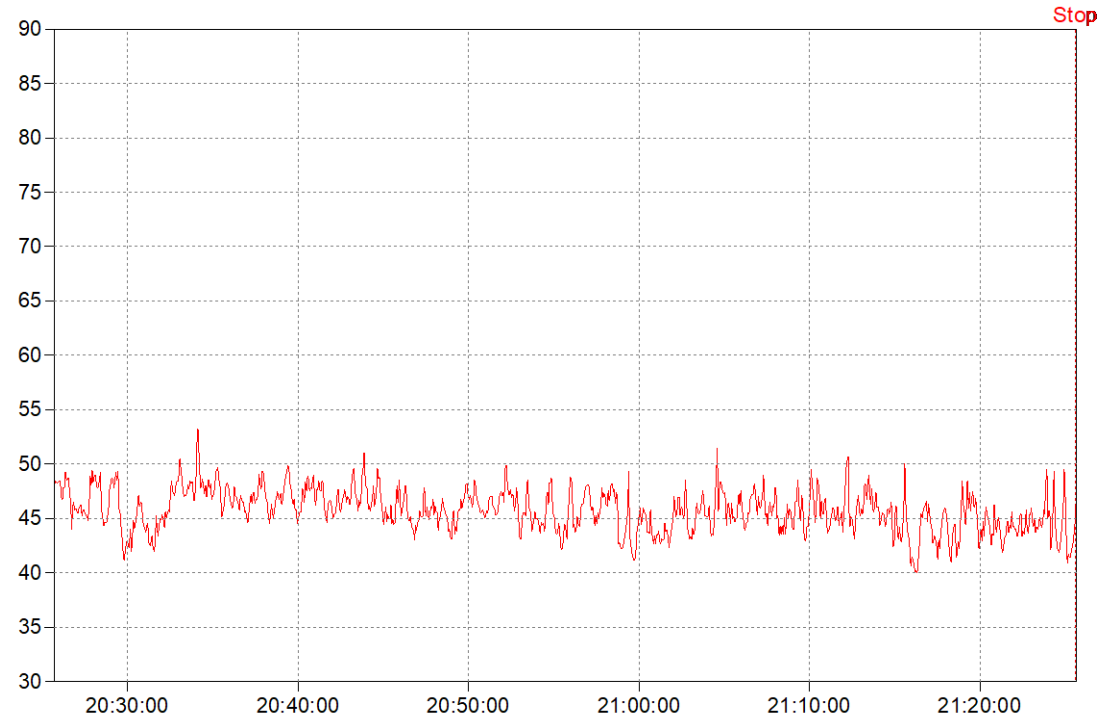
L(t) graph for 08:16 – 09:16 measurement at Silbury Road – 23/01/2021



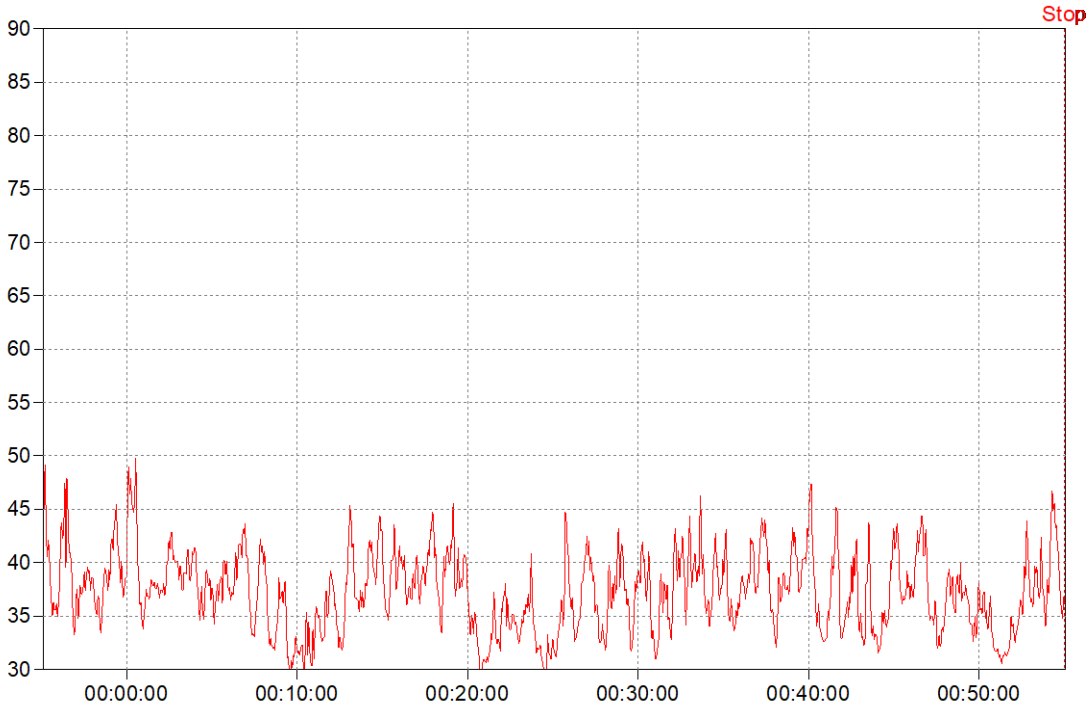
L(t) graph for 11:55 – 12:55 measurement at Silbury Road – 23/01/2021



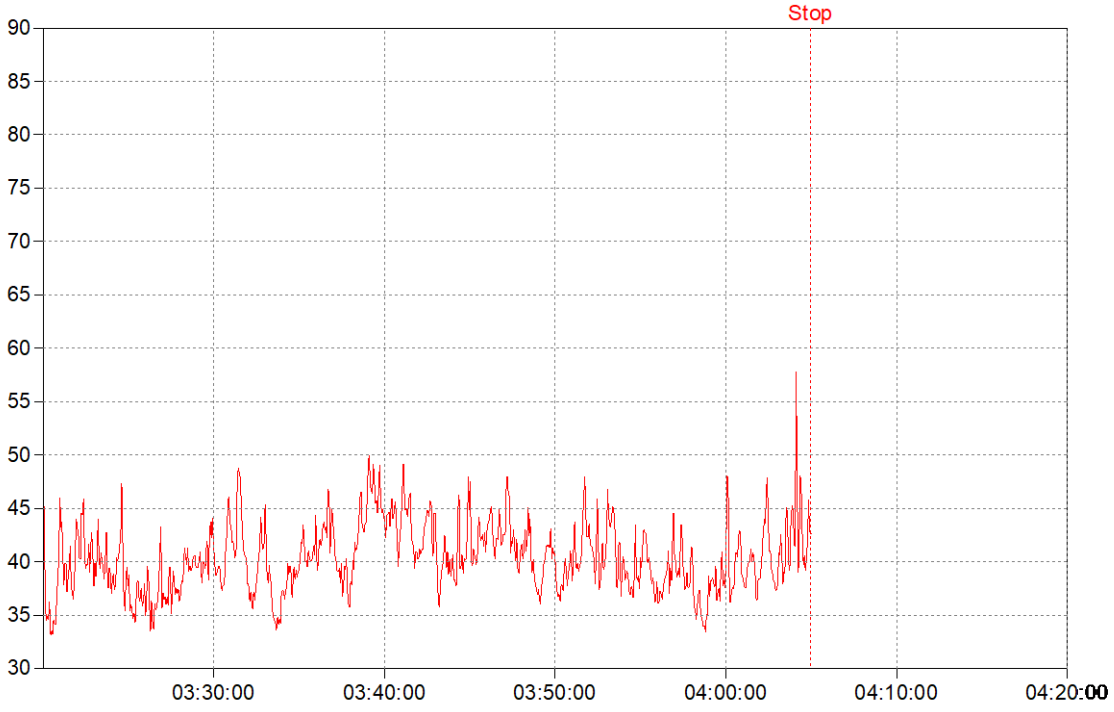
L(t) graph for 20:25 – 21:25 measurement at Silbury Road – 25/01/2021



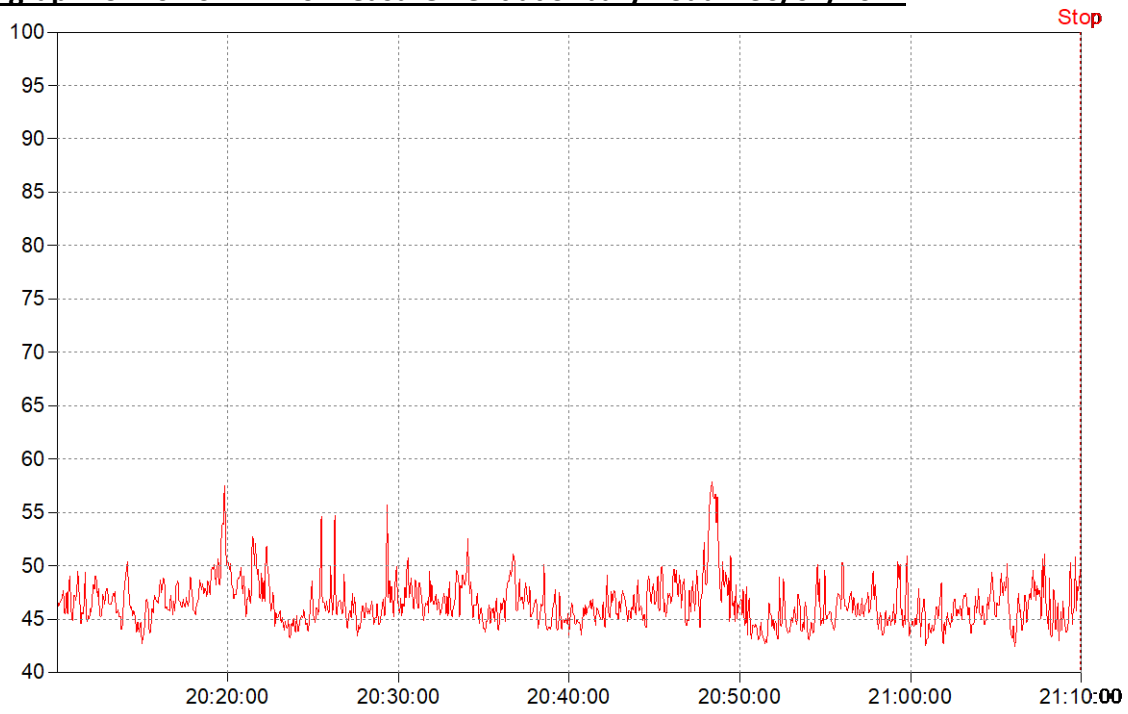
L(t) graph for 23:55 – 00:55 measurement at Silbury Road – 25/01/2021



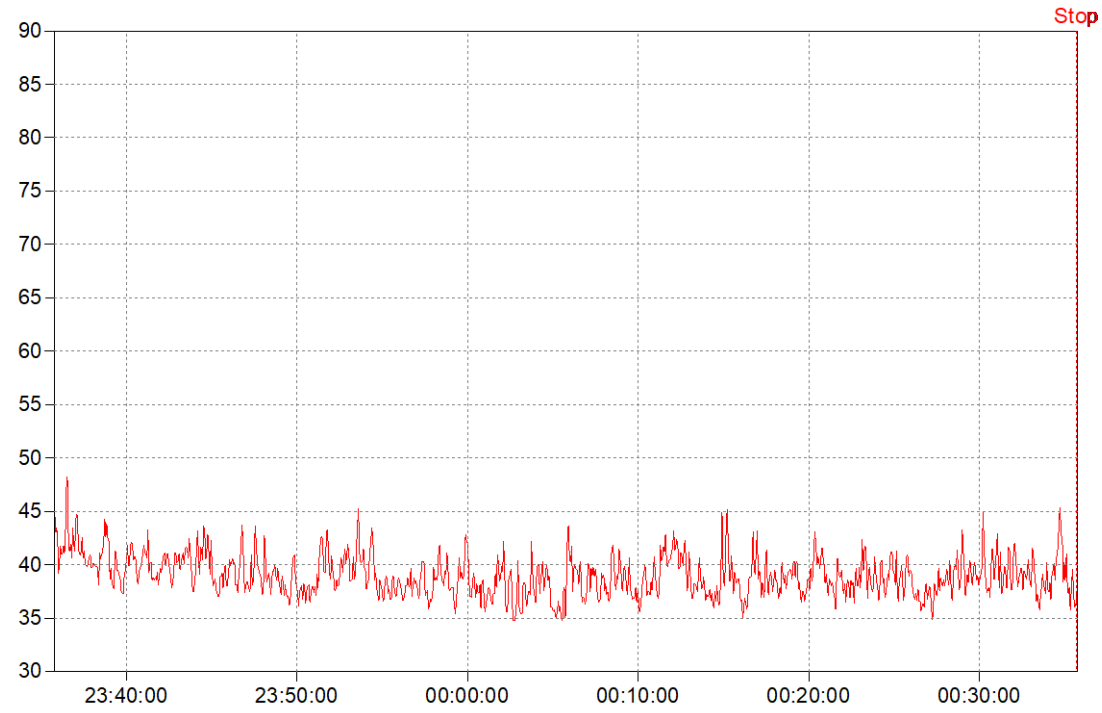
L(t) graph for 03:20 – 04:05 measurement at Silbury Road – 26/01/2021



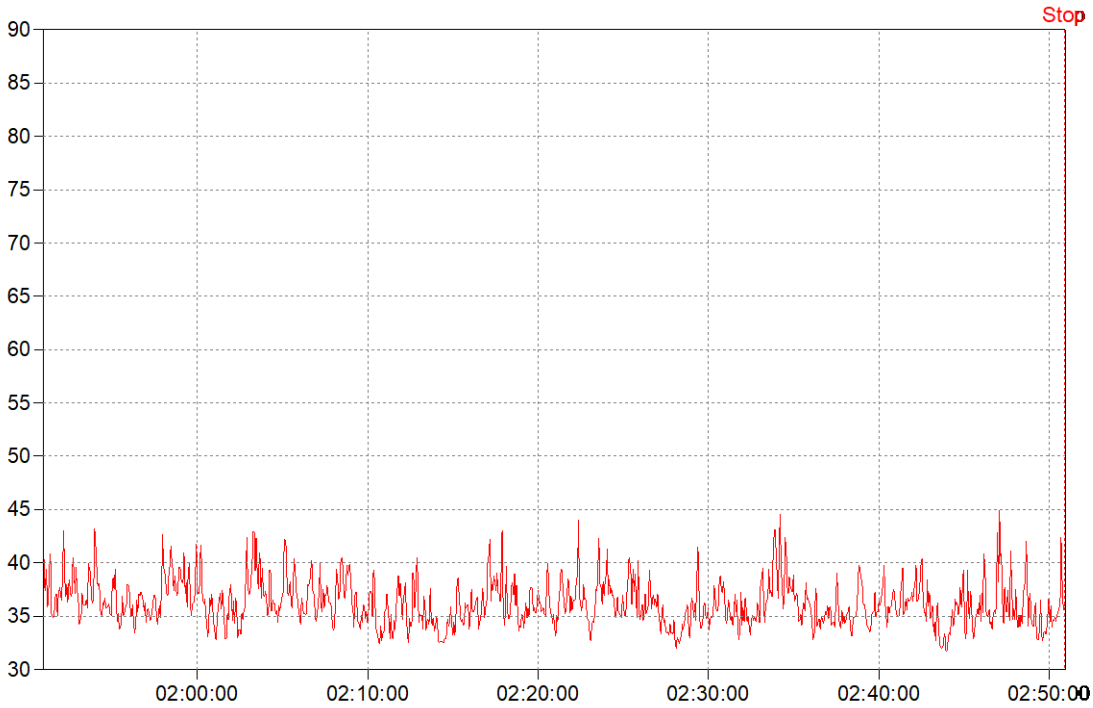
L(t) graph for 20:10 – 21:10 measurement at Silbury Road – 30/01/2021



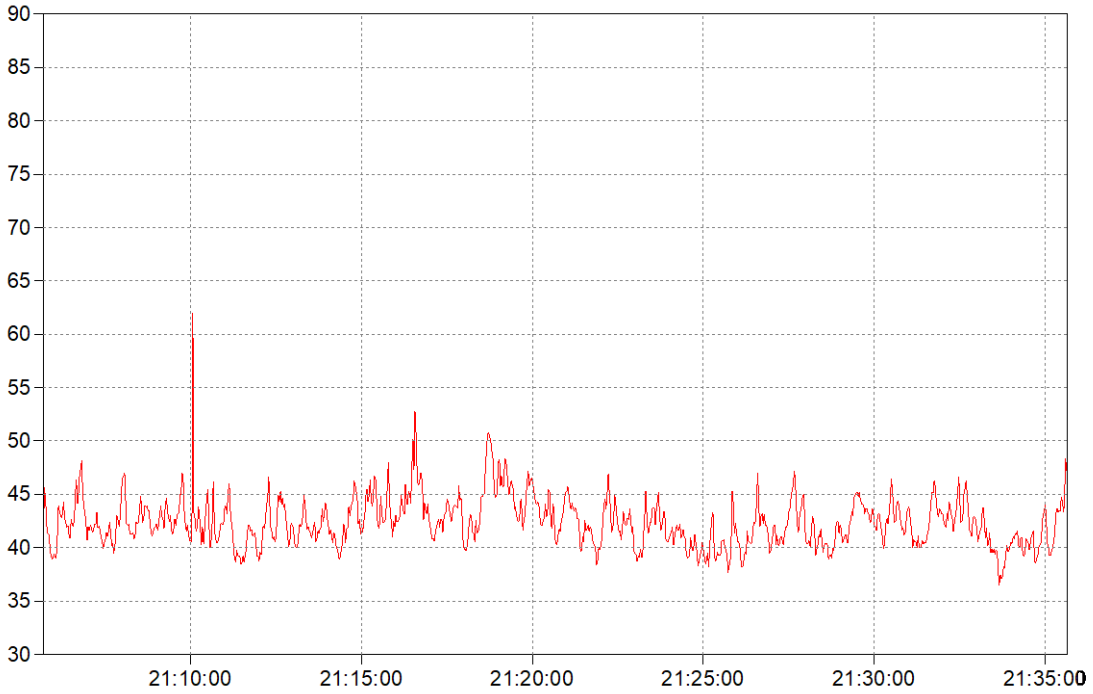
L(t) graph for 23:35 – 00:35 measurement at Silbury Road – 30/01/2021



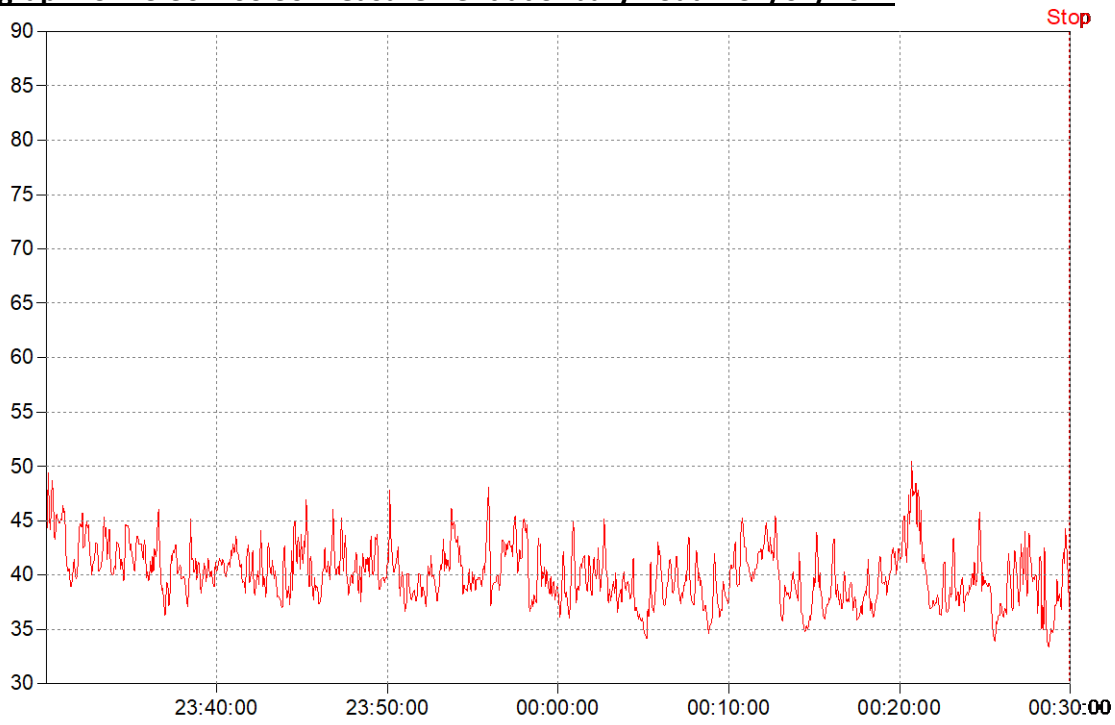
L(t) graph for 01:50 – 02:50 measurement at Silbury Road – 31/01/2021



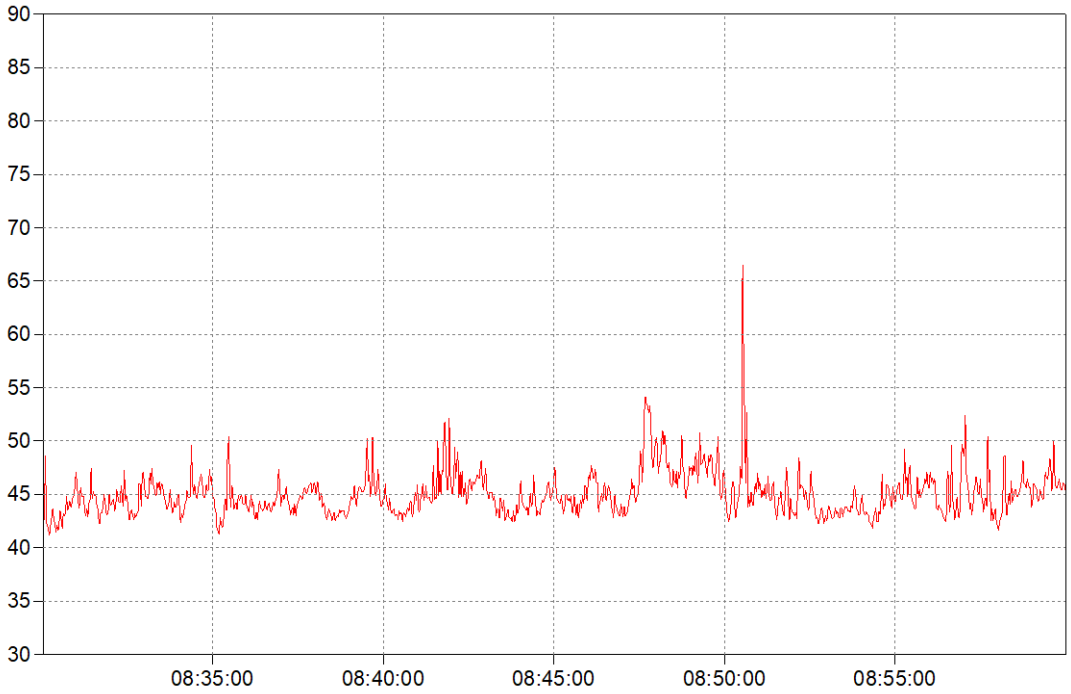
L(t) graph for 21:05 – 21:35 measurement at Silbury Road – 31/01/2021



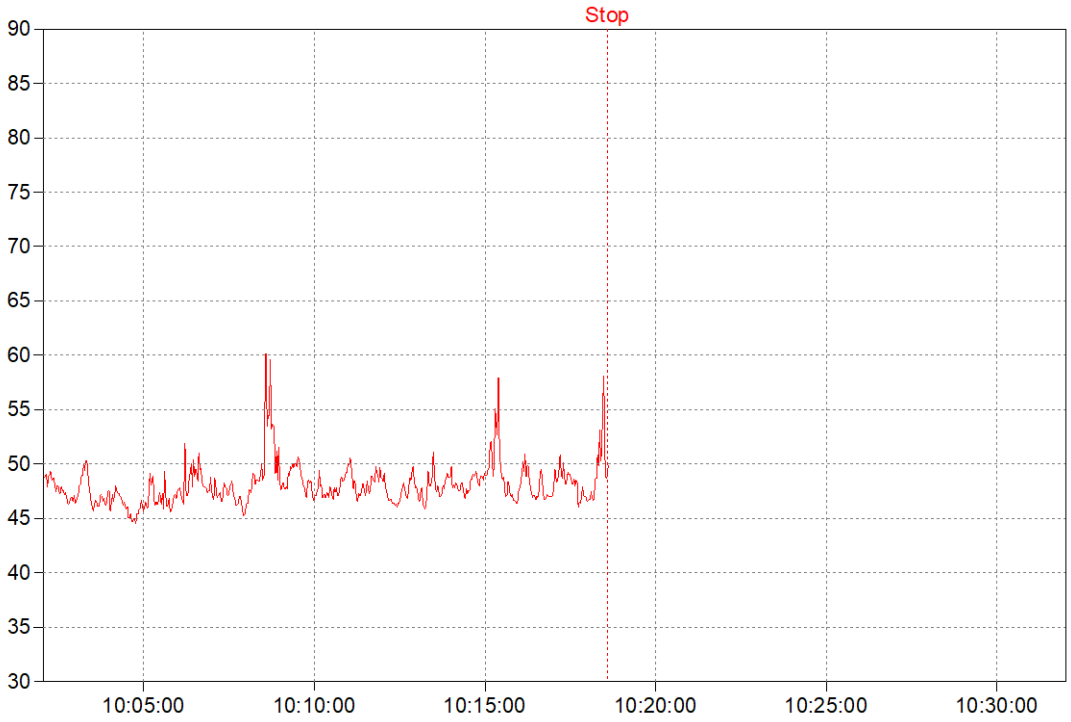
L(t) graph for 23:30 – 00:30 measurement at Silbury Road – 31/01/2021



L(t) graph for 08:30 – 09:00 measurement at Silbury Road – 14/02/2021



L(t) graph for 10:02 – 10:17 measurement at Silbury Road – 14/02/2021



Appendix IV

Complaints Procedure and Recording Form

COMPLAINTS PROCEDURE

1) Any complaints received in relation to noise and vibration will be recorded on the form below. This form will normally be completed, signed and dated by the site operator, if they are not available, the Office Manager will complete the form.

2) The name, address and telephone number of the caller will be requested.

3) Each complaint will be given a reference number.

4) The caller will be asked to give details of:
   - the nature of the complaint;
   - the time;
   - how long it lasted;
   - how often it occurs;
   - is this the first time the problem has been noticed; and,
   - what prompted them to complain.

5) The person completing the form will then, if possible, make a note of:
   - the weather conditions at the time of the problem (rain snow fog etc.)
   - strength and direction of the wind; and,
   - the activity on the site at the time the noise was detected, particularly anything unusual.

6) The reason for the complaint will be investigated and a note of the findings added to the report.

7) The caller will then be contacted with an explanation of the source of the complaint if identified and the action taken to prevent a recurrence of the problem in future.

8) If the caller is unhappy about the outcome or unwilling to identify themselves the caller will be referred to the EA.

9) Following any complaint the complaints procedure will be reviewed to see if any changes are required or if new procedures need to be put in place.

Complaints Report Form	
Date Recorded	Reference Number
Name and address of caller	
Telephone number of caller	
Time and Date of call	
Nature of complaint (noise, vibration) (date, time, duration)	
Weather at the time of complaint (rain, snow, fog, etc.)	
Wind (strength, direction)	
Any other complaints relating to this report	
Any other relevant information	
Potential reasons for complaint	
The operations being carried out on site at the time of the complaint	
Follow Up	
Actions taken	
Date of call back to complainant	
Summary of call back conversation	
Recommendations	
Change in procedures	
Changes to Written Management System	
Date changes implemented	
Form completed by	
Signed	
Date completed	