



# Brookhurst Wood MBT Facility

Environmental Permit Variation EPR/HP3232GW  
Noise and Vibration Management Plan

Biffa Waste Services Limited

Project reference: EPR/HP3238GW/V005  
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May 2023

## Quality information

### Prepared by



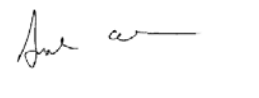
Savannah Rewcastle  
Graduate Environmental  
Consultant

### Checked by



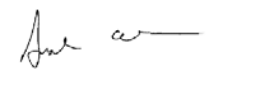
Caroline Braithwaite  
Senior Environmental  
Consultant

### Verified by



Angela Graham  
Associate

### Approved by



Angela Graham  
Project Manager

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## Distribution List

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	1	Neil Sumner / Biffa Waste Services Limited

## Prepared for:

Biffa Waste Services Limited

Prepared by Savannah Rewcastle  
Graduate Environmental Consultant

AECOM Infrastructure & Environment UK Limited  
12 Regan Way  
Chetwynd Business Park  
Nottingham NG9 6RZ  
United Kingdom

T: +44 (115) 907 7000  
aecom.com

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## Table of Contents

1.	Report Context.....	5
1.1	Introduction.....	5
1.2	Proposed Facility .....	5
2.	Noise Sensitive Receptors.....	6
3.	Site Operations and Site Noise Sources.....	7
3.1	Processing Equipment.....	7
3.2	Plant Movement.....	7
4.	Noise Control Measures .....	8
4.1	Physical Measures .....	8
4.2	Management Measures.....	8
4.3	Plant Purchasing Policy.....	9
5.	Compliance Noise Monitoring Protocol.....	10
5.1	Noise Monitoring Schedule.....	10
5.2	Instrumentation.....	10
5.3	Noise Monitoring Locations .....	10
5.4	Noise Monitoring Procedure .....	10
5.5	Exceedance of Noise Limits .....	11
6.	Complaint Management Procedure .....	12
7.	Record Keeping .....	13
8.	Review / Update .....	14
	Appendix A Environmental Noise Receptors.....	15
	Appendix B Example Log Sheet.....	17

## Figures

**No table of figures entries found.**

## Tables

Table 2-1: Environmental Noise Receptors .....	6
Table 3-1: Plant – MBT Extension Area.....	7

# 1. Report Context

## 1.1 Introduction

AECOM has been commissioned by Biffa Waste Services Limited (“the Operator” or Biffa) to prepare an application to vary the existing environmental permit (EPR/HP3238GW) to include an additional area of land in proximity to the current Mechanical and Biological Treatment (MBT) Facility for the loading, storage and dispatch of MBT outputs. The site is located at Brookhurst Wood, Horsham, West Sussex.

This document represents the Noise and Vibration Management Plan and should be read in conjunction with the other supporting application reports and risk assessments.

## 1.2 Proposed Facility

There are no changes proposed to the existing Mechanical Biological Treatment Facility operations.

Biffa plan to extend the existing MBT Facility to include an area of land known as Site Ha to be used as a waste storage and transfer area for loose or baled refuse derived fuel (RDF) produced by the MBT process to meet the requirements of the West Sussex County Council Materials Resource Management Contract (MRMC).

The area will be operated as a trailer park whereby up to 36 empty transport trailers may be delivered to site empty and subsequently filled with RDF. It is intended that alternate bays will be used for the full and empty trailers so the drivers can drop off and collect in the same trip. The RDF will be stored for a maximum 72 hours prior to export from site to EfW’s in the UK or abroad.

It is also proposed to allocate a controlled area for the storage of containerised covered CLO (Compost Like Organic), this material will be a by-product of the food waste process and will be taken to land spreading within the vicinity of the site during the week. Over weekends there will be a need to store the CLO at the site.

No waste treatment or processing will take place as part of this activity and total waste storage (daily maximum) is estimated at 450 tonnes of RDF and estimated 100 tonnes of digestate.

## 2. Noise Sensitive Receptors

Based on the noise assessment report the nearest noise-sensitive receptors are as detailed below in Table 2.1. A location plan of the local area showing receptor and noise monitoring positions is provided in Figure 1, Appendix A

**Table 2-1: Environmental Noise Receptors**

Receptor ID	Description	Approx. Distance from Installation Boundary (m)	Direction
R1	South Lodge	521	Northeast
R2	Graylands Lodge	309	East
R3	Bramblehurst	341	Southeast
R4	Cox Farm	338	West
R5	Gunbarn / The Nowhere House	900	Northwest

### 3. Site Operations and Site Noise Sources

#### 3.1 Processing Equipment

There are no changes proposed to the existing Mechanical and Biological Treatment (MBT) operations. Waste processing and loading operations will continue to take place within the MBT building.

The new waste transfer and storage area will be designed to facilitate temporary storage of MBT outputs on empty transport trailers for removal from site. The area can cater for up to 36 transport trailers (curtain siders or enclosed containers) and the intention is to use alternate bays for the full and empty trailers so the drivers can drop off and collect in the same trip.

No waste treatment, processing or loading will take place as part of this activity and total waste storage (daily maximum) is estimated at 450 tonnes of RDF and estimated 100 tonnes of digestate.

#### 3.2 Plant Movement

A plan showing the application site boundary and layout for the MBT and new Site Ha waste transfer and storage area is presented in Drawings WZD230400 and WXD230500 (Application Part 11).

Operations of the waste transfer and storage area will be restricted to normal site working hours (as per the Brookhurst Wood Landfill Site permitted working hours, i.e. Monday to Friday 07:30-18:00 hours and Saturday 07:00-15:00 hours).

Plant associated with the waste transfer and storage area are summarised in Table 3.1:

**Table 3-1: Plant – MBT Extension Area**

Component	Location
Front Loader	Material reception area
Forklift	Material reception area

The MBT loading plant would only be used for short durations and not be a continuous source of sound during the operational hours.

## 4. Noise Control Measures

### 4.1 Physical Measures

No additional physical noise control measures (e.g. additional noise bunds, acoustic barriers, or enclosures) are currently proposed beyond those already in place. Opportunities for additional physical noise control measures will be reviewed on a regular basis and, where practicable and cost effective, will be implemented.

The fitting and use of audible reversing warning systems on mobile plant and vehicles is a health and safety requirement which saves lives. The use of conventional audible reversing alarms ('bleepers') can cause excessive noise that may transmit beyond the site boundary. Alternatives exist, which, whilst ensuring they give proper warning, have a reduced noise impact on persons outside the site (e.g. self-adjusting (to background noise levels) and broadband 'white noise' alarms which produce a reduced tonal noise).

Mobile plant operated by the site shall be fitted with white noise or other suitable reversing alarms that will be unlikely to cause annoyance to nearby noise sensitive receptors.

It is likely that vehicles accessing the site are fitted with a range of reversing alarms that are essential for health and safety at other sites that they serve. Reversing will only be carried out where necessary.

### 4.2 Management Measures

The Site Manager has overall responsibility to ensure noise from the site is kept to a minimum. The Site Manager is responsible for ensuring that any applicable noise limits at sensitive receptors set by any planning permission conditions are met.

All staff working on the site have a responsibility to be aware of the need to ensure noise generated by the site is kept to a minimum and to report any potential issues or any potential improvements.

Although the noise assessment included in the Environmental Assessment (see Impact Risk Assessment, Application Section 8) demonstrated that no further mitigation measures were necessary as a result of the introduction of the Site Ha waste storage and transfer area, a comprehensive range of management noise control measures are already in place at the site. These measures will continue and will be regularly reviewed and improvements implemented where practicable.

Management noise control measures include:

- all site staff to be instructed on the importance of noise control and minimising noise emissions from the site during their inductions;
- reinforcement of induction information within regular "toolbox talks";
- signage on site, reminding all staff of the need to keep noise to a minimum;
- horns on vehicles and mobile plant not to be used, unless absolutely necessary;
- engines not to be "revved", unless absolutely necessary;
- vehicle and mobile plant engines to be switched off when stationary, unless impracticable;
- static plant engines to be switched off when not in use;
- all plant and machinery used on site to be fitted with an effective silencer and operate with doors or cowls of engine(s) in the closed position;
- vehicle speeds within the site to be restricted; and
- all plant and machinery to be regularly maintained (in accordance with the planned maintenance programme), to ensure that no item will produce excessive noise.



### 4.3 Plant Purchasing Policy

When new plant is to be purchased, the relative noise emission levels of the suitable options will be a consideration in the decision making process. Noise emissions for individual items of plant are generally provided as a sound power level (SWL or  $L_w$ ) in dB(A). The lower the sound power level, the quieter the plant.

The above applies equally to hiring of plant or the transfer of plant from another company site.

## 5. Compliance Noise Monitoring Protocol

### 5.1 Noise Monitoring Schedule

Compliance noise monitoring will be undertaken in the event that:

- a. A noise limit or monitoring has been stipulated (e.g. within environmental permit or planning conditions) and compliance must be demonstrated; or
- b. In circumstances where complaints have been received and one of the following conditions are met:
  - Corrective action has not resolved the problem; or
  - Monitoring will assist in determining source/cause and what further remedial action may be required.

Where compliance monitoring is required it will be completed in accordance with the sections below.

### 5.2 Instrumentation

Noise monitoring will be undertaken with a tripod mounted Class 1 integrating sound level meter (SLM), meeting the requirements of in BS EN 61672-1:2003 'Electroacoustics. Sound level meters. Specifications.'

The SLM and associated calibrator will have valid calibration certificates.

The SLM will be fitted with a suitable windshield.

### 5.3 Noise Monitoring Locations

Noise monitoring shall be undertaken at locations adjacent to the receptors as in shown in Table 1 and Figure 1 (Appendix A). Note that access to Receptor 4 (Cox Farm) may require arrangement with the landowner/tenant as this is located on a private access road.

### 5.4 Noise Monitoring Procedure

Noise monitoring will be undertaken during normal operations and should avoid breaks and periods of plant maintenance or breakdown.

Measurements will be undertaken during suitable meteorological conditions (i.e. no precipitation, winds below 5 m/s and no snow on the ground).

The noise monitoring equipment will be sited in free-field conditions (i.e. at least 3.5 metres from any reflecting surface apart from the ground), with the microphone between 1.2 and 1.5 metres above ground level.

Noise monitoring will be undertaken by a suitably qualified person and in accordance with good acoustical practice.

LAeq, LA90 and LAmax noise will be logged in 1 minute intervals over a 1 hour period. This will enable the exclusion of measurement data significantly affected by short term extraneous sources of noise not attributed to the MBT.

All results will be recorded on a suitable log sheet, which will include time of day, duration of measurements and a description of audible noise sources, together with site activities over the time of monitoring. Prevailing weather conditions, including wind direction and speed, air temperature and degree of cloud cover, will also be recorded with each set of measurement results.

An example log sheet is provided as Appendix B; alternative forms may be used but would still need to record the required information.

A permanent record of all noise monitoring undertaken will be kept on site and made available for inspection by relevant parties. The site operator will furnish the relevant authoritative body with the particulars of measurements recorded within two working days of a request.

## 5.5 Exceedance of Noise Limits

Where the results of the noise monitoring indicate that any applicable noise limit is exceeded at the noise sensitive property, the Site Manager will be notified and actions taken to reduce noise levels so far as is practicable. The remedial actions taken in these circumstances will be noted and reported to the relevant authoritative body.

The remedial actions will include:

- a. Identification of the plant and / or activities responsible for the exceedance;
- b. an assessment of the options to reduce noise levels, resulting in one or more of the following:
  - modification of site working practice (e.g. relocating plant, phasing of activities so as not to run concurrently);
  - installation of noise bunds, acoustic barriers, or mobile enclosures (details to be agreed with the relevant authoritative body);
  - replacement of certain plant items; and
  - cessation of use of certain plant items for a percentage of each working hour

Once the remedial actions have been put in place, noise monitoring at the receptor locations will be carried out according to the noise monitoring procedure and the measured noise levels will be assessed. Full details of the remedial actions taken and the post action noise monitoring will be entered on the log sheet.

In the highly unlikely event that the above procedure does not result in compliant site operations, a phase shutdown, potentially leading to a temporary suspension of all site operations, will be implemented. An action plan to remedy the situation will be developed and agreed with the relevant authoritative body and fully implemented, whereby site activities will re-commence.

## 6. Complaint Management Procedure

Should complaints arise from nearby residents regarding noise from site activities, a log of the complaint will be made, to include the:

- date and time that the complaint was received by the site;
- name, address and telephone number of the complainant; and
- nature of the complaint.

The Plant Manager/Operations Manager shall be notified as soon as possible that a complaint has been received, and if required, contact the complainant to obtain further details.

Where complaints are substantiated as relating to site operations, they will be recorded on the company database and notification will be made in accordance with the environmental permit.

If the complaint relates to an event in the past then the likely cause of the complaint will be investigated as soon as possible via records of site activities. The complainant will be advised of the results of the investigation and any remedial action taken as a result of the complaint, within two working days of the complaint being received.

If the source of the complaint is still ongoing, it will be investigated as soon as reasonably practicable. If initial investigations identify that the noise levels are unusual or the site noise limits (if applicable) may be being breached, then remedial action will be taken to reduce noise levels.

If the source of the complaint relates to normal day to day activities, noise monitoring will be undertaken to determine if such works are likely to result in a breach in the future. The results will be discussed with the complainant and explained with regard to any site noise limits (if applicable) and the influence of other noise sources outside the site.

If the noise monitoring results indicate that normal day to day activities are likely to result in a breach, then adjustments to the working methods will be undertaken to reduce noise levels.

Complaints should be directed to:

Name: Duty Shift Supervisor  
Address: Brookhurst Wood MBT Facility  
Langhurstwood Road.  
Warnham,  
West Sussex,  
RH12 4QD  
Tel.: Landline 01403 274 777

## 7. Record Keeping

Records relating to the management and monitoring of noise shall be maintained, to include:

- results of routine inspections;
- results of compliance noise monitoring and any additional quantitative noise monitoring undertaken;
- details of any complaints, to include date, time, location of complainant, prevailing weather conditions and outcome of the complaint investigation;
- details of any remedial action taken in response to issues identified by members of staff or via a complaint, and any subsequent change to normal operating procedures; and
- plant maintenance schedule.

The records will be kept in the main site office and in the case of substantiated complaints these will also be stored electronically on the company database.

The records shall be available for inspection by the relevant authoritative body (Environment Agency and/or local Environmental Health Officer).

The relevant authoritative body will be provided with the results of any noise monitoring within two working days.

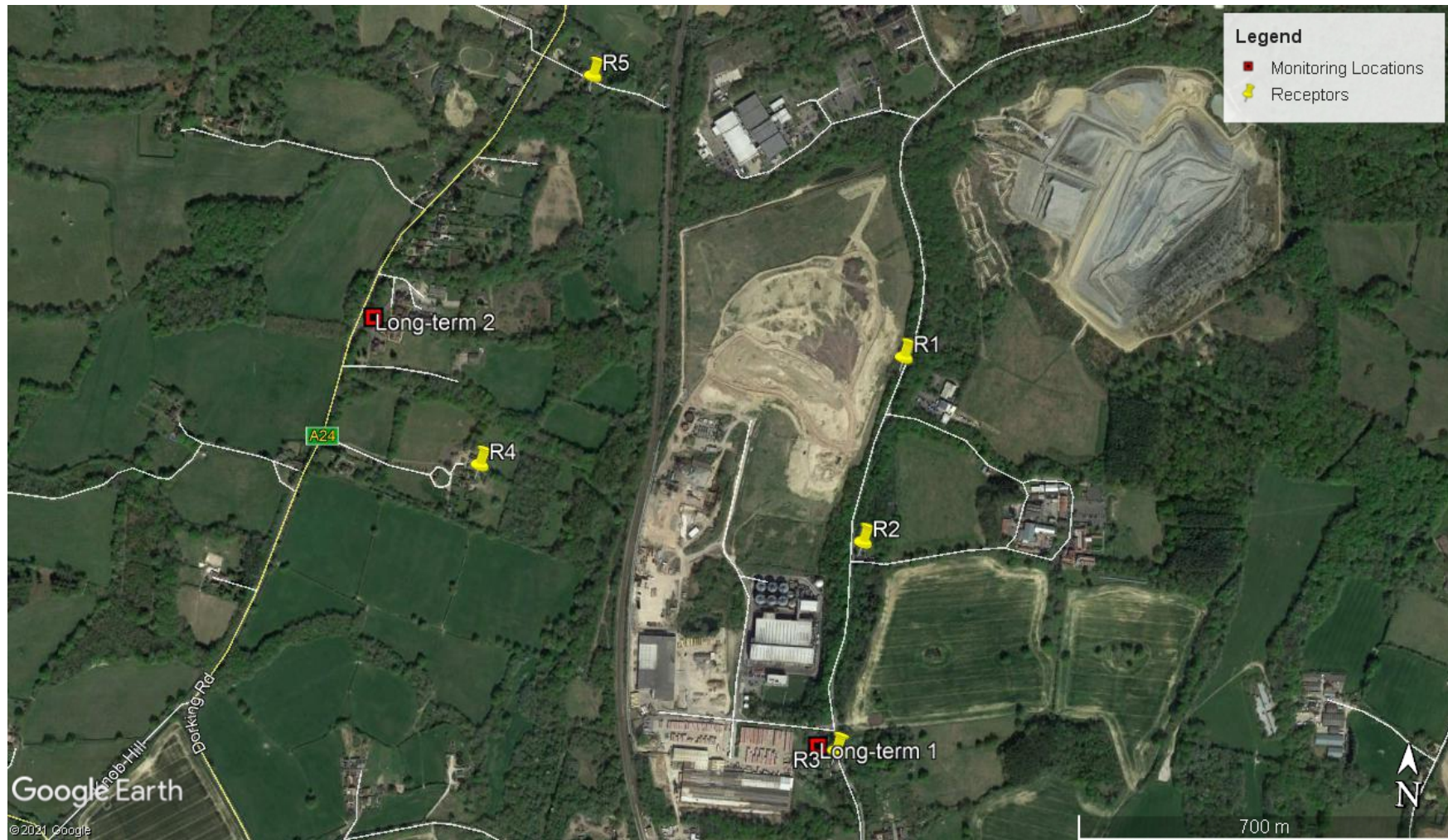
## 8. Review / Update

This NVMP is a controlled document, and forms part of the Integrated Management System. Records relating to the management and monitoring of noise resulting from the implementation of this NVMP will also form part of the Integrated Management System.

The NVMP is intended to be a live document which serves as a reference during day-to-day operations, and as such would be reviewed on an annual basis. The NVMP will also be reviewed and updated should any of the following occur:

- significant changes are made to the process or operational practices;
- there is a change to the management structure, designation of responsibility or training provision; and
- complaints are received, which on subsequent investigation result in the identification of further control measures or remedial action, in addition to those set out within this NAP.

## Appendix A Environmental Noise Receptors





## Appendix B Example Log Sheet

Noise Monitoring Sheet						Sheet 1 of <input style="width: 40px;" type="text"/>								
<b>Project Title</b>	<input style="width: 100%;" type="text"/>				<b>Job No</b>	<input style="width: 100%;" type="text"/>								
<b>Site</b>	<input style="width: 100%;" type="text"/>					Staff Initials								
START TIME:	(DD-MM-YY, HH:MM)	<input style="width: 30px;" type="text"/>	-	<input style="width: 30px;" type="text"/>	:	START								
END TIME:	(DD-MM-YY, HH:MM)	<input style="width: 30px;" type="text"/>	-	<input style="width: 30px;" type="text"/>	:	END								
METER	<input style="width: 150px;" type="text"/>				Tick	<input style="width: 40px;" type="checkbox"/>								
			< 2 YEARS SINCE CALIBRATION? (SEE LABEL)		Tick	<input style="width: 40px;" type="checkbox"/>								
CALIBRATOR	<input style="width: 100px;" type="text"/>	SAME CALIBRATOR USED AT END?		<input style="width: 40px;" type="checkbox"/>	< 1 YEAR SINCE CALIBRATION?									
METER CHECKS AND SET UP														
Sufficient battery?	Tick	<input style="width: 40px;" type="checkbox"/>	Date and time correct?	Tick	<input style="width: 40px;" type="checkbox"/>	Correct windshield correction set								
Sufficient memory?	Tick	<input style="width: 40px;" type="checkbox"/>	Clocks synchronised?	Tick	<input style="width: 40px;" type="checkbox"/>	Tick								
CALIBRATION														
						* Adjust sensitivity at start. Note value but do not adjust at end								
	Start	<input style="width: 80px;" type="text"/>	End	<input style="width: 80px;" type="text"/>										
Calibration Level	<input style="width: 100px;" type="text"/>		<input style="width: 100px;" type="text"/>											
Cal within ±0.5 dB	<input style="width: 100px;" type="checkbox"/>		<input style="width: 100px;" type="checkbox"/>		Tick to confirm that values within 0.5 dB of expected									
LOGGING PERIOD	<input style="width: 250px;" type="text"/>			RESOLUTION	<input style="width: 150px;" type="text"/>									
				Tick										
File name / Number	<input style="width: 100%;" type="text"/>													
WEATHER CONDITIONS														
	Wind direction (arrow) START			Wind direction (arrow) END										
WIND SPEED (m/s)	N W E S	AV m/s	MAX m/s	N W E S	AV m/s	MAX m/s								
CLOUD COVER (eighths)	/8			/8										
TEMPERATURE (°C)	°C			°C										
PRECIPITATION (Tick)		ROAD CONDITIONS (Tick)				GROUND CONDITION (Tick)								
	NONE	DRIZZLE	RAIN	SNOW	HAIL	FOG/MIST	DRY	DAMP	WET	ICE/SNOW	SOFT	HARD	ICE/SNOW	FROZEN
START	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>
END	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>	<input style="width: 20px;" type="checkbox"/>
Subjective description of sound climate (close your eyes and describe what you hear)														
Dominant Noise (Start)				Dominant Noise (End)										
Other Sources (Start)				Other Sources (End)										
Other Comments:														

Noise Monitoring Sheet				Sheet 2 of <span style="border: 1px solid black; padding: 2px 10px;"> </span>	
<b>Site</b>				<b>Date</b>	
				<b>Meter</b>	
<b>EQUIPMENT LOCATION</b>					
MICROPHONE HEIGHT ABOVE GROUND				METRES	
MICROPHONE MOUNTED ON (TICK)				DISTANCE FROM VERTICAL SURFACE / FAÇADE (>3.5M OR =1M)	
TRIPOD	<input type="checkbox"/>	A FRAME	<input type="checkbox"/>	LINE OF SIGHT FROM SOURCE TO RECEIVER? (Y/N)	
MAST	<input type="checkbox"/>	FENCE	<input type="checkbox"/>		
OTHER	<input type="checkbox"/>				
OTHER					
<b>Plan view sketch with distances.</b>					
<b>Mark:</b> Meter location                      North arrow                      Main audible noise sources					
Photographic direction and positions (meter installed and all round view of surroundings)					
Distance to nearest roads and other noise sources (identify) <span style="border: 1px solid black; padding: 2px 10px;"> </span> estimate <span style="border: 1px solid black; padding: 2px 10px;"> </span> measured					
Note position, height and construction material of barriers. <span style="border: 1px solid black; padding: 2px 10px;"> </span> estimate <span style="border: 1px solid black; padding: 2px 10px;"> </span> measured					
Note position and type of ground cover (grass, stone, shrubs etc)					
<div style="border: 1px solid black; width: 100%; height: 100%;"></div>					
GPS Coordinates					
	2 letters	5 numbers	5 numbers	east/west	north/south
				or	
Camera ID:				GPS ID	
Site staff	Print name	Signature		Date	
QA checked					



