To support the implementation of the site Environmental Noise Management Plan, Operations Management Teams may also wish to consider regular and routine environmental noise monitoring, as detailed below.

3. Equipment for Measurement of Environmental Noise

There are numerous types of environmental noise monitoring equipment available to GallifordTry site teams. A summary of potential options for consideration are shown in Table 2.

Table 2: Types of Environmental Noise Monitor

ENVIRONMENTAL NOISE MONITOR TYPES		APPLICATIONS / BENEFITS
	**Portable**	• For applications where monitoring is to be over short periods (e.g., a few weeks) • Good at providing short term 'spot-checks' of compliance with stipulated noise trigger levels • Equipment can be bought or leased • A Type 1 meter is most appropriate for survey work • Could be operated with competent site staff • Cheapest option is to lease the equipment.
	**Semi-Permanent**	• For applications where monitoring is to be over longer periods (e.g., months / years) • Suited to locations where site teams are aware of high sensitivity noise sensitive receptors • Can be located at location(s) of noise sensitive receptors to give continuous compliance assurance • Can provide real time data 24-hours per day • Can provide automated warnings of breaches of noise trigger levels • Equipment can be bought or leased • Cheapest option is to lease the equipment.
	**Permanent**	• Suited to monitoring at permanent locations; hence, generally not suited to the construction industry unless requested by clients • Provides good data quality and data analysis functions.

As an alternative to procuring or leasing environmental noise monitors, as detailed in Table 2, Operations Management Teams could also engage the services of an independent consultant to conduct regular noise surveys and produce performance reports, which would provide demonstrable compliance based evidence to regulators (e.g., local authorities) and potentially affected parties.

Regardless of how frequently environmental noise monitors are used it is imperative that they are subject to regular and routine calibration (before and after use), in accordance with the manufacturers' instructions; otherwise, the results obtained may be invalidated.

Table 4: Environmental Noise – Threshold of Significant Effects *(taken from BS5228)*

ASSESSMENT CATEGORY AND THRESHOLD VALUE PERIOD (LAeq)	THRESHOLD IN DECIBELS (dB)		
	Category A	Category B	Category C
Night time *(23:00–07:00)*	45	50	55
Evenings & Weekends *(19:00–23.00 weekdays; 13:00–23:00 Saturdays & 07:00–23:00 Sundays)*	55	60	65
Daytime *(07:00–19:00)* & Saturdays *(07:00–13:00)*	65	70	75

- ***Category A:*** Threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.
- ***Category B:*** Threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.
- ***Category C:*** Threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.

In the event that a significant effect is determined (i.e., the total LAeq noise level, including construction environmental noise, exceeds the threshold level for the Category appropriate to the ambient noise level) then Operations Management Teams should take all appropriate action to manage the identified environmental risk. Refer to Appendix 2 for a worked example.

5. Competency and Training

The person conducting the environmental noise monitoring must be a competent person and must possess a combination of technical knowledge, experience and skills, and must be able to demonstrate, as a minimum:

- Good understanding and experience of relevant acoustical standards
- A clear understanding of the regulatory consequences regarding noise nuisance impacts
- Familiarity with acoustical monitoring equipment and with a range of environmental noise indicators
- An ability to analyse, interpret and explain results
- An ability to recognise when more specialised expertise may be needed.

Galliford Try staff that are involved in conducting environmental noise monitoring should attend a relevant externally delivered training course e.g., Certificate of Competence in Environmental Noise Measurements, offered by The Institute of Acoustics.

Appendix 1 – Environmental Noise Monitoring Form

Date		Project			
Location		Monitors Name			
		Microphone Height (m)		Type of Measurement	Free Field / Façade
Location Description / Plan					

Start Time	Duration (mins)	$L_{Amx,T}$ dB	$L_{Amn,T}$ dB	$L_{Aeq,T}$ dB	$L_{Aeq,T}$ dB	Description of Noise

Planned noisy activities on day of monitoring					
Major Construction Noise Source(s) during monitoring					
Other Noise Source(s) during monitoring					
Wind Speed (m/s)		Weather Conditions	Fine / Sunny / Cloudy / Rainy		
Noise Type Hissing ☐ Banging ☐ Humming ☐ Clattering ☐			Fog ☐	Frost ☐	Snow ☐ Ice ☐
Calibration Traceability (UKAS)			Date		

Sound Level Meter			Calibrator		
Type	Manufacturer	Serial Number	Type	Manufacturer	Serial Number

Appendix 5 Access / Egress Route