

BASIC ENVIRONMENTAL NOISE SURVEY



XPRESS VEHICLE SOLUTIONS LIMITED

**Rear Car Parking Area of Tesco superstore
Lockoford Lane
Chesterfield
S41 7JB**

Prepared by:

Wayne Dunning *SIIRSM MIOSH*

Health and Safety Manager / Consultant / Trainer

Dated: 1st February 2017

Review Date: 1st February 2018

Issue: 1

1.0 INTRODUCTION.....	2
1.1 Noise Break-In Assessment	2
1.2 Planning Conditions	2
2.0 SITE DESCRIPTION	2
2.1 Aerial View and Location of Premises.....	3
2.2 Relevant Pictures associated with the Unit and Surrounds.....	4-5
3.0 ENVIRONMENTAL NOISE SURVEY.....	6
3.1 Methodology	6
3.2 Measurement Equipment	6
3.3 Weather Conditions	6
4.0 RESULTS	7
4.1 Comparison Measurement Results	7
5.0 SUMMARY	8
6.0 CALIBRATION CERTIFICATE.....	9

1.0 INTRODUCTION

ELAS Health and Safety have been appointed by **Dean Heath** to undertake a basic environmental noise assessment at the site of **Xpress Vehicle Solutions Limited**, located at the rear of **Tesco superstore, Lockoford Lane, Chesterfield, S41 7JB**.

The noise survey has been undertaken to establish the noise levels produced by a series of vehicle operations using small equipment within the unit with the fire door closed and open at specified distances from the unit. This report describes the noise survey, its results, and the consequent assessment outcome.

1.1 NOISE BREAK IN ASSESSMENT

The purpose of this assessment is to determine any appropriate noise control measures to protect the customers of Tesco and localised area against noise impact from the tools and processes whilst undertaking minor vehicle repairs within the unit of **Xpress Vehicle Solutions Limited**.

1.2 PLANNING CONDITIONS

It is understood that at this early stage there are no conditions associated with **Xpress Vehicle Solutions Limited**.

2.0 SITE DESCRIPTION

The site is located in the far end of the car park at **Tesco superstore, Lockoford Lane, Chesterfield, S41 7JB**. It is operational between 09:00hrs – 17:00hrs at peak season.

The surrounding area is mainly industrial warehousing and has the main A61 highway adjacent to the unit in question.

The unit houses its own compressor at the far end of the unit and has a sealed door with acoustic dampening to prevent noise leakage to the working areas.

The site in relation to its surroundings is shown in the site map and aerial photograph presented in Figure 2-1 below.

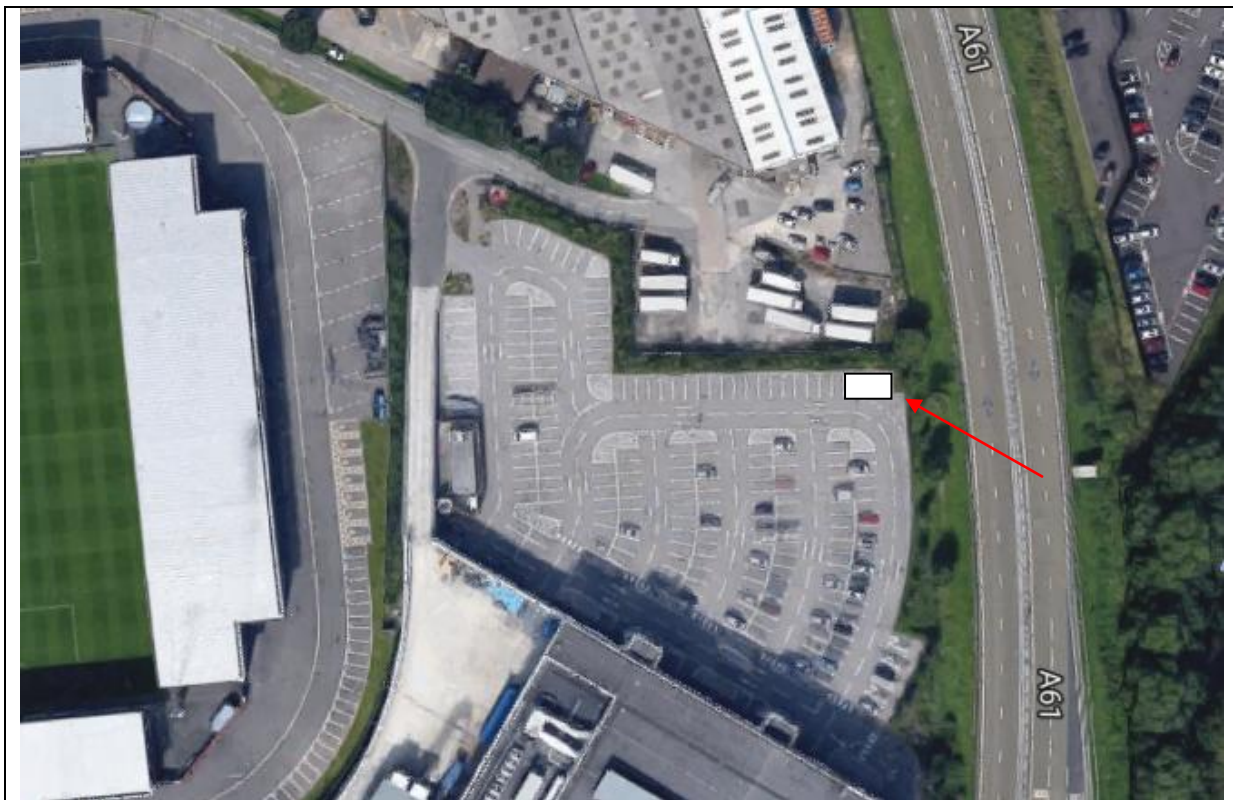
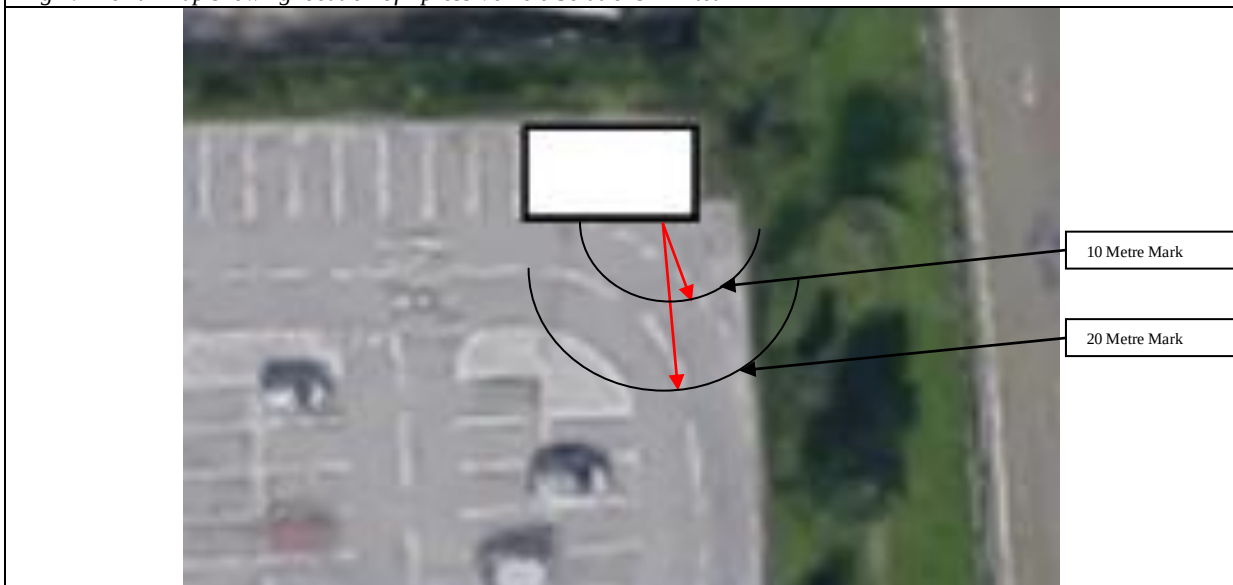


Fig 2.1 Aerial Map showing location of Xpress Vehicle Solutions Limited



Noise meter locations from the fire door if open and closed. Figures below indicate the emitted noise readings from various items of equipment.



Above shows the types of equipment used on the vehicle repair processes: The Grinder and Hammer being noisiest.



The unit showing front vehicle access and doors closed when vehicle is being worked on. The doors are closed and also vacuum sealed when compressor is on to carry out the processes on the vehicle.



The unit showing the location of the fire door which could be open in summer days.



View across the car parking area and one of the main routes into the Tesco car parking bays.

In order to conduct the assessment, the unit must be assessed against the existing noise climate. The primary contributor to ambient noise levels on site are the adjacent roads. Local business was quite and the warehouse to the rear is currently redundant.

However the car parking area was in operation and the A61 main highway was reasonably busy at the time, I therefore had to select measurements carefully at calmer/quieter periods.

3.0 ENVIRONMENTAL NOISE SURVEY

3.1 METHODOLOGY

Using a Type 2 Noise Meter to establish the existing environmental noise levels on site, the equipment was calibrated and then a noise survey was conducted between 11:00 and 13:00 at a fixed microphone position on site measuring 10 and 20 metres from the fire escape door of the unit. The fixed noise meter was set to measure consecutive 'A' weighted 1 minute time samples to determine the change in noise levels during operation of the equipment. Measurements have been taken in free-field conditions, or have been corrected where appropriate as identified in the results table.

Measurement locations are shown in the figure below of the report and presents photographs taken during the noise survey, which help provide a good understanding of the site. The results of the environmental noise survey are provided within Section 4.0 of this report.

Out of the 6 items of equipment, 2 were chosen for their nature of noise as being the most impact to the environment.

3.2 MEASUREMENT EQUIPMENT

The equipment used for this basic environmental noise survey is a Casella 430/2 Serial No. 057729.

3.3 WEATHER CONDITIONS

The following climate conditions were recorded for the site:

Wind: Less than 5 m/s.

Humidity: The weather was cloudy and slightly damp.

Temperature: 10°C.

The above weather conditions are suitable for the measurement of environmental noise in accordance with BS7445 *Description and Measurement of Environmental Noise*.

4.0 RESULTS

Equipment	Dist	Fire Door Open		Fire Door Closed	
Millwakee Polisher Buffer					
Panel Hammer	10 Mtrs	LAF 79.1dB	LAF Max 81.8dB	LAF 64.3dB	LAF Max 75.6dB
	10Mtrs	Lceq 76.1dB	Lcpk 98.1dB	Lceq 80.6dB	Lcpk 95.5dB
	20 Mtrs	LAF 65.2dB	LAF Max 75.7dB		
	20 Mtrs	Lceq 73.4dB	Lcpk 91.6dB		
Small 4 inch Hand Grinder	10 Mtrs	LAF 79.2dB	LAF Max 79.2dB	LAF 66.6dB	LAF Max 67.5.2dB
	10Mtrs	Lceq 74.5dB	Lcpk 91.3dB	Lceq 76.1dB	Lcpk 89.6dB
	20 Mtrs	LAF 65.7dB	LAF Max 72.7dB		
	20 Mtrs	Lceq 72.9dB	Lcpk 88.0dB		
Snap On Battery Hand Drill					
Air Gun					
Pneumatic Battery Grinder					
A61 Traffic in General	30 Mtrs	LAF 70.8dB	LAF Max 74.3dB		
	30 Mtrs	Lceq 79.9dB	Lcpk 93.1dB		

Equipment	Approximate time Duration of the equipment per vehicle
Millwakee Polisher Buffer	15-20 Minutes
Panel Hammer	1-3 Minutes
Small 4 inch Hand Grinder	1-3 Minutes
Snap On Battery Hand Drill	5-10 Minutes
Air Gun	1-2 Minutes
Pneumatic Battery Grinder	5-10 Minutes

4.1 COMPARISON MEASUREMENT RESULTS

Nature of Noise	Approximate sound in Decibels
2 People Talking – 5 Metres Away	60-65dB
Dog Barking – 20 Metres Away	60-110dB
Medium Traffic on a Highway – 20 Metres Away	70-85dB
Panel Hammer with Fire Door Open – 10 Metres Away	LAF 79.1dB – Use 1-3 Minutes per vehicle
Panel Hammer with Fire Door Closed – 10 Metres Away	LAF 64.3dB
Panel Hammer with Fire Door Open – 20 Metres Away	LAF 65.2dB
Small 4 Inch Hand Grinder with Fire Door Open – 10 Metres Away	LAF 79.2dB – Use 1-3 Minutes per vehicle
Small 4 Inch Hand Grinder with Fire Door Closed – 10 Metres Away	LAF 66.6dB
Small 4 Inch Hand Grinder with Fire Door Open – 20 Metres Away	LAF 65.7dB

5.0 SUMMARY

The noise results are generally short term based on the said use of the equipment with other vehicle preparation processes in place. The location of the unit is as far as possible from users of the car parking area and the Tesco store in question. With localised traffic and the movements within the Tesco car parking area the noise emitted from the unit are considered extremely low and would be lost or not considered as environmental nuisance noise.

No domestic dwellings are in close proximity where this may have impact. On match days the local football club will also generate noise well above the measurements taken although on a short basis.

6.0 CALIBRATION CERTIFICATE