

The Orchard Whalley Clitheroe

Acoustic Planning Report
1548/APR1

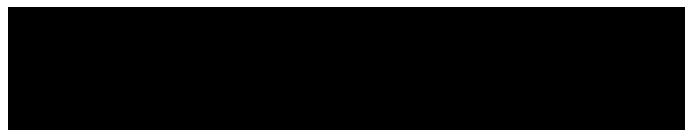
24 March 2016

For:

The Orchard Ribble Valley Ltd
4 Abbeycroft
The Sands
Whalley
Clitheroe
BB7 9TN



2nd Floor 3 Hardman Square
Spinningfields Manchester M3 3EB



Acoustic Planning Report 1548/APR1

Contents	Page
1.0 Introduction	1
2.0 Objectives	1
3.0 Site Description	1
4.0 Local Authority Requirements	2
5.0 Environmental Sound Survey	2
6.0 Assessment	5
7.0 Additional Guidance	7
8.0 Conclusions	7

Appendices

Time History Graph 1548/THG1

This report (including any enclosures and attachments) has been prepared by Lighthouse Acoustics with reasonable skill and care in accordance with generally accepted acoustic principles and the terms agreed between Lighthouse Acoustics and our Client. Any information provided by third parties and referred to herein may not have been checked or verified by Lighthouse Acoustics unless expressly stated otherwise. This document contains confidential information and no part of this report should be reproduced, distributed or communicated to any third party unless Lighthouse Acoustics provide express prior written consent. We do not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report. Where a sound survey has been undertaken, this report is based on the sound climate at the site at the time of the survey and no warranty is given as to the possibility of changes at differing times.

Lighthouse Acoustics is the trading name of Lighthouse Enterprises UK Limited
Registered Office: 2nd Floor 3 Hardman Square Spinningfields Manchester M3 3EB
Registered in England and Wales Company No. 09085491

1.0 Introduction

A tipi structure is proposed to be used for wellbeing activities between May and September at The Orchard, Whalley, Clitheroe. Lighthouse Acoustics has been appointed by The Orchard Ribble Valley Ltd to undertake an assessment of typical patron noise from the proposed tipi structure to the nearest noise sensitive receptor.

The survey methodology, results and assessment are presented in this report.

2.0 Objectives

To establish the Local Authority's acoustic requirements for patron noise from the proposed tipi structure.

To visit site to undertake a detailed environmental sound survey in order to establish existing environmental sound levels at the proposed development.

To undertake an assessment of typical patron noise from the proposed tipi structure to the nearest noise sensitive receptor based on operational activity data received.

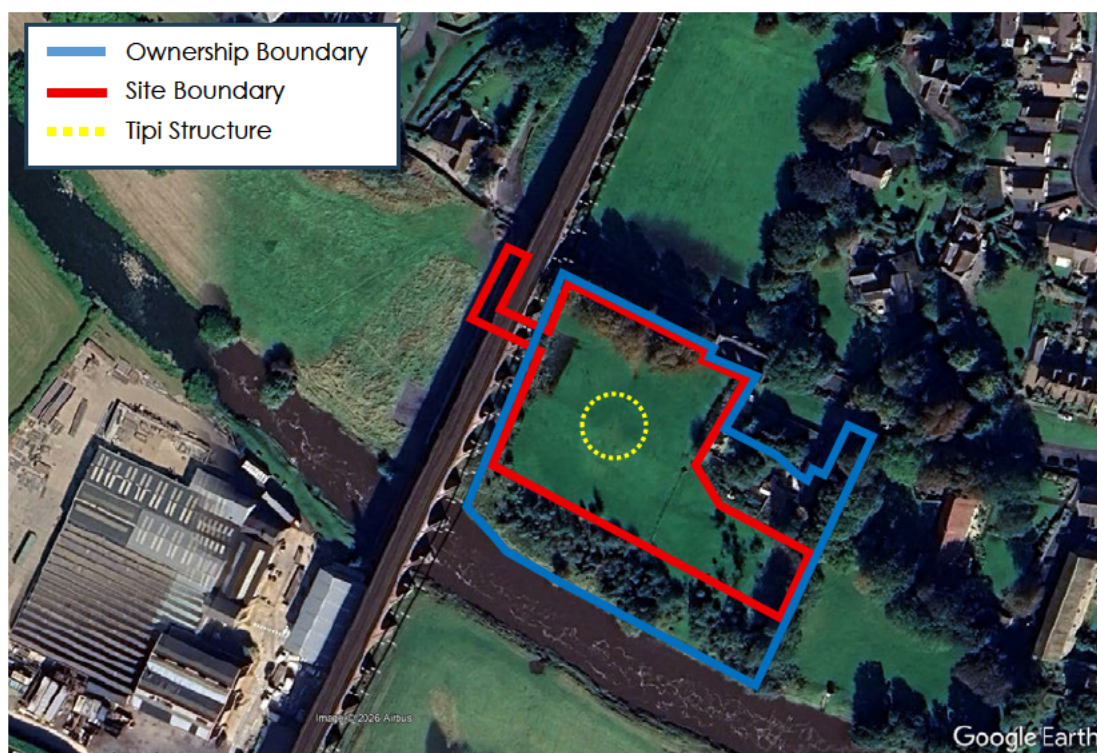
To comment on the acceptability and propose mitigation measures where required in order to minimise the impact of patron noise to the nearest noise sensitive receptor.

3.0 Site Description

The tipi structure is proposed at The Orchard, Whalley, Clitheroe. The site comprises a grass field and the tipi structure is to be situated in approximately the centre of the site.

The site is bound by Ridding Lane to the north east, residential properties to the south east (No.1-3 Abbeycroft), the River Calder to the south west and Whalley Viaduct to the north west. The land owner occupies No.4 Abbeycroft.

The site plan overleaf indicates the extent of the site and the surrounding environment.



Site plan indicating the extent of the site and the surrounding environment

4.0 Local Authority Requirements

It is understood that Ribble Valley Borough Council have requested an assessment of typical patron noise from the proposed tipi structure to the nearest noise sensitive receptor.

We are unaware of any requirements that Ribble Valley Borough Council have for external patron noise. As such, it is proposed that typical L_{Aeq} patron noise levels should not exceed the L_{A90} background sound levels at the nearest noise sensitive receptor by more than 5dB.

5.0 Environmental Sound Survey

5.1 Measurements

Automated environmental sound measurements were undertaken from 09:00 hours on Friday 6 March 2026 to 18:00 hours on Tuesday 10 March 2026. During this period the L_{Aeq} sound pressure levels were measured continuously over 15 minute periods.

5.2 Weather Conditions

At the start of the survey period there was a light westerly breeze (<3m/s) and the sky was overcast. There was no rainfall and road surfaces were dry. The temperature was approximately 5°C.

At the end of the survey period there was a light westerly breeze (<3m/s) and the sky was scattered cloud. There was no rainfall and road surfaces were dry. The temperature was approximately 6°C.

Based on publicly available weather data for the survey period it is understood that weather conditions remained similar for the duration of the survey with no periods of significant rainfall or strong breezes. The weather conditions during the survey period are therefore considered to be suitable for undertaking measurements of sound levels.

5.3 Measurement Position

Environmental sound levels were measured at a single position on-site as described in the table below.

Position	Description
A	Microphone situated towards the south eastern site boundary with the residential properties at 1.5m above ground level in free field conditions.

The measurement position is shown on the site plan below.



Site plan showing measurement position

The measurement position was selected in order to assess typical environmental sound levels at the nearest noise sensitive receptors.

5.4 Equipment

The following equipment was used to undertake the environmental sound survey.

Equipment	Manufacturer	Model	Serial No.	Calibration Date
Class 1 Sound Level Meter	Casella	633C	2811231	15/09/2025
Preamplifier	Casella	495	001239	15/09/2025
Microphone	Casella	251	1841	15/09/2025
Class 1 Sound Calibrator	Casella	120/1	3864878	05/11/2025
Environmental Noise Kit	Casella	6847	-	-
Microphone Extension Cable	Casella	C6717/5	-	-
Weather Protection System	Casella	6737	-	-

Field calibration checks were performed on the sound level meter prior to and on completion of the survey and were found to be within acceptable tolerance limits.

5.5 Results

5.5.1 Time History Graph

The results of the environmental sound survey are presented on Time History Graph 1548/THG1 enclosed at the rear of the report.

5.5.2 $L_{A90,T}$ Background Sound Levels

The lowest representative daytime $L_{A90,15min}$ background sound levels measured during the survey period between the proposed operational hours of the tipi structure (09:00 to 21:00) are detailed in the table below.

Day	Lowest Representative $L_{Aeq,15min}$ Residual Sound Level (dB)
	Daytime (07:00–21:00)
Friday	43*
Saturday	42
Sunday	41
Monday	44
Tuesday	47**

* 09:00-21:00 hours ** 07:00-18:00 hours

5.5.3 Discussion of Sound Climate

At the start and end of the survey period the dominant sound sources at Position A was noted to be frequent road traffic along Ridding Lane and occasional train passbys along the viaduct. During lulls in local road traffic, distant road traffic from Whalley Road to the south contributed towards the measured sound climate.

Whilst we are unable to comment on dominant sound sources or individual sound events during the survey period, based on the surrounding environment it is likely that road traffic remained the dominant sound source.

6.0 Assessment

6.1 Site Layout

The assessment has been based on the proposed site layout drawing detailed below.

Author	Drawing No.	Revision	Date
Wilson Mason	TOW-WMA-XX-ST-DR-A-00-0003	P03	02/12/2025

This indicates that the proposed tipi structure is to be situated in approximately the centre of the site.

6.2 Operational Hours

It is understood that the tipi structure has the potential to be used for wellbeing activities from 1 May to 30 September and between 07:00 to 21:00 hours 7 days a week.

Typical patron noise from the proposed tipi structure is therefore assessed against the lowest representative daytime $L_{A90,15min}$ background sound level measured during this period.

6.3 $L_{A90,T}$ Background Sound Levels

The lowest representative daytime $L_{A90,15min}$ background sound level measured during the survey period between the proposed operational hours of the tipi structure (09:00 to 21:00) is detailed in the table below.

Day	Lowest Representative $L_{Aeq,15min}$ Residual Sound Level (dB)
	Daytime (07:00–21:00)
Sunday	41

6.4 Sound Sources

It is understood that the tipi structure will feature up to 30No. patrons per event (yoga, tai chi, meditation) and that there will be no live/amplified music or overnight accommodation.

6.5 External Sound Data

For the tipi structure, it is assumed that half of the patrons in the space will be talking at any one time. Of these patrons it is assumed that half will be talking with a normal voice whilst half will be talking with a raised voice. The sound pressure levels for 1No. patron talking with normal and raised voices at 1m are detailed below and will each be applied to a quarter of the total number of patrons in the space.

Source Description	L _{eq} Sound Pressure level (dB) at Octave Band Centre Frequency (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
1No. patron talking with normal voice at 1m	42	47	57	60	54	49	44	39	60
1No. patron talking with raised voice at 1m	46	51	62	66	62	57	51	43	67

6.6 Nearest Noise Sensitive Receptor

The table below details the approximate distance between the tipi structure and windows of the nearest noise sensitive receptor.

Nearest Noise Sensitive Receptor	Distance (m)
Existing residential properties to the south east (1-3 Abbey Croft)	60

6.7 Calculation

The sound pressure level radiated from the tipi structure due to patrons talking has been calculated using the following formula:

$$L_p = L_{p1m} + 10 \log N - 20 \log R$$

Where:

L_p is the sound pressure level at the receiver, dB;

L_{p1m} is the sound pressure level of 1No. patron talking at 1m, dB;

N is the total number of patrons talking within the external space, m²;

R is the distance in meters between the external space and the receiver, m.

6.8 Results

The calculated typical L_{Aeq} patron noise level from the proposed tipi structure incident upon the windows of the nearest noise sensitive receptor is presented in the table below.

Nearest Noise Sensitive Receptor	Calculated L _{Aeq} (dB)
Existing residential properties to the south east (1-3 Abbey Croft)	41

The assessment indicates that the typical L_{Aeq} patron noise level from the proposed tipi structure incident upon the windows of the nearest noise sensitive receptor is likely to achieve the proposed requirement of not to exceed the L_{A90} background sound levels at the nearest noise sensitive receptor by more than 5dB.

Additionally, the material of the tipi structure is expected to provide a certain level of attenuation to the patron noise from inside which will further reduce the calculated typical L_{Aeq} patron noise level.

7.0 Additional Guidance

In order to minimise typical patron noise levels from the tipi structure the following guidance should be incorporated.

- Events should only take place from 1 May to 30 September and between 07:00 and 21:00 hours.
- Patron numbers should be restricted to the maximum of 30No. per event.
- No live/amplified music or overnight accommodation permitted.
- Event organisers should be made aware of the noise management measures in advance of any booking.
- Staff should regularly monitor and manage external areas to ensure that patrons are not causing a disturbance to local residents. Rowdy behaviour from patrons should not be tolerated and anyone behaving in an anti-social way should be asked to leave the premises.
- A contact telephone number should be made available to local residents which they can use to report noise disturbances to the event organisers should they occur.

8.0 Conclusions

A detailed environmental sound survey has been undertaken in order to establish existing environmental sound levels at the proposed development.

An assessment of typical patron noise from the proposed tipi structure to the nearest noise sensitive receptor based on operational activity data received has been undertaken.

The assessment indicates that the typical L_{Aeq} patron noise from the proposed tipi structure incident upon the windows of the nearest noise sensitive receptor is likely to achieve the proposed requirement of not to exceed the L_{A90} background sound levels at the nearest noise sensitive receptor by more than 5dB.



Robin Wood
LIGHTHOUSE ACOUSTICS

The Orchard, Whalley, Clitheroe

Time History Graph - Friday 6 March 2026 to Tuesday 10 March 2026

$L_{Amax,15min}$, $L_{Aeq,15min}$ & $L_{A90,15min}$ Noise Levels at Position A

