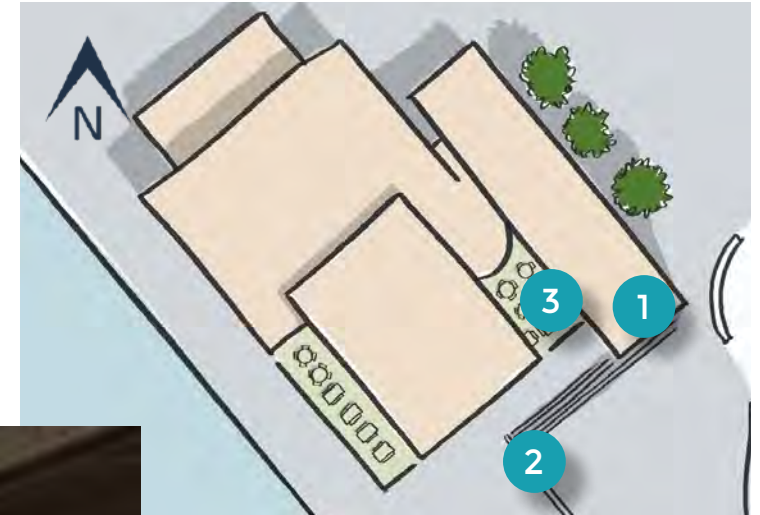


12. THE MOUNT STUART

Cardiff



Location plan showing the unattended logger and short-term attended measurement positions



City



Open roof terrace and garden



Young adults/Middle age/Mature



280m²



Capacity of



Cloudy with sunny spells



1st October 2021

SITE DESCRIPTION

The site became a J D Wetherspoon public house in 2013. The former dock building was the long-time offices of the Mount Stuart Dry Docks Co. Ltd. It was built in the 1880s, next to Graving Dock No.1, all part of Cardiff Docks. The pub features a minimalist industrial design extending over two floors. Each floor has an outside drinking terrace, with the upper one providing views across the Bay.

EXISTING MANAGEMENT CONTROLS

Access to the upper level beer garden terrace is controlled via doors from the first floor of the pub. The ground level garden area can be accessed via the front and side doors of the pub. This area can also be accessed externally from Landsea Square.



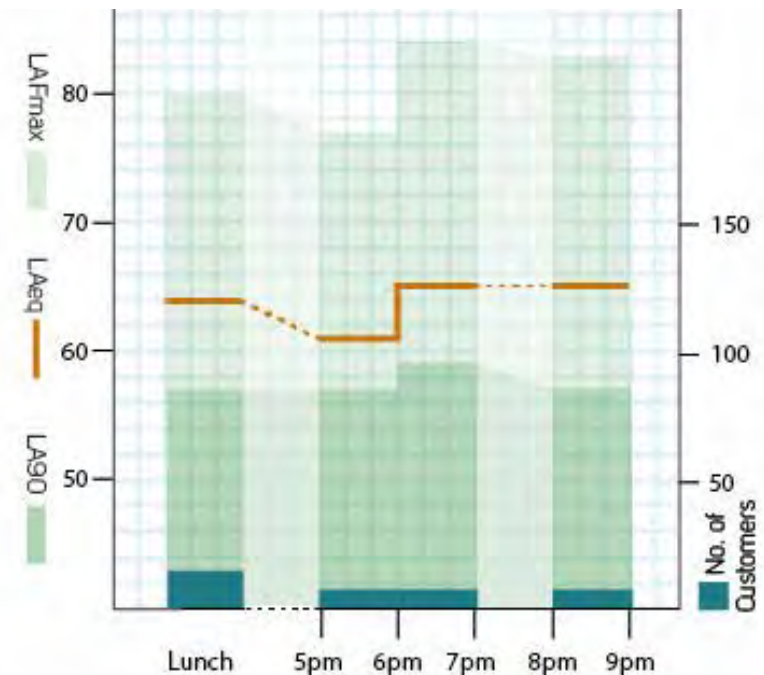
SURVEY OBSERVATIONS

The survey was carried out on Friday 1st October 2021. Weather during the survey was cloudy with sunny spells, remaining dry with little to no wind throughout. Conditions were warm during lunchtime and the mid-afternoon, but transitioned to becoming fairly cold into the evening. Due to pressure washing of the upper level beer garden terrace, measurements of noise related to beer garden patrons were not carried out during the lunchtime period. Throughout the survey, it was observed that almost all beer garden patrons were located within the ground level areas only.

During the mid-afternoon period, it was observed that a significant proportion of beer garden users were consuming food at some point during their stay. Towards the evening, it was noted that most beer garden patrons were drinking and/or smoking only.

The age profile of customers at this location was broad throughout the entire mid-afternoon – evening measurement period, however patrons were almost all below the age of 60.

Use of the beer garden areas during the evening period was limited and typically short in duration, likely due to the cold temperatures during the period.



Illustrative Graph depicting number of customers and noise levels, from all positions in the garden

13. THE PICTURE HOUSE

Morley



Town



Open roof terrace



Young adults/Middle age/Mature



104.3m²



Capacity of 142



Overcast and dry



1st October 2021

SITE DESCRIPTION

Site is located on Queen Street in the centre of Morley, a suburban town near Leeds. The customer area is across the ground floor of the premises. The roof terrace is located directly up a set of stairs of the single-storey building. Seating is laid out with planting across the central area.

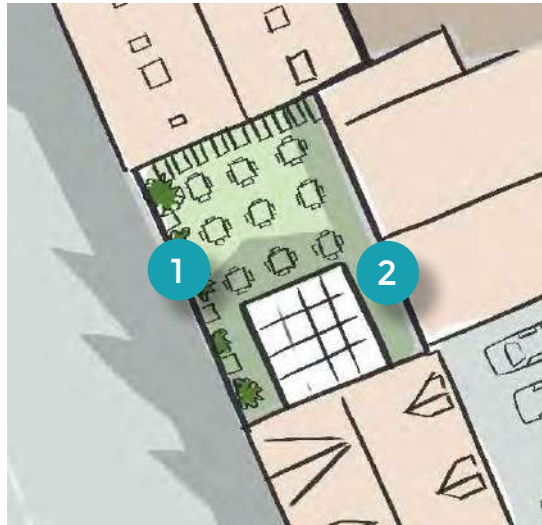
EXISTING MANAGEMENT CONTROLS

Access to the roof terrace is controlled through the pub itself, there is no external access. There was a no smoking policy on the roof terrace.

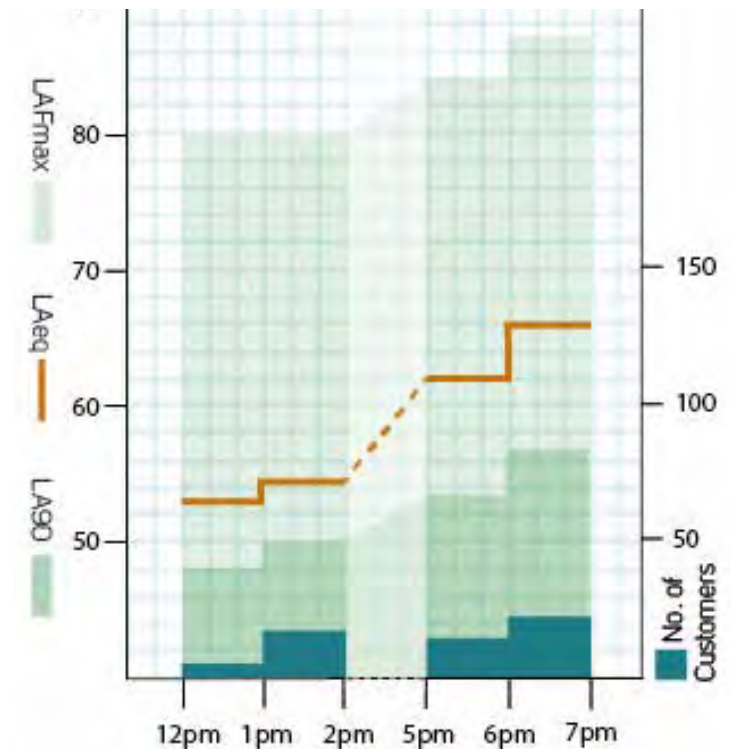
SURVEY OBSERVATIONS

The survey was undertaken on Friday 20th August 2021. Weather during the survey was overcast and dry. The roof terrace was quiet throughout the day, only becoming slightly busier in the evening. Throughout the survey period, it was observed that a significant proportion of beer garden users were consuming food at some point during their stay.

The age profile of customers at this location was broad, with customers in all age brackets throughout the day in approximately similar proportions in each age group. During the evening period the proportion of customers in the age bracket over 60 years of age reduced, particularly in the rear beer garden



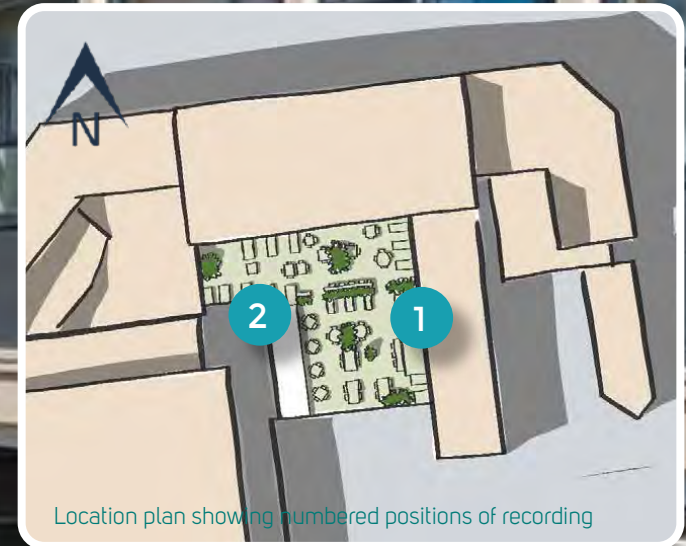
Location plan showing the unattended logger and short-term attended measurement positions










Illustrative Graph depicting number of customers and noise levels, from all positions in the garden

14. THE ADMIRAL HUMBER

Hull



Location plan showing numbered positions of recording
Aerial view of The Admiral Humber showing locations of surveys

-  City centre
-  Enclosed roof terrace
-  Young adults/Middle age/Mature
-  249.5m²
-  Capacity of 160
-  Dry & sunny
-  8th October 2021

SITE DESCRIPTION

Site is located on Anlaby Road in the centre of Hull. The customer area is across the ground floor of the premises. The roof terrace is located directly up a set of stairs in the multi-storey building, which consists of a Wetherspoons hotel above the pub. Seating is laid out with planting across the central area.

EXISTING MANAGEMENT CONTROLS

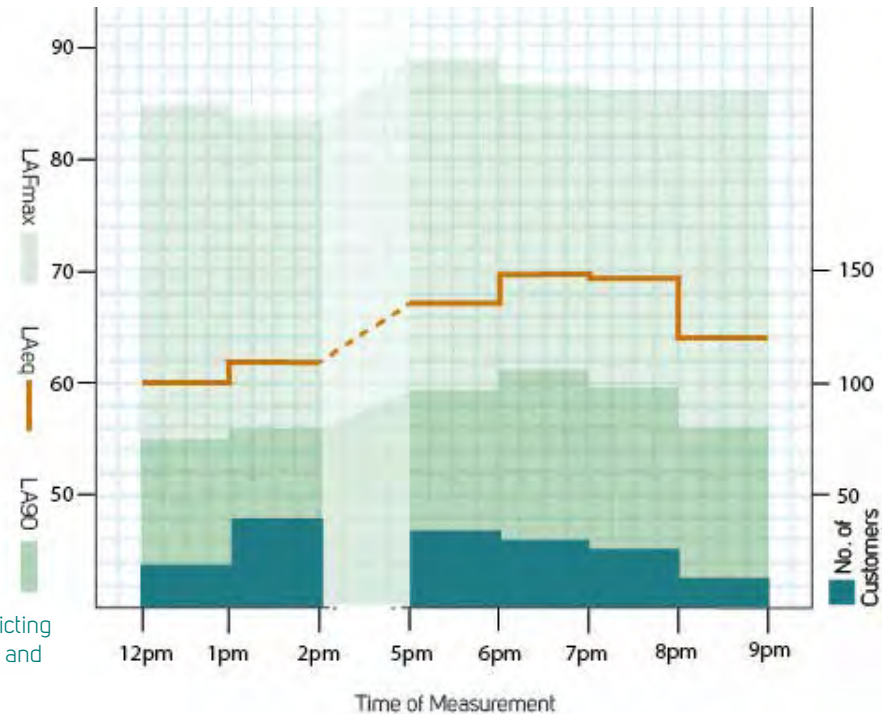
Access to the roof terrace is controlled through the pub itself, there is no external access. There was a no smoking policy on the roof terrace.



SURVEY OBSERVATIONS

The survey was undertaken on Friday 8th October 2021. Weather during the survey was sunny and dry. The roof terrace was busy throughout the day and evening, with it getting quieter throughout the night. Throughout the survey period, it was observed that a significant proportion of roof terrace users were consuming food at some point during their stay.

The age profile of customers at this location was broad, with customers in all age brackets throughout the day in approximately similar proportions in each age group. During the evening period the proportion of customers in the age bracket over 60 years of age reduced.



Illustrative Graph depicting number of customers and noise levels

15. THE CAPTAIN ALEXANDER

Liverpool



City centre



Enclosed roof terrace



Young adults/Middle age/Mature



145.6m²



Capacity of 80



Dry & sunny



20th August 2021

SITE DESCRIPTION

Site is located on James Street in the centre of Liverpool. The customer area is across the ground floor of the premises. The roof terrace is located directly up a set of stairs in the multi-storey building, which consists of offices above the pub. Seating is laid out with planting across the central area.

EXISTING MANAGEMENT CONTROLS

Access to the roof terrace is controlled through the pub itself, there is no external access. There were no smoking provisions on the roof terrace.

SURVEY OBSERVATIONS


The survey was undertaken on Friday 20th August 2021. Weather during the survey was sunny and mostly dry, with the survey cut short due to rain. The roof terrace was busy throughout the day and evening. Throughout the survey period, it was observed that a significant proportion of roof terrace users were consuming food at some point during their stay.

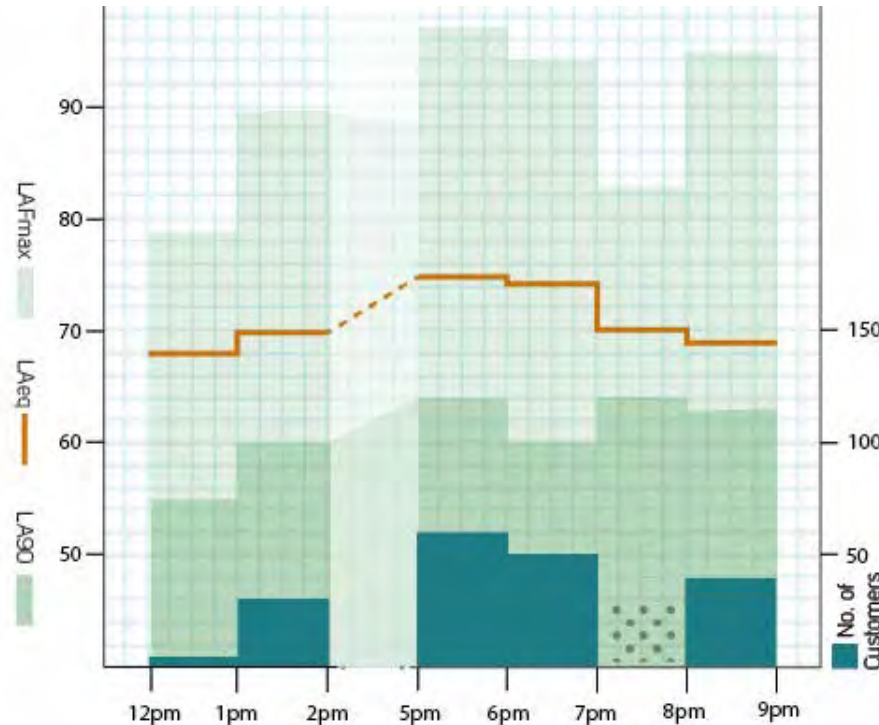
The age profile of customers at this location was broad, with customers in all age brackets throughout the day in approximately similar proportions in each age group. It should be noted that were a number of large stag and hen parties on the roof terrace during the survey. During the evening period the proportion of customers in the age bracket over 60 years of age reduced.



Location plan showing the unattended logger and short-term attended measurement positions

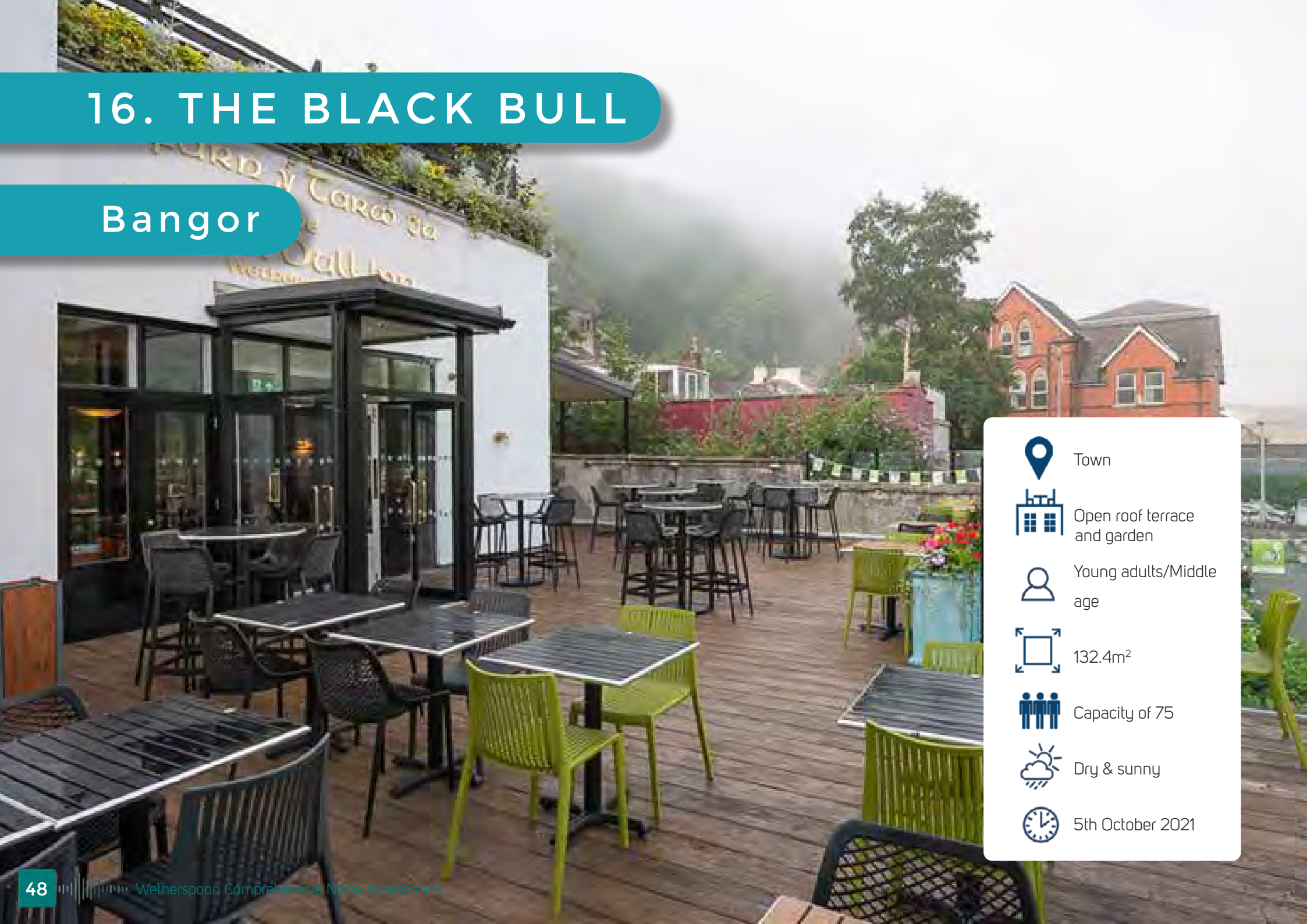


 No data recorded for number of customers



16. THE BLACK BULL

Bangor



Town



Open roof terrace and garden



Young adults/Middle age



132.4m²



Capacity of 75



Dry & sunny



5th October 2021

SITE DESCRIPTION

Site is located on High Street in the centre of Bangor. The customer area is across the ground floor of the premises. The roof terrace is located directly to the rear of the building overlooking a car park, with stairs leading down to a beer garden. Seating is laid out with planting across the central area.

EXISTING MANAGEMENT CONTROLS

Access to the roof terrace is controlled through the pub itself, with external access from the car park to the rear. There were no smoking provisions on the roof terrace or beer garden.



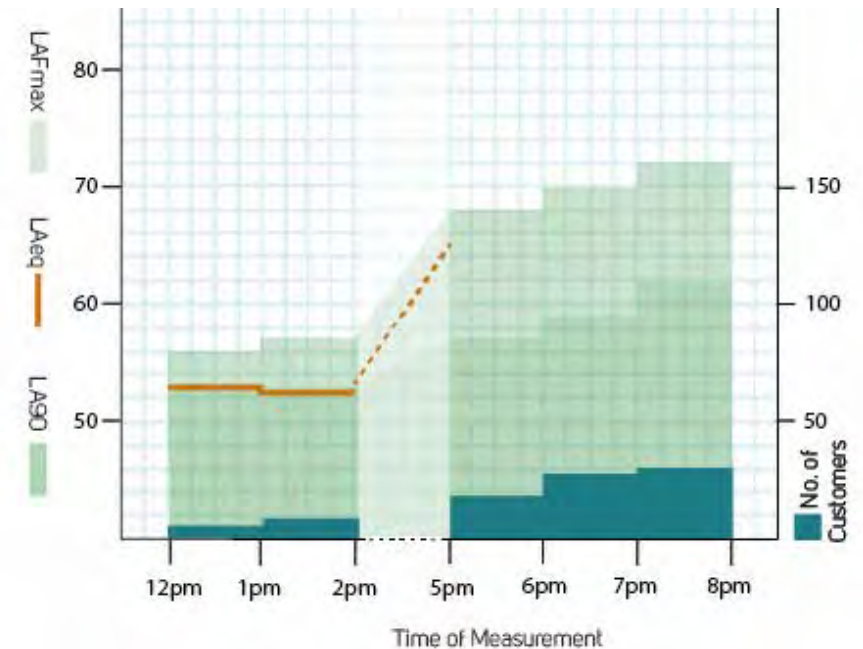
SURVEY OBSERVATIONS

The survey was undertaken on Friday 8th October 2021. Weather during the survey was sunny and dry. The roof terrace was busy throughout the day and evening, whilst the beer garden was quieter. Throughout the survey period, it was observed that a significant proportion of roof terrace and beer garden users were consuming food at some point during their stay.

The age profile of customers at this location was younger, gathered in small groups throughout the day and larger groups during the evening. It should be noted that were a number of large student groups during the survey. During the evening period the proportion of customers were significantly louder.



Location plan showing the unattended logger and short-term attended measurement positions



















RESULTS/CONCLUSION

















RESULTS/CONCLUSION

| GARDEN RESULTS 1 |  Time of measurement |  People/m ² |  Lw/m ² (dBA) |
|---|---|---|--|
| The Angel's Vault, Hitchin  | Lunch | 0.11 | 57 |
| | 5-6pm | 0.18 | 64 |
| | 6-7pm | 0.18 | 64 |
| | 8-9pm | 0.27 | 66 |
| | 9-10pm | 0.33 | 70 |
| The Whalebone, Downham Market  | Lunch | 0.04 | 53 |
| | 5-6pm | 0.09 | 57 |
| | 6-7pm | 0.09 | 60 |
| | 8-9pm | 0.11 | 57 |
| The Back of Beyond, Reading  | Lunch | 0.11 | 62 |
| | 5-6pm | 0.24 | 69 |
| | 6-7pm | 0.25 | 69 |
| | 8-9pm | 0.42 | 75 |
| | 9-10pm | 0.49 | 77 |
| The West Quay  | Lunch | 0.42 | 64 |
| | 5-6pm | 0.26 | 63 |
| | 6-7pm | 0.37 | 64 |
| | 7-7:30pm | 0.32 | 64 |

| GARDEN RESULTS 2 |  Time of measurement |  People/m ² |  Lw/m ² (dBA) |
|--|---|---|---|
| The Mossy Well  | Lunch | 0.07 | 58 |
| | 5-6pm | 0.09 | 60 |
| | 6-7pm | 0.13 | 64 |
| | 8-9pm | 0.08 | 63 |
| The Quayside  | 5-6pm | 23 | 61.6 |
| | 6-7pm | 31 | 60.0 |
| | 7-8pm | 38 | 58.7 |
| The Figure of Eight  | 12-1pm | 8 | 53.6 |
| | 1-2pm | 20 | 56.3 |
| | 5-6pm | 36 | 65.4 |
| | 6-7pm | 24 | 61.5 |
| | 8-9pm | 32 | 63.7 |
| The Buck Inn  | 9-10pm | 60 | 68.3 |
| | 12-1pm | 45 | 71.8 |
| | 5-6pm | 55 | 70.6 |
| | 6-7pm | 65 | 72.7 |
| | 7-8pm | 30 | 71.4 |
| 8-9pm | 40 | 71.5 | |
| 9-10pm | 25 | 69.1 | |



| ROOF TERRACE 1 |  Time of measurement |  People/m ² |  Lw/m ² (dBA) |
|--|---|---|--|
| The Jolie Brise  | Lunch | 0.56 | 64 |
| | 5-6pm | 0.11 | 62 |
| | 6-7pm | 0.22 | 62 |
| | 8-9pm | 0.16 | 61 |
| | 9-10pm | 0.11 | 61 |
| The Picture Playhouse  | Lunch | 0.29 | 61 |
| | 6-7pm | 0.38 | 38 |
| | 7-8pm | 0.33 | 66 |
| | 9-10pm | 0.31 | 65 |
| | 10-11pm | 0.28 | 61 |
| The Regal  | Lunch | 0.18 | 69 |
| | 5-6pm | 0.32 | 66 |
| | 6-7pm | 0.30 | 68 |
| | 8-9pm | 0.36 | 74 |
| | 9-10pm | 0.32 | 73 |
| The Mount Stuart  | 5-6pm | 0.05 | 65 |
| | 6-7pm | 0.03 | 63 |
| | 8-9pm | 0.03 | 63 |
| | 9-10pm | 0.03 | 63 |

| ROOF TERRACE 2 |  Time of measurement |  People/m ² |  Lw/m ² (dBA) |
|--|---|---|---|
| The Picture House  | 12-1pm | 4 | 55.3 |
| | 1-2pm | 18 | 59.0 |
| | 5-6pm | 16 | 62.4 |
| | 6-7pm | 22 | 66.7 |
| The Admiral Humber  | 12-1pm | 20 | 62.6 |
| | 1-2pm | 40 | 64.8 |
| | 5-6pm | 35 | 67.5 |
| | 6-7pm | 30 | 70.3 |
| | 7-8pm | 25 | 70.0 |
| The Captain Alexander  | 12-1pm | 6 | 60.6 |
| | 1-2pm | 30 | 70.6 |
| | 5-6pm | 60 | 79.9 |
| | 6-7pm | 50 | 78.7 |
| | 8-9pm | 40 | 73.7 |
| The Black Bull  | 5-6pm | 20 | 54.9 |
| | 6-7pm | 36 | 52.2 |
| | 7-8pm | 34 | 67.5 |
| | 8-9pm | 29 | 70.4 |



RESULTS

In considering the results of the surveys and how they relate to the previously described methodologies for establishing source sound power levels per square meter squared (L_w/m^2) for the beer gardens and terraces in operation, the following methodology has been followed:

- Each beer garden has been modelled, utilising either the CadnaA noise mapping software or the Softnoise Predictor software, incorporating the local environment including ground heights, buildings and acoustic screening of intervening structures;
- Receiver points were placed into the noise models to represent the locations at which the sound level meters were positioned during the surveys where physical measurements were taken;
- The areas of the beer gardens occupied by patrons were represented by area sources;
- The sound power level per square metre for the area sources were then validated against actual noise measurements during each 1-hour observation period;
- The L_w/m^2 derived from the empirical data and the L_w/m^2 validated from the noise measurements have been compared to establish if the two values are comparable, or to quantify any differential.

WHAT IS SOUND POWER?

- Energy quantity
- Independent of distance
- Theoretically calculated

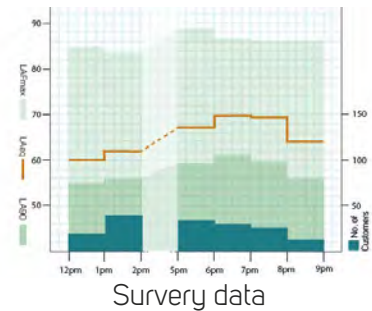
Sound Power level (L_w) is the total airbourne energy emitted by a sound source. It is a constant and non directional value.



This makes it possible to create comparisons without knowledge of location and distance measured.

HOW IT'S CALCULATED

BASED ON ON-SITE SURVEY MEASURED VALUES



CadnaA noise mapping
or
Softnoise Predictor

Calculated adjustments for contextual factors



Sound Power Level (L_w)

BASED ON EMPIRICAL DATA



Empirical data
for speech



Spectrum Methodology :
Adjust for the expected intensity levels
for the beer garden or terrace

Dragonfly Methodology :
Adjust for the expected occupation
levels of the beer garden or terrace



Sound Power Level (L_w)

Comparison to establish if the two values are comparable or to quantify any differential

The following contextual factors were considered relevant in undertaking the comparison, to understand if any factor in particular was a determining factor on the correlation of the modelled and measured values:

Type of external space

- Beer Garden
- Terrace
- Roof Terrace

Location of Premises

- City Centre
- Market Town
- Suburban

Age Range of Clientele

- High proportion of under 25s

In summary, overall there is a clearly a good correlation between the measured and predicted noise levels for both the Spectrum and Dragonfly methodologies. For the majority of sites the predicted noise level from the beer garden or terrace correlated with the highest measured noise levels from that use, such that the methodology could be considered as a 'worst case' assessment of noise emissions.

The results show that the Dragonfly methodology is likely to provide an accurate prediction of noise levels in 'normal' trading with the Spectrum methodology likely to provide a robust prediction that may slightly overpredict noise levels.

Where trading is busy, with high levels of beer garden or terrace occupancy, the Dragonfly methodology

shows a greater likelihood to underpredict noise levels, albeit that the predicted noise levels are still within the accepted margin of accuracy. The Dragonfly methodology allows for consideration of periods of 'peak use'. However, the Spectrum method takes account of these periods more robustly without the need for adaption for consideration of peak periods.

The calculated sound power levels per square metre derived for each site were analysed in order to determine representative values for two trading scenarios:

- A 'normal trading' scenario, where the outdoor amenity areas were not very busy and the patrons generally consumed food during their stay. This generally represents expected trading levels during the weekdays and the lunchtime through to the early evening period at weekends.
- A 'busy trading' scenario, where the great majority of patrons consumed only drinks. This is typical of the evening and late evening periods, most likely at weekends or associated with local special events.

The analysis indicates that the average sound power level for the 'normal trading' scenario is L_w/m^2 67 dB, and the average sound power levels for the 'busy trading' scenario is L_w/m^2 74 dB.

In seeking to understand this divergence, it is necessary to look at the specifics of how these sites operate.

When considering the details of the sites there is a clear delineation in terms of correlation between sites in central city locations. These include:

The Figure of Eight, Birmingham
The Captain Alexander, Liverpool

For these sites, at times the measured noise levels exceed the predicted noise levels by an unacceptable margin of circa 9-10dB.

The Dragonfly modelling principle is based more directly on the practical seated capacity of the beer garden or terrace. This methodology has been developed based on how JD Wetherspoon sites typically operate, with the use of beer gardens and terraces largely focused around a mixed food and drink offer with the vast majority of users seated. For these two sites, it was noted that the actual operating capacity was more than the seated capacity with a significant number of standing patrons using only the drinking offer. A similar situation was observed for the very busy smoking area of The Picture Playhouse in Bexhill on Sea, resulting in higher noise levels.

Based on the survey observations, it is considered that in these instances, the noise levels could be significantly reduced by the premises implementing management controls limiting the number of customers to the seated capacity.

Therefore, the results of this study indicate that two trading scenarios are considered representative for future assessments of noise from outdoor amenity areas, with the following sound power levels per square metre:

- 'Normal Trading' with a sound power level per square metre of L_w/m^2 67 dB
- 'Busy Trading' with a sound power level per square metre of L_w/m^2 74 dB



CONCLUSION

Spectrum and Dragonfly have been commissioned to carry out surveys at 16 J D Wetherspoon premises across the UK. The results of the surveys have demonstrated that the assessment process utilised for predicting noise emissions from JD Wetherspoon sites, by considering the vocal effort of speakers and modelling the beer garden as an area source at a height of 1.5m above ground level, is an accurate and robust methodology for establishing noise emissions for all sites.

Both methodologies produce reliable and robust measurements for the majority of sites. The Dragonfly methodology is more accurate in predicting the noise emissions from the site during general day to day levels of trading, but this method is less accurate where the number of patrons reaches or exceeds the seated capacity of the beer garden or terrace.

The Spectrum methodology, which considers only the area in use by patrons and does not consider the capacity of the beer garden when determining the modelled noise level, provides a robust assessment especially during busy trading scenarios but may overpredict during quieter periods.

The results of this analysis demonstrate that two trading scenarios can be considered typical for each premise: a 'normal trading' scenario, and a 'busy trading' scenario. The associated sound power levels per square metre for each scenario

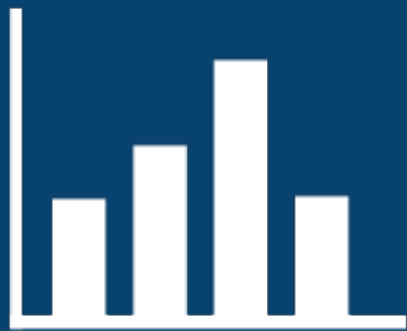
have been determined, and it is proposed that the following sound power levels per square metre are to be utilised in future assessments of outdoor amenity areas.

- 'Normal Trading' with a sound power level per square metre of L_w/m^2 67dB
- 'Busy Trading' with a sound power level per square metre of L_w/m^2 74dB

It is noted that the two proposed trading scenarios recommended to be used in future assessments are consistent with the approach previously taken in noise assessments completed on behalf of JD Wetherspoon by both consultants. The two new trading scenarios are considered to provide an approach that will ensure that in all circumstances noise levels are predicted such that all circumstances of use are considered.

The study also indicates that, in two instances, noise from the outdoor amenity areas could exceed the 'busy trading' level. Nevertheless, it is considered that this level is atypical for the majority of sites and the noise levels can normally be managed by the premises implementing the JDW management controls.





TECHNICAL APPENDICES

TECHNICAL APPENDICES

THE ANGELS VAULT, HITCHIN - SPECTRUM

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | L _{Aeq} | L _{A90} | L _A Fmax | Observations |
|----------|-------|-----------------|---------------|--|--------------------|----------------------------|------------------|------------------|---------------------|--|
| A1 | 12:43 | 5 | 26 | Families / Older Groups | 50:50 | 40 | 50 | 45 | 69 | General speaking |
| A2 | 12:52 | 5 | 32 | Families / Older Groups | 50:50 | 45 | 54 | 47 | 65 | Louder speaking, increased wind and drilling noise |
| A3 | 12:58 | 5 | 32 | Families / Young Adults | 60:40 | 35 | 53 | 48 | 66 | Gusts of wind |
| A4 | 13:04 | 5 | 41 | Families / Young Adults | 60:40 | 40 | 57 | 51 | 71 | |
| A5 | 13:11 | 5 | 43 | Families / Young Adults | 60:40 | 45 | 55 | 50 | 73 | |
| A1 | 13:17 | 5 | 43 | Families / Young Adults | 60:40 | 50 | 59 | 50 | 77 | Larger gusts, shelter rattling |
| A2 | 13:23 | 5 | 45 | Families / Young Adults | 50:50 | 45 | 53 | 47 | 70 | Foliage noise, light speaking |
| A3 | 13:30 | 5 | 39 | Families / Young Adults | 50:50 | 45 | 54 | 48 | 68 | Light foot traffic near mic |
| A4 | 13:36 | 5 | 36 | Families / Young Adults | 50:50 | 40 | 59 | 50 | 76 | Baby crying, gusts of wind |
| A5 | 13:43 | 5 | 31 | Families / Young Adults | 50:50 | 40 | 58 | 50 | 71 | Loud speaking from close group |
| A1 | 17:33 | 5 | 59 | Families / Young Adults | 30:70 | 30 | 68 | 58 | 81 | Large group close to mic |
| A2 | 17:43 | 5 | 63 | Families / Young Adults | 30:70 | 30 | 63 | 58 | 75 | Low wind noise |
| A3 | 17:50 | 5 | 69 | Families / Young Adults | 30:70 | 35 | 67 | 60 | 86 | Large group close to mic |
| A4 | 17:58 | 5 | 64 | Families / Young Adults | 30:70 | 35 | 58 | 50 | 79 | High foot traffic area |
| A5 | 18:07 | 5 | 61 | Families / Young Adults | 30:70 | 30 | 68 | 63 | 82 | Table being cleared |
| A1 | 18:15 | 5 | 69 | Families / Young Adults | 30:70 | 30 | 68 | 59 | 81 | Large loud group |
| A2 | 18:23 | 5 | 67 | Students / Young Adults | 40:60 | 25 | 65 | 60 | 79 | Strong gusts |
| A3 | 18:30 | 5 | 76 | Students / Young Adults | 40:60 | 25 | 65 | 58 | 84 | Loud talking near mic |

THE ANGELS VAULT, HITCHIN - SPECTRUM, CONTINUED

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|-------|-----------------|---------------|--|--------------------|----------------------------|------|------|--------|--------------------------------------|
| A4 | 18:37 | 5 | 62 | Students / Young Adults | 50:50 | 25 | 57 | 52 | 78 | Busy foot traffic |
| A5 | 18:45 | 5 | 55 | Students / Young Adults | 50:50 | 30 | 66 | 60 | 76 | Close to waiter stand, cutlery noise |
| A1 | 18:51 | 5 | 53 | Students / Young Adults | 50:50 | 30 | 66 | 58 | 77 | Table clearing |
| A2 | 19:37 | 5 | 81 | Students / Young Adults | 50:50 | 25 | 67 | 61 | 80 | Light wind, foliage noise |
| A3 | 19:43 | 5 | 89 | Students / Young Adults | 50:50 | 25 | 64 | 59 | 82 | Large group walking past |
| A4 | 19:51 | 5 | 101 | Students / Young Adults | 50:50 | 30 | 61 | 53 | 74 | High foot traffic |
| A1 | 20:00 | 5 | 107 | Students / Young Adults | 50:50 | 30 | 71 | 63 | 86 | Shouting from large group |
| A5 | 20:20 | 5 | 108 | Students / Young Adults | 60:40 | 30 | 73 | 68 | 85 | Loud people near mic |
| A2 | 20:27 | 5 | 123 | Students / Young Adults | 50:50 | 30 | 70 | 67 | 81 | High levels of shouting |
| A3 | 20:36 | 5 | 125 | Students / Young Adults | 50:50 | 30 | 72 | 67 | 91 | Loud talking near smoking area |
| A4 | 20:46 | 5 | 122 | Students / Young Adults | 60:40 | 30 | 66 | 60 | 84 | Close chair movements, shouting |
| A5 | 20:55 | 5 | 108 | Students / Young Adults | 50:50 | 25 | 73 | 69 | 84 | Table clearing, glass noises |
| A2 | 21:05 | 5 | 121 | Students / Young Adults | 50:50 | 30 | 68 | 60 | 85 | Bottom of beer garden empty |
| A5 | 21:19 | 5 | 115 | Students / Young Adults | 50:50 | 25 | 72 | 65 | 89 | Shouting |
| A5 | 21:24 | 5 | 102 | Students / Young Adults | 50:50 | 25 | 75 | 66 | 89 | Loud talking group close to mic |
| A5 | 21:30 | 5 | 100 | Students / Young Adults | 50:50 | 25 | 75 | 67 | 85 | High foot traffic |
| A5 | 21:36 | 5 | 106 | Students / Young Adults | 50:50 | 25 | 77 | 68 | 89 | Large amounts of shouting |

THE WHALEBONE, DOWNHAM MARKET - SPECTRUM

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|-------|-----------------|---------------|--|--------------------|----------------------------|------|------|--------|----------------------------------|
| 1 | 12:38 | 5 | 17 | Families / Older Groups | 60:40 | 35 | 44 | 42 | 56 | Birdsong, foliage noise |
| 2 | 12:45 | 5 | 14 | Families / Older Groups | 70:30 | 45 | 45 | 42 | 58 | Birdsong, foliage noise |
| 3 | 12:51 | 5 | 17 | Families / Older Groups | 70:30 | 45 | 54 | 48 | 77 | Some kitchen noise |
| 4 | 12:58 | 5 | 22 | Families / Older Groups | 60:40 | 40 | 63 | 52 | 80 | Close to bins and road |
| 1 | 1:05 | 5 | 26 | Families / Older Groups | 60:40 | 40 | 46 | 43 | 66 | Baby crying, plant noise |
| 2 | 1:11 | 5 | 26 | Families / Older Groups | 60:40 | 40 | 47 | 44 | 58 | Low level speaking |
| 3 | 1:17 | 5 | 34 | Families / Older Groups | 70:30 | 45 | 55 | 50 | 72 | Cutlery noise |
| 4 | 1:24 | 5 | 38 | Families / Older Groups | 60:40 | 40 | 59 | 50 | 70 | Road traffic noise |
| 1 | 5:30 | 5 | 50 | Young Groups / Older Groups | 50:50 | 35 | 52 | 47 | 68 | Busier grassed area |
| 2 | 5:36 | 5 | 49 | Young Groups / Older Groups | 50:50 | 35 | 53 | 48 | 71 | Table clearing close to position |
| 3 | 5:43 | 5 | 51 | Young Groups / Older Groups | 50:50 | 35 | 61 | 56 | 73 | High level foot traffic |
| 4 | 5:50 | 5 | 49 | Young Groups / Older Groups | 50:50 | 35 | 81 | 53 | 101 | Glass bins taken out |
| 1 | 5:57 | 5 | 42 | Young Groups / Older Groups | 50:50 | 30 | 50 | 45 | 61 | Food taken to table close |
| 2 | 6:04 | 5 | 51 | Young Groups / Older Groups | 40:60 | 30 | 53 | 49 | 70 | Large group close laughing |
| 3 | 6:10 | 5 | 51 | Young Groups / Older Groups | 40:60 | 30 | 61 | 56 | 79 | Louder internal noises |
| 4 | 6:19 | 5 | 59 | Young Groups / Families | 50:50 | 35 | 61 | 54 | 76 | High road traffic noise |

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|------|-----------------|---------------|--|--------------------|----------------------------|------|------|--------|--|
| 1 | 6:32 | 5 | 71 | Young Groups / Families | 50:50 | 30 | 52 | 48 | 68 | Children shouting and running |
| 2 | 6:41 | 5 | 73 | Young Groups / Families | 50:50 | 30 | 58 | 51 | 73 | Food being served |
| 3 | 6:49 | 5 | 76 | Young Groups / Families | 50:50 | 30 | 67 | 57 | 90 | Internal noise dominant |
| 4 | 6:57 | 5 | 82 | Young Groups / Families | 50:50 | 35 | 66 | 58 | 81 | Bins taken out, gate slam, close talking |
| 1 | 8:04 | 5 | 84 | Young Groups / Older Groups | 30:70 | 25 | 50 | 45 | 63 | Kids running around |
| 2 | 8:11 | 5 | 81 | Young Groups / Older Groups | 30:70 | 25 | 61 | 54 | 79 | Shouting kids |
| 3 | 8:21 | 5 | 78 | Young Groups / Older Groups | 40:60 | 30 | 61 | 56 | 73 | Indoor noise dominant |
| 4 | 8:30 | 5 | 67 | Young Groups / Older Groups | 50:50 | 35 | 64 | 58 | 80 | Loud road traffic noise, louder talking |
| 1 | 8:40 | 5 | 57 | Young Groups / Older Groups | 50:50 | 35 | 53 | 47 | 70 | Very empty grass section |
| 2 | 8:50 | 5 | 47 | Young Groups / Older Groups | 50:50 | 45 | 59 | 51 | 74 | Clearing tables |
| 3 | 8:59 | 5 | 45 | Young Groups / Older Groups | 50:50 | 45 | 62 | 56 | 75 | Indoor noise dominant |
| 4 | 9:13 | 5 | 51 | Young Groups / Older Groups | 60:40 | 35 | 65 | 59 | 75 | Low level speaking |
| 3 | 9:24 | 5 | 47 | Young Groups / Older Groups | 60:40 | 35 | 62 | 55 | 80 | Loud laughing group |
| 4 | 9:32 | 5 | 42 | Young Groups / Older Groups | 50:50 | 30 | 66 | 59 | 78 | Gate slam |

THE BACK OF BEYOND, READING - SPECTRUM

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % (F-M) | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|------|-----------------|---------------|--|----------------------|----------------------------|------|------|--------|------------------------------|
| 1 | 1240 | 5 | 12 | Older Groups | 20-80 | 45 | 60 | 55 | 76 | Distant sirens |
| 2 | 1248 | 5 | 10 | Older Groups | 20-80 | 50 | 61 | 55 | 76 | Table being cleared |
| 3 | 1257 | 5 | 15 | Older Groups / Families | 30-70 | 40 | 61 | 55 | 76 | Light wind |
| 1 | 1305 | 5 | 11 | Younger Groups / Families | 30-70 | 35 | 58 | 53 | 77 | Laughing children |
| 2 | 1312 | 5 | 17 | Younger Groups / Families | 30-70 | 35 | 62 | 57 | 77 | Louder group |
| 3 | 1322 | 5 | 18 | Younger Groups / Families | 30-70 | 40 | 60 | 56 | 71 | Light wind |
| 2 | 1657 | 5 | 33 | Older Groups | 40-60 | 50 | 70 | 64 | 85 | Loud laughing |
| 3 | 1704 | 5 | 33 | Older Groups | 40-60 | 50 | 68 | 62 | 82 | Little / No wind |
| 1 | 1716 | 5 | 30 | Older Groups / Younger Groups | 50-50 | 40 | 69 | 63 | 82 | Loud Talking |
| 2 | 1722 | 55 | 35 | Older Groups / Younger Groups | 40-60 | 45 | 70 | 64 | 82 | Loud talking |
| 3 | 1728 | 5 | 31 | Older Groups / Younger Groups | 40-60 | 45 | 69 | 63 | 81 | Shouting, distant motorcycle |
| 1 | 1734 | 5 | 31 | Older Groups / Younger Groups | 40-60 | 45 | 69 | 63 | 81 | Close talking |
| 2 | 1750 | 5 | 32 | Older Groups / Younger Groups | 40-60 | 40 | 67 | 62 | 82 | Close talking |
| 3 | 1757 | 5 | 19 | Older Groups | 40-60 | 50 | 67 | 59 | 85 | Table clearing |
| 1 | 1804 | 5 | 21 | Older Groups | 40-60 | 45 | 68 | 60 | 82 | Table clearing |
| 2 | 1812 | 5 | 23 | Older Groups | 30-70 | 45 | 67 | 60 | 83 | Loud talking |
| 3 | 1820 | 5 | 32 | Older Groups / Students | 40-60 | 35 | 68 | 62 | 82 | Distant sirens |
| 1 | 1827 | 5 | 33 | Older Groups / Students | 40-60 | 35 | 68 | 63 | 80 | Distant sirens |
| 2 | 1835 | 5 | 37 | Older Groups / Students | 40-60 | 35 | 69 | 65 | 80 | Laughing close |



THE BACK OF BEYOND, READING - SPECTRUM, CONTINUED

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % | Approximate Age of Patrons | L _{Aeq} | L _{A90} | L _A Fmax | Observations |
|----------|------|-----------------|---------------|--|----------------|----------------------------|------------------|------------------|---------------------|----------------------------------|
| 3 | 1862 | 5 | 38 | Younger Groups / Students | 40-60 | 30 | 72 | 66 | 85 | Close sirens |
| 1 | 1850 | 5 | 46 | Younger Groups / Students | 40-60 | 30 | 70 | 65 | 83 | Table clearing |
| 2 | 1959 | 5 | 59 | Younger Groups / Students | 40-60 | 25 | 74 | 69 | 85 | Larger groups |
| 3 | 2006 | 5 | 55 | Younger Groups / Students | 50-50 | 30 | 74 | 68 | 86 | Glass bins emptied |
| 1 | 2012 | 5 | 38 | Younger Groups | 50-50 | 30 | 73 | 68 | 87 | General talking |
| 2 | 2018 | 5 | 53 | Younger Groups | 60-40 | 30 | 75 | 69 | 88 | Larger group |
| 3 | 2025 | 5 | 49 | Younger Groups | 60-40 | 30 | 74 | 69 | 90 | Loud laughing |
| 1 | 2030 | 5 | 58 | Younger Groups | 60-40 | 30 | 75 | 69 | 93 | Close talking / Distant shouting |
| 2 | 2036 | 5 | 62 | Younger Groups | 60-40 | 30 | 76 | 70 | 92 | Large group cheering |
| 3 | 2043 | 5 | 65 | Younger Groups | 60-40 | 25 | 76 | 71 | 88 | Close talking |
| 1 | 2050 | 5 | 54 | Younger Groups | 60-40 | 30 | 75 | 70 | 87 | Close talking |
| 2 | 2057 | 5 | 56 | Younger Groups | 60-40 | 30 | 76 | 71 | 88 | Large group chanting |
| 3 | 2108 | 5 | 61 | Younger Groups | 60-40 | 30 | 75 | 71 | 88 | General talking |
| 1 | 2114 | 5 | 63 | Younger Groups | 60-40 | 30 | 76 | 71 | 90 | Close talking |
| 2 | 2121 | 5 | 70 | Younger Groups | 50-50 | 30 | 76 | 71 | 90 | Close talking |
| 3 | 2126 | 5 | 65 | Younger Groups | 60-40 | 25 | 77 | 73 | 88 | Louder shouting |
| 1 | 2132 | 5 | 62 | Younger Groups | 60-40 | 30 | 78 | 74 | 93 | Distant screaming |

THE WEST QUAY, BRIGHTON - SPECTRUM

| Attended Project | Position | Time | Duration (mins) | No. of People N-Side / S-Side | Type of people e.g. students, families, young professions etc. | Gender Split % M/F | Approx. Age of Patrons | LAeq | LA90 | LAFmax |
|------------------|----------|-------|-----------------|-------------------------------|--|--------------------|------------------------|------|------|--------|
| 1 | A | 12:41 | 05:30 | 54 / 30-35 | Families, middle-aged couples, young professionals | 60/40 | 35-70 | 59 | 55 | 69 |
| 2 | B | 12:49 | 05:30 | 55-60 / 31 | Families, middle-aged couples, young professionals | 60/40 | 35-70 | 59 | 56 | 71 |
| 3 | C | 12:55 | 05:30 | 55-60 / 31 | Families, middle-aged groups | 60/40 | 35-70 | 61 | 56 | 73 |
| 4 | A | 13:01 | 05:30 | 55-60 / 31 | Families, middle-aged groups | 60/40 | 35-70 | 61 | 58 | 68 |
| 5 | B | 13:08 | 05:00 | 55-60 / 31 | Families, middle-aged groups | 60/40 | 35-70 | 62 | 58 | 77 |
| 6 | C | 13:13 | 05:00 | 50-55 / 35-40 | Families, middle-aged groups | 60/40 | 35-70 | 62 | 58 | 77 |
| 7 | A | 13:18 | 05:00 | 50-55 / 35-40 | Families, middle-aged groups | 60/40 | 35-70 | 60 | 57 | 72 |
| 8 | B | 13:24 | 05:00 | 50-55 / 35-40 | Families, middle-aged groups | 60/40 | 35-70 | 61 | 58 | 69 |
| 9 | C | 13:32 | 05:00 | 50 / 25-30 | Families, middle-aged groups, couples, young professionals | 60/40 | 35-70 | 61 | 57 | 70 |
| 10 | A | 13:38 | 05:00 | 50 / 25 | Families, middle-aged groups, couples, young professionals | 60/40 | 35-70 | 63 | 59 | 78 |
| 11 | B | 13:45 | 05:00 | 50 / 25 | Families, middle-aged groups, couples, young professionals | 60/40 | 35-70 | 60 | 56 | 76 |
| 12 | C | 13:51 | 05:00 | 50 / 25 | Families, middle-aged groups, couples, young professionals | 60/40 | 35-70 | 59 | 55 | 72 |
| 13 | D | 13:57 | 05:00 | 50 / 25 | Families, middle-aged groups, couples, young professionals | 60/40 | 35-70 | 58 | 54 | 72 |
| 14 | A | 17:26 | 05:00 | 25-30 / 16-20 | Couples, young professionals, middle-aged groups | 60/40 | 30-60 | 57 | 54 | 69 |
| 15 | B | 17:31 | 05:00 | 25-30 / 16-20 | Couples, young professionals, middle-aged groups | 60/40 | 30-60 | 62 | 55 | 76 |
| 16 | C | 17:37 | 05:00 | 25-30 / 16-20 | Couples, young professionals, middle-aged groups | 60/40 | 30-60 | 58 | 53 | 71 |
| 17 | A | 17:43 | 05:00 | 25-30 / 16-20 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 58 | 54 | 70 |
| 18 | B | 17:49 | 05:00 | 25-30 / 16-20 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 61 | 55 | 75 |
| 19 | C | 17:55 | 05:00 | 35-40 / 24 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 62 | 54 | 78 |
| 20 | A | 18:01 | 05:00 | 35-40 / 24 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 58 | 55 | 69 |
| 21 | B | 18:07 | 05:00 | 35-40 / 24 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 66 | 56 | 92 |

THE WEST QUAY, BRIGHTON - SPECTRUM, CONTINUED

| | | | | | | | | | | |
|----|---|-------|-------|---------------|---|-------|-------|----|----|----|
| 23 | A | 18:21 | 05:00 | 35-40 / 25-30 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 57 | 53 | 71 |
| 24 | B | 18:26 | 05:00 | 35-40 / 25-30 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 60 | 56 | 74 |
| 25 | C | 18:32 | 05:00 | 35-40 / 30-35 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 61 | 56 | 75 |
| 26 | A | 18:38 | 05:00 | 35-40 / 30-35 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 60 | 57 | 73 |
| 27 | B | 18:43 | 05:00 | 35-40 / 30-35 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 60 | 56 | 75 |
| 28 | C | 18:49 | 05:00 | 50 / 35-40 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 60 | 57 | 76 |
| 29 | A | 18:55 | 05:00 | 50 / 35-40 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 61 | 57 | 82 |
| 30 | B | 19:01 | 05:00 | 35-40 / 35-40 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 62 | 58 | 76 |
| 31 | C | 19:06 | 05:00 | 35-40 / 35-40 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 62 | 57 | 76 |
| 32 | E | 19:12 | 05:00 | 35-40 / 35-40 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 60 | 56 | 76 |
| 33 | A | 19:27 | 02:53 | 25 / 20 | Couples, young professionals, middle-aged groups | 60/40 | 25-60 | 58 | 55 | 70 |

THE MOSSY WELL, MUSWELL HILL, LONDON - SPECTRUM

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|--------------------------------|-------|-----------------|---------------|--|----------------|----------------------------|------|------|--------|--|
| 1 - N under balcony/terrace | 13:07 | 5 | 2 | Young professionals / students | 50 | 30 | 50 | 49 | 58 | Fountain splashing dominant, intermittent birdsong, no patron noise (Had synchronise to clock turned on – turned off after this measurement) |
| 2 – N on balcony/terrace | 13:13 | 5 | 4 | Young professionals / students | 50 | 25 | 55 | 54 | 69 | Extract vent dominant, intermittent beeping from kitchen indoors (doors open throughout), door slam at apartment nearby |
| 3 – SE corner next to fountain | 13:20 | 5 | 5-9 | Young professionals / students / families | 40 M – 60 F | 25 | 58 | 57 | 68 | Fountain dominant, screened road noise, some patrons talking towards end |
| 4 – SW position in raised area | 13:27 | 5 | 9 | Young professionals / students / families | 40 M – 60 F | 25 | 53 | 48 | 71 | Patrons talking quietly dominant, plane, fountain |
| 1 | 13:33 | 5 | 9-11 | Young professionals / students / families | 40 M – 60 F | 25 | 56 | 50 | 77 | Patrons talking + impacts on terrace and stairs dominant, fountain, 2 planes |
| 2 | 13:40 | 5 | 11-13 | Young professionals / students / families | 40 M – 60 F | 30 | 58 | 54 | 71 | Patrons talking dominant, extract vent |
| 3 | 13:46 | 5 | 13 | Young professionals / students / families | 50 | 35 | 60 | 57 | 76 | Fountain dominant, intermittent patrons talking, light table impacts |
| 4 | 13:51 | 5 | 13 | Young professionals / students / families | 50 | 35 | 52 | 47 | 69 | Patrons talking dominant, fountain |
| 1 | 13:57 | 5 | 13 | Young professionals / students / families | 50 | 30 | 54 | 49 | 78 | Patrons talking + impacts on terrace and stairs dominant, fountain |
| 2 | 14:04 | 5 | 16 | Young professionals / pensioners / families | 50 | 35 | 59 | 54 | 73 | Intermittent patrons talking dominant, extract vent |
| 3 | 14:11 | 5 | 16-20 | Young professionals / pensioners / families | 50 | 40 | 59 | 57 | 72 | Intermittent patrons talking dominant, chair scrapes on floor, kid's scooter impacts on stairs, fountain |
| 4 | 14:17 | 5 | 22 | Young professionals / pensioners / families | 50 | 40 | 55 | 48 | 71 | Patrons talking dominant, fountain |

THE MOSSY WELL, MUSWELL HILL, LONDON - SPECTRUM, CONTINUED

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|-------|-----------------|---------------|--|----------------|----------------------------|------|------|--------|---|
| 1 | 17:00 | 5 | 22-17 | Students / young professionals / families / pensioners | 50 | 30 | 55 | 51 | 70 | Patrons talking + impacts on terrace and stairs dominant, fountain |
| 2 | 17:06 | 5 | 17 | Students / young professionals / families / pensioners | 50 | 40 | 63 | 56 | 86 | Patrons talking dominant, extract vent, paused for man talking to me, chair scrape/impacts. plane |
| 3 | 17:13 | 5 | 13 | Students / young professionals / middle-aged / pensioners | 60 M – 40 F | 50 | 58 | 57 | 72 | Fountain dominant, patrons talking quietly |
| 4 | 17:19 | 5 | 10 | Students / young professionals / middle-aged / pensioners | 60 M – 40 F | 50 | 55 | 47 | 69 | Patrons talking dominant, fountain |
| 1 | 17:25 | 5 | 10 | Students / young professionals / middle-aged / pensioners | 50 | 40 | 53 | 50 | 68 | Fountain dominant, chairs scraping on terrace, plane |
| 2 | 17:31 | 5 | 9-12 | Students / young professionals / middle-aged / pensioners | 50 | 30-40 | 62 | 56 | 77 | Patron noise dominant, chair scrape, extract vent, plates/glasses clinking |
| 3 | 17:38 | 5 | 15 | Students / young professionals / middle-aged / pensioners | 60 M – 40 F | 30 | 60 | 57 | 71 | Patron noise dominant, fountain, birdsong |
| 4 | 17:44 | 5 | 15 | Students / young professionals / middle-aged / pensioners | 60 M – 40 F | 30 | 55 | 49 | 66 | Patron noise dominant, fountain |
| 1 | 17:50 | 5 | 15 | Students / young professionals / middle-aged / pensioners | 60 M – 40 F | 30 | 59 | 52 | 70 | Patron noise dominant, football commentary on phone, chair scrape on terrace, plane |
| 2 | 17:57 | 5 | 18 | Students / young professionals / middle-aged / pensioners | 50 | 35 | 64 | 58 | 77 | Patron noise dominant, extract fan |
| 3 | 18:03 | 5 | 20 | Students / young professionals / middle-aged / pensioners | 50 | 35 | 62 | 59 | 74 | Patrons talking/music from phone dominant, paused for somebody talking to me |
| 4 | 18:10 | 5 | 20 | Students / young professionals / middle-aged / pensioners | 50 | 30 | 57 | 51 | 69 | Patrons talking dominant, music from phone, fountain, glasses clinking |
| 1 | 18:16 | 5 | 22 | Students / young professionals / middle-aged | 50 | 25 | 61 | 54 | 79 | Patrons talking dominant, siren in distance, music on phone, glasses clinking, impacts on terrace |
| 2 | 18:22 | 5 | 25 | Students / young professionals / middle-aged | 50 | 25 | 63 | 57 | 77 | Patrons talking dominant, extract vent, chairs scrape |

THE MOSSY WELL, MUSWELL HILL, LONDON - SPECTRUM, CONTINUED

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|-------|-----------------|---------------|--|----------------|----------------------------|------|------|--------|---|
| 3 | 18:29 | 5 | 23 | Students / young professionals | 50 | 25 | 65 | 60 | 78 | Patrons talking/music on phone dominant, loud car engine in distance, fountain |
| 4 | 18:34 | 5 | 18 | Students / young professionals | 50 | 25 | 54 | 49 | 73 | Patrons talking/music from phone dominant, fountain, glasses clinking |
| 1 | 18:40 | 5 | 20 | Students / young professionals | 50 | 25 | 61 | 55 | 71 | Patrons talking dominant, fountain |
| 2 | 18:46 | 5 | 18-14 | Students / young professionals | 50 | 25 | 59 | 56 | 72 | Patrons talking dominant, extract vent, plane |
| 3 | 18:52 | 5 | 14 | Students / young professionals | 50 | 25 | 62 | 58 | 72 | Patron noise dominant, fountain |
| 4 | 18:58 | 5 | 16 | Students / young professionals | 50 | 25 | 54 | 48 | 71 | Patron noise dominant, short burst of music from phone, fountain |
| | | | | | | | | | | |
| 1 | 20:00 | 5 | 12-8 | Students / young professionals | 50 | 20 | 59 | 52 | 73 | Patrons talking dominant, fountain, 4 people leave at start with impacts on stairs/terrace |
| 2 | 20:11 | 5 | 10 | Students / young professionals | 50 | 20 | 62 | 59 | 76 | Had to pause for guy talking to me, extract vent dominant, patrons talking/beeping from indoors |
| 3 | 20:18 | 5 | 14 | Students / young professionals | 50 | 20 | 69 | 61 | 84 | Patrons talking loudly dominant, fountain |
| 4 | 20:23 | 5 | 10 | Students / young professionals | 70 M – 30 F | 20 | 67 | 55 | 82 | Guys talk to me, patron noise dominant, fountain |
| 1 | 20:29 | 5 | 16 | Students / young professionals | 60 M – 40 F | 20 | 61 | 54 | 76 | Patrons talking dominant, fountain, plates clinking, people talk to me briefly |
| 2 | 20:36 | 5 | 16-10 | Students / young professionals | 50 | 20 | 62 | 59 | 83 | Paused for people talking to me, extract vent dominant, patrons talking indoors |
| 3 | 20:43 | 5 | 10 | Students / young professionals | 50 | 20 | 63 | 59 | 76 | Patron noise dominant, fountain |

THE JOLIE BRISE, TEIGNMOUTH - SPECTRUM

| Attended Project | Position | Time | Duration (mins) | No. of People S / Mid / N | Type of people e.g. students, families, young professions etc. | Gender Split % M/F | Approx. Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|------------------|----------|---------------|-----------------|---------------------------|--|--------------------|------------------------|------|------|--------|---|
| - | - | 13:45 | | 20 / 16 / 24 | Families, couples, groups of people | 50 / 50 | 10 - 60 | - | - | - | People talking normally, distant traffic audible |
| 2 | A | 14:11 | | 20 / 16 / 24 | Families, couples, groups of people | 50 / 50 | 10 - 60 | 52 | 49 | 66 | People talking normally, distant traffic audible |
| 3 | B | 14:18 | | 12 / 10 / 30 | Families, couples, groups of people | 50 / 50 | 10 - 60 | 62 | 56 | 85 | Glasses clattering, seagulls, 14:26 motorcycle |
| 4 | C | 14:30 | | 12 / 10 / 30 | Families, couples, groups of people | 50 / 50 | 10 - 60 | 59 | 51 | 76 | 14:34 plane, distant mechanical plant |
| 5 | D | 14:41 | | 16 / 20 / 11 | Families, couples, groups of people | 50 / 50 | 10 - 60 | 61 | 55 | 80 | 14:43 and 14:49 glasses shatter, normal talking |
| - | - | 17:30 – 18:00 | | 2 / 4 / 8 | Couples, groups of people | 50 / 50 | 25-70 | - | - | - | Normal talking, seagulls, plane passing, distant mechanical plant. |
| 6 | A | 18:05 | | 10 in the smoking area | Families, couples, groups of people | 50 / 50 | 25-70 | 54 | 49 | 69 | One group loud, people audible from terrace. |
| 7 | E | 18:11 | | 2 / 8 / 8 | Families, couples, groups of people | 60 / 40 | 25-70 | 61 | 53 | 80 | One group loud, but not busy. Mechanical plant audible. |
| 8 | C | 18:21 | | 2 / 8 / 8 | Families, couples, groups of people | 60 / 40 | 25-70 | 52 | 47 | 77 | Seagulls, people audible mostly from the mid-section |
| - | - | | | 0 / 2 / 10 | Families, couples, groups of people | 60 / 40 | 30-60 | - | - | - | Seagulls, 18:59 lorry passing on road. |
| 9 | D | 19:00 | | 0 / 10 / 14 | Families, couples, groups of people | 60 / 40 | 30-60 | 56 | 49 | 74 | Normal talking, bottles dumped at 19:17 |
| - | - | 19:30 | | 0 / 10 / 14 | Families, couples, groups of people | 60 / 40 | 30-60 | - | - | - | 19:30 bottles dumped, seagulls loud |
| - | - | 20:00 | | 0 / 4 / 5 | Couples, young professionals | 70 / 30 | 25-50 | - | - | - | - |
| 10 | D | 20:15 | | 0 / 4 / 5 | Couples, young professionals | 70 / 30 | 25-50 | 56 | 48 | 79 | 20:31 staff speaking next to mic. |
| 11 | B | 20:38 | | 0 / 4 / 12 | Couples, young professionals | 80 / 20 | 25-50 | 63 | 52 | 89 | - |
| 12 | A | 21:25 | | 3 in the smoking area | - | - | - | 56 | 52 | 67 | Patron noise breaking out mostly from inside. |
| 13 | B | 21:33 | | 0 / 6 / 10 | Couples, young professionals | 80 / 20 | 25-50 | 59 | 49 | 80 | 21:34 4 people leave, 21:37 another 4 people leave |
| 14 | A | 21:47 | | 0 / 4 / 4 | Couples, young professionals | 80 / 20 | 25-50 | 47 | 43 | 61 | Distant traffic, smoking area closed, pub door closed, people talking on street |

THE PICTURE PLAYHOUSE, BREXHILL ON SEA - SPECTRUM

| Attended Project | Position | Time | Duration (mins) | No. of People South / Mid / North | Type of people e.g. students, families, young professions etc. | Gender Split % M/F | Approx. Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|------------------|----------|-------|-----------------|-----------------------------------|--|--------------------|------------------------|------|------|--------|--|
| 1 | A | 12:45 | 05:00 | 22 / 6 / 4 | Middle-aged groups and couples | 60/40 | 30-60 | 60 | 53 | 84 | People talking normally, constant mechanical plant audible |
| 2 | B | 12:51 | 05:00 | 22 / 6 / 4 | Middle-aged groups and couples | 60/40 | 30-60 | 59 | 54 | 74 | People talking normally, occasional vehicles audible, |
| 3 | C1 | 12:57 | 05:00 | 25 / 6 / 10 | Middle-aged groups and couples | 60/40 | 30-60 | 55 | 49 | 72 | People talking normally, constant mechanical plant audible, 12:57 people sit next to mic |
| 4 | A | 13:03 | 05:00 | 34 / 6 / 10 | Middle-aged groups and couples | 60/40 | 30-60 | 57 | 53 | 72 | |
| 5 | B | 13:09 | 05:00 | 34 / 6 / 10 | Middle-aged groups and couples | 60/40 | 30-60 | 62 | 52 | 81 | Loud talking nearby, train at 13:13 |
| 6 | C1 | 13:15 | 05:00 | 34 / 6 / 10 | Middle-aged groups and couples | 60/40 | 30-60 | 59 | 51 | 71 | Quiet in the North area. Plant audible, occasional wind gusts |
| 7 | A | 13:22 | 05:00 | 30 / 6 / 8 | Middle-aged groups and couples | 60/40 | 30-60 | 61 | 56 | 72 | Bin collection on street, distant plant |
| 8 | B | 13:28 | 05:00 | 30 / 6 / 8 | Middle-aged groups and couples | 60/40 | 30-60 | 56 | 51 | 74 | Car horns on street, a few wind gusts |
| 9 | C1 | 13:34 | 05:00 | 34 / 6 / 12 | Groups of young professionals and middle-aged people, couples | 60/40 | 20 - 50 | 60 | 51 | 75 | Normal talking, distant plant |
| 10 | A | 18:01 | 05:00 | 34 / 6 / 14 | Groups of young professionals and middle-aged people, couples | 60/40 | 20 - 50 | 64 | 57 | 84 | 18:05 glasses clattering next to mic (short period) |
| 11 | B | 18:07 | 05:00 | 34 / 6 / 14 | Groups of young professionals and middle-aged people, couples | 60/40 | 20 - 50 | 63 | 56 | 76 | Normal talking, distant plant, 18:07 train passing |
| 12 | C1 | 18:14 | 05:00 | 34 / 6 / 14 | Groups of young professionals and middle-aged people, couples | 60/40 | 20 - 50 | 64 | 51 | 84 | One group loud, 18:15 trains passing |
| 13 | C1 | 18:20 | 05:00 | 35-40 / 6 / 14 | Groups of young professionals and middle-aged people, couples | 60/40 | 20 - 50 | 68 | 57 | 81 | One group loud, 18:25 trains passing |
| 14 | A | 18:27 | 05:00 | 42 / 6 / 14 | Groups of young professionals and middle-aged people, couples | 60/40 | 20 - 50 | 65 | 61 | 79 | |
| 15 | B | 18:39 | 05:00 | 42 / 6 / 14 | Groups of young professionals and middle-aged people, couples | 60/40 | 20 - 50 | 65 | 59 | 78 | 18:42 train |



THE PICTURE PLAYHOUSE, BREXHILL ON SEA - SPECTRUM, CONTINUED

| Attended Project | Position | Time | Duration (mins) | No. of People South / Mid / North | Type of people e.g. students, families, young professions etc. | Gender Split % M/F | Approx. Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|------------------|----------|-------|-----------------|-----------------------------------|--|--------------------|------------------------|------|------|--------|---|
| 16 | C1 | 18:50 | 05:00 | 30 / 7 / 16 | Groups of young professionals and middle-aged people, couples | 60/40 | 20 - 50 | 69 | 58 | 92 | One group louder |
| 17 | A | 19:02 | 05:00 | 30 / 7 / 16 | Groups of young professionals and middle-aged people, couples | 60/40 | 25 - 50 | 65 | 59 | 89 | 19:07 train, people audible from inside the pub, seagulls, glasses clattering |
| 18 | B | 19:14 | 05:00 | 20 / 6 / 28 | Groups of young professionals and middle-aged people, couples | 60/40 | 25 - 50 | 60 | 54 | 77 | 19:16 loud car, South side is quieter, North part is busy and louder |
| 19 | C2 | 19:27 | 05:00 | 18 / 6 / 28 | Young professionals and a few couples | 60/40 | 25 - 50 | 75 | 68 | 87 | Big group next to logger, 19:32 train |
| 20 | A | 19:39 | 05:00 | 18 / 6 / 28 | Young professionals and a few couples | 60/40 | 25 - 50 | 67 | 62 | 80 | More noise audible from inside (people talking) |
| 21 | B | 19:45 | 05:00 | 20 / 6 / 20 | Young professionals and a few couples | 60/40 | 25 - 50 | 62 | 57 | 77 | |
| 22 | C2 | 19:53 | 05:00 | 20 / 6 / 20 | Young professionals and a few couples | 60/40 | 25 - 50 | 80 | 72 | 97 | Loud group of girls loud, glass breaks 19:59 |
| 23 | C2 | 19:59 | 05:00 | 20 / 8 / 20 | Young professionals and a few couples | 60/40 | 25 - 50 | 79 | 72 | 93 | |
| 24 | A | 21:18 | 05:00 | 20 / 6 / 20 | Young professionals and a few couples | 60/40 | 25 - 50 | 73 | 63 | 92 | One group is loud |
| 25 | B | 21:29 | 05:00 | 20 / 6 / 20 | Young professionals and a few couples | 60/40 | 25 - 50 | 63 | 57 | 83 | Loud group close to Pos A. 21:30 and 21:34 trains |
| 26 | C3 | 21:40 | 05:00 | 20 / 6 / 20 | Young professionals and a few couples | 60/40 | 25 - 50 | 77 | 71 | 92 | People sing, 21:46 train |
| 27 | A | 21:51 | 05:00 | 20 / 8 / 20 | Young professionals | 60/40 | 25 - 50 | 74 | 63 | 91 | One loud group |
| 28 | B | 22:04 | 05:00 | 20 / 8 / 20 | Young professionals | 60/40 | 25 - 50 | 64 | 56 | 79 | 22:07 helicopter, 22:12 train, big group loud next to Pos A. |
| 29 | C | 22:16 | 05:00 | 20 / 8 / 20 | Young professionals | 60/40 | 25 - 50 | 80 | 72 | 100 | V noisy area, 22:24 guy talks into the mic |
| 30 | A | 22:27 | 05:00 | 8-10 / 8 / 20 | Young professionals | 60/40 | 25 - 50 | 73 | 59 | 97 | 22:30 guy sings into mic, big group that is loud leaves. |
| 31 | B | 22:39 | 05:00 | 8-10 / 8 / 20 | Young professionals | 60/40 | 25 - 50 | 61 | 54 | 77 | 22:46 train, normal talking, not v noisy |
| 32 | C4 | 22:50 | 05:00 | 8-10 / 8 / 20 | Young professionals | 60/40 | 25 - 50 | 79 | 68 | 98 | 22:52 train, one group is loud, not as noisy as before. Distant mechanical plant audible, 22:57 singing |
| 33 | A | 23:01 | 05:00 | 8 / 4 / 6 | Young professionals | 60/40 | 25 - 50 | 63 | 57 | 82 | Big group leaves at 23:00. Quieter outside, less people, noise audible from inside. |
| 34 | B | 23:13 | 05:00 | 8 / 4 / 6 | Young professionals | 60/40 | 25 - 50 | 57 | 51 | 73 | Quiet. A few people talking, mechanical plant more audible. |
| 35 | C4 | 23:24 | 05:00 | 8 / 4 / 8 | Young professionals | 60/40 | 25 - 50 | 66 | 54 | 87 | Not noisy, people talking normally |

THE PICTURE PLAYHOUSE, BREXHILL ON SEA - SPECTRUM, CONTINUED

| Attended Project | Position | Time | Duration (mins) | No. of People South / Mid / North | Type of people e.g. students, families, young professions etc. | Gender Split % M/F | Approx. Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|------------------|----------|-------|-----------------|-----------------------------------|--|--------------------|------------------------|------|------|--------|--|
| 36 | A | 23:36 | 05:00 | 4 / 4 / 8 | Young professionals | 70 / 30 | 25 - 40 | 60 | 53 | 79 | Not noisy, plant audible, 23:40 train |
| 38 | B | 23:45 | 05:00 | 4 / 6 / 8 | Young professionals | 70 / 30 | 25 - 30 | 57 | 50 | 72 | Loud patrons from inside, 23:47 train, glasses clattering, loud guys on N side |
| 39 | C4 | 23:50 | 05:00 | 4 / 6 / 8 | Young professionals | 70 / 30 | 25 - 30 | 65 | 52 | 85 | Group of guys next to the mic, mechanical plant audible |
| 40 | C4 | 23:56 | 05:00 | 4 / 6 / 8 | Young professionals | 70 / 30 | 25 - 30 | 72 | 53 | 94 | Sweeping floor, cleaning, 23:59 loud shouting. |

THE REGAL, CAMBRIDGE - SPECTRUM

| Project | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % (F-M) | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|---------|-------|-----------------|---------------|--|----------------------|----------------------------|------|------|--------|---|
| 1 | 12:41 | | 10 | Older groups | 40:60 | 50 | 59 | 58 | 63 | Soft speech, empty top floor, plant noise, table clearing inside |
| 1 | 12:56 | | 13 | Older groups | 40:60 | 45 | 57 | 55 | 63 | Truck reversing on street, bins taken out |
| 1 | 13:05 | | 14 | Older groups, Families | 50:50 | 40 | 57 | 55 | 67 | Discharging plant noise (similar to bus breaks), shouting from smoking area |
| 1 | 13:17 | | 18 | Older groups, Young Professionals | 50:50 | 35 | 59 | 55 | 75 | Louder talking, food delivered to tables |
| 1 | 13:27 | | 18 | Older groups, Young Professionals | 50:50 | 35 | 60 | 57 | 67 | Cars passing on street, loud laughing from smoking area |
| 2 | 17:20 | | 22 | Young Professionals, Students | 30:70 | 30 | 69 | 59 | 84 | Moderate Talking, some tables cleared |
| 2 | 17:26 | | 23 | Young Professionals, Students | 30:70 | 30 | 70 | 61 | 83 | Loud laughing close to mic, shouting from smoking area, glass clearing |
| 2 | 17:35 | | 26 | Young Professionals, Students | 30:70 | 30 | 71 | 60 | 85 | Close talking, discharging plant noise, table clearing |
| 2 | 17:44 | | 27 | Young Professionals, Students | 40:60 | 25 | 71 | 62 | 81 | Stopped measurement due to moving positions |
| 2 | 17:49 | | 26 | Young Professionals, Students | 40:60 | 25 | 73 | 64 | 84 | Laughing close, loud banging of chairs, |
| 2 | 18:02 | | 29 | Young Professionals, Students | 40:60 | 25 | 67 | 59 | 81 | Loud car playing music, measurement paused due to talking |
| 2 | 18:07 | | 26 | Young Professionals, Students | 30:70 | 30 | 73 | 65 | 82 | Clapping from group, loud shouting from group |
| 2 | 18:16 | | 22 | Young Professionals, Students | 30:70 | 30 | 69 | 63 | 79 | Table cleared, loud shouting close, car parking |
| 2 | 18:22 | | 23 | Young Professionals, Students | 30:70 | 30 | 71 | 65 | 81 | Very loud shouting |
| 2 | 18:33 | | 17 | Young Professionals, Students | 30:70 | 35 | 72 | 64 | 81 | Loud talking close to mic position |
| 2 | 18:41 | | 20 | Young Professionals, Older Groups | 40:60 | 40 | 72 | 66 | 82 | Plant noise audible in talking lull |

THE REGAL, CAMBRIDGE - SPECTRUM, CONTINUED

| Project | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|---------|-------|-----------------|---------------|--|----------------|----------------------------|------|------|--------|---|
| 2 | 18:54 | | 21 | Young Professionals, Older Groups | 40:60 | 40 | 70 | 65 | 77 | People leaving beer garden due to decreased temperature |
| 3 | 19:50 | | 27 | Young Professionals, Students | 40:60 | 30 | 71 | 67 | 78 | Loud talking close |
| 3 | 19:59 | | 32 | Young Professionals, Students | 40:60 | 25 | 76 | 71 | 85 | Talking close to mic position |
| 3 | 20:08 | | 32 | Young Professionals, Students | 40:60 | 25 | 77 | 72 | 84 | Louder group close to mic, shouting |
| 3 | 20:18 | | 29 | Young Professionals, Students | 50:50 | 25 | 75 | 71 | 83 | Door slam, glass dropped, clapping |
| 3 | 20:31 | | 26 | Young Professionals, Students | 40:60 | 25 | 77 | 70 | 85 | Large group leaving, loud shouting from smoking area |
| 3 | 20:40 | | 28 | Young Professionals, Students | 40:60 | 25 | 79 | 75 | 86 | Shouting, loud laughing |
| 3 | 20:49 | | 27 | Young Professionals, Students | 40:60 | 25 | 77 | 72 | 87 | Door slam close, shouting |
| 3 | 20:58 | | 24 | Young Professionals, Students | 40:60 | 25 | 76 | 70 | 87 | Loud laughing, table cleared close |
| 3 | 21:09 | | 24 | Young Professionals, Students | 40:60 | 25 | 76 | 70 | 82 | Music playing from patrons' phone, door slam |
| 3 | 21:20 | | 26 | Young Professionals, Students | 40:60 | 25 | 76 | 71 | 86 | Table cleared, dropped glass |

THE MOUNT STUART, CARDIFF - SPECTRUM

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | L _{Aeq} | LA90 | LAF _{max} | Observations |
|----------|-------|-----------------|---------------|--|--------------------|----------------------------|------------------|------|--------------------|---|
| 1 | 17:05 | 5 | 15-17 | Young professionals / Middle aged / Students | 50:50 | 35 | 66 | 58 | 81 | Patrons talking dominant, music from Mermaid Quays pub behind |
| 1 | 17:10 | 5 | 15-19 | Young professionals / Middle aged / Students | 50:50 | 35 | 66 | 58 | 80 | Patrons talking dominant, music from Mermaid Quays pub behind |
| 1 | 17:15 | 5 | 19-22 | Young professionals / Middle aged / Students | 50:50 | 35 | 64 | 58 | 79 | Patrons talking dominant, music from Mermaid Quays pub behind, chairs scrape on balcony |
| 1 | 17:20 | 5 | 22 | Young professionals / Middle aged / Students | 50:50 | 35 | 66 | 60 | 76 | Patrons talking dominant, music from Mermaid Quays pub behind |
| 1 | 17:25 | 5 | 18-14 | Young professionals / Students | 50:50 | 30 | 65 | 57 | 78 | Patrons talking dominant, music from Mermaid Quays pub behind |
| 1 | 17:30 | 5 | 14-10 | Young professionals / Students | 50:50 | 25 | 64 | 58 | 77 | Patrons talking dominant, music from Mermaid Quays pub behind, distant horn, birdsong |
| 1 | 17:35 | 5 | 8 | Young professionals / Students | 50:50 | 25 | 63 | 56 | 78 | Patrons talking dominant, music from Mermaid Quays pub behind, group of people walk past |
| 1 | 17:40 | 5 | 10 | Young professionals / Students | 50:50 | 25 | 61 | 56 | 75 | Patrons talking dominant, music from Mermaid Quays pub behind |
| 1 | 17:45 | 5 | 13 | Young professionals / Middle aged / Students | 40:60 | 30 | 63 | 57 | 76 | Patrons talking dominant, music from Mermaid Quays pub behind, seagull caws |
| 1 | 17:50 | 5 | 16-7 | Young professionals / Middle aged / Students | 30:70 | 30 | 66 | 58 | 80 | Patrons talking dominant, music from Mermaid Quays pub behind, large group leaves, glasses clink |
| 1 | 17:55 | 5 | 6 | Young professionals / Students | 0:100 | 30 | 59 | 55 | 82 | Becomes cold outside, Music from Mermaid Quays pub behind dominant, patrons talking + noise from inside through open doors, high frequency impact in distance, birdsong |

THE MOUNT STUART, CARDIFF - SPECTRUM, CONTINUED

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|-------|-----------------|---------------|--|--------------------|----------------------------|------|------|--------|---|
| 1 | 18:00 | 5 | 6 | Young professionals | 0:100 | 30 | 61 | 56 | 74 | Music from Mermaid Quays pub behind dominant, patrons talking outdoors + noise from inside through open doors, couple bikes wheeled off, plane, siren |
| 1 | 18:05 | 5 | 7-6 | Young professionals | 0:100 | 30 | 60 | 56 | 75 | Patrons talking dominant, birdsong, car horn in distance, music from Mermaid Quays pub behind |
| 1 | 18:10 | 5 | 6-8 | Young professionals / Middle aged | 20:80 | 35 | 60 | 57 | 73 | Patrons talking dominant, music from Mermaid Quays pub behind, birdsong |
| 1 | 18:15 | 5 | 8 | Young professionals / Middle aged | 20:80 | 35 | 62 | 59 | 75 | Patrons talking dominant, music from Mermaid Quays pub behind, loud birdsong, glasses clink |
| 1 | 18:20 | 5 | 8-10 | Young professionals / Middle aged | 20:80 | 35 | 65 | 60 | 87 | Equal contributions birdsong and patrons talking dominant, music from Mermaid Quays pub behind, man yells, loads of bottles dumped at nearby pub |
| 1 | 18:25 | 5 | 13-8 | Young professionals / Middle aged | 20:80 | 35 | 61 | 57 | 74 | Equal contributions birdsong and patrons talking dominant, doors to inside of pub closed, group of people leave, music from Mermaid Quays pub behind |
| 1 | 18:30 | 5 | 8-5 | Young professionals | 20:80 | 30 | 58 | 56 | 66 | Birdsong dominant, patrons talking, music from Mermaid Quays pub behind |
| 1 | 18:35 | 5 | 7 | Young professionals / Students | 30:70 | 25 | 59 | 56 | 75 | Birdsong dominant, patrons talking, music from Mermaid Quays pub behind, guy talks to me at end |
| 1 | 18:40 | 5 | 5 | Young professionals | 40:60 | 30 | 61 | 55 | 75 | Guy still talking to me dominant, afterwards music from Mermaid Quays pub behind dominant |
| 1 | 18:45 | 5 | 3 | Young professionals | 30:70 | 30 | 59 | 56 | 77 | Music from Mermaid Quays pub behind dominant, patrons talking |

THE MOUNT STUART, CARDIFF - SPECTRUM, CONTINUED

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|-------|-----------------|---------------|--|--------------------|----------------------------|------|------|--------|--|
| 1 | 18:50 | 5 | 3-5 | Young professionals / Middle aged / Students | 50:50 | 30 | 59 | 56 | 71 | Patrons talking dominant, music from Mermaid Quays pub behind, siren in distance |
| 1 | 18:55 | 5 | 6-8 | Young professionals / Middle aged / Students | 30:70 | 25 | 62 | 57 | 86 | Patrons talking dominant, music from Mermaid Quays pub behind, glasses clinking |
| 1 | 19:00 | 5 | 8-3 | Young professionals / Middle aged / Students | 30:70 | 25 | 81 | 57 | 106 | Loud patrons talking to me dominant, guy yells into microphone, music from Mermaid Quays pub behind |
| 1 | 20:00 | 5 | 3-7 | Young professionals | 0:100 | 30 | 62 | 59 | 74 | Music from Mermaid Quays pub behind dominant, patrons talking |
| | 20:05 | | 7-10 | Young professionals / Students | 0:100 | 35 | 65 | 60 | 76 | Patrons talking dominant, music from Mermaid Quays pub behind, guy talks to me quietly near meter |
| | 20:10 | | 8 | Young professionals / Middle aged / Students | 10:90 | 30 | 70 | 60 | 96 | Patrons talking dominant, music from Mermaid Quays pub behind |
| | 20:15 | | 6 | Young professionals / Middle aged | 20:80 | 40 | 65 | 59 | 84 | Music from Mermaid Quays pub behind and from café to SE dominant, patrons talking, guys yell nearby |
| | 20:20 | | 2-5 | Young professionals / Students | 0:100 | 30 | 61 | 58 | 75 | Music from Mermaid Quays pub behind and from café to SE dominant, patrons talking |
| | 20:25 | | 5-6 | Young professionals / Students | 20:80 | 20 | 62 | 58 | 77 | Music from Mermaid Quays pub behind and from café to SE dominant, patrons talking |
| | 20:30 | | 6 | Young professionals / Students | 20:80 | 20 | 62 | 59 | 73 | Music from Mermaid Quays pub behind and from café to SE dominant, patrons talking, guy talks to me briefly, beeping sound inside pub |
| | 20:35 | | 4-6 | Young professionals / Students | 20:80 | 20 | 62 | 58 | 78 | Music from Mermaid Quays pub behind and from café to SE dominant, patrons talking, beeping sound inside pub |

THE MOUNT STUART, CARDIFF - SPECTRUM, CONTINUED

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|-------|-----------------|---------------|--|--------------------|----------------------------|------|------|--------|---|
| | 20:40 | | 10-8 | Young professionals / Students | 20:80 | 25 | 64 | 59 | 77 | Music from Mermaid Quays pub behind and from café to SE dominant, patrons talking |
| | 20:45 | | 8-14 | Young professionals / Students | 40:60 | 25 | 64 | 59 | 74 | Patrons talking dominant, music from café to SE |
| | 20:50 | | 16 | Young professionals / Students | 50:50 | 25 | 65 | 59 | 81 | Patrons talking dominant, music from café to SE, guy yells nearby |
| | 20:55 | | 12 | Young professionals / Students | 30:70 | 25 | 66 | 59 | 87 | Patrons talking dominant, music from café to SE |
| | 21:00 | | 8-4 | Young professionals / Students | 40:60 | 25 | 64 | 58 | 77 | Patrons talking and music from phone speaker dominant, music from café to SE, woman talks to me briefly |
| | 21:05 | | 2-4 | Young professionals / Students | 0:100 | 25 | 59 | 56 | 71 | Patrons talking and music from phone speaker dominant, music from café to SE |
| | 21:10 | | 6-8 | Young professionals / Middle aged / Students | 20:80 | 30 | 62 | 57 | 77 | Patrons talking dominant, music from café to SE |
| | 21:15 | | 5-10 | Young professionals / Middle aged / Students | 20:80 | 30 | 63 | 57 | 84 | Patrons talking dominant, music from café to SE, music from phone speaker, loud guy on phone walks past |
| | 21:20 | | 9-6 | Young professionals / Middle aged / Students | 20:80 | 30 | 62 | 57 | 74 | Patrons talking dominant, music from café to SE, music from phone speaker, loud guy continues to talk on phone, woman talks to me briefly |
| | 21:25 | | 6-8 | Young professionals / Middle aged / Students | 0:100 | 40 | 61 | 56 | 73 | Patrons talking dominant, music from café to SE, music from phone speaker, loud guy continues to talk on phone, loud whistles in distance |
| | 21:30 | | 10-8 | Young professionals / Middle aged / Students | 20:80 | 40 | 62 | 57 | 76 | Patrons talking dominant, music from café to SE |
| | 21:35 | | 8-2 | Young professionals / Middle aged / Students | 20:80 | 30 | 60 | 55 | 81 | Patrons talking dominant, music from café to SE, loud whistles in distance |

THE MOUNT STUART, CARDIFF - SPECTRUM, CONTINUED

| Position | Time | Duration (mins) | No. of People | Type of people e.g. students, families, young professions etc. | Gender Split % F:M | Approximate Age of Patrons | LAeq | LA90 | LAFmax | Observations |
|----------|-------|-----------------|---------------|--|--------------------|----------------------------|------|------|--------|--|
| | 21:40 | | 4-5 | Young professionals / Students | 20:80 | 25 | 59 | 55 | 73 | Patrons talking dominant, music from café to SE, bottles emptied into a bin nearby |
| | 21:45 | | 6-10 | Young professionals / Students | 20:80 | 20 | 62 | 57 | 78 | Patrons talking dominant, music from café to SE |
| | 21:50 | | 10-12 | Young professionals / Students | 20:80 | 25 | 67 | 58 | 83 | Patrons talking dominant, music from café to SE, guy talks to me near meter |
| | 21:55 | | 4-12 | Young professionals | 0:100 | 25 | 72 | 58 | 93 | Patrons talking dominant, music from café to SE, guy talks into microphone and others talk to me |

THE ADMIRAL HUMBER, THE BLACK BULL INN, THE BUCK INN - DRAGONFLY

| | Time Period | | No. of people during the survey period (average) | Capacity of beer garden | Area of beer garden (m ²) | People/m ² | Based on survey Spectrum (Hz) | | | | | | | | |
|--------------------------------|-------------|-------|--|-------------------------|---------------------------------------|-----------------------|-------------------------------|------|------|------|------|------|------|------|------|
| | | | | | | | Lw/m2 ((dBA) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| | | | | | | | | | | | | | | | |
| The Admiral Humber, Hull | 12:00 | 13:00 | 20 | 160 | 249.53 | 0.08 | 62.6 | 46.9 | 50.0 | 54.0 | 60.6 | 58.8 | 54.6 | 48.5 | 38.3 |
| | 13:00 | 14:00 | 40 | 160 | 249.93 | 0.16 | 64.8 | 49.1 | 52.2 | 56.2 | 62.8 | 61.0 | 56.9 | 50.8 | 40.5 |
| | 17:00 | 18:00 | 35 | 160 | 249.93 | 0.14 | 67.5 | 51.8 | 54.9 | 58.9 | 65.5 | 63.7 | 59.6 | 53.5 | 43.2 |
| | 18:00 | 19:00 | 30 | 160 | 249.93 | 0.12 | 70.3 | 54.5 | 57.7 | 61.7 | 68.3 | 66.4 | 62.3 | 56.2 | 46.0 |
| | 19:00 | 20:00 | 25 | 160 | 249.93 | 0.10 | 70.0 | 54.2 | 57.4 | 61.4 | 68.0 | 66.1 | 62.0 | 55.9 | 45.7 |
| | 20:00 | 21:00 | 15 | 160 | 249.93 | 0.06 | 68.5 | 52.8 | 55.9 | 60.0 | 66.5 | 64.7 | 60.6 | 54.5 | 44.3 |
| The Black Bull, Bangor (Top) | 12:00 | 13:00 | 5 | 75 | 116.21 | 0.04 | 52.0 | 36.3 | 39.4 | 43.4 | 50.0 | 48.2 | 44.0 | 37.9 | 27.7 |
| | 13:00 | 14:00 | 9 | 75 | 116.21 | 0.08 | 51.8 | 36.1 | 39.2 | 43.3 | 49.8 | 48.0 | 43.9 | 37.8 | 27.6 |
| | 17:00 | 18:00 | 18 | 75 | 116.21 | 0.15 | | | | | | | | | |
| | 18:00 | 19:00 | 27 | 75 | 116.21 | 0.23 | | | | | | | | | |
| | 19:00 | 20:00 | 30 | 75 | 116.21 | 0.26 | | | | | | | | | |
| | 20:00 | 21:00 | 20 | 75 | 116.21 | 0.17 | | | | | | | | | |
| The Black Bull Bangor (Bottom) | 17:00 | 18:00 | 20 | 75 | 132.4 | 0.15 | 54.9 | 39.2 | 42.3 | 46.4 | 52.9 | 51.1 | 47.0 | 40.9 | 30.7 |
| | 18:00 | 19:00 | 26 | 75 | 132.4 | 0.20 | 52.2 | 38.5 | 41.6 | 45.6 | 52.2 | 50.4 | 46.2 | 40.1 | 29.9 |
| | 19:00 | 20:00 | 34 | 75 | 132.4 | 0.26 | 67.5 | 51.8 | 54.9 | 59.0 | 65.5 | 63.7 | 59.6 | 53.5 | 43.3 |
| | 20:00 | 21:00 | 29 | 75 | 132.4 | 0.22 | 70.4 | 54.6 | 57.8 | 61.8 | 68.4 | 66.5 | 62.4 | 56.3 | 46.1 |
| The Buck Inn, Northallerton | 12:00 | 13:00 | 45 | 142 | 219.35 | 0.21 | 71.8 | 56.0 | 59.2 | 63.2 | 69.8 | 67.9 | 63.8 | 57.7 | 47.5 |
| | 17:00 | 18:00 | 55 | 142 | 219.35 | 0.25 | 70.6 | 54.9 | 58.0 | 62.1 | 68.6 | 66.8 | 62.7 | 56.6 | 46.4 |
| | 18:00 | 19:00 | 65 | 142 | 219.35 | 0.30 | 72.7 | 56.9 | 60.1 | 64.1 | 70.7 | 68.8 | 64.7 | 58.6 | 48.4 |
| | 19:00 | 20:00 | 30 | 142 | 219.35 | 0.14 | 71.4 | 55.7 | 58.8 | 62.8 | 69.4 | 67.6 | 63.5 | 57.4 | 47.1 |
| | 20:00 | 21:00 | 40 | 142 | 219.35 | 0.18 | 71.5 | 55.7 | 58.9 | 62.9 | 69.5 | 67.6 | 63.5 | 57.4 | 47.2 |
| | 21:00 | 22:00 | 25 | 142 | 219.35 | 0.11 | 69.1 | 53.4 | 56.5 | 60.5 | 67.1 | 65.3 | 61.2 | 55.1 | 44.8 |



| Based on Survey Measured Lp at X location (dBA) | Based on empirical data Spectrum (Hz) | | | | | | | | | Predicted Lp at X location (dBA) | Predicted Lp at X location - Design Capacity (dBA) | |
|--|--|------|------|------|------|------|------|------|------|--|--|--------------------------------------|
| | Lw/m2 (dBA) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | | | |
| 60.5 | 60.7 | 45.1 | 48.2 | 52.2 | 58.8 | 57.0 | 52.8 | 46.7 | 36.5 | 58.7 | 67.7 | The Admiral Humber, Hull |
| 62.7 | 63.8 | 48.1 | 51.2 | 55.2 | 61.8 | 60.0 | 55.9 | 49.8 | 39.5 | 61.7 | | |
| 65.4 | 63.2 | 47.5 | 50.6 | 54.6 | 61.2 | 59.4 | 55.3 | 49.2 | 38.9 | 61.1 | | |
| 68.1 | 62.5 | 46.8 | 50.0 | 54.0 | 60.6 | 58.7 | 54.6 | 48.5 | 38.3 | 60.4 | | |
| 67.8 | 61.7 | 46.0 | 49.2 | 53.2 | 59.8 | 57.9 | 53.8 | 47.7 | 37.5 | 59.6 | | |
| 66.4 | 59.5 | 43.8 | 46.9 | 51.0 | 57.5 | 55.7 | 51.6 | 45.5 | 35.3 | 57.4 | | |
| 53.2 | 58.0 | 42.4 | 45.5 | 49.5 | 56.1 | 54.3 | 50.1 | 44.0 | 33.8 | 59.3 | 68.9 | The Black Bull, Bangor (Top) |
| 53.1 | 60.6 | 44.9 | 48.0 | 52.1 | 58.6 | 56.8 | 52.7 | 46.6 | 36.4 | 61.9 | | |
| | 63.6 | 47.9 | 51.1 | 55.1 | 61.7 | 59.8 | 55.7 | 49.6 | 39.4 | | | |
| | 65.4 | 49.7 | 52.8 | 56.8 | 63.4 | 61.6 | 57.5 | 51.4 | 41.1 | | | |
| | 65.8 | 50.1 | 53.3 | 57.3 | 63.9 | 62.0 | 57.9 | 51.8 | 41.6 | | | |
| | 64.1 | 48.4 | 51.5 | 55.5 | 62.1 | 60.3 | 56.2 | 50.1 | 39.8 | | 71.1 | The Black Bull Bangor (Bottom) |
| 54.5 | 63.5 | 47.8 | 50.9 | 55.0 | 61.5 | 59.7 | 55.6 | 49.5 | 39.3 | 63.1 | | |
| 53.8 | 64.6 | 49.0 | 52.1 | 56.1 | 62.7 | 60.9 | 56.7 | 50.6 | 40.4 | 64.3 | | |
| 67.1 | 65.8 | 50.1 | 53.2 | 57.3 | 63.8 | 62.0 | 57.9 | 51.8 | 41.6 | 65.4 | | |
| 69.9 | 65.1 | 49.4 | 52.6 | 56.6 | 63.2 | 61.3 | 57.2 | 51.1 | 40.9 | 64.7 | 67.9 | The Buck Inn, North Allerton |
| 69.8 | 64.8 | 49.1 | 52.3 | 56.3 | 62.9 | 61.0 | 56.9 | 50.8 | 40.6 | 62.9 | | |
| 68.7 | 65.7 | 50.0 | 53.1 | 57.2 | 63.7 | 61.9 | 57.8 | 51.7 | 41.5 | 63.8 | | |
| 70.7 | 66.4 | 50.7 | 53.9 | 57.9 | 64.5 | 62.6 | 58.5 | 52.4 | 42.2 | 64.5 | | |
| 69.5 | 63.1 | 47.4 | 50.5 | 54.5 | 61.1 | 59.3 | 55.2 | 49.1 | 38.8 | 61.2 | | |
| 69.5 | 64.3 | 48.6 | 51.8 | 55.8 | 62.4 | 60.5 | 56.4 | 50.3 | 40.1 | 62.4 | | |
| 67.2 | 62.3 | 46.6 | 49.7 | 53.7 | 60.3 | 58.5 | 54.4 | 48.3 | 38.0 | 60.4 | | |



THE CAPTAIN ALEXANDER, THE FIGURE OF EIGHT, THE PICTURE PLAYHOUSE - DRAGONFLY

| | Time Period | | No. of people during the survey period (average) | Capacity of beer garden | Area of beer garden (m ²) | People/ m ² | Based on survey | | | | | | | | |
|----------------------------------|----------------|-------|--|-------------------------|---------------------------------------|------------------------|-----------------|------|------|------|------|------|------|------|------|
| | | | | | | | Spectrum (Hz) | | | | | | | | |
| | | | | | | | Lw/m2 ((dBA) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| The Captain Alexander, Liverpool | 12:00 | 13:00 | 6 | 80 | 145.68 | 0.04 | 60.6 | 44.9 | 48.0 | 52.0 | 58.6 | 56.8 | 52.6 | 46.5 | 36.3 |
| | 13:00 | 14:00 | 30 | 80 | 145.68 | 0.21 | 70.6 | 54.9 | 58.0 | 62.0 | 68.6 | 66.8 | 62.6 | 56.5 | 46.3 |
| | 17:00 | 18:00 | 60 | 80 | 145.68 | 0.41 | 79.9 | 64.2 | 67.3 | 71.3 | 77.9 | 76.1 | 71.9 | 65.8 | 55.6 |
| | 18:00 | 19:00 | 50 | 80 | 145.68 | 0.34 | 78.7 | 63.0 | 66.1 | 70.1 | 76.7 | 74.9 | 70.8 | 64.7 | 54.4 |
| | 20:00 | 21:00 | 40 | 80 | 145.68 | 0.27 | 73.7 | 58.0 | 61.1 | 65.2 | 71.7 | 69.9 | 65.8 | 59.7 | 49.5 |
| | Spectrum Level | | | 80 | 145.68 | 0.00 | | | | | | | | | |
| The Figure of Eight, Birmingham | 12:00 | 13:00 | 8 | 150 | 0.02 | 0.02 | 53.6 | 37.9 | 41.0 | 45.1 | 51.6 | 49.8 | 45.7 | 39.6 | 29.4 |
| | 13:00 | 14:00 | 20 | 150 | 0.05 | 0.05 | 56.3 | 40.6 | 43.7 | 47.7 | 54.3 | 52.5 | 48.4 | 42.3 | 32.0 |
| | 17:00 | 18:00 | 36 | 150 | 0.10 | 0.10 | 65.4 | 49.6 | 52.8 | 56.8 | 63.4 | 61.5 | 57.4 | 51.3 | 41.1 |
| | 18:00 | 19:00 | 24 | 150 | 0.07 | 0.07 | 61.5 | 45.8 | 48.9 | 52.9 | 59.5 | 57.7 | 53.6 | 47.5 | 37.2 |
| | 20:00 | 21:00 | 32 | 150 | 0.09 | 0.09 | 63.7 | 47.9 | 51.1 | 55.1 | 61.7 | 59.8 | 55.7 | 49.6 | 39.4 |
| | 21:00 | 22:00 | 60 | 150 | 0.16 | 0.16 | 68.3 | 53.0 | 56.1 | 60.1 | 66.7 | 64.9 | 60.7 | 54.6 | 44.4 |
| | Spectrum Level | | | 150 | 0.00 | 0.00 | | | | | | | | | |
| The Picture Playhouse, Morley | 12:00 | 13:00 | 4 | 142 | 104.3 | 0.04 | 55.3 | 39.6 | 42.7 | 46.7 | 53.3 | 51.5 | 47.3 | 41.2 | 31.0 |
| | 13:00 | 14:00 | 18 | 142 | 104.3 | 0.17 | 59.0 | 43.3 | 46.4 | 50.4 | 57.0 | 55.2 | 51.1 | 45.0 | 34.7 |
| | 17:00 | 18:00 | 16 | 142 | 104.3 | 0.15 | 62.4 | 46.7 | 49.8 | 53.8 | 60.4 | 58.6 | 54.5 | 48.4 | 38.1 |
| | 18:00 | 19:00 | 22 | 142 | 104.3 | 0.21 | 66.7 | 51.0 | 54.1 | 58.1 | 64.7 | 62.9 | 58.7 | 52.6 | 42.4 |

| Based on Survey Measured Lp at X location (dBA) | Based on empirical data Spectrum (Hz) | | | | | | | | | Predicted Lp at X location (dBA) | Predicted Lp at X location - Design Capacity (dBA) | |
|--|--|------|------|------|------|------|------|------|------|--|--|--|
| | Lw/m2 (dBA) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | | | |
| 56.1 | 57.8 | 42.2 | 45.3 | 49.3 | 55.9 | 54.1 | 49.9 | 43.8 | 33.6 | 53.4 | 64.6 | The Captain Alexander, Liverpool |
| 66.1 | 64.8 | 49.2 | 52.3 | 56.3 | 62.9 | 61.1 | 56.9 | 50.8 | 40.6 | 60.4 | | |
| 75.4 | 67.8 | 52.2 | 55.3 | 59.3 | 65.9 | 64.1 | 59.9 | 53.8 | 43.6 | 63.4 | | |
| 74.2 | 67.1 | 51.4 | 54.5 | 58.5 | 65.1 | 63.3 | 59.2 | 53.1 | 42.8 | 62.6 | | |
| 69.2 | 66.1 | 50.4 | 53.5 | 57.6 | 64.1 | 62.3 | 58.2 | 52.1 | 41.9 | 61.6 | | |
| | 71.0 | - | 37.0 | 53.0 | 64.0 | 69.0 | 64.0 | 58.0 | 51.0 | 66.7 | | |
| 54.7 | 55.1 | 39.4 | 42.5 | 46.6 | 53.1 | 51.3 | 47.2 | 41.1 | 30.9 | 56.2 | 68.7 | The Figure of Eight, Birmingham |
| 57.4 | 59.1 | 43.4 | 46.5 | 50.5 | 57.1 | 55.3 | 51.2 | 45.1 | 34.8 | 60.2 | | |
| 66.4 | 61.6 | 45.9 | 49.1 | 53.1 | 59.7 | 57.8 | 53.7 | 47.6 | 37.4 | 62.7 | | |
| 62.6 | 59.9 | 44.2 | 47.3 | 51.3 | 57.9 | 56.1 | 52.0 | 45.9 | 35.6 | 61.0 | | |
| 64.7 | 61.1 | 45.4 | 48.6 | 52.6 | 59.2 | 57.3 | 53.2 | 47.1 | 36.9 | 62.2 | | |
| 69.8 | 63.8 | 48.2 | 51.3 | 55.3 | 61.9 | 60.1 | 55.9 | 49.8 | 39.6 | 65.0 | | |
| | 71.0 | - | 37.0 | 53.0 | 64.0 | 69.0 | 64.0 | 58.0 | 51.0 | 72.4 | | |
| 54.2 | 57.5 | 41.9 | 45.0 | 49.0 | 55.6 | 53.8 | 49.6 | 43.5 | 33.3 | 56.5 | 72.0 | The Picture Playhouse, Morley |
| 57.9 | 64.1 | 48.4 | 51.5 | 55.5 | 62.1 | 60.3 | 56.2 | 50.1 | 39.8 | 63.0 | | |
| 61.3 | 63.6 | 47.9 | 51.0 | 55.0 | 61.6 | 59.8 | 55.7 | 49.6 | 39.3 | 62.5 | | |
| 65.6 | 64.9 | 49.3 | 52.4 | 56.4 | 63.0 | 61.2 | 57.0 | 50.9 | 40.7 | 63.9 | | |

THE QUAYSIDE - DRAGONFLY

| | Time Period | | No. of people during the survey period (average) | Capacity of beer garden | Area of beer garden (m ²) | People/m ² | Based on survey Spectrum (Hz) | | | | | | | | |
|---------------------------------|-------------|-------|--|-------------------------|---------------------------------------|-----------------------|-------------------------------|------|------|------|------|------|------|------|------|
| | | | | | | | Lw/m2 ((dBA) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| The Quayside, Newcastle (front) | 17:00 | 18:00 | 23 | 87 | 163.1 | 0.14 | 61.6 | 45.9 | 49.0 | 53.1 | 59.6 | 57.8 | 53.7 | 47.6 | 37.4 |
| | 18:00 | 19:00 | 31 | 87 | 163.1 | 0.19 | 60.0 | 44.3 | 47.4 | 51.5 | 58.0 | 56.2 | 52.1 | 46.0 | 35.8 |
| | 19:00 | 20:00 | 38 | 87 | 163.1 | 0.23 | 58.7 | 43.0 | 46.1 | 50.1 | 56.7 | 54.9 | 50.8 | 44.7 | 34.4 |
| The Quayside, Newcastle (back) | 12:00 | 13:00 | 5 | 261 | 494.91 | 0.01 | 54.3 | 38.6 | 41.7 | 45.7 | 52.3 | 50.5 | 46.3 | 40.2 | 30.0 |
| | 13:00 | 14:00 | 10 | 261 | 494.91 | 0.02 | 56.5 | 40.8 | 43.9 | 47.9 | 54.5 | 52.7 | 48.6 | 42.5 | 32.2 |
| | 17:00 | 18:00 | 10 | 261 | 494.91 | 0.02 | 59.0 | 43.3 | 46.4 | 50.4 | 57.0 | 55.2 | 51.1 | 45.0 | 34.7 |
| | 18:00 | 19:00 | 16 | 261 | 494.91 | 0.03 | 62.6 | 46.9 | 50.0 | 54.1 | 60.6 | 58.8 | 54.7 | 48.6 | 38.4 |
| | 19:00 | 20:00 | 38 | 261 | 494.91 | 0.08 | 65.2 | 49.5 | 52.6 | 56.6 | 63.2 | 61.4 | 57.3 | 51.2 | 40.9 |



| Based on Survey Measured Lp at X location (dBA) | Based on empirical data Spectrum (Hz) | | | | | | | | | Predicted Lp at X location (dBA) | Predicted Lp at X location - Design Capacity (dBA) | |
|--|--|------|------|------|------|------|------|------|------|--|--|--|
| | Lw/m2 (dBA) | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | | | |
| 64.1 | 63.2 | 47.5 | 50.6 | 54.7 | 61.2 | 59.4 | 55.3 | 49.2 | 39.0 | 65.7 | 71.5 | The Quayside, Newcastle (front) |
| 62.5 | 64.5 | 48.8 | 51.9 | 56.0 | 62.5 | 60.7 | 56.6 | 50.5 | 40.3 | 67.0 | | |
| 61.2 | 62.4 | 46.7 | 49.8 | 53.8 | 60.4 | 58.6 | 54.5 | 48.4 | 38.1 | 64.9 | | |
| 58.8 | 51.7 | 36.1 | 39.2 | 43.2 | 49.8 | 48.0 | 43.8 | 37.7 | 27.5 | 56.3 | 73.5 | The Quayside, Newcastle (back) |
| 61.1 | 54.8 | 39.1 | 42.2 | 46.2 | 52.8 | 51.0 | 46.9 | 40.8 | 30.5 | 59.4 | | |
| 63.6 | 54.8 | 39.1 | 42.2 | 46.2 | 52.8 | 51.0 | 46.9 | 40.8 | 30.5 | 59.4 | | |
| 67.2 | 56.8 | 41.1 | 44.2 | 48.3 | 54.8 | 53.0 | 48.9 | 42.8 | 32.6 | 61.4 | | |
| 69.8 | 60.6 | 44.9 | 48.0 | 52.0 | 58.6 | 56.8 | 52.7 | 46.6 | 36.3 | 65.2 | | |



wetherspoon

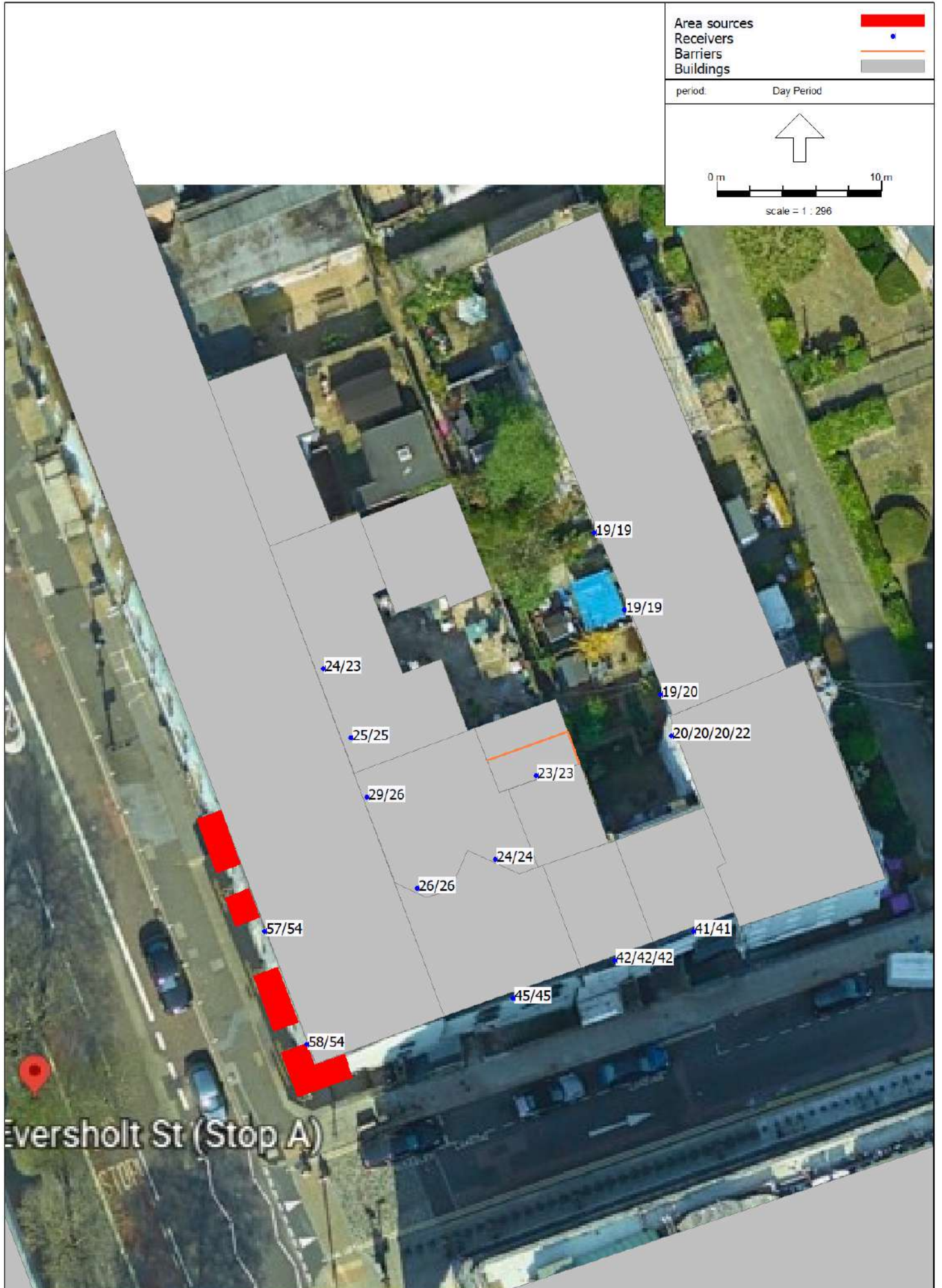
nineteen47
CHARTERED TOWN PLANNERS
& URBAN DESIGNERS

DRAGONFLY
CONSULTING

SPECTRUM
ACOUSTIC CONSULTANTS

A P P E N D I X D

Noise Model – External Seating Area

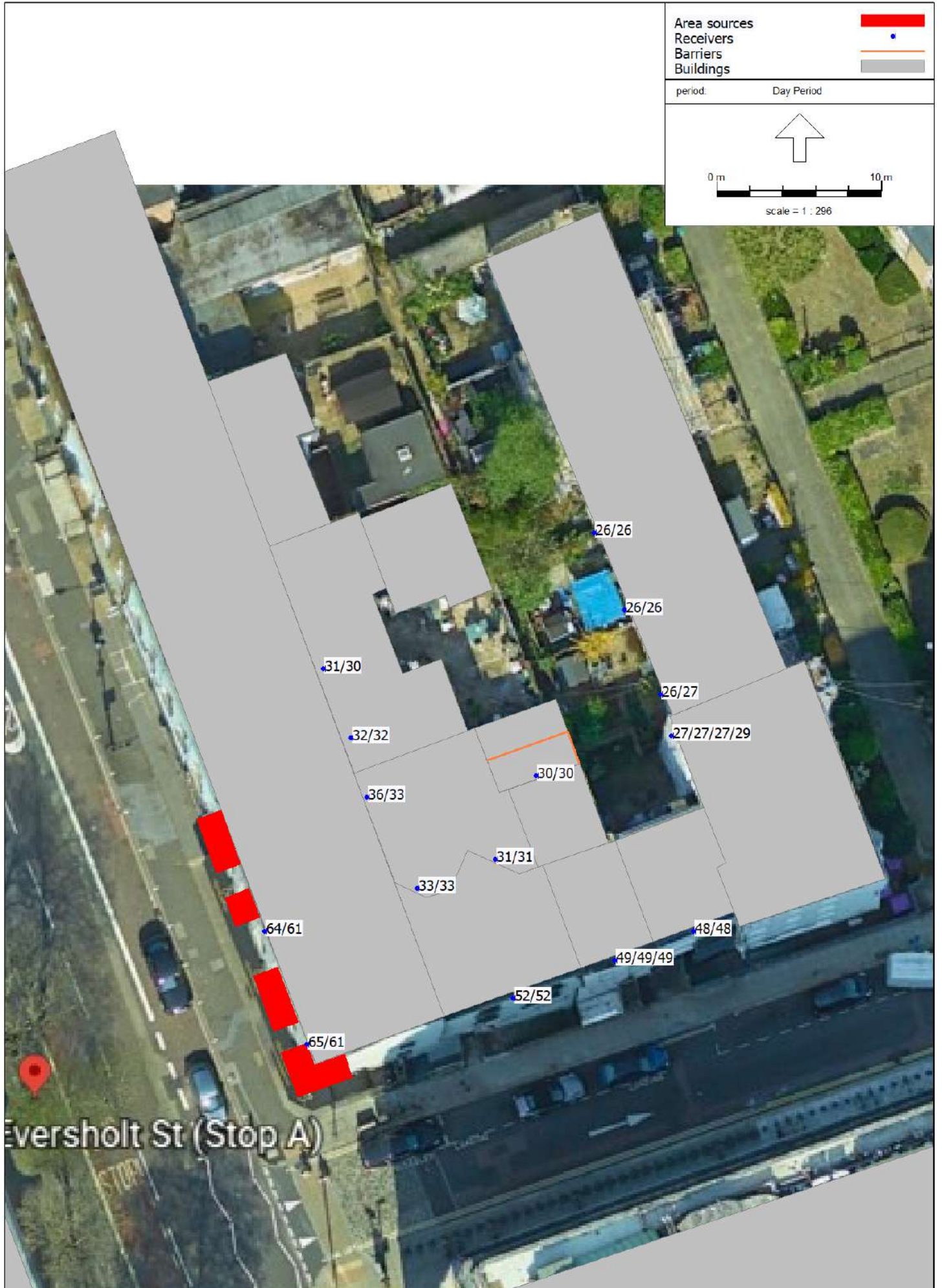


JDW Euston Patrons - normal trading

Report: Table of Results
 Model: Patrons - normal trading
 LAeq per octave: total results for receivers
 Group: (main group)
 Group Reduction: No

| Name | | Evening | | | | | | | | | |
|----------|-------------|---------|-------|----|-----|-----|-----|------|------|------|------|
| Receiver | Description | Height | Total | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| NSR1_A | | 1.50 | 26 | -- | -- | 10 | 19 | 24 | 19 | 12 | -- |
| NSR1_B | | 4.00 | 26 | -- | -- | 11 | 19 | 23 | 18 | 12 | -- |
| NSR10_A | | 1.50 | 18 | -- | -- | -- | 11 | 16 | 11 | -- | -- |
| NSR10_B | | 4.50 | 18 | -- | -- | -- | 12 | 16 | 11 | -- | -- |
| NSR11_A | | 5.50 | 45 | -- | 11 | 27 | 38 | 43 | 38 | 32 | 24 |
| NSR11_B | | 8.50 | 45 | -- | 10 | 27 | 37 | 42 | 37 | 31 | 23 |
| NSR12_A | | 2.50 | 42 | -- | 8 | 24 | 35 | 40 | 35 | 29 | 22 |
| NSR12_B | | 5.00 | 42 | -- | 8 | 24 | 35 | 40 | 35 | 29 | 21 |
| NSR12_C | | 7.50 | 42 | -- | 8 | 24 | 34 | 40 | 35 | 29 | 21 |
| NSR13_A | | 3.00 | 41 | -- | 6 | 23 | 33 | 38 | 35 | 28 | 19 |
| NSR13_B | | 6.00 | 41 | -- | 6 | 23 | 33 | 38 | 34 | 28 | 19 |
| NSR14_A | | 4.50 | 58 | -- | 24 | 40 | 51 | 56 | 51 | 45 | 37 |
| NSR14_B | | 7.50 | 54 | -- | 20 | 36 | 47 | 52 | 47 | 41 | 33 |
| NSR15_A | | 4.50 | 57 | -- | 23 | 39 | 50 | 55 | 50 | 44 | 36 |
| NSR15_B | | 7.50 | 54 | -- | 20 | 36 | 47 | 52 | 47 | 41 | 33 |
| NSR2_A | | 1.50 | 24 | -- | -- | 7 | 17 | 22 | 17 | 10 | -- |
| NSR2_B | | 4.00 | 24 | -- | -- | 8 | 17 | 22 | 16 | 10 | -- |
| NSR3_A | | 1.50 | 29 | -- | -- | 11 | 21 | 27 | 22 | 15 | 4 |
| NSR3_B | | 4.00 | 26 | -- | -- | 10 | 19 | 23 | 18 | 12 | -- |
| NSR4_A | | 1.50 | 25 | -- | -- | 7 | 18 | 23 | 18 | 11 | -- |
| NSR4_B | | 4.00 | 25 | -- | -- | 8 | 17 | 22 | 17 | 11 | -- |
| NSR5_A | | 1.50 | 23 | -- | -- | 2 | 16 | 21 | 16 | 10 | -- |
| NSR5_B | | 4.00 | 23 | -- | -- | 6 | 16 | 21 | 16 | 9 | -- |
| NSR6_A | | 1.50 | 23 | -- | -- | 1 | 15 | 20 | 15 | 9 | -- |
| NSR6_B | | 4.00 | 23 | -- | -- | 6 | 16 | 20 | 15 | 9 | -- |
| NSR7_A | | 1.50 | 19 | -- | -- | -- | 12 | 17 | 12 | 1 | -- |
| NSR7_B | | 4.50 | 20 | -- | -- | -- | 13 | 17 | 12 | 1 | -- |
| NSR7_C | | 7.50 | 20 | -- | -- | 3 | 14 | 18 | 12 | 1 | -- |
| NSR7_D | | 10.50 | 21 | -- | -- | 7 | 16 | 19 | 13 | 1 | -- |
| NSR8_A | | 1.50 | 19 | -- | -- | -- | 12 | 17 | 12 | 0 | -- |
| NSR8_B | | 4.50 | 19 | -- | -- | 0 | 13 | 17 | 12 | 0 | -- |
| NSR9_A | | 1.50 | 19 | -- | -- | -- | 12 | 17 | 12 | -- | -- |
| NSR9_B | | 4.50 | 19 | -- | -- | -- | 12 | 17 | 12 | -- | -- |

All shown dB values are A-weighted



JDW Euston Patrons - peak trading

Report: Table of Results
 Model: Patrons - busy trading
 LAeq per octave: total results for receivers
 Group: (main group)
 Group Reduction: No

| Name | | Evening | | | | | | | | | |
|----------|-------------|---------|-------|----|-----|-----|-----|------|------|------|------|
| Receiver | Description | Height | Total | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| NSR1_A | | 1.50 | 33 | -- | -- | 17 | 26 | 31 | 26 | 19 | 11 |
| NSR1_B | | 4.00 | 33 | -- | 4 | 18 | 26 | 30 | 25 | 19 | 11 |
| NSR10_A | | 1.50 | 26 | -- | -- | 9 | 18 | 23 | 18 | 11 | -- |
| NSR10_B | | 4.50 | 26 | -- | -- | 11 | 19 | 23 | 18 | 11 | -- |
| NSR11_A | | 5.50 | 52 | -- | 18 | 34 | 45 | 50 | 45 | 39 | 31 |
| NSR11_B | | 8.50 | 52 | -- | 17 | 34 | 44 | 49 | 44 | 38 | 30 |
| NSR12_A | | 2.50 | 49 | -- | 15 | 31 | 42 | 47 | 42 | 36 | 29 |
| NSR12_B | | 5.00 | 49 | -- | 15 | 31 | 42 | 47 | 42 | 36 | 28 |
| NSR12_C | | 7.50 | 49 | -- | 15 | 31 | 41 | 47 | 42 | 36 | 28 |
| NSR13_A | | 3.00 | 48 | -- | 13 | 30 | 40 | 45 | 42 | 35 | 26 |
| NSR13_B | | 6.00 | 48 | -- | 13 | 30 | 40 | 45 | 41 | 35 | 26 |
| NSR14_A | | 4.50 | 65 | -- | 31 | 47 | 58 | 63 | 58 | 52 | 44 |
| NSR14_B | | 7.50 | 61 | -- | 27 | 43 | 54 | 59 | 54 | 48 | 40 |
| NSR15_A | | 4.50 | 64 | -- | 30 | 46 | 57 | 62 | 57 | 51 | 43 |
| NSR15_B | | 7.50 | 61 | -- | 27 | 43 | 54 | 59 | 54 | 48 | 40 |
| NSR2_A | | 1.50 | 31 | -- | -- | 14 | 24 | 29 | 24 | 17 | 9 |
| NSR2_B | | 4.00 | 31 | -- | -- | 16 | 24 | 29 | 23 | 17 | 8 |
| NSR3_A | | 1.50 | 36 | -- | 1 | 18 | 28 | 34 | 29 | 22 | 13 |
| NSR3_B | | 4.00 | 33 | -- | 0 | 18 | 26 | 30 | 25 | 19 | 10 |
| NSR4_A | | 1.50 | 32 | -- | -- | 15 | 25 | 30 | 25 | 18 | 10 |
| NSR4_B | | 4.00 | 32 | -- | -- | 16 | 24 | 29 | 24 | 18 | 10 |
| NSR5_A | | 1.50 | 31 | -- | -- | 13 | 23 | 28 | 23 | 17 | 8 |
| NSR5_B | | 4.00 | 30 | -- | -- | 14 | 23 | 28 | 23 | 16 | 7 |
| NSR6_A | | 1.50 | 30 | -- | -- | 13 | 22 | 27 | 22 | 16 | 6 |
| NSR6_B | | 4.00 | 30 | -- | -- | 13 | 23 | 27 | 22 | 16 | 6 |
| NSR7_A | | 1.50 | 27 | -- | -- | 10 | 19 | 24 | 19 | 12 | -- |
| NSR7_B | | 4.50 | 27 | -- | -- | 11 | 20 | 24 | 19 | 13 | -- |
| NSR7_C | | 7.50 | 27 | -- | -- | 13 | 21 | 25 | 19 | 12 | -- |
| NSR7_D | | 10.50 | 29 | -- | -- | 15 | 23 | 26 | 20 | 12 | -- |
| NSR8_A | | 1.50 | 26 | -- | -- | 10 | 19 | 24 | 19 | 12 | -- |
| NSR8_B | | 4.50 | 27 | -- | -- | 11 | 20 | 24 | 19 | 12 | -- |
| NSR9_A | | 1.50 | 26 | -- | -- | 10 | 19 | 24 | 19 | 12 | -- |
| NSR9_B | | 4.50 | 26 | -- | -- | 11 | 19 | 24 | 19 | 12 | -- |

All shown dB values are A-weighted

A P P E N D I X E

J D Wetherspoon Outside Area Management Information

Outside Areas – The JD Wetherspoon Approach

Introduction

JD Wetherspoon operates 866 premises in England, Wales, Scotland and Northern Ireland. The provision of facilities whereby customers can eat and drink outside has been a key part in the development of those premises. We all like to sit outside when the weather permits and our customers are no different. Accordingly we have tried wherever possible to allow for an outside customer area when we build new premises or refurbish existing ones.

The requirement for outside areas became more important after the introduction of restrictions on smoking inside premises. The lack of an outside area means that smokers use the public footpath outside or adjacent to premises where they are more difficult to control and there is greater potential for litter and anti-social behaviour.

We are increasingly acknowledging that whilst our outside areas are popular with our customers who wish to smoke, their use of such areas should not be to the detriment of non-smoking customers and we have a number of outside areas where smoking is limited to certain areas or not permitted at all.

Wherever possible we look to incorporate an outside area within the demise of our premises. If this is not possible then where appropriate, we look to operate an area on the public footpath in front or adjacent to the premises by way of a pavement licence or similar issued by the relevant Highway Authority. At some premises, we operate both.

As well as providing a facility for our customers, outside areas also add to the visual appeal of our premises and a significant amount of investment goes into landscaping and afterwards maintaining them to maximise that appeal.

It is difficult to provide an exact figure but we would estimate that approximately 80% of our premises operate some form of outside area. Of those premises which do not, the majority are in city centre locations where the physical space for an outside area does not exist.

Management and Control

We fully appreciate that when customers use our outside areas then there is a potential risk for noise and disturbance to be caused to those who live and work in the vicinity of our premises which is beyond that if our customers were restricted to inside.

This risk is mitigated by a number of management control measures which are generally applied across our estate. Such measures include the following:

- Effective staff supervision.
- CCTV.
- Signage.
- Restricted hours of use either by way of licensing or planning condition or a voluntary restriction.
- Noise attenuation considerations built into the design.
- Efficient procedures for dealing with any complaints quickly and effectively at premises level.
- No internal music in the vast majority of our premises and no external music at all.

The application of the above measures has meant that formal authority complaints in respect of customer noise from our outside areas are extremely infrequent. The company has not faced any formal enforcement action or premises licence reviews arising from noise issue from outside areas. Any complaint is dealt with quickly and effectively.

It is common for our use of an outside area to be curtailed by way of either a planning or licensing condition although the latter is more frequent given that the prevention of public

nuisance is one of the four licensing objectives (five in Scotland). Wherever possible, we will look to address any concerns of the Environmental Health Officer during both the licensing and planning process to agree a suitable condition/restriction which balances the fully recognised right of local residents and business not to be disturbed from our outside areas and our wish to provide such areas to our customers.

By way of information of the 29 premises which the company opened in 2012, conditions/restrictions restricting use of outside areas were applied as follows:

The Court of Requests, Oldbury (17.1.12) - "The hours of use of the beer garden shall be limited to between 8am and 11pm on Sundays and 8am to 11.30pm on Mondays to Saturdays" (Planning permission)

The Man in the Wall, Wimborne (20.1.12) – "The rear external terrace area of the premises immediately adjacent to the premises, further identified as the area shaded green on the approved premises licence plan shall not be used by customers for the purpose of consumption of food and drink between the hours of 2200 and 0700. All other rear external terrace areas shall not be used between 2200 and 0700 for any purpose" (Premises Licence)

The Watchman, New Malden (27.3.12) – "The outside area to the left of the exit, as viewed from inside the building, will not be used by customers between the hours of 2300 and 0700. Between the hours of 2300 and 0700 the outside areas to the right of the exit ,as viewed from inside the building, will be restricted to customers who wish to smoke" (Premises Licence)

The Queens Picture House, Waterloo (10.4.12) – "Unless otherwise agreed in writing with Merseyside Police, no consumption of alcohol shall occur in the outside patio area beyond 2300 hours" (Premises Licence)

The Prestwick Pioneer, Prestwick (15.5.12) – "Any beer garden must be closed for the consumption of alcohol after 10pm" (Premises Licence)

The Thorns Farm, Yate (29.5.12) – " All outside areas shall be cleared of food and drinks receptacles by 23:00 hours and no food and drink receptacles are to be taken outside after 23:00 hours. Signage indicating this condition shall be prominently displayed inside all external doors" (Premises Licence)

Henry Bell, Helensburgh (29.5.12) – "The terminal hour for the external drinking area is 9pm Sunday to Thursday and 10pm Friday and Saturday. Persons using the external area after this time, have to remain within the area marked "smoking area" on the plan" (Premises Licence)

Railway Hotel, Lytham (10.7.12) – "There shall be no consumption of food or drink in any external area of the premises after 2300" – Premises Licence

The Kingfisher, Poynton (18.12.12) – "There shall be no consumption of food and drink in any outside area of the premises after 2200 until close on any day. All glasses and bottles shall be regularly cleared from any outside area with none remaining after 2200. The premises licence holder will ensure that after 2200 until close of the premises there is regular monitoring of any outside area to ensure that public nuisance is not caused" (Premises Licence)

The above conditions were requested by the authorities, and agreed to by the company, in acknowledgement of near-by residential properties. Some conditions, as will be noted, prevent use of outside terrace areas completely after a certain time and others prevent use for consumption of food and drink thereby allowing use by smokers as an alternative to the pavement or street. This recognises the fact that where customers are not permitted to take drinks with them into the outside area then they are more likely to return inside quickly minimising the potential for any noise nuisance being caused, Where possible the company prefer the flexibility of allowing smokers to use outside terrace areas up until close simply because it allows a greater degree of management control. If the authorities however feel that

the interests of our neighbours are better served by a complete restriction on use then we will concur if the request is a reasonable one.

Case Studies

The approach taken by JD Wetherspoon and the authorities to the control of outside terrace areas via the licensing and planning processes at our premises is more fully demonstrated by the following three case studies.

The Frank Hornby, Maghull, Liverpool

The premises opened on the 17th April 2012.

The premises had previously traded as the Everest Hotel, a long standing public house with a poor reputation in the local community in its final years of operation for causing noise and disturbance.

The Frank Hornby is located in an entirely residential area with houses to the front, sides and rear in close proximity.

The refurbishment of the premises included plans for an extended and enhanced outside area at the front of the premises to replace some free standing bench style seating in what was previously used as a car park.



Possible noise and disturbance from this area was one of a number of issues that caused a high level of concern amongst near-by residents which the company sought to address at 3 public meetings prior to the premises opening. One of the meetings was attended by 70 residents as well as local councillors.

The Planning Authority (Sefton Council) also had concerns over the operation of the area. Our development team worked closely with the planning officer to address those concerns by a reduction in the size of the proposed outside terrace and a management plan which provided for the following:

- No consumption of food and drink in the outside terrace area after 2200
- Regular checks by staff of the outside terrace area
- 24 hour CCTV coverage
- Erection of signage in the area requesting customers to respect the neighbour's right to quiet enjoyment.
- Regular residents meetings

The first residents' meeting took place on the 30th May 2012. 13 residents attended. No complaints were made as to noise from the outside area although one resident did ask us to ensure that smokers did use the area rather than the car park area to the side of the pub.

The second residents meeting took place on the 8th August. On this occasion only 2 residents attended and no concerns were raised about any aspect of the premise's operation.

The Broken Bridge, Pontefract, West Yorkshire

The premises opened on the 18th June 2010 after conversion from former retail premises.

The development included proposals for an outside terrace area at the rear of the premises in close proximity to a row of terraced housing.



Concerns were raised by the EHO as the possibility of noise from the area disturbing the occupiers of the houses. In response to her concerns, the following condition was agreed with her.

“The outside beer garden area shall not be used between 2100 and 1000 except as a smoking area until the premises licence holder has prepared such a scheme of works to address the noise likely to emanate from the area and completed such works to the satisfaction of the EHO”

Given the proximity of the area to the residential properties unfortunately we were unable to come to agreement with the EHO as to a suitable scheme and the restriction remains on the premises licence.

An early complaint was received from one of the occupiers of the houses shortly after opening involving the EHO. Closer management focus was applied to the area and subsequent to that initial complaint, no further complaints have been received as to use of the area.

The manager of the premises is particularly keen to communicate with the residents and keep them abreast of any activity at the premises which might affect them in the belief this minimises complaints. This is something the company encourages all its managers to do and especially those whose pubs are next to noise sensitive premises.

The Five Swans, St Mary's Place, Newcastle

The premises opened on the 29th March 2011 after conversion from 4 separate retail and restaurant properties.

The development included provision for a relatively small external terrace area to the rear of the premises which was directly overlooked by a neighbouring residential property as shown on the picture below



After liaison with the EHO from Newcastle City Council, the following premises licence condition was agreed:

“The premises licence holder will ensure that there shall be no consumption of alcohol, non-alcoholic drinks or food in the outside area to the rear of the premises after the daily terminal hour for closure the premises and before 0700 the following day”

This restriction was not sufficient for the owner of the residential flat and the committee imposed an earlier cut off time for use of 2200 and in addition required the fitting of a Mag Lock to the access door for the area, which also doubled as a fire door, to prevent unauthorised access after 2200. The Mag Lock would prevent anyone opening the door after 2200 but it would automatically allow use once the premises fire alarm was activated.

There were some initial teething problems with the use of the Mag Lock as customers were able to manually to override it. This led to a complaint via the EHO from our neighbour in August 2011 that customers were using the area after 2200.

In response, the pub's operational team met our neighbour and a number of measures as follows were agreed for immediate implementation to stop a reoccurrence:

- Replacement of the original Maglock with a break glass emergency exit system
- More prominent signage informing customers of the hours of use of the terrace area
- Installation of an alarm in the door so that if it was opened in unauthorised circumstances, a member of the pubs management team would be immediately alerted.

There have been no other complaints received regarding the issue.

Conclusion

The above case studies show that with a combination of pre-opening liaison with the authorities and the local community, imposition of workable restrictions, whether on the premises licence or planning permission, and a commitment to address any problems when they arise after opening, that we are able operate outside areas which do not impact on our neighbours.

APPENDIX F

Equipment Sound Power Level List

Equipment List Sound Power Levels - JDW Euston



| Revision | Date | Comment |
|----------|------------|---|
| 0 | 14/10/2022 | Client supplied data |
| 1 | 21/10/2022 | Manufacturer data |
| 2 | 28/10/2022 | Revised scheme (enclosed under-pavement and rear plant areas) |
| | | |
| | | |

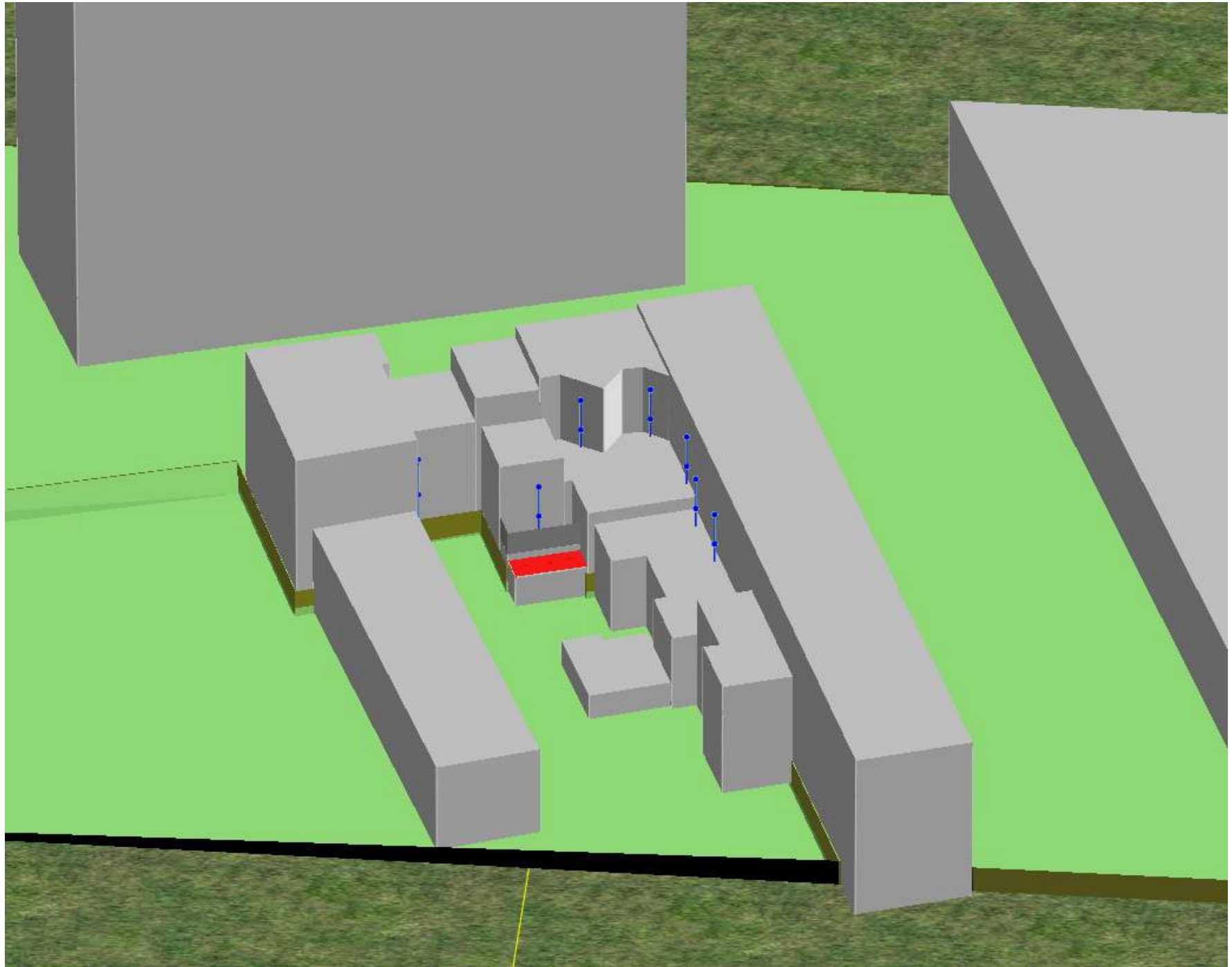
| Equipment or Source | Octave Band Sound Power Level, Lw (Linear) | | | | | | | | Overall LwA (dB) | Frequency shaping (L/M/H) | % On-time | No. off | Corrected overall LwA (dB) | Comments |
|---------------------------------------|--|-------|-------|-------|------|------|------|------|------------------|---------------------------|-----------|---------|----------------------------|---|
| | 63Hz | 125Hz | 250Hz | 500Hz | 1kHz | 2kHz | 4kHz | 8kHz | | | | | | |
| GF NORTH FAÇADE | | | | | | | | | | | | | | |
| 01. Trade area supply air fan | 76 | 70 | 69 | 61 | 56 | 48 | 50 | 47 | 64 | | 100 | 1 | 64 | Elta Select HIT315 (reduced speed 1965rpm) |
| 02. Trade area supply air fan | 76 | 70 | 69 | 61 | 56 | 48 | 50 | 47 | 64 | | 100 | 1 | 64 | Elta Select HIT315 (reduced speed 1965rpm) |
| GF WEST FAÇADE | | | | | | | | | | | | | | |
| 07. Trade area extract air fan | 80 | 72 | 70 | 64 | 60 | 53 | 50 | 51 | 67 | | 100 | 1 | 67 | Elta Select HIT315 |
| 08. Disabled WC extract air fan | 38 | 43 | 43 | 40 | 40 | 38 | 35 | 33 | 45 | M | 100 | 1 | 45 | Envirovent Silent MV160/100T |
| 09. Food hoist/pickup extract air fan | 72 | 80 | 70 | 61 | 60 | 56 | 47 | 42 | 68 | | 100 | 1 | 68 | Elta Select HIT150 (reduced speed 2300rpm) |
| 10. Glass wash extract air fan | 72 | 71 | 66 | 62 | 59 | 57 | 53 | 53 | 65 | | 100 | 1 | 65 | Elta Select HIT200 |
| 11. Male/Female WC extract air fan | 72 | 72 | 71 | 60 | 59 | 57 | 50 | 50 | 66 | | 100 | 1 | 66 | Elta Select HIT250 |
| 12. Office extract air fan | 74 | 81 | 74 | 64 | 64 | 60 | 52 | 47 | 71 | | 100 | 1 | 71 | Elta Select HIT150 |
| -1F WEST FAÇADE | | | | | | | | | | | | | | |
| 24. Kitchen extract fan | 80 | 83 | 80 | 80 | 79 | 76 | 71 | 69 | 83 | | 100 | 1 | 83 | SystemAir AR450E4 (Spectrum calculation estimate) |
| -1F REAR | | | | | | | | | | | | | | |
| 30. Kitchen supply fan | 80 | 83 | 80 | 80 | 79 | 76 | 71 | 69 | 83 | | 100 | 1 | 83 | SystemAir AR450E4 (Spectrum calculation estimate) |
| ENCLOSED PLANT AREAS | | | | | | | | | | | | | | |
| 13. Office supply air fan | 75 | 82 | 74 | 72 | 64 | 61 | 54 | 49 | 73 | | 100 | 1 | 73 | Elta Select HIT150 |
| 27. Staff room supply wall fan | 53 | 58 | 58 | 55 | 55 | 53 | 50 | 48 | 60 | M | 100 | 1 | 60 | Vent Axia TX7WL |
| 28. Staff EC/changing room extract | 74 | 81 | 74 | 64 | 64 | 60 | 52 | 47 | 71 | | 100 | 1 | 71 | Elta Select HIT150 |
| 29. Staff room extract wall fan | 53 | 58 | 58 | 55 | 55 | 53 | 50 | 48 | 60 | M | 100 | 1 | 60 | Vent Axia TX7WL |
| 32. Kitchen ducted AC condenser | 83 | 81 | 75 | 72 | 71 | 66 | 61 | 53 | 75 | | 50 | 1 | 72 | Mitsubishi PUZ-M140YAR1 |
| 33. Condenser G/F cassette AC | 83 | 81 | 75 | 72 | 71 | 66 | 61 | 53 | 75 | | 50 | 1 | 72 | Mitsubishi PUZ-M140YAR1 |
| 34. Condenser G/F cassette AC | 83 | 81 | 75 | 72 | 71 | 66 | 61 | 53 | 75 | | 50 | 1 | 72 | Mitsubishi PUZ-M140YAR1 |
| 35. Staff room AC condenser | 61 | 62 | 67 | 59 | 60 | 51 | 48 | 43 | 64 | | 50 | 1 | 61 | Mitsubishi MUZ-HR35VF |
| 36. Cellar cooling condenser | 76 | 76 | 71 | 65 | 62 | 57 | 52 | 45 | 68 | | 50 | 1 | 65 | J&E Hall BSCU-30-M3 |
| 37. Britvic heat dump | 54 | 59 | 59 | 56 | 56 | 54 | 51 | 49 | 61 | M | 50 | 1 | 58 | LwA 61 assumed |
| 38. Glycol condenser | 66 | 66 | 71 | 62 | 57 | 54 | 46 | 44 | 66 | | 50 | 1 | 63 | J&E Hall JEHS-0250-B2-M-1 |
| 39. Glycol condenser | 66 | 66 | 71 | 62 | 57 | 54 | 46 | 44 | 66 | | 50 | 1 | 63 | J&E Hall JEHS-0250-B2-M-1 |
| 40. Walk in freezer condenser | 65 | 65 | 68 | 66 | 61 | 55 | 47 | 42 | 67 | | 50 | 1 | 64 | J&E Hall JEHR-0180-B2-L-1 |
| 41. Walk in fridge condenser | 67 | 67 | 56 | 59 | 53 | 48 | 40 | 38 | 59 | | 50 | 1 | 56 | J&E Hall JEHR-0100-B1-M-1 V3 |
| 14. Undercroft Extract Fan | 80 | 83 | 80 | 80 | 79 | 76 | 71 | 69 | 83 | | 100 | 1 | 83 | SystemAir AR500DV (Spectrum calculation estimate) |
| 15. Undercroft Extract Fan | 80 | 83 | 80 | 80 | 79 | 76 | 71 | 69 | 83 | | 100 | 1 | 83 | SystemAir AR500DV (Spectrum calculation estimate) |
| 16. Undercroft Extract Fan | 80 | 83 | 80 | 80 | 79 | 76 | 71 | 69 | 83 | | 100 | 1 | 83 | SystemAir AR500DV (Spectrum calculation estimate) |
| 17. Undercroft Extract Fan | 80 | 83 | 80 | 80 | 79 | 76 | 71 | 69 | 83 | | 100 | 1 | 83 | SystemAir AR500DV (Spectrum calculation estimate) |

APPENDIX G

Noise Model – Mechanical Plant

3D view of noise model







JDW Euston Normal trading

Report: Table of Results
 Model: Plant - normal trading (all plant) - mitigated
 LAeq per octave: total results for receivers
 Group: (main group)
 Group Reduction: No

| Name Receiver | Description | Height | Day | | | | | | | | |
|------------------|-------------|--------|-------|------|------|------|------|------|------|------|------|
| | | | Total | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| NSR1_A | | 1.50 | 17.6 | 11.2 | 15.4 | 9.1 | -- | -- | -- | -- | 0.1 |
| NSR1_B | | 4.00 | 19.2 | 12.5 | 17.1 | 11.5 | -- | -- | -- | -- | -- |
| NSR10_A | | 1.50 | 25.6 | 10.8 | 18.3 | 17.9 | 13.8 | 12.8 | 17.5 | 16.9 | 18.8 |
| NSR10_B | | 4.50 | 29.6 | 13.1 | 20.8 | 20.1 | 16.3 | 17.3 | 22.3 | 21.9 | 23.9 |
| NSR11_A | | 5.50 | 38.9 | 31.7 | 35.6 | 31.0 | 23.4 | 26.1 | 25.3 | 22.6 | 23.5 |
| NSR11_B | | 8.50 | 35.5 | 27.2 | 32.6 | 29.1 | 18.4 | 20.5 | 19.7 | 17.3 | 19.1 |
| NSR12_A | | 2.50 | 36.8 | 30.0 | 32.9 | 29.9 | 19.3 | 21.4 | 21.2 | 20.3 | 26.2 |
| NSR12_B | | 5.00 | 33.8 | 26.0 | 30.5 | 27.3 | 16.6 | 18.6 | 18.0 | 16.5 | 20.6 |
| NSR12_C | | 7.50 | 32.7 | 24.3 | 29.7 | 26.4 | 15.2 | 17.2 | 16.5 | 14.6 | 18.0 |
| NSR13_A | | 3.00 | 31.3 | 23.0 | 28.1 | 25.1 | 13.1 | 15.1 | 15.6 | 13.7 | 18.1 |
| NSR13_B | | 6.00 | 30.8 | 22.1 | 27.8 | 24.7 | 12.5 | 14.4 | 14.7 | 12.8 | 16.7 |
| NSR14_A | | 4.50 | 38.4 | 28.2 | 34.8 | 31.9 | 22.3 | 20.7 | 25.7 | 25.9 | 28.1 |
| NSR14_B | | 7.50 | 33.8 | 25.4 | 28.3 | 28.4 | 19.1 | 17.1 | 22.0 | 22.3 | 24.2 |
| NSR15_A | | 4.50 | 41.2 | 34.2 | 35.5 | 36.9 | 26.2 | 21.3 | 25.6 | 27.3 | 28.5 |
| NSR15_B | | 7.50 | 35.4 | 27.7 | 29.6 | 30.6 | 20.6 | 17.4 | 22.1 | 22.9 | 24.5 |
| NSR2_A | | 1.50 | 18.7 | 11.2 | 16.5 | 12.1 | -- | -- | -- | -- | -- |
| NSR2_B | | 4.00 | 21.2 | 12.9 | 18.0 | 15.1 | 8.0 | 3.3 | 7.6 | 3.7 | 3.0 |
| NSR3_A | | 1.50 | 18.9 | 10.8 | 15.4 | 11.4 | 0.5 | -- | 7.1 | 6.3 | 8.4 |
| NSR3_B | | 4.00 | 21.7 | 11.8 | 17.1 | 14.5 | 8.9 | 6.6 | 11.4 | 10.6 | 11.7 |
| NSR4_A | | 1.50 | 19.8 | 9.9 | 15.5 | 12.0 | 3.9 | -- | 8.8 | 9.6 | 11.9 |
| NSR4_B | | 4.00 | 22.1 | 11.3 | 17.2 | 15.0 | 9.8 | 7.6 | 12.3 | 11.4 | 12.4 |
| NSR5_A | | 1.50 | 20.8 | 9.1 | 15.4 | 13.2 | 8.7 | 7.1 | 11.7 | 10.8 | 11.9 |
| NSR5_B | | 4.00 | 22.5 | 10.5 | 17.2 | 15.8 | 10.9 | 8.6 | 13.1 | 12.0 | 12.9 |
| NSR6_A | | 1.50 | 27.6 | 18.8 | 24.2 | 21.4 | 14.2 | 10.0 | 12.5 | 11.8 | 14.2 |
| NSR6_B | | 4.00 | 30.1 | 18.3 | 25.1 | 24.4 | 18.8 | 16.5 | 20.0 | 18.1 | 18.9 |
| NSR7_A | | 1.50 | 24.8 | 12.7 | 19.6 | 17.6 | 12.4 | 10.8 | 15.6 | 14.7 | 16.2 |
| NSR7_B | | 4.50 | 29.2 | 13.6 | 21.1 | 21.0 | 17.2 | 16.2 | 21.1 | 20.8 | 23.1 |
| NSR7_C | | 7.50 | 29.5 | 15.8 | 23.7 | 22.1 | 17.0 | 15.8 | 20.4 | 19.9 | 22.1 |
| NSR7_D | | 10.50 | 28.7 | 15.1 | 22.3 | 21.1 | 16.0 | 14.9 | 19.8 | 19.4 | 21.9 |
| NSR8_A | | 1.50 | 26.8 | 14.9 | 21.9 | 19.9 | 14.6 | 12.9 | 17.2 | 16.0 | 17.5 |
| NSR8_B | | 4.50 | 31.8 | 15.2 | 23.7 | 23.8 | 19.9 | 18.9 | 23.7 | 23.4 | 25.6 |
| NSR9_A | | 1.50 | 27.1 | 13.3 | 20.9 | 19.5 | 14.8 | 14.2 | 18.7 | 18.0 | 19.5 |
| NSR9_B | | 4.50 | 32.4 | 14.3 | 24.0 | 23.6 | 20.6 | 19.8 | 24.7 | 24.3 | 26.5 |

All shown dB values are A-weighted



JDW Euston
Late trading (23:00-01:00)

Report: Table of Results
 Model: Plant - early night trading (excluding kitchen plant) - mitigated
 LAeq per octave: total results for receivers
 Group: (main group)
 Group Reduction: No

| Name Receiver | Description | Height | Night | | | | | | | | |
|------------------|-------------|--------|-------|------|------|------|------|-------|------|------|------|
| | | | Total | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| NSR1_A | | 1.50 | 17.2 | 10.1 | 15.3 | 9.3 | -4.6 | -- | -- | -- | -- |
| NSR1_B | | 4.00 | 18.7 | 10.9 | 16.8 | 11.1 | -2.1 | -12.5 | -- | -- | -- |
| NSR10_A | | 1.50 | 24.0 | 9.6 | 17.9 | 16.6 | 12.2 | 10.5 | 15.1 | 14.5 | 16.4 |
| NSR10_B | | 4.50 | 27.8 | 11.9 | 20.5 | 19.2 | 15.0 | 15.1 | 19.9 | 19.4 | 21.4 |
| NSR11_A | | 5.50 | 38.7 | 31.5 | 35.5 | 30.9 | 23.3 | 26.0 | 25.2 | 22.4 | 22.9 |
| NSR11_B | | 8.50 | 35.3 | 26.9 | 32.5 | 28.9 | 18.3 | 20.3 | 19.5 | 17.0 | 18.1 |
| NSR12_A | | 2.50 | 32.5 | 23.8 | 29.7 | 26.3 | 15.6 | 17.5 | 16.7 | 14.3 | 15.3 |
| NSR12_B | | 5.00 | 32.4 | 23.6 | 29.6 | 26.2 | 15.4 | 17.3 | 16.5 | 14.1 | 15.1 |
| NSR12_C | | 7.50 | 32.0 | 22.9 | 29.2 | 25.9 | 14.6 | 16.5 | 15.7 | 13.4 | 14.4 |
| NSR13_A | | 3.00 | 30.0 | 20.4 | 27.3 | 24.1 | 11.7 | 13.6 | 13.8 | 10.9 | 11.9 |
| NSR13_B | | 6.00 | 29.9 | 20.3 | 27.2 | 24.0 | 11.5 | 13.4 | 13.6 | 10.7 | 11.7 |
| NSR14_A | | 4.50 | 37.4 | 23.0 | 33.8 | 28.5 | 21.2 | 26.9 | 25.7 | 26.9 | 28.0 |
| NSR14_B | | 7.50 | 31.9 | 18.5 | 25.0 | 22.8 | 17.7 | 24.4 | 22.0 | 23.7 | 24.0 |
| NSR15_A | | 4.50 | 39.0 | 20.0 | 25.2 | 24.7 | 23.1 | 33.4 | 34.9 | 30.6 | 27.8 |
| NSR15_B | | 7.50 | 32.4 | 17.3 | 23.4 | 22.0 | 18.4 | 27.0 | 22.1 | 25.1 | 24.1 |
| NSR2_A | | 1.50 | 18.0 | 10.4 | 16.0 | 10.7 | -1.6 | -12.9 | -- | -- | -- |
| NSR2_B | | 4.00 | 20.0 | 11.0 | 17.5 | 13.8 | 6.3 | -5.5 | 3.1 | -1.8 | -- |
| NSR3_A | | 1.50 | 17.9 | 8.9 | 15.0 | 10.4 | 2.5 | -7.8 | 4.7 | 3.7 | 6.5 |
| NSR3_B | | 4.00 | 20.4 | 9.9 | 16.6 | 13.5 | 7.5 | 4.9 | 9.0 | 8.2 | 9.2 |
| NSR4_A | | 1.50 | 18.8 | 9.0 | 15.2 | 11.2 | 3.9 | 0.2 | 6.6 | 7.1 | 9.1 |
| NSR4_B | | 4.00 | 21.0 | 10.0 | 16.8 | 14.2 | 8.7 | 6.4 | 10.5 | 9.4 | 10.3 |
| NSR5_A | | 1.50 | 19.4 | 8.4 | 15.0 | 12.2 | 7.1 | 5.1 | 9.2 | 8.3 | 9.4 |
| NSR5_B | | 4.00 | 21.1 | 9.4 | 16.7 | 14.7 | 9.3 | 6.7 | 10.7 | 9.5 | 10.2 |
| NSR6_A | | 1.50 | 26.7 | 17.7 | 23.8 | 20.4 | 12.6 | 7.9 | 9.9 | 9.0 | 11.3 |
| NSR6_B | | 4.00 | 28.8 | 17.0 | 24.6 | 23.3 | 17.1 | 13.9 | 17.1 | 15.2 | 16.0 |
| NSR7_A | | 1.50 | 23.5 | 11.6 | 19.0 | 16.3 | 10.5 | 8.5 | 13.1 | 12.6 | 14.6 |
| NSR7_B | | 4.50 | 26.8 | 12.2 | 20.5 | 19.1 | 15.2 | 13.3 | 17.9 | 17.5 | 19.9 |
| NSR7_C | | 7.50 | 27.7 | 14.0 | 23.2 | 20.9 | 15.2 | 13.1 | 17.4 | 16.7 | 18.8 |
| NSR7_D | | 10.50 | 26.8 | 13.6 | 21.8 | 19.9 | 14.2 | 12.2 | 16.8 | 16.3 | 18.5 |
| NSR8_A | | 1.50 | 25.7 | 13.4 | 21.4 | 18.9 | 13.2 | 11.1 | 15.3 | 14.4 | 16.1 |
| NSR8_B | | 4.50 | 30.1 | 14.2 | 23.2 | 22.8 | 18.5 | 16.8 | 21.4 | 21.0 | 23.3 |
| NSR9_A | | 1.50 | 25.8 | 12.1 | 20.6 | 18.3 | 13.2 | 12.2 | 16.7 | 16.0 | 17.7 |
| NSR9_B | | 4.50 | 30.6 | 13.4 | 23.6 | 22.7 | 19.1 | 17.7 | 22.2 | 21.8 | 24.0 |

All shown dB values are A-weighted



JDW Euston Night (24hr plant)


Report: Table of Results
 Model: Plant - night (24hr plant) - mitigated
 LAeq per octave: total results for receivers
 Group: (main group)
 Group Reduction: No

| Name Receiver | Description | Height | Night | | | | | | | | |
|------------------|-------------|--------|-------|------|------|------|------|-------|------|------|------|
| | | | Total | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| NSR1_A | | 1.50 | 13.6 | 5.9 | 11.5 | 6.6 | -7.5 | -- | -- | -- | -- |
| NSR1_B | | 4.00 | 15.0 | 6.7 | 12.9 | 8.7 | -5.0 | -17.2 | -- | -- | -- |
| NSR10_A | | 1.50 | 23.6 | 9.6 | 17.3 | 16.0 | 11.2 | 10.1 | 15.0 | 14.5 | 16.4 |
| NSR10_B | | 4.50 | 27.5 | 11.8 | 19.9 | 18.6 | 13.8 | 14.7 | 19.8 | 19.4 | 21.4 |
| NSR11_A | | 5.50 | 13.9 | 1.3 | 5.2 | 5.4 | 1.8 | 1.9 | 6.9 | 6.0 | 6.3 |
| NSR11_B | | 8.50 | 13.9 | 1.2 | 5.7 | 5.6 | 1.6 | 1.7 | 6.8 | 5.9 | 6.2 |
| NSR12_A | | 2.50 | 13.1 | 0.3 | 4.6 | 4.7 | 1.0 | 1.1 | 6.1 | 5.2 | 5.3 |
| NSR12_B | | 5.00 | 13.0 | 0.3 | 4.8 | 4.6 | 0.9 | 1.1 | 6.1 | 5.1 | 5.2 |
| NSR12_C | | 7.50 | 13.1 | 0.3 | 5.4 | 5.0 | 0.9 | 1.0 | 6.0 | 5.0 | 5.1 |
| NSR13_A | | 3.00 | 2.9 | -- | -0.5 | -- | -- | -- | 0.3 | -- | -- |
| NSR13_B | | 6.00 | 3.8 | -- | 1.2 | -- | -- | -- | 0.2 | -- | -- |
| NSR14_A | | 4.50 | 33.2 | 19.4 | 22.5 | 24.0 | 20.4 | 20.6 | 25.7 | 25.4 | 28.0 |
| NSR14_B | | 7.50 | 29.4 | 15.7 | 18.8 | 20.3 | 16.7 | 16.9 | 22.0 | 21.7 | 24.0 |
| NSR15_A | | 4.50 | 32.9 | 19.1 | 22.3 | 23.7 | 20.1 | 20.3 | 25.5 | 25.2 | 27.7 |
| NSR15_B | | 7.50 | 29.5 | 15.8 | 19.0 | 20.4 | 16.8 | 17.0 | 22.1 | 21.8 | 24.1 |
| NSR2_A | | 1.50 | 16.5 | 8.4 | 14.4 | 9.7 | -4.5 | -- | -- | -- | -- |
| NSR2_B | | 4.00 | 18.6 | 9.1 | 15.9 | 13.0 | 5.0 | -10.2 | 3.0 | -1.8 | -- |
| NSR3_A | | 1.50 | 16.9 | 7.3 | 13.7 | 9.8 | 1.0 | -12.5 | 4.6 | 3.7 | 6.5 |
| NSR3_B | | 4.00 | 19.5 | 8.2 | 15.2 | 12.7 | 6.3 | 4.4 | 9.0 | 8.1 | 9.2 |
| NSR4_A | | 1.50 | 18.2 | 8.1 | 14.3 | 10.7 | 2.5 | -0.5 | 6.5 | 7.1 | 9.1 |
| NSR4_B | | 4.00 | 20.4 | 9.0 | 15.9 | 13.6 | 7.6 | 6.0 | 10.5 | 9.4 | 10.3 |
| NSR5_A | | 1.50 | 18.9 | 7.6 | 14.3 | 11.7 | 5.9 | 4.7 | 9.2 | 8.3 | 9.4 |
| NSR5_B | | 4.00 | 20.6 | 8.6 | 16.0 | 14.1 | 8.1 | 6.3 | 10.6 | 9.4 | 10.2 |
| NSR6_A | | 1.50 | 26.2 | 17.5 | 23.3 | 19.8 | 11.4 | 7.5 | 9.8 | 9.0 | 11.3 |
| NSR6_B | | 4.00 | 28.3 | 16.8 | 24.1 | 22.7 | 15.9 | 13.4 | 17.0 | 15.2 | 16.0 |
| NSR7_A | | 1.50 | 23.1 | 11.5 | 18.5 | 15.8 | 9.4 | 8.2 | 13.1 | 12.5 | 14.6 |
| NSR7_B | | 4.50 | 26.5 | 11.9 | 20.0 | 18.5 | 14.2 | 12.9 | 17.9 | 17.5 | 19.9 |
| NSR7_C | | 7.50 | 27.3 | 13.6 | 22.6 | 20.3 | 14.1 | 12.7 | 17.3 | 16.7 | 18.8 |
| NSR7_D | | 10.50 | 26.3 | 13.0 | 21.0 | 19.2 | 13.1 | 11.8 | 16.7 | 16.3 | 18.5 |
| NSR8_A | | 1.50 | 25.3 | 13.3 | 20.9 | 18.3 | 12.1 | 10.7 | 15.3 | 14.4 | 16.1 |
| NSR8_B | | 4.50 | 29.8 | 14.0 | 22.8 | 22.2 | 17.3 | 16.4 | 21.4 | 21.0 | 23.3 |
| NSR9_A | | 1.50 | 25.5 | 12.1 | 20.1 | 17.8 | 12.0 | 11.8 | 16.6 | 16.0 | 17.7 |
| NSR9_B | | 4.50 | 30.3 | 13.3 | 23.1 | 22.1 | 18.0 | 17.2 | 22.2 | 21.8 | 24.0 |


All shown dB values are A-weighted

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