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TAYLOR WIMPEY LIMITED

**Proposed Residential Development at Land off
Henthorn Road, Clitheroe, Lancashire**

Noise Assessment

November 2012

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TAYLOR WIMPEY LIMITED

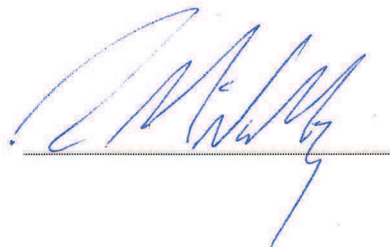
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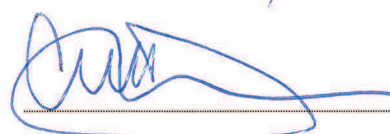
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DRAWINGS

LE11674-001	Northeastern Part of the Proposed Development and Noise Monitoring Location
LE11674-002	Northeastern Part of the Proposed Development and Suggested Barrier Treatment

1 INTRODUCTION

1.1.1 By written instruction (email) dated 18th October 2012, from Mr Gareth Bancroft of Taylor Wimpey Limited, Wardell Armstrong LLP were commissioned to undertake a noise assessment which examines the potential impact of noise associated with an existing dog kennels and cattery at the northeastern boundary of a proposed residential development at Henthorn Road, Clitheroe, Lancashire. This report has been produced to respond to the pre-application comments provided by Ribble Valley Borough Council (RVBC), and is required to accompany a planning application for the proposed development.

1.1.2 The land off Henthorn Road currently has permission to develop 270 residential dwellings, a doctor's surgery, landscape, open space, and highways.

1.1.3 The nearest dwellings in the northeastern area of the proposed development will be situated close to an established boarding kennels and cattery business with associated external exercise and kennels area. Therefore, as part of the appeal decision for the development of the land (ref APP/T2350/A/11/2161186), dated 26th March 2012, a condition was attached in relation to noise from this potential noise source:

'7) Any application for the approval of reserved matters that includes development of residential properties adjoining the shared northern site boundary with the kennels/cattery shall include specific measures for the provision of a suitable noise barrier along the shared boundary. The measures so submitted and approved in writing by the Local Planning Authority shall be implemented in accordance with the approved measures prior to the commencement of residential development in that phase.'

1.1.4 Further to a meeting between Taylor Wimpey and RVBC on 17th July 2012, RVBC issued several comments in relation to noise from the adjacent kennels and cattery. The comments were sent by Sarah Westwood, who is a Senior Planning Officer at Ribble Valley Borough Council (RVBC), in her letter dated 2 August 2012 (ref SW/CMS/RV/2012/ENQ/00141). With regard to attenuating the potential noise impact from the kennels, the letter states:

'A suitable barrier should present an appropriate screen between the uses on the outline plan but there are concerns that thresholds in terms of noise levels [sic] garden areas and dwellings would be difficult to achieve. Noise from the

kennels is intermittent barking and thus would be difficult to pick up as part of any noise survey. Whilst acoustic glazing could be provided to manage internal noise levels there are questions over whether a suitable environment could be achieved in garden areas. I appreciate that purchasers would buy in the knowledge of what adjacent uses were but we need to ensure that amenities are safeguarded into the future. If you do take this layout forward into a reserved matters submission, colleagues in Environmental Health have advised that a noise survey is carried out this should try and identify peaks and be carried out over a period of at least 7am to 10.30pm. It may be that you speak further to colleagues in Environmental Health regarding this matter if it is your intention to follow this design option through.'

- 1.1.5 The adjacent business is Clitheroe Kennels and Cattery, which changed ownership in 2006. At maximum capacity, it is understood that up to twenty five dogs can be accommodated at any one time.
- 1.1.6 This report details the results of a noise survey undertaken to establish existing baseline levels at the proposed development, an assessment of the potential noise impact from kennels and cattery, and details suitable mitigation measures where appropriate.

2 ASSESSMENT METHODOLOGY

2.1 Consultation and Scope of Works

2.1.1 To respond to the comments provided by RVBC, as per the letter dated 2 August 2012, Wardell Armstrong contacted Mr James Russell, who is an Environmental Health Officer at RVBC, in order to discuss the general methodology for assessing the potential noise impact of the kennels cattery on the development.

2.1.2 Mr Russell confirmed that the standards for outdoor living areas, as defined in The World Health Organisation's 'Guidelines for Community Noise' 1999 (WHO 1999) should be achieved. In addition, Mr Russell asked that any noise monitoring from the kennels and cattery be representative of 'peak' periods of activity. Should this not be possible, a 'reasonable judgement' would need to be made as to what the potential noise impact would be from peak such activities.

2.1.3 Wardell Armstrong proposed to undertake extended noise monitoring at the boundary of the proposed development and adjacent kennels and cattery during the week commencing 22 October 2012. Mr Russell expressed concerns that this period may not be representative, and the following week may be more suitable as schools would be on a mid-term break, and the kennels more likely to have a greater number of dogs in accommodation. However, following a brief discussion with Clitheroe Kennels and Cattery, it was identified that six dogs would be staying at the kennels during the week commencing 22 October, and only an extra dog or two would be expected the following week. Therefore, Wardell Armstrong proposed to supplement the survey data with measured noise levels from dogs barking, measured at an existing facility or of a dog known to company personnel.

2.2 Noise Survey

2.2.1 As part of this assessment, Wardell Armstrong LLP has carried out a partially attended noise survey (0725 to 1000h) to assess the current ambient noise levels in the northeastern part of the proposed development, with the remaining survey period being unattended. The noise survey is discussed in Section 3 of this report.

2.3 Assessment Criteria

2.3.1 The potential noise impacts from the kennels and cattery have been assessed with reference to the following guidance.

National Planning Policy Framework

2.3.2 In March 2012, Planning Policy Guidance Note 24: *Planning and Noise*, 1994 (PPG24), was replaced in England by the 'National Planning Policy Framework'(NPPF). With regard to noise, Paragraph 123 of NPPF states:

'Planning policies and decisions should aim to:

- avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;
- mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;
- recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and
- identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.'

- 2.3.3 In terms of ‘adverse effects’ the NPPF refers to the ‘National Policy Statement for England’ (NPSE) which defines three categories, as follows:

NOEL – No Observed Effect Level

This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

LOAEL – Lowest Observed Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected.

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.’

- 2.3.4 However, whilst the above terms are provided in NPSE, paragraph 2.22 acknowledges that these terms require further research in order to establish what is meant in terms of ‘adverse impact’.

‘2.22 It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available.’

- 2.3.5 The NPSE refers to the World Health Organisation when discussing health and quality of life. Therefore, in the absence of any more precise planning policy guidance, the noise standards set out in WHO guidance have been used for setting appropriate noise limits.

World Health Organisation Guidelines for Community Noise, 1999:

- 2.3.6 In accordance with the requirements of the World Health Organisation’s “Guidelines for Community Noise”, 1999 (WHO 1999), the following external noise limits, for noise from external sources, will need to be met within outdoor areas of the residential dwellings:

- 55dB L_{Aeq} (16 hour) during the daytime in outdoor living areas.
- 2.3.7 The above noise limit has been used as the basis of the following assessment of potential noise impact on the nearest dwellings in the northeast part of the development.
- 2.3.8 In addition, as part of the proposed development, a small children's play area is proposed between the kennels and nearest dwellings, and although this would not generally be considered a 'noise sensitive' area, the above limit has also be considered to provide adequate amenity.
- 2.3.9 Should the above level be exceeded, there would be a requirement for noise mitigation measures.

3 NOISE SURVEY

- 3.1.1 On the 24th October 2012 Wardell Armstrong LLP carried out a noise survey to assess the existing noise levels at one location, representative of the nearest sensitive receptors to the existing kennels and cattery.
- 3.1.2 Attended noise monitoring was carried out between approximately 0730 and 1000 hours on the 24th October 2012, with the unattended monitoring between 1000 and 2230 hours. The monitoring location is shown on Drawing Number LE11674-001:
- 3.1.3 The noise measurements were made using a Type 1, integrating sound level meter. The sound level meter was mounted vertically on a tripod 1.2m above the ground and more than 3.5m from any other reflecting surfaces.
- 3.1.4 All noise monitoring took place during dry and calm weather conditions. The sound level meter was calibrated to a reference level of 94dB at 1kHz both before, and on completion of the noise survey. No drift in calibration was recorded during the survey.
- 3.1.5 The noise measurements were continuous between 0725 and 2230 hours. A-weighted¹ L_{eqs} ² were recorded, together with A-weighted L_{90s} ³. The maximum and minimum sound pressure levels were also recorded to provide additional information. The measured noise levels are set out in Appendix A, as fifteen minute periods.
- 3.1.6 In addition to noise monitoring at the proposed development site, Wardell Armstrong undertook measurements of an Alsatian breed dog, whilst barking, and at one metre. This source was measured in an external yard, and has been used in order to predict the possible impact of noise from the kennels and cattery during peak occupation, at the proposed development.

¹ A' Weighting An electronic filter in a sound level meter which mimics the human ear's response to sounds at different frequencies under defined conditions

² L_{eqs} Equivalent continuous noise level; the steady sound pressure which contains an equivalent quantity of sound energy as the time-varying sound pressure levels.

³ L_{90} The noise level which is exceeded for 90% of the measurement period.

3.1.7 Attended noise monitoring allows observations and detailed notes to be made of the significant noise sources which contribute to each of the measured levels. Observations identified the following significant noise sources at the site:

Road Traffic: Road traffic noise was audible at the monitoring locations due to road traffic on Whalley Road (A671) and the A59 to the east, as well as vehicular movement on Edisford Road (B6243) to the north .

Kennel/Cattery Noise: During the attended period of the survey, several dog barks were noted on one occasion. The owner of the kennels was also observed cleaning out a kennel during the early morning. No other noises were heard from this site.

Birdsong/Foliage: There are trees and shrubs in the vicinity of the survey locations. A small amount of foliage rustling, and birdsong was subjectively loud during the measurement period attended.

Other Noise Sources: During the attended survey period, distant construction noise in the form of an excavator was audible from 0744 hours until leaving the site at 1000 hours. However, the location of this source was not established, and the source has been established based on previous experience with such plant rather than visual confirmation.

4 NOISE IMPACT ASSESSMENT

4.1 Introduction

- 4.1.1 The following noise impact assessment has been based on the Composite Site Layout provided by Taylor Wimpey, as shown on Drawing LE11674-001.
- 4.1.2 The boundary between Clitheroe Kennels and Cattery currently consists of existing trees, shrubbery, and wire fencing.
- 4.1.3 On the 24th October 2012, the owner of Clitheroe Kennels and Cattery informed Wardell Armstrong that six dogs were staying at the facility that day. As the regular dog walker had been taken ill, the scheduled 0930 hours walk had been cancelled, but the 1730 hours walk was expected. The owner of Clitheroe Kennels and Cattery informed Wardell Armstrong that dogs which regularly stay at the facility are familiar with the surrounding and staff of this business, and as a result, rarely bark. The owner informed Wardell Armstrong that since taking over the business in 2006, they had worked hard to eliminate 'bad behaviour' dogs. These types of dogs, which would be expected to bark more regularly, had been a main part of the previous ownership's trade, and had in turn, resulted in complaints. The current owner of the business informed Wardell Armstrong that this was not the case now and that a good relationship exists between Clitheroe Kennels and Cattery and nearby neighbouring properties.
- 4.1.4 Wardell Armstrong asked the owner of Clitheroe Kennels and Cattery how many dogs could be exercised at any one occasion. The owner informed Wardell Armstrong that the number could vary, but five dogs would be too many on one occasion.

4.2 Existing Noise Levels

- 4.2.1 Appendix A summarises the measured noise survey data over fifteen minute periods, which has been chosen as the time base for the following assessments. This has been done to consider shorter periods of amenity in outdoor areas. WHO 1999 recommends a sixteen hour time base, however it is considered that intermittent dog barking noise could be understated over such a long averaging period.

- 4.2.2 The periods presented in Appendix A represent a full daytime period, 10m from the boundary of Clitheroe Kennels and Cattery, during a typical day 'as found'. Although the 0930 hours exercise period did not occur, the graphical time history of the sound level meter identifies that a period of concentrated 'spikes' of noise did occur at 1730 hours, which would concur with information provided by the owner regarding exercise times.
- 4.2.3 As can be seen from Appendix A, daytime noise levels do not exceed 55dBL_{Aeq}. Generally, with the exception of the periods starting at 1009 hours, and at 1809 hours, noise levels at 10m south of the northeastern boundary of the development are below 50dBL_{Aeq}. With regard to these periods, the exact noise source elevating these noise levels cannot be substantiated due to the measurements being unattended.
- 4.2.4 Therefore, for the full daytime period observed, noise levels at a location representative of the Children's play area would be below the WHO 1999 limit of 55dBL_{Aeq} for noise in outdoor areas. This would also be the case at the nearest dwellings.

4.3 Assessment of Noise Levels Measured from the Kennels and Cattery

- 4.3.1 At 1730 hours on 24th October, the graphical time history of the sound level meter identifies that noise levels over a period of 2:37 minutes were 52.6dBL_{Aeq}, which is assumed to be dog activity. This would be representative of a nominal point within the northern part of the children's play area and would be below the WHO 1999 limit for noise in outdoor areas. At the nearest dwellings to the kennels and cattery, in the northeastern part of the development, noise levels due to this source would reduce by a further 8.5dB due to increased distance from the source, and would be significantly lower still in the rear outdoor areas of these dwellings.
- 4.3.2 Whilst the above assessment demonstrates noise levels from the kennels should be acceptable, the sample period of 2:37 minutes may not be entirely representative of a worst case situation when the kennels are fully occupied. A more robust means of assessing noise from the kennels would be to evaluate the sound exposure level of one event, such as the loudest dog bark, and calculate what the average noise level could be over a fifteen minute period based on this level.

- 4.3.3 During the 2:37 minute period, the time history of the sound level meter identifies 72 'spikes' of noise, which equates to one or more dogs barking on average every 2.2 seconds. The loudest 'bark' during this period was noted as having a sound exposure level of 61.2dB_{L_{AE}}. In addition, during the period of observation between 0730 hours and 1000 hours, a dog bark was noted at 0944 hours, with a sound exposure level of 71.2dB_{L_{AE}}, assumed to be at 15m. However, the exact location of this source could not be ascertained, and may include the effect screening if the bark was propagating from a kennel opening or from behind an on-site structure.
- 4.3.4 In order to provide more precise data, and hence a more robust assessment, Wardell Armstrong measured the sound exposure level of the bark of a large Alsatian breed dog at one metre distance. The greatest sound exposure level measured during the period of observation was found to be 100dB_{L_{AE}} at 1m.
- 4.3.5 Table 1 below predicts the noise level within the children's play area, and at the nearest dwellings in the northeastern part of the development, based a sound exposure level of 100dB_{L_{AE}} at 1m and one bark every 2.2 seconds over a period of fifteen minutes. This is assumed to represent a likely worst case when the kennels have full occupancy.

Table 1: Predicted Noise Levels of Dog Barks to the Children’s play area and Nearest Dwellings of the Development (Figures in dB(A))									
Description	Overall Noise Level, dB	Frequency, Hz							
		63	125	250	500	1k	2k	4k	8k
Predicted Noise Levels at the Children’s play area									
Dog bark at 1m	100 L _{AE}	60.2	62.4	72.0	92.7	90.9	88.0	64.5	57.5
Distance attenuation to Children’s play area	-	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5
Correction for number of events (i.e 409 barks in 15 minutes)	-	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1
Time correction (15min)	-	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5
A-weighting	-	-26.2	-16.1	-8.6	-3.2	0	+1.2	+1	-1.1
Overall noise level	67.8 L _{Aeq}	7.1	19.4	36.5	62.6	64.0	62.3	38.6	29.5

Predicted Noise Levels at the Nearest Dwellings in the Northeastern Part of the Development									
Dog bark at 1m	100 L _{AE}	60.2	62.4	72.0	92.7	90.9	88.0	64.5	57.5
Distance attenuation to dwellings	-	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0
Correction for number of events (i.e 409 barks in 15 minutes)	-	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1
Time correction (15min)	-	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5
A-weighting	-	-26.2	-16.1	-8.6	-3.2	0	+1.2	+1	-1.1
Overall noise level	59.2 L _{Aeq}	0.0	10.9	28.0	54.1	55.5	53.8	30.1	21.0

- 4.3.6 Based on the above, mitigation measures would be necessary in order to control noise levels from barking dogs. However, based on the information provided by the owner of the kennels, it is expected that this frequency of barking would not occur on any regular basis, and therefore, the above assessment represents a worst case scenario.

5 MITIGATION MEASURES

- 5.1.1 The most suitable means of attenuating potential noise levels from dog activities and barking associated with the kennels and cattery is to provide an acoustic barrier along the boundary separating the kennels and cattery from the proposed development.
- 5.1.2 Predictive calculations identify that a barrier with a minimum height of 1.5m would provide sufficient mitigation to control noise levels to no greater than 55dBL_{Aeq} at the nearest proposed dwellings to the kennels and cattery, and in the children's play area.
- 5.1.3 In addition, the owner of the kennels and cattery has concerns that dogs are likely to be disturbed by any nearby activity, such as children playing, which could cause additional barking. Therefore, it is suggested that a barrier with a minimum height of 2m is installed in order to intervene the line of sight between the kennels and the dwellings, and the children's play area. This would result in less disturbance to the dogs and therefore less barking, which would be a benefit to the occupants of the residential development.
- 5.1.4 The barrier would need to be solid in construction, with a surface mass of at least 10kg/m² (e.g close boarded fencing). In addition, it is recommended that the barrier extend for several metres to the south, into the site, to ensure all noise pathways around the barrier are controlled, as indicated on Drawing LE11674-002.
- 5.1.5 To indicate the attenuation which may be gained by the inclusion of a barrier, Table 2 below identifies the predicted noise levels at each receptor location after a 2m high barrier has been provided along the northeastern boundary.

Table 2: Predicted Noise Levels of Dog Barks to the Children’s play area and Nearest Dwellings of the Development with a 2m Barrier at the Northeastern Boundary (Figures in dB(A))									
Description	Overall Noise Level, dB	Frequency, Hz							
		63	125	250	500	1k	2k	4k	8k
Predicted Noise Levels at the Children’s play area									
Dog bark at 1m	100 L _{AE}	60.2	62.4	72.0	92.7	90.9	88.0	64.5	57.5
Distance attenuation to Children’s play area	-	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5
Correction for number of events (i.e 409 barks in 15 minutes)	-	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1
Time correction	-	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5
Barrier attenuation – 2m barrier		-7.2	-8.7	-10.7	-13.1	-15.8	-18.0	-18.0	-18.0
A-weighting	-	-26.2	-16.1	-8.6	-3.2	0	+1.2	+1	-1.1
Overall noise level	52.6 L _{Aeq}	0	10.7	25.8	49.5	48.2	44.3	20.6	11.5
Predicted Noise Levels at the Nearest Dwellings in the Northeastern Part of the Development									
Dog bark at 1m	100 L _{AE}	60.2	62.4	72.0	92.7	90.9	88.0	64.5	57.5
Distance attenuation to dwellings	-	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0
Correction for number of events (i.e 409 barks in 15 minutes)	-	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1	+26.1
Time correction	-	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5
Barrier attenuation – 2m barrier		-6.8	-8.2	-10.0	-12.3	-14.9	-17.7	-18.0	-18.0
A-weighting	-	-26.2	-16.1	-8.6	-3.2	0	+1.2	+1	-1.1
Overall noise level	44.7 L _{Aeq}	0.0	2.7	18.0	41.8	40.6	36.1	12.1	3.0

5.1.6 Table 2 demonstrates that with the inclusion of a 2m high barrier along the entire length of the boundary between the proposed development and the kennels at cattery, the WHO 1999 noise limit of 55dB L_{Aeq} for outdoor areas would not be exceeded even during peak occupancy. Therefore, the comments of RVBC have been appropriately responded to.

6 CONCLUSIONS

- 6.1.1 Wardell Armstrong LLP has undertaken a noise assessment which examines the potential impact of noise associated with an existing dog kennels and cattery at the northeastern boundary of a proposed residential development at Henthorn Road, Clitheroe, Lancashire. In addition, this report has been prepared to respond to the pre-application comments provided by Ribble Valley Borough Council, which raise specific concerns to the noise impact of this source on the proposed development.
- 6.1.2 As part of this assessment, Wardell Armstrong LLP has carried out a partially attended noise survey on 24th October 2012, between 0730 to 1000 hours, with unattended measurements acquired over the period 1000 to 2230 hours.
- 6.1.3 Based on the measured data for a typical daytime period, it was found that existing noise levels, with the inclusion of some activity from the adjacent kennels and cattery would be well within the WHO 1999 noise limit of 55dBL_{Aeq} for outdoor areas. However, it is understood that during the noise survey period, the occupation of the kennels and cattery was not at maximum capacity.
- 6.1.4 Further assessments of the potential noise impact from the kennels and cattery have been made based on the noise levels acquired for known noise source, and corrected for a worst case number of barks over a fifteen minute period. It has been found that without any mitigation measures in place, worst case noise levels could exceed the WHO 1999 noise limit of 55dBL_{Aeq} for outdoor areas.
- 6.1.5 With the inclusion of a 2m high barrier along the entire length of the boundary between the proposed development, and the kennels and cattery, the WHO 1999 noise limit of 55dBL_{Aeq} for outdoor areas would be met in the children's play area and at the nearest dwellings of the development to the kennels and cattery.
- 6.1.6 Therefore, the comments of RVBC have been appropriately responded to.

APPENDIX A

Appendix A: Noise Monitoring Results

Time, h	L _{Aeq} dB	L _{AMIN} dB	L _{AFMAX} dB	L _{A90} dB	L _{A10} dB	Comments
Monitoring Location 1:						
Daytime (24/10/2012) - ATTENDED						
0724 – 0739	43.7	38.3	73.2	39.8	44.5	Background noise due to distant road traffic, trees rustling, bird song.
0739 – 0754	45.2	40.7	64.9	41.6	47.5	As above. Distant excavator audible from 0744h.
0754 – 0809	44.7	40.4	57.5	41.9	46.6	As above.
0809 – 0824	44.4	40.2	56.6	41.6	46.3	As above.
0824 – 0839	48.0	40.0	69.7	41.4	46.9	As above.
0839 – 0854	44.2	39.1	61.2	40.3	45.8	As above.
0854 – 0909	45.3	38.2	65.6	39.4	48.1	As above.
0909 – 0924	45.3	39.1	63.6	40.4	48.1	As above.
0924 – 0939	48.3	39.1	75.7	41.4	46.5	Dog bark at kennels, one kennel being cleaned out.
0939 – 0954	46.2	41.0	65.5	42.5	48.0	As above. Hose pipe in use at kennels at 0950h, subjectively masked by unknown broadband noise source to the north of Edisford Road.
Daytime (24/10/2012) - UNATTENDED						
0954 – 1009	45.1	37.0	60.4	38.8	48.7	--
1009 – 1024	54.0	36.5	74.5	38.1	51.7	--
1024 – 1039	43.0	38.4	56.7	39.9	45.3	--
1039 – 1054	45.3	38.5	75.1	40.0	46.0	--
1054 – 1109	46.0	37.1	73.1	39.5	48.4	--
1109 – 1124	45.1	38.0	75.4	39.8	45.8	--
1124 – 1139	44.3	38.4	59.3	40.0	46.5	--
1139 – 1154	43.3	37.7	57.3	39.5	45.1	--
1154 – 1209	44.4	38.8	56.5	41.0	46.5	--
1209 – 1224	46.0	38.8	59.6	41.2	48.6	--
1224 – 1239	44.8	38.5	58	40.9	47.4	--
1239 – 1254	44.9	39.2	64.2	41.0	46.5	--
1254 – 1309	42.7	38.4	57.1	39.9	44.8	--
1309 – 1324	42.5	38.7	61.1	40.0	44.0	--
1324 – 1339	47.9	39.6	68.9	41.3	46.1	--
1339 – 1354	45.7	38.6	72.2	41.0	46.8	--
1354 – 1409	44.6	39.2	57.1	40.7	46.6	--
1409 – 1424	45.7	40.7	59.5	42.1	48.0	--
1424 – 1439	45.6	39.5	60.1	40.9	49.2	--
1439 – 1454	49.6	40.7	72.4	42.2	50.2	--
1454 – 1509	46.5	41.2	60.3	43.3	48.8	--
1509 – 1524	46.2	41.9	58.9	43.4	48.3	--
1524 – 1539	46.1	41.4	56.6	43.2	48.1	--
1539 – 1554	45.5	40.7	56.3	42.3	47.7	--
1554 – 1609	48.6	40.0	74.3	41.7	47.5	--
1609 – 1624	45.5	40.1	59	41.9	47.9	--
1624 – 1639	44.8	39.7	70.4	41.1	46.1	--

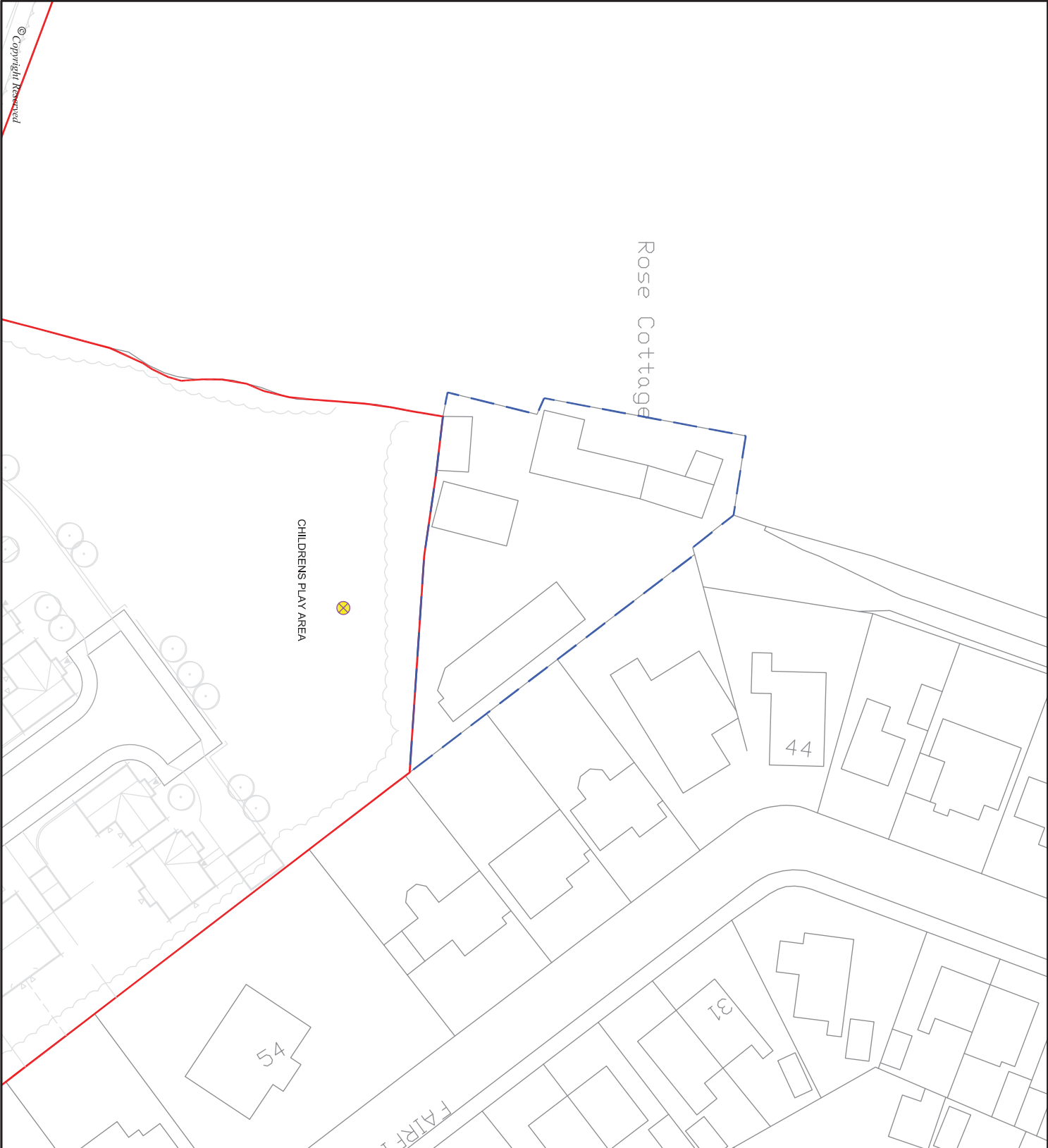
Time, h	L _{Aeq} dB	L _{AMIN} dB	L _{AFMAX} dB	L _{A90} dB	L _{A10} dB	Comments
1639 – 1654	43.5	40.0	60.4	41.0	45.1	--
1654 – 1709	41.8	38.8	57.3	40.0	43.1	--
1709 – 1724	43.0	39.0	59.5	40.2	44.1	--
1724 – 1739	46.7	39.0	67	40.3	47.3	Graphical time history identifies several 'spikes' in noise level at 1730 hours, which would be at the time of a scheduled exercise period at Clitheroe Kennels and Cattery.
1739 – 1754	42.8	39.0	63.3	39.9	43.3	--
1754 – 1809	41.6	37.9	58.1	39.0	43.6	--
1809 – 1824	53.4	37.5	85.8	38.4	41.4	--
1824 – 1839	40.6	36.2	54.6	38.2	41.7	--
1839 – 1854	40.1	36.7	52.8	37.6	42.2	--
1854 – 1909	47.5	36.4	76	37.7	40.9	--
1909 – 1924	38.7	36.1	49.9	37.2	39.9	--
1924 – 1939	38.9	35.1	50.1	36.5	40.4	--
1939 – 1954	38.9	36.1	50.6	37.1	40.3	--
1954 – 2009	39.3	35.7	57.1	37.0	39.3	--
2009 – 2024	41.1	36.0	59.3	37.3	42.2	--
2024 – 2039	39.2	35.2	51.7	36.4	41.5	--
2039 – 2054	40.0	35.6	52.6	36.8	42.1	--
2054 – 2109	41.4	36.1	53.2	37.7	43.9	--
2109 – 2124	38.7	34.6	51	35.6	40.4	--
2124 – 2139	36.7	33.4	52.4	34.7	38.3	--
2139 – 2154	38.1	34.2	62.1	35.0	39.3	--
2154 – 2209	37.7	34.4	46.4	35.7	38.9	--
2209 – 2224	39.9	35.2	53.3	36.7	42.9	--

DRAWINGS

DO NOT SCALE FROM THIS DRAWING

REFERENCE

- PROPOSED DEVELOPMENT BOUNDARY
- BOUNDARY OF CLITHEROE KENNELS & CATTERY
- NOISE MONITORING LOCATION



PROJECT		Land off Henthorn Road Clitheroe Lancashire	
DRAWING TITLE		Northeastern Part of Proposed Development & Noise Monitoring Location	
DRG No.		LE11674-001	
SCALE		1:500	
DATE		01/11/12	
DRAWN BY		SG	
CHECKED BY		RM	
APPROVED BY		MD	
STOCK/COMPONENT		TEL 0845 111 7777	
NEWCASTLE UPON TYNE		TEL 0191 232 0843	
WEST BROMWICH		TEL 0121 580 0809	
LONDON		TEL 020 7287 2872	
CANNON		TEL 020 2072 8971	
LEIGH		TEL 01642 286101	
SHEFFIELD		TEL 0114 246 6244	
EDINBURGH		TEL 0131 555 3311	
LIVERPOOL		TEL 0151 484 5431	
CLIENT		Taylor Wimpey Limited	
REASON		DETAILS	
DATE		DRAWN/CHKG/APP'D	
A		First Issue	
16/11/12		RM RM MD	



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REFERENCE

— BOUNDARY OF CLITHEROE KENNELS & CATTERY
— PROPOSED 2m BARRIER



Taylor Wimpey Limited

Land off Henthorn Road
Clitheroe
Lancashire

Northeastern Part of Proposed Development & Suggested Barrier Treatment

PRG No.	SCALE	DATE
LE11674-002	1:500	01/11/2002
DRAWN BY	CHECKED BY	APPROVED BY
SG	RM	MD
☐ STORE ON-DRAWING (FIELD 07452) ☐ NEWCASTLE PROJECT ☐ WEST BROMWICH LONDON	TEL 0445 511 7777 ☐ CANOIFF ☒ LEIGH ☐ SHEFFIELD ☐ ENDSBURGH ☐ LIVERPOOL	TEL 020 202 8191 TEL 01462 280101 TEL 0114 555 644 TEL 0171 555 311 TEL 0191 444 5431



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