

**Proposed Dog Day Care
Stryt Yr Hwch Farm
Marchwiel Hall Road
Sontley
Wrexham
LL13 0YA
(Planning Ref: 16/08/2021)**

NOISE IMPACT ASSESSMENT

Acoustics Report M2132/R01
1st October 2021

To: Roger Parry & Partners
Hogstow Hall
Minsterley
Shrewsbury
Shropshire
SY5 0HZ

By: Paul Smith BSc MIOA

1. Introduction

This acoustic report documents a noise impact assessment for the proposed day care dog business at Stryt Yr Hwch Farm, Wrexham (Planning Ref: 16/08/2021); Figure 1 and 2.

The report is divided into the following sections:

- Section 2: Overview of the Development
- Section 3: Noise Criteria
- Section 4: Representative Background Noise Level
- Section 5: Noise Impact Assessment
- Section 6: Conclusion
- Appendix A: Calculations
- Appendix B: Woof Walkies Ltd 'Barking: Keeping the noise down'

2. Overview of the Development

2.1 Proposed Scheme

The proposal is for the change of use of an existing barn at Stryt Yr Hwch Farm, Wrexham from Class B8 (storage) to D1 (dog day care); Figures 1 and 2.

2.2 Existing Barn

The existing barn's construction consists of; Figure 1:

- Facades:
 - North-east, north-west and south-east facades: Yorkshire boarding
 - South-west: 2m high concrete panels at low level with openings above. Yorkshire boarding along the southern end. Single door access
- Roof: fibre cement sheets with roof lights

We understand that historically the barn was used for housing cattle, although any livestock would currently be permitted.

2.3 Dog Day Care

The proposed dog day care business will be operated by Woof Walkies Ltd, an established and award-winning doggy day care business with over 10 years of trading.

Woof Walkies have provided us with a staff information sheet covering dog noise, in particular barking (see Appendix C). This provides good practice guidance in minimising adverse noise, with particular emphasis on strategies and dog welfare.

The new development, which will have a capacity for 30 dogs, will operate Monday – Friday.

We have been informed that the daily routine will consist of:

- 08:00 - 10:00hrs: Dogs collected by van from clients' homes
- 10:00 – 12:00hrs: Indoor and outdoor supervised play, stimulation and on-site walks
- 12:00 – 13:30hrs: Indoor rest
- 13:30 – 15:30hrs: Indoor and outdoor supervised play, stimulation and on-site walks
- 15:30 – 19:00hrs: Dogs cleaned and dropped back off at client's home

Typically, dogs would only be on site between 10:00 – 16:00hrs, during which time they would be under constant supervision (all staff will be K9 First Aid Trained) and provided with sufficient stimulation and rest.

The barn will contain an office area for staff, with the dogs housed in the remaining space. Temporary dividers will be used in the barn as required to create separate zones depending on the dogs that are on site each day.

The outdoor play/walks will be within the paddock to the east of the barn.

The dog collection/drop off service has the advantage that it mitigates against barking at the development as a result of excitement in seeing their owners/non-staff members.

Dogs will be assessed at an initial consultation for their suitability to attend the dog day centre; if the dog is found to display any adverse behavioural traits, such as persistent barking, it will not be given a place.

No plant is proposed. The main and dominant noise source will therefore be generated by the dogs themselves.

2.4 Noise Sensitive Receptors

The nearest noise sensitive receptors to the proposed development are two dwellings, which are approximately 130m – 140m from the proposed change of use barn; see Figure 2. The dwellings, which are 4m above the ground level of the barn, will have an unobstructed view of the development (barn and adjoin paddock).

2.5 Site Context

Stryt Yr Hwch is a working beef farm, and consequently there will livestock, farm machinery and vehicle (e.g., tractors/HGVs) related noise seven days a week. These noise sources will be intermittent in nature, and vary in both character and amplitude.

The closest dwellings identified in Figure 2, which have an unobstructed view of the farm, will be exposed to the farm related noise emissions, including livestock kept within the existing barn proposed for the change of use.

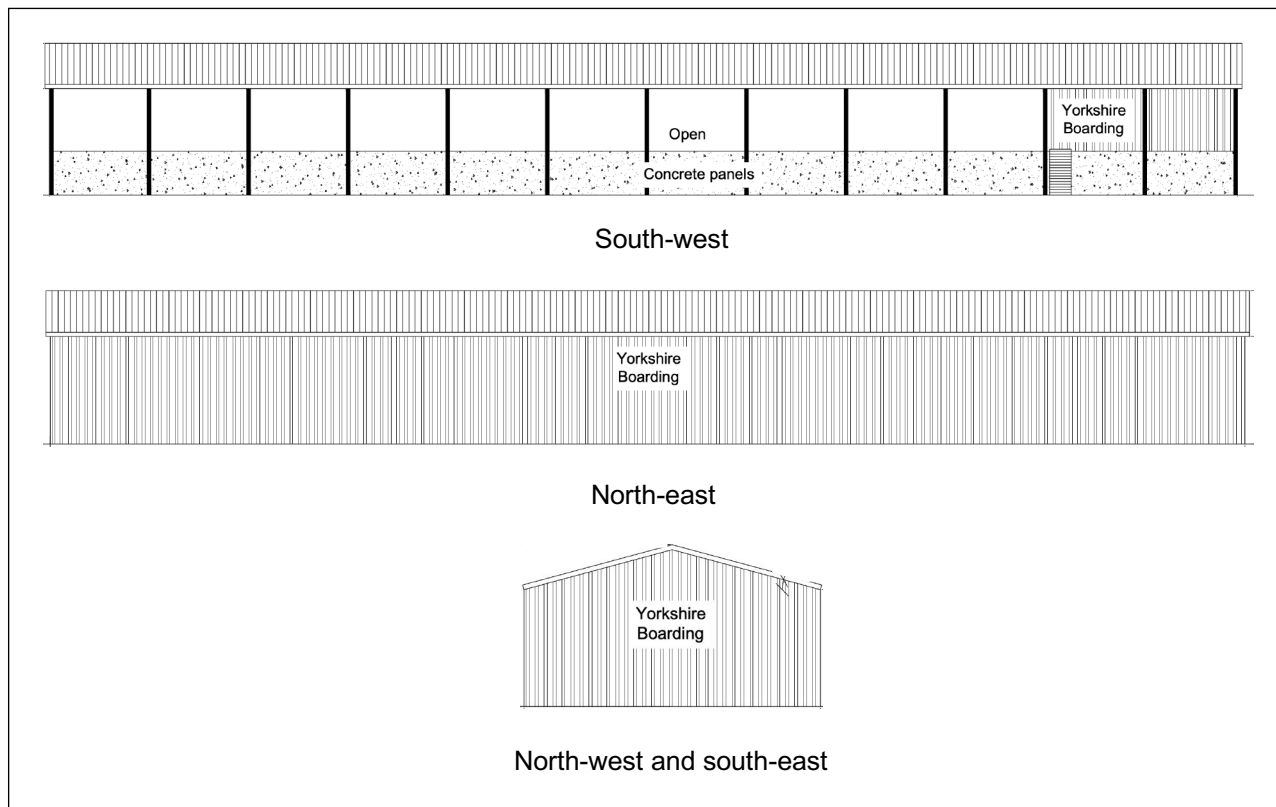


Figure 1. Elevations of existing livestock barn



Figure 2. Aerial view (source: www.google.com) showing footprint of proposed day dog care kennels and nearest dwellings

3. Noise Criteria

There is no official guidance to the assessment of or the determination of acceptable limits in relation to noise emissions from dog care units. We have therefore based our assessment with reference to the following:

3.1 National Planning Policy Framework (NPPF)

NPPF (2021) sets out the Government's planning policies for England and how these are expected to be applied.

The framework states (among other commitments) that the planning system should contribute to and enhance the natural and local environment by *"Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability"*.

The express inclusion of noise in the NPPF means that it is a material planning consideration for local planning decisions.

With regard to noise paragraph 185 of the NPPF document states that planning policies and decisions should aim to:

- mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life
- identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason

3.2 Noise Policy Statement for England (NPSE)

The Noise Policy Statement for England (NPSE) launched in March 2010 states the long-term vision of Government noise policy is to *"promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development"*.

The aims of NPSE, through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development are to:

- Avoid significant adverse impacts on health and quality of life;
- Mitigate and minimise adverse impacts on health and quality of life;
- Where possible, contribute to the improvement of health and quality of life.

NPSE provides the following categories to aid the identification of potential impact of noise:

- 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.

It should be highlighted that NPSE does not provide noise limits or threshold associated with the above effect level categories.

Further guidance and clarification on the 'Observed Effect Level' based on the likely perception of a new noise source is provided in the Department for Communities and Local Government's

(DCLG) Planning Practice Guidance. Table 1 provides their summary of the noise exposure hierarchy based on the likely average response.

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
		Lowest Observed Adverse Effect Level	
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
		Significant Observed Adverse Effect Level	
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

3.3 Noise Ingress Limits in Habitable Rooms

BS8233 provides the following day period noise ingress limits for habitable rooms:

- Living rooms: $L_{Aeq,16hr}$ 35dB
- Dining Room: $L_{Aeq,16hr}$ 40dB
- Bedroom: $L_{Aeq,16hr}$ 35dB

The above noise ingress limits are for steady noise sources such as traffic on a busy road or continually operating plant. To take into account that the noise sources associated with the dog care unit will be intermittent, we consider that suitable noise ingress limits will be 10dB below those given in BS833.

The noise ingress will be dictated by the façade sound insulation provided by the building envelope. For the assessment we consider it reasonable to assume an open window; the World Health Organization's (WHO) 'Night Noise Guidelines for Europe' states that a façade with an open window will provide between 10 - 15dB sound reduction (i.e., the difference between the outside and inside noise level).

3.4 External Amenity Noise Limits

World Health Organisation (WHO) Guidelines for Community Noise 1999 advise that for external amenity areas (e.g., gardens and patios) the thresholds for moderate and serious annoyance are $L_{Aeq,16hr}$ 50 dB and $L_{Aeq,16hr}$ 55dB respectively.

BS8233 also advises that it is desirable that the external noise level does not exceed $L_{Aeq,16hr}$ 50dB.

3.5 BS4142:2014

BS4142:2014 provides a methodology to assess the impact of industrial and commercial noise affecting dwellings, whereby the 'typical' background noise level is deducted from the industrial noise Rating Level (industrial noise corrected to account for the 'on-time' and noise character of the noise source. The following guidance is given based on the established difference:

- A difference of around +10dB or more is likely to be an indication of significant adverse impact, depending on context
- A difference of +5dB is likely to be an indication of an adverse impact, depending on context
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on context

Context, as defined in BS4142:2014, includes the consideration of the following factors:

- The absolute level of the noise emissions
- Character and level of the residual sound compared to the character and level of the Specific Level
- Sensitivity of the receptor and any acoustic design measures (e.g., façade sound insulation, use of mechanical ventilation and acoustic screening) incorporated at premises used for residential purposes

To take account of industrial/commercial noise sources that do not operate continually an 'on-time' correction is applied using:

$$- 10 \log (r/r_{ref})$$

Where:

r_{ref} = reference time (1hr between 07:00 – 23:00hrs and 15 minutes between 23:00 – 07:00hrs)

r = total 'on-time' during the reference period

Note that the shorter reference time interval between 23:00 – 07:00hrs is designed to penalise industrial/commercial noise events that occur during the night.

BS4142 provides four noise character correction categories with associated penalties that must be applied when determining the Rating Level, namely:

- **Tonality:**
 - Not perceptible = 0dB
 - Just perceptible = +2dB
 - Clearly perceptible = +4dB
 - Highly perceptible = +6dB

- **Impulsivity:**
 - Not perceptible = 0dB
 - Just perceptible = +3dB
 - Clearly perceptible = +6dB
 - Highly perceptible = +9dB
- **Intermittency:** +3dB if the intermittency of operation is readily distinctive against the residual noise environment
- **Other:** +3dB applied if the specific sound is neither tonal or impulsive but features noise characteristics that are readily distinctive against the residual noise environment

It should be highlighted that the BS4142 methodology is designed to assess the impact of sound of an industrial and/or commercial nature, for which the Standard provides the following examples:

- sound from industrial and manufacturing processes
- sound from fixed installations which comprise mechanical and electrical plant and equipment
- sound from the loading and unloading of goods and materials at industrial and/or commercial premises
- sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

As can be seen from the above list the types of noise sources that BS4142:2014 is designed to assess is mechanical related industrial/commercial noise. On this occasion however we have included a BS4142 assessment to review noise emissions from the dog care unit. Our rationale for this approach is the BS4142 assessment methodology allows for noise characteristics penalties to be applied, which can therefore be used to address concerns related to potential intermittent dog barks

3.6 WHO: Night Noise Guideline for Europe

With regard to sleep quality the World Health Organization's (WHO) 'Night Noise Guidelines for Europe' provides a threshold level $L_{Amax,F}$ 42dB; noise events that exceed this level have the potential to result in 'waking up in the night and/or too early in the morning'.

Though the day dog care will only operate during the day period, WHO's threshold limit is still useful for the purpose of reviewing the impact of maximum noise levels.

4. Noise Impact Assessment

Calculations (Appendix A) have been conducted in order to establish the noise emissions from the dog day care development (both noise break-out from the barn and noise emissions from the paddock). The calculations are based on inhouse source noise levels obtained from dog kennels and suggested mitigation measures.

The resultant noise emissions (Table 2) have been reviewed against noise criteria identified in Section 3.

4.1 Mitigation measures

For the assessment the following advised mitigation measures have been included; Figure 3:

- **Paddock perimeter fence:** 3m high good quality close-boarded timber fence along the southern boundary of the paddock. The fence must have a minimum surface density of 10kg/m² with no gaps in the construction. The fence will provide acoustic shielding of dog generated noise in the paddock for the nearest dwellings.

- **South-east gable end:** The Yorkshire boarding provides very limited sound insulation and consequently a façade sound insulation upgrade is advised. A suitable upgrade would be:
 - 18mm marine plywood fixed to the inside of the Yorkshire boarding
 - 100mm timber battens with 100mm dense mineral fibre contained within the void
 - 2 x 12.5mm plasterboard

Using Insul acoustic software the above upgrade has been calculated to achieve a sound reduction of R_w 40dB.

It would also be possible to locate the office at the south-eastern end of the barn, which would significantly reduce noise-breakout from the gable end. For this scenario the upgrade treatment would only be required for the areas of the gable end not covered by the office.

- **Gate:** 4m high solid timber fence/gate between the south-west corner of the day dog care barn and existing agricultural barn to west. The gates will provide acoustic shielding of noise emissions from the predominately open sided south-west façade of the barn. In addition, it is advised that the vans are unloaded/loaded to the north of the gates with the gates closed.
- **Acoustic absorption:** This mitigation measure has not been included within the assessment. It will however be possible to reduce the build-up of noise within the barn if required with the addition of acoustic absorbers to the space (the absorbers 'soak' up the reflections of noise). Depending on the total area coverage and performance of the absorber, a 3 – 6dB reduction in the reverberant noise level within the barn is possible.

In this case we would recommend suspended absorbers evenly spaced throughout the space (these have the advantage that they absorb noise from both the bottom and top surfaces). Ideally a Class A absorber would be used (the highest performing absorber).

One advantage of absorbers is that they can be retrofitted, relocated and added to, which gives them flexibility.

Example absorber manufactures are:

- Echophon: www.ecophon.co.uk
- Armstrong: www.armstrong.co.uk
- Rockfon: www.rockfon.co.uk
- Soundsorba: www.soundsorba.com
- The woolly shepherd: www.wooleyshepherd.co.uk

Alternatively bespoke absorbers can be constructed onsite. A typical construction would be 25mm dense mineral fibre faced with an acoustically transparent material (i.e., a material that air can pass through) behind timber slats.



Figure 3. Advised mitigation measures

4.2 Source Noise Levels

Inhouse data obtained at a 20-dog boarding kennel (Beloved Kennels, Worcestershire), established the following day period noise levels:

- Internal noise level within kennel:
 - General dog noise: L_{Aeq} 64dB
 - Dog bark: $L_{Amax,F}$ 80 - 91dB.
- External noise level (free-field) 1m from caged runs (dogs typically 5m from the measurement microphone):
 - Highest 1hr ambient noise level: $L_{Aeq,1hr}$ 61dB
 - Dog bark: $L_{Amax,F}$ 78 - 93dB.

The highest bark noise levels were from 4 Dobermans at the kennel; the lower levels represent barking from smaller dogs and general playful barks.

It should be highlighted that the frequency of barking will depend on the dog's temperament. There will therefore inevitably be a variation in both the frequency and amplitude of barks on a daily basis depending on the dogs being cared for.

Taking into account the vetting of the dogs allowed to attend the day dog care and the Woof Walkies standard good practice being implemented, we expect that any barking will be minimised. Additionally, general dog noise is expected to be lower than will occur at kennels due to both the greater space available to the dogs (both in the barn and paddock) and the staff ratio to dogs (1 member of staff to 8 dogs as opposed to 1: 20 at the kennels).

As a precautionary measure however, we have assumed that the noise levels obtained at the kennels are representative to those that will occur at the day dog care scheme. This allows for a robust assessment to be undertaken.

5.1 Derivation of boarding kennel noise emissions

Using source noise levels existing kennels, the noise emissions from the proposed development have been calculated at the nearest private dwelling (Figure 1) by applying the following corrections to the source noise data:

- **Distance correction:**
 - Dogs within the paddock (point noise source): $20 \times \log (d_1/d_0)$, where d_1 = distance between receptor and the noise source and d_0 = reference distance. For the calculation it has been assumed the dogs are 10m north of the southern paddock boundary.
 - Dogs within the kennels
 - noise break-out from gable end and roof (plane noise source): $10 \times \log (2 \times \pi \times d_2)$, where d = distance between façade/roof and receptor
 - noise emissions from open section of barn: $20 \times \log (d) + 11$, where d = distance between receptor and opening (note that the correction is applied to the sound power level at the opening)
- **Façade area correction (noise break-out):** $10 \times \log (A)$, where A is the area of the radiating façade/roof. Note that for the roof and side openings it has been taken that the dominant noise is emanating from the south-west section of the barn.
- **Reflections (noise emissions from the side openings of the barn):** 3dB added to account for reflections off the adjacent agricultural building

- **Shielding attenuation:** The barrier attenuation has been calculated in accordance with Maekawa's "Noise Reduction by Screen" (1968) using:

$$-1 [10\log(3+\{(40 \times \text{pd} \times \text{f})/344\})]$$

Where,

pd = path difference

f = octave frequency band in question

- **Building envelope sound reduction (noise break-out from the roof and south-east gable end):** Composite sound reduction of the south façade of the kennel (the façade facing Dwelling A), calculated based on the following components:
 - Upgraded south-east gable end: R_w 40dB
 - Roof: double glazed units: R_w 32dB
- **Noise Ingress:** assumes an open window - 10dB reduction

Tables A1 and A2, Appendix A provide the full calculations, with the resultant noise emission levels given in Table 2.

5.2 Rating & Assessment Levels

To account for the 'highly perceptible' impulsive nature of barking, a 9dB BS4142 character correction has been applied to the ambient noise levels in order to determine the corresponding Rating Level

We define Assessment Level = RL – min L_{A90} dB, where:

RL = Rating Level, dB(A)

L_{A90} dB = representative typical background noise level, L_{A90} . For the assessment L_{A90} 35dB has been assumed; this is a low background noise level, commensurate with the rural setting.

The established Rating and Assessment Levels are provided in Table 2.

Noise Emissions From:	External noise level		Noise ingress via an open window		Rating Level, dB	Typical Background, L_{A90} dB (assumed level)	Assessment Level, dB
	General dog noise, L_{Aeq} dB	Bark, $L_{Amax,F}$ dB	General dog noise, L_{Aeq} dB	Bark, $L_{Amax,F}$ dB			
Barn	16	32 - 43	6	22 - 33	25	35	-10
Paddock	18	35 - 50	8	25 - 40	27	35	-9

5.3 Noise Impact Assessment

- **External Noise Emissions:** The ambient noise levels generated by the proposed day dog care are very low (both from the paddock and noise break-out from the barn), being significantly below assumed low background noise level commensurate with the rural setting of the development and BS8233 noise limits for external amenity areas. We therefore conclude that the ambient noise emissions will be acceptable.

The maximum noise levels generated by barks, though potentially audible on occasion at a low level, are within context of those that would be generated by existing livestock at the farm.

It should be highlighted the good practice with regard to the control of barking combined with the vetting of dogs that will be implemented by the operators of the day dog care

centre; barking is therefore expected to be minimal and will not occur for prolonged periods.

Overall, we considered that the barks would be categorised as 'Noticeable but not intrusive', which according to DLGC's Planning Guidance (Table 1) results in 'No Observed Adverse Effect'.

We therefore conclude that the external noise emissions are acceptable, with no adverse effects on health and quality of life (below NPSE LOAEL).

- **Noise Ingress:** The ambient noise ingress levels (via an open window) are more than 10dB below the guidance limits given in BS8233, which meet our suggested noise limit. The noise ingress levels are also below the assumed low background noise levels.

The maximum noise ingress levels are also significantly below WHO's threshold with regard to sleep disturbance (L_{Amax} 42dB).

We therefore conclude that the day dog care noise ingress levels are acceptable, with no adverse effects on sleep quality or general health and quality of life.

- **BS4142 Noise Impact:** Where the Rating Level is at parity with the typical background noise level (Assessment Level = 0 dB) BS4142 states that the Specific Level will have a low impact; an adverse impact is indicated where the Rating Level is ≥ 5 dB and <10 dB above the typical background noise level.

As can be seen in Table 1 the Assessment Levels are in all cases significantly <0 dB. We therefore conclude that the BS4142 noise impact will be very low.

On the basis that the noise emissions from the proposed day dog care, with the implementation of the advised mitigation measures (Figure 3), will not adversely affect health and wellbeing ($< NPSE LOAEL$) and the Rating Levels will result in a BS4142 very low impact, we conclude that the proposed development is acceptable with regard to noise.

5.4 Calculation uncertainty

With all calculations there is a level of uncertainty, which in this case we do not expect to be greater than ± 3 dB (3dB is a just perceptible change in noise level). This small level of uncertainty is not considered to have any significance to the outcome of the assessment.

The source noise levels derived from a boarding kennel represent a 'worst-case' scenario' and are therefore considered suitably robust for the purpose of the assessment.

5. Conclusion

Calculations (Appendix A) have been conducted in order to establish the noise emissions from the dog day care development (both noise break-out from the barn and noise emissions from the paddock).

The calculations are based on:

- inhouse source noise levels obtained from dog kennels; these represent a 'worst-case' scenario
- suggested mitigation measures consisting of; Figure 3:
 - 3m high close-boarded timber fence along the southern boundary of the paddock
 - Upgraded façade sound insulation of the south-east gable end of the barn
 - 4m high solid timber gate/fence between the barn and adjacent agricultural building to the west

In the absence of any published guidance on the assessment or acceptable noise limits in relation to dog boarding kennels, the following have been considered for the assessment:

- Noise Policy Statement for England
- BS8233 guidance noise limits in external amenity areas
- BS8233 noise ingress limits in habitable rooms
- WHO's threshold limit with regard to sleep disturbance
- Noise impact according to BS4142

The resultant calculated noise emissions have established that at the nearest private dwellings (Figure 1) the:

- External ambient noise levels will be significantly below assumed low background noise levels commensurate with the rural setting of the development and BS8233 noise limits for external amenity areas. The maximum noise levels generated by barks, though potentially audible on occasion at a low level, are within context of those that would be generated by existing livestock at the farm. Taking into account the noise management and good practice that will be employed by the operators of the development, barking is expected to be minimal and not occur for prolonged periods. We therefore consider that the noise generated by barks would be categorised as 'Noticeable but not intrusive', which according to DLGC's Planning Guidance (Table 1) results in 'No Observed Adverse Effect'.
- Ingress levels via an open window will be below our suggested noise ingress limit (10dB below BS8233 noise ingress limits) and result in maximum noise levels significantly below WHO's sleep disturbance threshold
- Rating Levels, which includes a +9dB character correction to account for barking, that are significantly below the assumed background noise level. The BS4142 noise impact is therefore considered to be 'very low'.

On the basis that the noise emissions from the proposed dog board kennel, with the implementation of the advised mitigation measures (Figure 3), will not adversely affect health and wellbeing (< NPSE LOAEL) and the Rating Levels will result in a BS4142 very low noise impact, we conclude that the proposed development is acceptable with regard to noise.

Table A1. Calculation of noise breakout from day dog care barn

			Octave Band Centre Frequency, Hz								dB(A)	
			63	125	250	500	1k	2k	4k			
Typical noise level within barn:			General dog noise Dog bark (maximum)	L _{eq} L _{max,F} dB	55.9 76.2	54.1 69.5	51.5 69.1	59.5 86.8	61.6 88.5	56.3 83.9	46.8 68.2	64 91
Noise path 1: South-east gable end	Sound reduction, R _w dB			13	17	36	43	45	42	48		
	Façade area correction, dB		70 m ²	18.5	18.5	18.5	18.5	18.5	18.5	18.5		
	Distance correction, dB		130 m	50.3	50.3	50.3	50.3	50.3	50.3	50.3		
	Lp at dwelling:	General dog noise	L _{eq,1hr} dB	11.1	5.3	-16.3	-15.3	-15.2	-17.5	-33.0	-7	
		Dog bark (maximum)	L _{max,F} dB	31.4	20.7	1.3	12.0	11.7	10.1	-11.6	16	
Noise path 2: Roof	Sound reduction, R _w dB			17.0	21.0	26.0	30.0	34.0	30.0	35.0		
	Roof area correction, dB		55 m ²	17.4	17.4	17.4	17.4	17.4	17.4	17.4		
	Distance correction, dB		135 m	50.6	50.6	50.6	50.6	50.6	50.6	50.6		
	Lp at dwelling:	General dog noise	L _{eq,1hr} dB	5.7	-0.1	-7.7	-3.7	-5.6	-6.9	-21.4	-1	
		Dog bark (maximum)	L _{max,F} dB	26.0	15.3	9.9	23.6	21.3	20.7	0.0	26	
Noise path 3: South-west façade	Open area		25 m ²	14.0	14.0	14.0	14.0	14.0	14.0	14.0		
	Distance correction, dB		3.5 m	16.4	16.4	16.4	16.4	16.4	16.4	16.4		
	Reflections, dB			3.0	3.0	3.0	3.0	3.0	3.0	3.0		
	Reverberant Lp		L _{eq,1hr} dB	56.4	54.6	52.0	60.0	62.1	56.8	47.3	65	
			L _{max,F} dB	76.7	70.0	69.6	87.3	89.0	84.4	68.7	92	
	Timber gate shielding attenuation		0.01 pd	5.1	5.1	5.3	5.5	6.0	6.8	8.2		
	Distance correction		138 m	42.8	42.8	42.8	42.8	42.8	42.8	42.8		
	Lp at dwelling:	General dog noise	L _{eq,1hr} dB	8.5	6.7	3.9	11.7	13.3	7.2	-3.7	16	
		Dog bark (maximum)	L _{max,F} dB	28.8	22.1	21.5	39.0	40.2	34.8	17.7	43	
Aggregate	Lp at dwelling:	General dog noise	L _{eq,1hr} dB	13.8	9.6	4.3	11.9	13.4	7.4	-3.6	16	
		Dog bark (maximum)	L _{max,F} dB	34.1	25.0	21.9	39.2	40.3	35.0	17.8	43	
BS4142 noise character correction: 'Highly perceptible impulsivity'												9
Rating Level, dB												25
Typical Background, L _{A90} dB (assumed level)												35
Assessment Level, dB												-10

Table A2. Calculation of noise emissions from paddock

			Octave Band Centre Frequency, Hz								dB(A)	
			63	125	250	500	1000	2000	4000			
Source noise levels	Bark maximum noise level		L _{max,F} dB at 5m	78.2	71.5	71.1	88.8	90.5	85.9	70.2	93.0	
	Highest 1hr ambient noise level		L _{eq,1hr} dB at 5m	52.9	51.5	48.5	56.6	58.6	53.3	43.8	61.0	
3m high close-boarded timber fence shielding attenuation			pd 0.23 m	6.4	7.5	9.2	11.5	14.3	17.3	20.3		
Distance attenuation			148 m	29.4	29.4	29.4	29.4	29.4	29.4	29.4		
Noise level at Dwelling A	External	L _{max,F} dB	42.4	34.6	32.5	47.9	46.8	39.2	20.5	50		
		L _{eq,1hr} dB	17.1	14.6	9.9	15.7	14.9	6.6	-5.9	18		
	Noise ingress via open window	L _{Amax,F} dB									40	
		L _{Aeq,1hr} dB									8	
BS4142 noise character correction			'Highly perceptible impulsivity'								9	
Rating Level											27	
Typical L _{A90} dB											35	
Assessment Level, dB											-9	

Barking: Keeping the noise down

Woof Walkies Ltd – Training 2021

Barking: Keeping the noise down

WOOF WALKIES LTD - TRAINING 2021



Introduction



All dogs bark, it's a normal form of communication between dogs and between dogs and humans. Excessive barking, either too much or too often is usually a sign that something isn't right. It is our Duty of Care to each dog to ensure it is comfortable in our care. Identifying the trigger of the barking and removing it where possible, is the key to a happy dog and reducing the noise.



It is Our Duty of Care

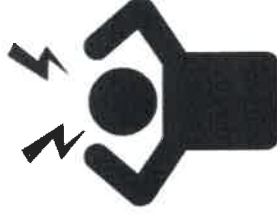


To the dogs



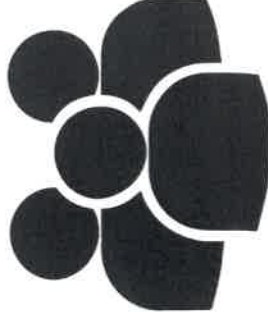
- A noisy dog is usually an unhappy dog and can lead to other unwanted behaviours if not dealt with.
- Can cause stress and anxiety in other dogs

To the local neighbours



- Annoys the neighbours. Can be stressful if persistent.
- Neighbours Working from Home
- Night shift workers sleeping
 - Babies sleeping
- Can lead to complaints and lack of support

To each other



- Noisy environment to work in leads to stress and lack of concentration.
- Not enjoyable
- Potential to loose support from local neighbours
- Potential threat of closure from councils etc

Reasons for excessive or persistent barking?



Stressed or
anxious

Not
enough
exercise

Territorial/
Protective

Compulsive
disorders

Lack of
space

Excitement
/Over
arousal

Attention
seeking

Left alone/
bored

Medical
issues

Alarm/
fear



We have up to 30 dogs a day here at any one time – How do we manage the barking?



Standard practice:

- We work on a ratio of 1 human looking after a pack of up to 8 dogs
- Dogs split into groups based on their energy levels, temperament and exercise requirements
- Site is over 5 acres so packs of 8 have plenty of space away from each other
- All dogs are off-lead and free to roam the whole time they are here (we don't have a kennel set up)
- Zero tolerance policy on aggression and excessive barking
- Team communicate via walkie talkies to swap dogs between packs if need be
- Dogs never left unattended so there is no barking for attention or out of loneliness
- Team are trained to identify stress and anxiety and K9 communication

We have up to 50 dogs a day here at any one time - How do we manage the barking?



We keep barking to a minimum by working in a way that minimizes the reasons why dogs may want to bark excessively or persistently:

- The dogs have opportunity to exercise as much or as little as they want to (subject to physical or age limitations). Those not in the fields are cared for in the Den where they can choose to play games or play with toys or find a bed to snooze in. Boredom is not an option!
- We only have two crates on site and they are used by puppies who need some time out and downtime and are used to being in a crate at home. All dogs have plenty of space and are free to roam as they please.
- All visitors to site enter/exit in an area away from the dogs to minimize any territorial/protecting behaviours from the dogs. The team communicate via Walkie Talkies to alert each other about visitors on site so any dogs known to be vocal are distracted or moved away from any areas where they may be alerted to the visitors presence
- All dog owners attend a 'Meet & Greet' prior to their dog's first day with us. During which we ask about anxieties, stresses and nervousness to gauge an understanding of any dogs triggers such as noisy aircraft, fireworks, bin lorries etc. These are noted and relayed to the team so we can be aware of potential barkers in certain situations

Peak Noise Time #1 - Day Care arrivals



09:30 – 10:00 Day Care dogs arrive at HQ

- Our Day Care vans arrive back at HQ with the dogs – this is peak excitement time as they recognize where they so the anticipation is high and the energy increases.
- The team work quickly to minimize the time between the vans parking and the dogs being lead into their packs.
- The Dog Plan has already been produced so the team know which dog will start the day where.
- The longer the dogs remain in the vans, the higher the risk of excited barking happening as the excitement and anticipation builds up. Excited barking is kept to a minimum as those dogs known to be noisy are moved first

Peak Noise Time #2 – Pack Walk takes place



13:00 – 14:00 Pack Walks arrive and leave HQ

- Pack Walkers deal with potential barking in the same way that the Day Care team does as per previous slide.
- Additional risk of noise from Day Care dogs knowing another pack of dogs has arrived on site. Any dogs in the vicinity of the vans are moved away prior to the van arriving to reduce the potential barking. Pack Walker lets Day Care team know they on route back to HQ to give Day Care team to prepare

Excitement & Over arousal



Our daily dog plan identifies those dogs known to be vocal when excited and are usually the starting point of the dog plan. These dogs are put in a pack with low energy dogs to keep their arousal levels low meaning they are less likely to bark. Putting a highly excitable dog in a high energy pack of dogs only increases the arousal in that dog and leads to more vocal excitement. A highly aroused dog can also find it stressful in a high energy pack which can also lead to persistent barking. Identifying which dogs are over aroused and are high energy dogs has been proven to be key in the team managing the packs.



Compulsive behaviours & Separation Anxiety

Compulsive behaviours and separation anxiety are two causes of barking that we as a business do not have the capacity to deal with as both take time and dedicated training to prevent so the persistent barking is likely to continue. Both are also an indication that the dog is finding it stressful in our environment and as we can't resolve it, it is better for the dog and for us for the dog to return home as soon as practically possible.