



22-28-b3-04-XX-RP-A Noise Management Strategy

Re-submission of Full Planning application for 'change of use' of an agricultural paddock to a dog exercise area using existing access / parking at Knypersley Mill Farm

Knypersley Mill Farm, Judgefield Lane, Brown Edge, ST6 8UG.

Full planning permission

(PP-12505490)

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1. Introduction & Proposals

This Noise Management Strategy has been prepared by "b3architectural", in relation to a Full Planning Application for a 'dog exercise area', within an existing paddock at Knypersley Mill Farm. This application is commissioned on behalf of Mr M Hall. The proposals are located at:

National Grid Reference: **SJ 89750 54757**
Easting: 389750
Northing: 354757

In summary the proposals entail a re-submission for Full Planning permission. This is following the refusal of SMD/2022/0471 and dismissal of Appeal Reference: APP/B3438/W/23/3314564. Revision has been made to the proposals in response to the feedback from the Planning Inspectorate.

Full Planning permission is sought for the 'material change of use of land':

- To allow a 'Dog Exercise Area' to be created.
- Access to the site and car parking will utilise the existing 'Camp Site Access' and an area of existing hardstanding. No new parking areas need to be created.

2. Nearest Noise Sensitive Receptors

The Proposed Block Plan by 'b3architectural' shows the properties within a 50-250m radius of the application site, this is taken from a central point in the site. In order of distance from the proposals the nearby stakeholders are:

1.	Judgefields (Farm)	130m
2.	Pool Dam Cottage	143m
3.	Poolside House	148m
4.	Knypersley Mill Farmhouse (owned by the applicant)	161m
5.	High Gables	173m
6.	Knypersley Mill	195m
7.	Tongue Lane Farm	250m

3. Planning Policy & Guidance

The following planning policy documents and guidance notes advocate the considerations and expected process to demonstrate if the proposals will cause an adverse effect on the surroundings:

- National Planning Policy Framework (NPPF) 2021
- Noise Policy Statement for England (NPSE) 2010
- Planning Practice Guidance – Noise 2019

National Planning Policy Framework (NPPF) 2021

Chapter 15 of the NPPF relates to 'Conserving and enhancing the natural environment':

Paragraph 174 states planning policies and decisions should contribute to and enhance the natural and local environment by: (e) "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. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans".

Paragraph 185 states "Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:"

"(a) mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;"

"(b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."

Noise Policy Statement for England (NPSE) 2010

The Noise Policy Statement for England (NPSE) was published by the Department for Environment, Food and Rural Affairs (DEFRA) in 2010.

The long-term vision from this document is outlined in Paragraph 1.7. The aims 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.

Policy considers all types of noise with Paragraph 2.5, these are:

- "Environmental noise" which includes noise from transportation sources.
- "Neighbour noise" which includes noise from inside and outside people's homes.
- "Neighbourhood noise" which includes noise arising from within the community such as industrial and entertainment premises, trade and business premises, construction sites and noise in the street.

Paragraph 2.9 considers how noise policy should be used in the UK. The paragraph states: "Noise management is a complex issue and at times requires complex solutions. Unlike air quality, there are currently no European or national noise limits which have to be met, although there can be specific local limits for specific developments. Furthermore, sound only becomes noise (often defined as "unwanted sound") when it exists in the wrong place or at the wrong time such that it causes or contributes to some harmful or otherwise unwanted effect, like annoyance or sleep disturbance. Unlike many other pollutants, noise pollution depends not just on the physical aspects of the sound

itself, but also the human reaction to it. Consequently, the NPSE provides a clear description of desired outcome from the noise management of a particular situation.”

The NPSE Paragraph 2.19 to 2.21 categorise the toxicology of noise. These are defined in the three below categories:

1. **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.
2. **LOAEL** – Lowest Observed Adverse Effect Level. This is the level above which adverse effects on health and quality of life can be detected.
3. **SOAEL** – Significant Observed Adverse Effect Level. This is the level above which significant adverse effects on health and quality of life occur.

Policy also states, “there is a need to integrate consideration of the economic and social benefit of the activity or policy under examination with proper consideration of the adverse environmental effects, including the impact of noise on health and quality of life. This should avoid noise being treated in isolation in any particular situation, i.e. not focussing solely on the noise impact without taking into account other related factors.”

The proposal of dog exercise facilities for human enjoyment might generate some noise that affects the surrounding area, yet in doing so it will counteract this harm providing a form of sustainable development that benefits the health and well-being of the user, without causing adverse harm to a nearby stakeholder/resident.

The first aim of the NPSE states that “**significant adverse effects**” on health and quality of life **should be avoided** while also considering the guiding principles of sustainable development which are described above in the previous two paragraphs.

The second aim of the NPSE refers to the situation where the impact lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life. Methods of Noise Mitigation will be considered in the following section of this document.

Planning Practice Guidance – Noise 2019

In 2016 the ‘Department for Levelling Up, Housing and Communities’ and ‘Ministry of Housing, Communities & Local Government’ published planning practice guidance which would be supplementary to the NPPF. This was updated in 2021 with the latest update of the NPPF. Noise guidance was published on 22nd July 2019. Guidance promotes applicants and agents to consider the wider characteristics of a development proposal, its likely users, and its surroundings, as these can have an important effect on whether noise is likely to pose a concern.

Guidance on levels of noise and their likely impact is as follows. This ranges in severity from 1; being the lowest, up to 2 and 3; where mitigation is likely to be possible to create an acceptable solution, and 4 where the proposals should not be accepted:

1. At the lowest extreme, when noise is not perceived to be present, there is no effect. As the noise exposure increases, it will cross the 'no observed effect' level. However, the noise has no adverse effect so long as the exposure does not cause any change in behaviour, attitude, or other physiological responses of those affected by it. The noise may slightly affect the acoustic character of an area but not to the extent there is a change in quality of life. If the noise exposure is at this level no specific measures are required to manage the acoustic environment.
2. As the exposure increases further, it crosses the 'lowest observed adverse effect' level boundary above which the noise starts to cause small changes in behaviour and attitude, for example, having to turn up the volume on the television or needing to speak more loudly to be heard. The noise therefore starts to have an adverse effect and consideration needs to be given to mitigating and minimising those effects (taking account of the economic and social benefits being derived from the activity causing the noise).
3. Increasing noise exposure will at some point cause the 'significant observed adverse effect' level boundary to be crossed. Above this level the noise causes a material change in behaviour such as keeping windows closed for most of the time or avoiding certain activities during periods when the noise is present. If the exposure is predicted to be above this level the planning process should be used to avoid this effect occurring, for example through the choice of sites at the plan-making stage, or by use of appropriate mitigation such as by altering the design and layout. While such decisions must be made taking account of the economic and social benefit of the activity causing or affected by the noise, it is undesirable for such exposure to be caused.
4. At the highest extreme, noise exposure would cause extensive and sustained adverse changes in behaviour and / or health without an ability to mitigate the effect of the noise. The impacts on health and quality of life are such that regardless of the benefits of the activity causing the noise, this situation should be avoided.

This has also been produced as a 'Noise Exposure Hierarchy Table' which summarises the noise exposure hierarchy, based on the likely average response of those affected:

Response	Examples of outcomes	Increasing effect level	Action
No Observed Effect Level			
Not present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, 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 small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, 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
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

Figure 1: 'Noise Exposure Hierarchy Table' by the 'Department for Levelling Up, Housing and Communities' and 'Ministry of Housing, Communities & Local Government'

4. Noise Mitigation Measures

Sound Pressure Level / Noise Level

The sound of an average sized dog barking is thought to be approximately 80-90 Decibels (dB) on average. This is the 'Sound Power Level'. A large dog or a group of dogs might create a 'Sound Power Level' as loud as 110 Decibels if they all barked together.

The above is not the noise heard by a resident to the proposals. The Noise heard is the 'Sound Pressure Level' and this is based on the distance from the source and is influenced by other factors such as: if the noise was in a contained space (such as kennels) or if the noise was outdoors with no surfaces near to the sound source. This is known as the 'Directivity Factor'.

The Location of Sound

The location of the sound within the proposals is within an open-air field. There are existing boundary treatments (hedges and trees) separating the proposal site from the 'Nearest Noise Sensitive Receptors'. These landscape features will be retained.

There is also a road (Judgefield Lane) which is closer to the NNSR 1,2,3 and 5. A car or motorbike using the road is likely to have an average 'Sound Power Level' of 70-100 Decibels from source. Again, the 'Sound Pressure Level' heard will vary relative to where this vehicle is.

Noise Management Measures

The hours of operation are the first method of noise mitigation. By ensuring that activity occurs during daylight hours, when people are not asleep, this reduces the chances of disruption of sleep. Disruption of sleep is defined as a **LOAEL** to **SOAEL** depending on the exact level of disturbance. The following hours of operation are proposed:

Spring/Summer Operating Hours

1st March – 30th September

5:30 am – 8:30 pm Monday – Friday

7:30 am – 8:30 pm Saturday/Sunday

Autumn/Winter Operating Hours

1st October – 28th February

6:30 – 5:30 pm Monday – Friday

7:30 – 5:30 pm Saturday/Sunday

The obvious question posed by the above is will activity before 7:30am pose a threat to neighbours sleeping, particularly in summer when windows are likely to be open. Within the household the typical

ambient noise levels are 40-50dB. The nearby waterfall/dam into the 'Mill Pond' creates greater levels of noise for the nearby houses. At 100m from the proposal the 'Sound Pressure Level' heard from a 90dB Dog Bark would be 39dB. There are no 'Noise Sensitive Receptors' closer than 130m from the proposals, therefore, it is thought whilst the noise would be 'present' it would not be 'intrusive'. This is the definition of **NOEL** and there is no detectable effect on health and quality of life due to the noise.

Restrictions on Number of Dogs

The above noise impact assessment is based on a 90dB source. This is likely to be the sound pressure of one large dog barking. Greater sound pressure could be created by multiple dogs barking and as result the numbers of dogs will be restricted.

The Dog Exercise Area is really intended for a single individual or two persons to arrive in one car with their personal dogs. This would be 1-4 dogs typically, probably less.

The maximum limit imposed on the field will be 6 dogs and this will cater for businesses' such as local dog walkers, trainers etc who might wish to use the facilities. This is the same number of dogs as is limited on local Case Studies features in the Design & Access Statement.

Site Rules and Etiquette

The proposals are adjacent to a Camping and Caravanning Club permitted site. Like on the campsite, the landowner, will expect a level of etiquette and behaviour from users and reserves the right to revoke access from users of the 'Dog Exercise Area' that cause excess noise from the dogs using the facilities, the people, or the method of transport to the site.

5. Analysis of Proposals Impact

Environmental Noise

The proposals will create up to two car journeys on an hourly basis (per booking). This is an 'environmental noise' that will be limited occurring only at the time of a booked slot.

The existing facilities nearby to the site (Knypersley Reservoir and Greenway Bank Country Park) both create a far higher number of journeys on a more frequent basis. Pool Dam Cottage and Poolside House are alongside the reservoir, near to the point where the path (used by the public and dog walkers) meets the road. The informal parking of vehicles also occurs on the roadside.

This parking occurs from the bridge onwards which is approximately 115m from Poolside House and 121m from Pool Dam Cottage. The pedestrians and dog walkers exit the reservoir path at the boundary of Poolside House approximately 3.5m from the building.

Neighbourhood Noise

The act of exercising multiple (up to 6) dogs with individual or persons as a business operation will present some noise creation. Although the Design and Access Statement describes how this type of dog exercise is likely to improve dog behaviour, reduce frustration and in turn reduce barking noise (some barking is anticipated). It should be noted this would also occur around the reservoir.

A dog bark might be 80-90dB and a group of dogs barking could be as much as 110dB. A table has been created that will consider the impact on each of the 7 'Noise Sensitive Receptors' nearby to the proposals:

'Noise Sensitive Receptors'	Distance	90 dB Power	110 dB Power	Effect Level
Judgefields (Farm)	130m	36.729	56.729	NOEL - LOAEL
Pool Dam Cottage	143m	35.901	55.901	NOEL - LOAEL
Poolside House	148m	35.602	55.602	NOEL - LOAEL
Knypersley Mill Farmhouse	161m	34.871	54.871	NOEL - LOAEL
High Gables	173m	34.246	54.246	NOEL - LOAEL
Knypersley Mill	195m	33.207	53.207	NOEL - LOAEL
Tongue Lane Farm	250m	31.049	51.049	NOEL - LOAEL

6. Conclusion

Typically, when a dog barks within the normal range there will be 'No Observed Effect' or 'No Observed Adverse Effect Level' on the 'Nearby Noise Sensitive Receptors'. Only if a group of larger dogs barked simultaneously would the noise become greater than 'light traffic noise' around the site which might be 50-60dB or a group of people talking which might be 40-60dB.

At this point there would be 'Low Observed Adverse Effect'. It is thought that by limiting the hours of use to end at 8.30pm evening disturbance is mitigated. Morning disturbance is likely to be less than that already caused by the nearby recreation uses.

As mentioned in the Design Access Statement the proposals have incorporated strategies to limit the adverse effect on nearby neighbours to the site.

- The intensity of the use/number of users has been selected to suit the size of the site, to limit noise to a level which is fair and considerate towards the neighbours of the site and to ensure parking requirement and traffic generated is low.
- The number of dogs and parking is found to be the same or less than the precedent businesses researched.
- Hours of operation respond to seasons. Operation will begin at a similar time to that when the public attends the reservoir, it will also end at 8.30PM. This is thought to be respectful.

Therefore, with regards to noise, the proposals are worthy of the Council's support and should be **granted planning permission** subject to such planning conditions, as the local planning authority may consider necessary and appropriate to retain control over the implementation of the approved scheme.