



**Town & Country Planning Act 1990**

**APPEAL  
ON BEHALF OF  
SATNAM MILLENNIUM LIMITED**

**IN RESPECT OF  
Land at Peel Hall, Warrington**

**RE-OPENED PUBLIC INQUIRY 14<sup>th</sup> September 2020**

**PLANNING INSPECTORATE REF:  
APP/M0655/W/17/3178530**

**LOCAL AUTHORITY PLANNING APPLICATION REFERENCE: 2016/28493**

**Rebuttal to Rule 6 Party Proof of Evidence (Noise)**

**Matthew Wilson**

**Date: 26<sup>th</sup> August 2020**

## 1. Introduction

- 1.1. This Rebuttal responds to issues raised in the Proof of Evidence provided by Ms Margaret Steen, representing the Save Peel Hall Campaign Group (Rule 6 Party). I have written it on behalf of my client Satnam Millennium Limited.
- 1.2. I comment on each paragraph as appropriate. Where similar paragraphs are grouped together along a similar theme in Ms Steen's proof of evidence, I make a single comment to avoid repetition.
- 1.3. It is worth noting at this stage that the Local Planning Authority have not raised any issues with the methodology for the monitoring or assessment of potential noise impacts and there is an agreed Statement of Common Ground between Warrington Borough Council and Satnam Millennium Ltd on all aspects.
- 1.4. This Rebuttal, like my Proof of Evidence and the ES Chapter shows the following:
  - Noise monitoring has been conducted appropriately and with the cooperation of Warrington Borough Council;
  - Noise modelling is an appropriate way to predict and assess noise over the site;
  - The assessment methodology and criteria are appropriate to determine site suitability for residential development;
  - A continuous noise barrier is an appropriate, achievable form of mitigation for the site, alongside other mitigation options (massing and façade elements);
  - and
  - The application will protect the future of Peel Hall Farm Kennels by way of planning condition which is appropriate in this case and agreed with the LPA.

## 2. Section 2 – Noise

### Paragraphs 2.3 & 2.4

- 2.1. The physiological effects of noise and its impact on other factors such as sleep are well documented. The WHO guidelines Ms Steen highlights are recognised, however it is important to identify clear and consistent criteria that new developments are required to achieve. In residential planning cases, it is appropriate for internal and external noise criteria to meet the criteria set out in BS8233:2014 - *Guidance on sound insulation and noise reduction for buildings*, which is derived from the WHO guidance.
- 2.2. This British Standard has not retained its 1999 predecessor's requirement for a consideration of  $L_{Amax}$  events, however this criteria is introduced by Pro PG – Planning and Noise (2017).
- 2.3. Through the detailed design phase of the site, there will be a design target of 50 dB  $L_{Aeq,16h}$  in residential gardens, this will be achievable for the vast majority of the site. Where 50 dB  $L_{Aeq,16h}$  is not possible, the agreed planning condition allows relaxation of the criteria to 55 dB  $L_{Aeq,16h}$  in line with the guidance in Paragraph 7.7.3.2 of BS8233 which states:

#### 7.7.3.2 Design criteria for external noise

For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB  $L_{Aeq,7r}$  with an upper guideline value of 55 dB  $L_{Aeq,T}$  which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.]

- 2.4. The Appeal Site is part of an urban area adjoining the strategic transport network and makes efficient use of land resources to ensure development needs can be met.
- 2.5. Draft planning condition 29, agreed between WBC and the Appellant ensures that external levels will not exceed 55dB  $L_{Aeq,16h}$ .

### 3. Section 3 – Acoustic Monitoring

- 3.1. It is necessary to explain the noise mapping provided on Page 7 of Ms Steen’s proof, (Peel Hall Noise Mapping Daytime).
- 3.2. The graphics displayed show a noise metric known as  $L_{DEN}$ , which is a 24-hour average of noise levels, with additional weightings applied to evening and night time periods. The  $L_{DEN}$  will therefore be higher than the  $L_{Aeq,16h}$ , which is the correct metric for this assessment as supported by BS8233 and ProPG.
- 3.3. The  $L_{DEN}$  metric is used by DEFRA to comply with the European Directive (2002/49/EC – The Environmental Noise Directive) which requires member states to produce strategic noise maps.
- 3.4.  $L_{DEN}$  is not used as a metric in any English residential noise assessments.
- 3.5. Miller Goodall’s assessment uses the correct metric for daytime assessment,  $L_{Aeq,16h}$ , which is the average continuous noise level measured or predicted between 0700 and 2300.
- 3.6. The figure on Page 8 of Ms Steen’s proof (Peel Hall Noise Mapping Night time) shows predicted night time noise levels derived from traffic flows rather than from direct measurement.
- 3.7. Figure A3.1 at the top of Page 9 of Ms Steen’s proof is from the document HD213/11. This is no longer in use and has now been replaced in the Design Manual for Roads and Bridges as of November 2019, by LA111.
- 3.8. LA111 and the noise metric  $L_{A10,18hr}$ , are not used as part of a site suitability assessment. They are used to assess impact when comparing with and without scenarios where receptors will be exposed to changes in road traffic noise as a result of a development, not the assessment of existing noise levels over a proposed development site.

#### **Paragraphs 3.4 - 3.6 – Suitability of a Noise Barrier**

- 3.9. In paragraph 3.6 of Ms Steen’s proof it is unclear which measurements Ms Steen is discussing or which conclusions. There is no evidence that a continuous barrier cannot be achieved. A continuous barrier is one that is capable of blocking line of sight. Where discontinuities are required due to access or obstacles, gates and overlapping sections can be utilised.
- 3.10. Further evidence relating to this is found in Section 4 of this Rebuttal.

#### **Paragraphs 3.8 – 3.10**

- 3.11. The internal noise levels shown on Page 10 of Ms Steen’s proof and in Table 11.13 of the ES are demonstrations of internal noise levels in the absence of any façade mitigation (glazing and ventilation). In other words, this is the level which would be expected internally with typical open window attenuation of 15dB. It is to demonstrate the requirement for mitigation, not the final result of it.
- 3.12. At paragraph 3.10, Ms Steen highlights a further reduction of 22dB required to meet the internal criteria. That further reduction will be achieved using façade mitigation, namely glazing and alternative ventilation products, to give an overall reduction of 37dB.

- 3.13. The glazing to be installed will be openable by residents when desired, in case of purge ventilation for example. However for internal noise criteria to be met, windows will need to be closed and alternative ventilation relied upon. Such façade mitigation is common in new residential development.
- 3.14. Façade mitigation and plot design will be done with reference to the Acoustics, Ventilation and Overheating Guide, issued by the Association of Noise Consultants (ANC), application of which is intended to demonstrate good acoustic design as described in ProPG: Planning and Noise.

### **Paragraphs 3.11 – 3.15**

- 3.15. The limit of the indicative location of residential buildings is shown on the parameters plan as the light blue line which forms the northern extent of the “*Area Suitable for Apartments (In line with noise assessment)*” (parameters plan legend). This line corresponds to the noise contour of 67dB  $L_{Aeq,8hr}$ , as predicted at 9.0m.
- 3.16. The location of this limit to the indicative location of residential buildings was identified by calculation. It was determined through calculation that a typical small bedroom, the most sensitive room in a dwelling, would be capable of providing appropriate internal noise levels when façade levels are up to 37dB above the night time criteria of 30dB  $L_{Aeq,8h}$ .
- 3.17. At night, which is considered to be the worst case, this is a façade level of 67dB  $L_{Aeq,8h}$  (i.e. the night time criteria of 30dB, plus 37dB above that criteria).
- 3.18. Computer noise modelling was undertaken to determine the location within the site where this noise level would be expected from the M62 with a 4.0 m barrier in place on the northern boundary. As discussed above, this is an outline application and the exact location of future development will be dependent on the detailed design at the Reserved Matters stage.
- 3.19. The distance between the highway and the proposed barrier is clearly shown on the Parameters Plan, as is the distance between the barrier and the closest potentially developable land. Barrier construction is detailed in the ES Chapter at 11.6.7.
- 3.20. The height of the barrier is clearly stated on the parameters plan.
- 3.21. At this stage I see no reason why a barrier could not be constructed along the entire northern boundary of the site as indicated on the Parameters Plan.
- 3.22. Prediction of noise levels using an indicative noise barrier location is a standard methodology for outline planning applications for residential sites. It is therefore not correct for Ms Steen to comment at paragraph 3.15 that without exact knowledge of the location of a barrier or of its materials it is impossible to accurately determine the noise impact at the nearest receptors.

### **Methodology for monitoring and modelling**

#### **Paragraphs 3.16 – 3.45**

- 3.23. The remainder of Section 3 of Ms Steen's proof of evidence provides a mixed critique of the noise monitoring and modelling methodology. In response to that critique it should be noted that computer noise modelling is a recognised way by which large sites can be assessed for noise propagation.

- 3.24. Section 2.72(b) of ProPG states that “...*The external post mitigation noise assessment should use an informed judgement of typical worst case conditions over the foreseeable future, but it should exclude atypical noise events. Noise mapping and modelling techniques are likely to be useful for more complex sites*”.
- 3.25. Noise modelling software uses algorithms to allow accurate predictions of noise over a large site in line with ISO 9613-2:1996 *Acoustics – Attenuation of sound during propagation outdoors*.
- 3.26. It is not disputed that the dominant noise source affecting the site is the M62 which runs for the entire length of the site. A common principle of acoustics is to measure the noise at source, which is what was done with the agreement of the Local Planning Authority.
- 3.27. In paragraph 3.27 Ms Steen states that the monitoring falls short as it was not a complete 24-hour period. The requirements are for *an assessment* of noise over a 24-hour period, monitoring needs to be representative of this and need not be for the full period of time. The use of prediction, measurement or a combination of these methods is described in the paragraph 2.9 of ProPG to which Ms Steen refers.
- 3.28. Using published formula provided by DEFRA (Document Ref: st/05/91/AGG04442) research and the Calculation of Road Traffic Noise (CRTN, Paragraph 43), it is possible to determine daytime (16 hours 0700 – 2300) and night time (2300 – 0700) average noise levels ( $L_{Aeq,T}$ ) using a single noise measurement consisting of noise data gathered in three consecutive hours between 1000 and 1700.
- 3.29. Our monitoring position at MP04 generated 12 hours of daytime data and a full 8 hours of night time data from a location as close to the M62 as possible whilst not accessing Highways England land. This location allowed for the following appropriate measurements to be made:
- $L_{A10,3hr}$  this can be used to determine  $L_{A10,18h}$  which is what a road noise source is calibrated to; and
  - typical frequency spectra for daytime traffic, night time traffic and maximum noise events.
- 3.30. All of the above are required to make appropriate noise modelling predictions for the site. Additional monitoring within the site would not have generated any useful data to inform the noise model. Again, this methodology is utilised in noise modelling and assessment for a wide variety of planning applications where a dominant road noise source is evident.
- 3.31. .
- 3.32. We are confident, considering the steady state of the dominant motorway noise source, that the monitoring methodology is appropriate and that it provides sufficient and reliable data from an unrestricted and free flowing road in appropriate monitoring conditions.
- 3.33. Monitoring on the busiest days of the week often results in traffic at a standstill which is quieter than free flowing traffic, hence it is typical to measure road traffic noise in a midweek period.
- 3.34. In my professional opinion as a member of the Institute of Acoustics, the quantity and duration of monitoring is appropriate to inform the assessment undertaken.

### **Peel Hall Farm Kennels – Paragraph 3.19**

- 3.35. Discussed in Section 9.

### **Monitoring at Mill Lane Paragraphs 3.29 to 3.30**

- 3.36. Monitoring at Mill Lane, as referred to in paragraph 3.29 of Ms Steen's Proof, was undertaken at the outset of Miller Goodall's involvement with the project, to get an indicative baseline  $L_{A10,18h}$  value for the area close to the proposed access route. It later transpired that baseline traffic flows were available for use in order to assess the change in noise level so short-term monitoring data was not utilised in this assessment.
- 3.37. The locations discussed in paragraph 3.30 of Ms Steen's Proof are receptors related to change in noise level due to new traffic on the roads or in the case of the Mill Lane junction, a new section of road, they are not monitoring positions. The locations relate to existing receptors where there is a reasonable prospect of a significant adverse effect due to the change in road traffic noise. Such a situation does not exist on the northern boundary of the site.

### **Monitoring at MP01, MP02 and MP04 (Paragraphs 3.33 – 3.36)**

- 3.38. Mrs Steen States that the noise at MP04 is not typical of the noise across the length of the M62 / site boundary, but no further indication is given as to why. Vehicles exiting and entering the M62 via a slip road, slowing and accelerating after doing so, would be typical of the entire length of that section of road between J9 and J10. Vehicles at motorway speeds will commence braking or start slowing down well before a slip-road and it is unlikely that the difference in velocity of the few vehicles exiting or entering an 8 lane highway would have any material difference in the long term average noise level.
- 3.39. Monitoring at MP04 would give a good account of noise levels at night along the entire section of the M62 at the Peel Hall site. For this reason, in addition to the security issues that are referred to at 11.3.10 of the ES, no night time monitoring was required to be undertaken at MP01 and MP02.
- 3.40. Recording the quantities of each individual vehicle type on a busy motorway is not practically possible. The measured data will reflect the typical vehicle mix for day and night for this stretch of the M62.

### **Topography (Paragraphs 3.38 – 3.40)**

- 3.41. Once a source noise is identified and measured, source noise data is entered into a computer noise model. Site topography was gathered from DEFRA Lidar data, ensuring all undulations of the site and relative difference to the M62 were taken into account during modelling.
- 3.42. Ms Steen's point at 3.40 regarding the width and height of the embankment changing will be fully accounted for in the noise model and the input Lidar topographical data.

### **Summary of response to Section 3**

- 3.43. The monitoring methodology was done in such a way as to collect all appropriate typical data to inform the production of a noise model which can demonstrate an appropriate standoff distance from the M62. Such monitoring and modelling methodology is commonplace for such assessments with a single dominant noise source.

3.44. Noise modelling can be relied upon and is so for all major housing and infrastructure schemes.

## 4. Section 4 – Noise Barrier

- 4.1. The plans are indicative at this stage and full consultation with all stakeholders will be undertaken at the detailed design stage to determine the exact route of the fence, allowing access to all easements, infrastructure and pumping stations. The location of the closest residential properties may alter slightly as a result but this is not an issue that prevents the appeal scheme from coming forward on the site. An approximate location of the proposed noise barrier is shown as a brown line on the Parameters Plan and clearly labelled in the legend. By necessity, the distance of the barrier from the nearside kerb will vary with site ownership and topography.
- 4.2. There are a number of detail design issues that will be addressed when the final design and location of the barrier is determined, including the existing National Grid Infrastructure and easement, a Public Right of Way and Spa Brook, which is not a Statutory Main River or pending determination as such.
- 4.3. The exact location of the fence and construction techniques will be finalised at the detailed design stage of the proposed development.
- 4.4. Ms Steen discusses the following points in Section 4 and at other locations within her Proof of Evidence:
  - Construction of the noise barrier and its anticipated sound reduction (paragraphs 4.1 – 4.4)
  - Existing Highways England fencing and other infrastructure (paragraphs 4.9 – 4.10)
  - National Grid High Pressure Gas Main (paragraphs 4.11 – 4.14, 4.20)
  - United Utilities infrastructure (paragraph 4.15)
  - Ditch 1, Spa Brook and a historic hedgerow (paragraphs 4.18 – 4.21)
  - Public Rights of Way (paragraph 4.19)
  - Topography and extent of the barrier (paragraphs 4.22 – 4.34)
- 4.5. I will discuss each aspect in turn to demonstrate that Ms Steen is wrong to suggest in 4.31 and other places, that the noise barrier cannot be constructed without gaps.

### **Barrier Construction (paragraphs 4.1 – 4.4)**

- 4.6. The construction options offered for the barrier ensure that it will be sufficiently dense so that noise passing through it will not be dominant compared to noise diffracting over the top.
- 4.7. Appropriate footings will be provided to ensure degradation due to animal interaction and weathering will not impact performance as suggested by Ms Steen in her paragraph 4.2.
- 4.8. The structure of the barrier is to be confirmed, however one appropriate potential structure is a specialist noise barrier with an  $R_w$  of 25dB. This value is a weighted measure of what a partition would achieve in laboratory conditions with no flanking noise. It is not a requirement of the barrier to provide 25dB of attenuation, in fact we would not expect the barrier to provide more than 10dB and have undertaken our modelling and calculations on this basis.

### **Highways England (paragraphs 4.9 – 4.10)**

- 4.9. Where required it may be necessary to replace the existing fence line on the northern boundary of the site with the proposed noise barrier. This will be done in agreement with Highways England and result in an improvement of the boundary fencing in terms of unauthorised access to the live motorway from the site and maintenance requirements for Highways England.
- 4.10. The fence will not restrict maintenance and operation of the other Highways England infrastructure that is described by Ms Steen in her Paragraph 4.10.

**National Grid (paragraphs 4.11 – 4.14, 4.20)**

- 4.11. Southern Gas Networks (SGN) and the Health and Safety Executive (HSE) have not resulted in any objections to the project.
- 4.12. Consultation with SGN has confirmed that the Building Proximity Distance (zone 1) is a distance of 3m either side of the pipeline. Zone 1 is a safety factor with reference to habitable buildings. The proposals are for the construction of a noise barrier, which would be considered low sensitivity. Intrusion within this safety zone should not be taken lightly and any intention to proceed should be accompanied by a risk assessment.
- 4.13. It is therefore not accurate for Ms Steen to assert at her paragraph 4.11, that construction of an acoustic fence cannot take place within the easement and there is inadequate space. Rather, all care should be taken, and appropriate construction methodologies employed during construction, with vibration monitoring utilised where necessary.

**United Utilities (paragraph 4.15)**

- 4.14. United Utilities (UU) raises no objections to the proposals.
- 4.15. The acoustic barrier will not restrict access to the pumping station or to UU's right of way for vehicular access.
- 4.16. The water main crossing the site is understood to connect to Peel Hall Farm and will not be crossed by the barrier.

**Watercourses and Hedgerows (paragraphs 4.18 – 4.21)**

- 4.17. The identified watercourses and historic hedgerows are already crossed by a fence line on the northern boundary of the site. At these locations the proposals will be upgrading the existing fence lines without encroaching further into proposed ecological buffer zones.

**Public Right of Way (paragraph 4.19)**

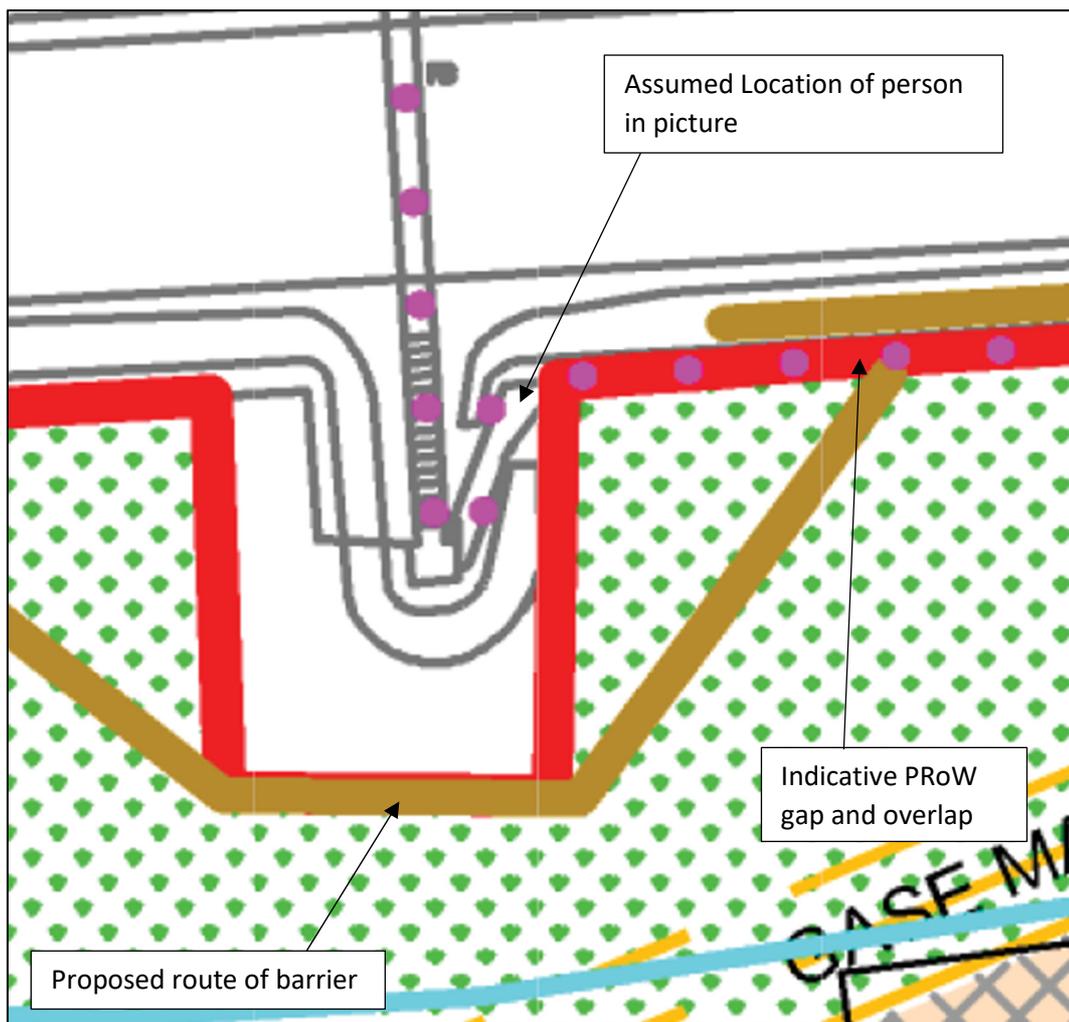
- 4.18. The PRoW has been factored into the design of the barrier as shown on the parameters plan. There is a break in the barrier to allow the PRoW to pass through without deviation. The overlapping design of the barrier will not allow noise to propagate onto the site through the gap created (see figure 1).

**Topography and extent (paragraphs 4.22 – 4.34)**

- 4.19. At paragraph 4.22, Ms Steen discusses the extent of the barrier. Extension beyond the site boundary is not required and is not possible due to being outside of the current site ownership. The modelled setback distances for proposed residential building take account of the end of the barrier.

- 4.20. At paragraph 4.23, Ms Steen questions the modelling of a vehicle as a transient point source. Noise modelling must assume a busy road as a line source, not a static point.
- 4.21. At paragraphs 4.23 and 4.24 Ms Steen questions how topography of the site is accounted for. As discussed earlier, Lidar topography data is fully incorporated in the model for the site and surroundings.
- 4.22. The height of the barrier is a consistent 4.0 m for its entire length, not 6.5 m as incorrectly extrapolated by Ms Steen. Ms Steen’s figure on Page 26 of her proof which shows a person in relation to the motorway is inaccurate as the acoustic fence would be located to the south and east of this location (see Figure 1)

Figure 1: Detailed section of Parameters Plan



- 4.23. Holes, slits or gaps in the acoustic barrier, as discussed in paragraph 4.31 by Mrs Steen, are to be avoided between panels and below the fence – this will be a stipulation for contractors to adhere to. Specialist acoustic fencing is designed to avoid such defects.

**Summary of response to Section 4**

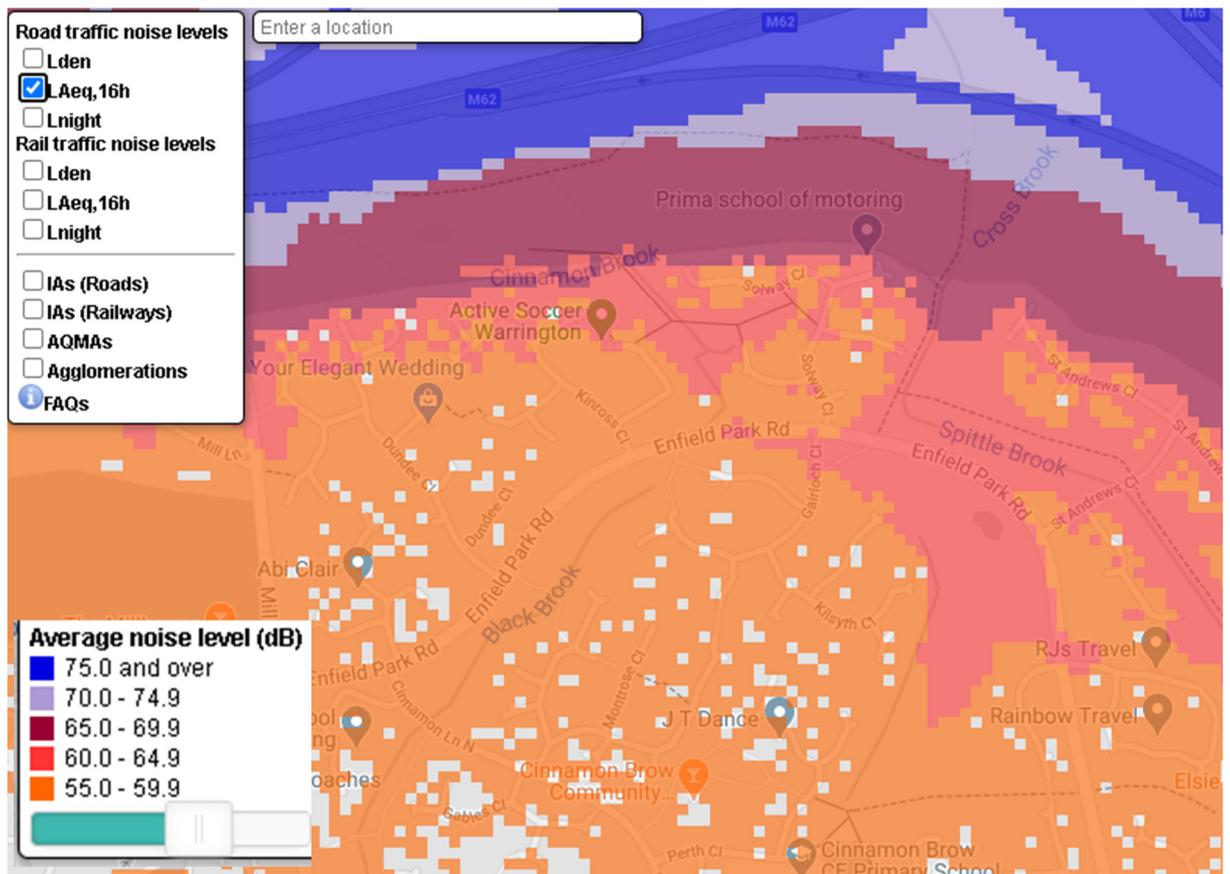
- 4.24. Whilst it is true that technical engineering challenges always exist at some points along the proposed route of an acoustic fence, these are manageable on this site as these are technical aspects are for civil engineers to determine at the design.

- 4.25. The aspects discussed above do not prevent a continuous noise barrier from being constructed, and being an appropriate part of the wider package of noise mitigation proposed.

## 5. Section 5 – Massing

- 5.1. In paragraph 5.4 of her proof, Ms Steen discusses a 9-year time period between site occupation and completion of noise attenuation measures. This is not correct as phasing is often designed to build close to noise sources initially to ensure noise attenuation is in place from the outset. It would be anticipated that the full noise barrier would be completed in years 1 to 3 prior to the beginning of development of any parcels of land immediately to the south of the M62.
- 5.2. At this outline stage, phasing of the wider site is not fixed. When this is done at reserved matters stage, of course the final phasing plan will have regard for the need to achieve the noise levels that are necessary on site.
- 5.3. At paragraph 5.5 Mrs Steen discusses requirement for continuous frontage parallel to the M62. This is neither proposed nor desired. Increased set-back distance from the M62 and partial line of sight would also provide additional noise attenuation above that provided by the barrier.
- 5.4. Where a residential building of any phase has a clear line of sight to the northern boundary, it will be a requirement for the detailed design to ensure building massing of individual plots is appropriate to achieve the design criteria for external noise.
- 5.5. The examples of a noise gap at Cinnamon Brow again utilise DEFRA mapping using the  $L_{DEN}$  criteria, not  $L_{Aeq,16h}$ . It should also be noted that DEFRA mapping is calculated at 4.0m above ground level not at the 1.5m garden height.
- 5.6. In any event, the comparison between Cinnamon Brow and the Appeal Site is not appropriate. Cinnamon Brow is exposed to (and influenced by) the M6 and M62 and associated interchanges, and the first line of residential is 2 storey, as compared to the 4 storey apartment blocks and 3 storey houses proposed on the Peel Hall site.
- 5.7. That said, even a 6.5m tall 2 storey detached house demonstrated at Cinnamon Brow is capable of reducing noise to 55-60dB at 4.0m, which will likely be closer to 55dB at garden height. See the map shown in Figure 2 below, which is a reproduction of the map on page 31 of Ms Steen's proof with the appropriate  $L_{Aeq,16h}$  layer highlighted.

Figure 2 – Cinnamon Noise Gap, in  $L_{Aeq,16h}$



- 5.8. The comments in paragraphs 5.6.1, 5.6.2 and 5.9 relating to stand off distances of existing development from the motorways do not give any information as to why such setbacks have been chosen. Ms Steen wishes us to consider that it is purely due to noise levels, however other land uses or ownership may have resulted in the setback we see in the identified communities.
- 5.9. The setback proposed on the Peel Hall site has been demonstrated to be sufficient.

#### Summary of response to Section 5

- 5.10. We are told that building massing will not be appropriate to protect outdoor amenity space, however the mapping is inapt. The metric used for most mapping is  $L_{DEN}$ , which we do not consider in UK noise assessments for residential developments. The mapping is also showing low resolution mapping predicted at 4.0m, which will always give a higher noise level predicted at 1.5m, the assessment height for a garden.

## 6. Section 6 – ProPG and NPSE

- 6.1. In accordance with ProPG, there will be no requirement for windows to be permanently closed. Fixed, unopenable glazing does not form part of the outline mitigation strategy.
- 6.2. Detailed design of phases and individual plots will seek to minimise the number of residential façades that require windows to be closed to achieve acceptable internal noise levels. This will be done using the principles of good acoustic design to avoid reliance on façade mitigation wherever possible. This is in line with the guidance highlighted in Paragraph 6.2 of Ms Steen’s proof.
- 6.3. The assessment has shown, through calculation and modelling, that residential development of 4 stories in height will be able to appropriately mitigate noise inside a typical bedroom at night. Of course if the Appeal is successful house builders will come forward with Reserved Matters applications that will be bound by the proposed planning conditions set to meet the required internal and external noise levels on the site. These criteria are recognised as being the SOAEL for residential development as detailed in Table 11.9 (page 136) of the ES Volume 8.

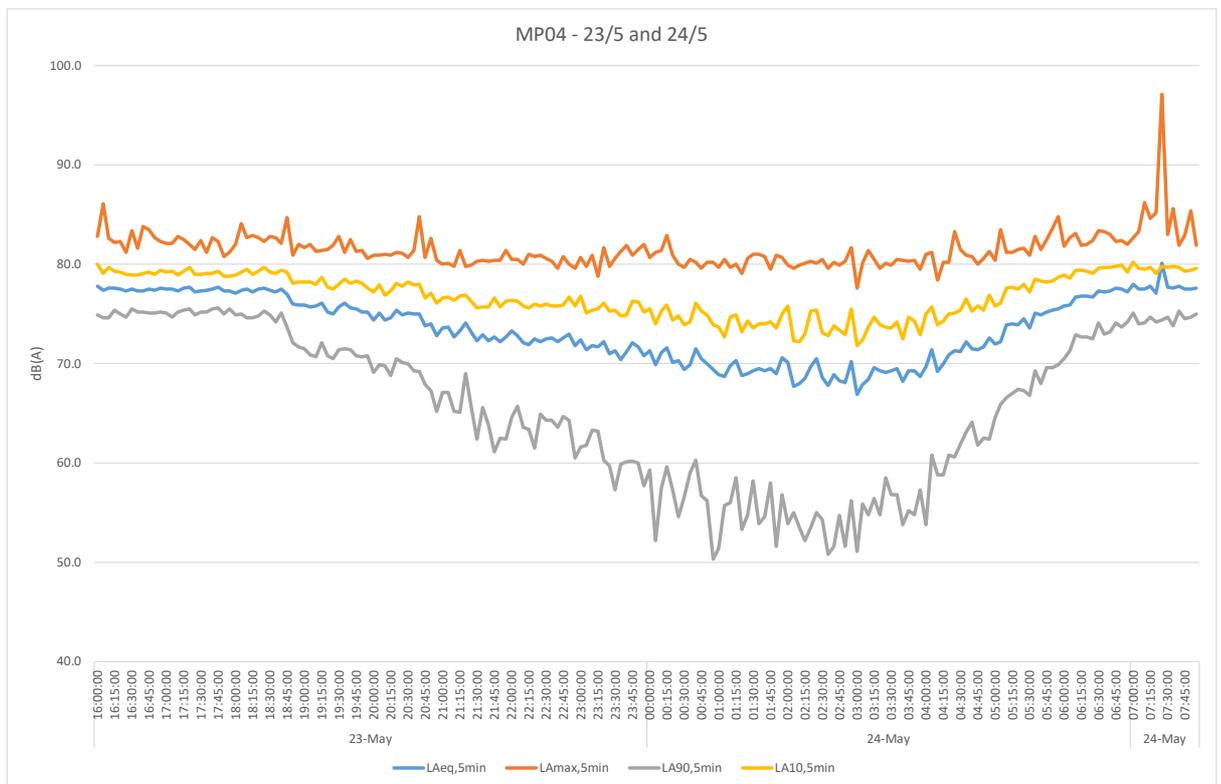
## 7. Section 7 – PPG24

- 7.1. PPG 24 has been removed as a guidance document since the introduction of the NPPF in 2012. ProPG and BS8233 are now recognised as the appropriate documents to assess a site for proposed residential development.

## 8. Section 8 – Road Closures

- 8.1. Page 49 of Ms Steen’s proof shows a table of scheduled road closures for maintenance on the M62 around the time of the unattended noise survey.
- 8.2. There is no evidence to show if the scheduled works were actually undertaken and the noise data, including audio recordings clearly demonstrate that the M62 was operational throughout the night.
- 8.3. Chart 1 shows a trace of all the data recorded, with a 5 minute resolution. The stable  $L_{Amax}$  events (orange line) are consistent with free flowing traffic of all classes. The  $L_{Aeq,5min}$  (blue line) data is typical of a free flowing motorway with a minimum between 0300 and 0400, as would be expected on a motorway.
- 8.4. The grey line is  $L_{A90}$ , background noise level and the yellow line is  $L_{A10}$ .

Chart 1: Noise levels measured at MP04 from 1600 23/5/19 – 0800 24/5/19



- 8.5. The measured  $L_{Aeq,8hr}$  of 72dB between 2300 and 0700 is what would be expected for a measurement at the side of an operational motorway overnight and also corresponds well with the predicted noise level from DEFRA noise mapping shown in Figure 3.

Figure 3 – Predicted night time noise levels from DEFRA noise modelling



### Summary of response to Section 8

- 8.6. Whilst ongoing maintenance works may have been scheduled for the night on the 23<sup>rd</sup> May, the data clearly demonstrates that the motorway was open and operational with levels measured being similar to those expected.
- 8.7. In my professional opinion the data is appropriate for its purpose.

## 9. Section 9 - Peel Hall Farm Kennels

- 9.1. The existence of the commercial kennels operation has not been ignored, and Miller Goodall have worked closely with the Local Planning Authority to develop a planning condition that protects the operation and puts a duty on the developers to fully consider noise from the kennels at the time of Reserved Matters.
- 9.2. The decision to consider the noise from the kennels by way of condition rather than at this outline stage is logical and good practice, and accords with the previous Inspector's comments regarding the kennels, in that it puts the onus on the agent of change, in this case the ultimate developer of the site or a part thereof, to assess noise from the kennels as they exist immediately prior to development occurring, this may be some years in the future.
- 9.3. In any even, of course if an assessment of noise from the kennels as it currently exists had been undertaken at this stage, the planning condition would still be required (and would be worded in the same way) as there would be scope for the kennels operation to change or grow substantially in nature, rendering initial assessment at this stage academic.
- 9.4. Monitoring and measurement of the kennel operations at this time would not change our management of the noise issues on the site as a whole and the conclusions would remain the same.

## 10. Section 10 – Human Rights

- 10.1. The human rights of future residents are protected by way of complying with national guidelines and standards (ProPG and BS8233). Compliance with the standards has been demonstrated in the ES and will be repeated at detailed design stage.