

23rd September 2021

Sasha and Richard Ayres
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Dear Sasha and Richard

This letter sets out our responses to the revised mitigation proposals issued by EDF on the 21st September 2021 and the discussions at the meeting on the 22nd.

This letter follows on from the following documents:

- Report B5393 2021-05-11
- Letter B5393 2021-08-27
- Letter B5393 2021-09-03

Several of the points raised below are repeated from these earlier documents.

Latest Proposals for Operational Noise Mitigation

The following comments are based upon the information supplied by EDF in emails from Tom McGarry on the 18th and 21st September 2021 and the discussions during the meeting held at Mollett's Farm on 22nd September 2021.

The latest proposals are a modification of those received and discussed at the meeting at Mollett's Farm on the 2nd September. Their expected acoustic benefits have been modeled and show a slight improvement over the previous version.

My main concern remains that, although the package is being presented as a means of mitigating noise, there appears to be little or no consideration of acoustics either in the specification or design of the package.

Noise is one of the most significant concerns of Mollett's Farm. I recall that they stated this in the previous meeting on 2nd September, that I attended, and again at the most recent one.

The first stage of addressing this concern should therefore be to establish some acoustic criteria for the performance of a noise mitigation package based on achieving noise levels at Mollett's Farm that are suitable to limit damage to the essential nature of the business (across its various forms). The existing noise model should then be used to inform the design of a mitigation package to achieve the required reduction. No acoustic performance criteria appear to have been applied to the design of the latest mitigation proposals.

As with previous information supplied by EDF there is still no recognition of the importance of the context of the landscape and noise sensitivity of the Mollett's Farm business in the determination of

the significance of effects. The supplied information mentions the “EIA Context” but by this they just appear to mean according to the basic tables in DMRB. As we have explained several times the significance of effects at Mollett’s Farm is greatly influenced by:

- The assessment is based on a comparison between incompatible wind conditions (from a less frequent condition to a more frequent condition), so the actual real change in noise levels at the house is greater than predicted.
- The orientation of the various buildings and outdoor elements of the business, which have evolved as a result of the existing road being to the north of the property. Relocation of the A12 road to the south of the property makes this orientation no longer effective in creating the tranquil location that is a USP of the business.

These factors mean that the effect of a given calculated noise level resulting from a road to the south of the Mollett’s Farm will be greater than the same calculated noise level resulting from a road to the north. So even if the calculated noise level from the proposed route is lower than the calculated level from the existing route, it has the potential to have a more significant effect on the business. So the conclusions in the EIA that the changes would not be significant in an EIA context are not correct.

In addition, it is worth noting that the impact of the predicted 44 dB L_{night} noise level on a camp site which trades on its tranquillity will be very significant. Tent canvas offers little to no resistance to the passage of sound and this level is far in excess of that recommended by the WHO for sleep, which is 30 dB L_{Aeq} . It would be reasonable to expect that sound levels inside a tent night exceed this level due to ‘natural’ sources, but a 14 dB exceedance due to road traffic noise would be very significant. Also the L_{night} indicator does not take into account the instantaneous maximum levels that will occur as a result of passing larger (or louder) vehicles. These maximum levels are likely to have a significant impact on the sleep of people in the camping field.

Therefore, the process should start with a recognition that the effect of noise from the currently proposed route is significantly adverse and needs to be reduced. In my review report of the 11th May I estimated that a reduction in levels of at least 5 dB would be required, based on the predictions at the house. I would suggest that this should be the target criterion for the mitigation package. The latest mitigation proposals are predicted to give a 2.7 dB reduction at first floor bedroom height. However, the house has bedrooms on the second floor and the holidays lets have some Velux windows high up in their roofs. Barrier effects will be slightly reduced at these heights and the modelling should reflect this.

It also appears that there was no acoustic input into the design process, which appears to have been primarily informed by the constraints of the currently proposed red line, the possible requirements of deals with other landowners and a range of concerns expressed by the local authorities. The noise model only appears to have been used to evaluate the expected performance of the mitigation package once it had been designed.

Bearing in mind that the primary purpose of this mitigation package is to deliver noise reductions for Mollett’s Farm it would be usual practice for acoustic considerations to be preminent in the design

process, making use of the noise model to identify the segments of the road that are contributing the most noise and mitigating them accordingly.

Clashes with other considerations should then be considered and addressed carefully bearing in mind the impact that any resulting changes or compromises might have on the overall noise reduction performance. For example, if one of these other considerations results in a gap in the barrier at a critical location then the benefits of bunding in other areas will be greatly undermined. The model can identify such issues and assist in the identification of alternatives.

There appear to be several examples where this consideration of other issues has resulted in detrimental impacts on the acoustic performance of the proposed mitigation:

- a) There is no bund or barrier north of footpath 29. This section of the road is in the shallowest cutting and includes the area in which vehicles will be accelerating away from the roundabout. We need to understand the impact of the absence of a noise barrier in this area on the noise at Mollett's Farm. It may be that it is severely limiting what can be achieved with mitigation in other areas. It should be noted that the proposed temporary and/or permanent barriers around the construction compound are not in a location that will offer any significant acoustic benefit at Mollett's Farm
- b) There is a gap between the top edge of the western side of the cutting and the proposed bund for the entire length of the bund. The effectiveness of a noise barrier increases the closer it gets to the source. The presence of the gap is therefore reducing the effectiveness of the bund compared with what could be achieved if the bund was placed immediately adjacent to the cutting edge.
- c) The previous design of the access to the footbridge (for footpaths 3 and 4) has been retained. This results in a gap in the barrier due to the slope of the north-side ramp. From an acoustics perspective, this appears to be very badly located as it means that the bund is effectively absent on the line from the holiday cottages to the rising, almost radial, section of the road south of the bridge. The increased effective distance between the barrier line and the roadway due to this radial orientation will already be reducing the effectiveness of the barrier in this area, so this is a location where it would be expected that increased barrier height might be required.

These issues may have significantly undermined the acoustic performance of the currently proposed mitigation package. This is something that could be established by 'drilling down' into the model outputs. In our view the currently proposed package does not offer sufficient noise reductions to address the significance of effects on Mollett's Farm. It may be that addressing the three issues above could deliver the necessary reductions. The model can be used to assess this or to identify the most efficient places to add additional mitigation to achieve suitable results.

We have requested more detailed model output information to enable us to form a view on this.

Construction Noise

The EDF noise assessment identifies that during parts of the construction of the new road the noise levels at Mollett's Farm will have a significant adverse impact. This, however, is only in the residential context upon which the assessment was based. The contextual issues that influence the significance of the impacts and effects of operational noise also apply to some degree to the construction noise, in particular the orientation of the business to take advantage of the tranquility of the land to the south and southeast. Therefore, it should be noted that the noise levels during construction will render Mollett's Farm incapable of delivering its established tourism experience.

Construction of a bund to mitigate operational noise effects is likely to result in even higher construction noise levels at Mollett's Farm than those in the EIA (as the work will be closer) and increase the time for which noisy work will be undertaken in the vicinity.

No information has been provided on any acoustic rationale behind the design of the temporary bunding proposed for the western and southern edges of the temporary contractor's compound.

Questions Raised at Meeting on 22/9/21

EDF helpfully suggested yesterday that questions I raised at the meeting be put to their noise expert, which I have done. I have re-phrased them in this report so as to enable the ExA and the Councils to understand the context better.

1. Is it now accepted by EDF that our analysis of the proper application of the DMRB is correct? If not, then you as our clients (and no doubt the ExA also) need an explanation from EDF and the Councils why not. In particular, the advice we have given you is that sections 3.50 to 3.60 of LA111 of DMRB require that the acoustic context of the proposals and individual receptors must be taken into account when assessing the significance of effects.
2. Is it acknowledged by EDF that similarly that the specific acoustic context of Mollett's Farm (business USPs, evolved orientation of holiday accommodation and site layout etc.) acts to increase the significance of effects of noise from the proposed TVB route?
3. For some reason EDF have not supplied you with an updated version of Table 4 (as in the previous documents). You need one to be provided.
4. The daytime levels predicted by EDF for the camping field are L_{A10} . For an assessment of impact on amenity in the daytime L_{Aeq} (or L_{day}) would be more relevant, we advise, and you need to know what is the predicted L_{Aeq} .
5. Is it recognised by EDF that the predicted night-time noise levels in the camping field for the TVB render it unsuitable for that use?
6. Was the acoustic model used to optimise or advise the design process for the mitigation package or was it simply used to model the expected performance of a package derived in some other way?
7. Why is there a gap between the bund and the edge of the cutting?

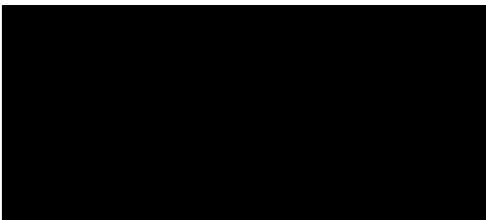
8. What is the explanation for the roadside barrier (bund) not continuing north of the public footpath FP 29 (due east of Mollett's Farm and proposed for an at grade road crossing) and what is the impact of this absence on noise levels at Mollett's Farm?
9. What acoustic criteria or acoustic inputs were applied to the design of the temporary bund around the construction compound and its proposed permanent replacement and what are their predicted acoustic benefits?

There simply is not now sufficient time for us (or any other third party) to create a parallel acoustic model of the TVB. For satisfactory consideration of the issues by us and you (and, we suggest, the ExA and the Councils), we therefore need the following information by the end of September 2021:

- (a) The exact location or locations of house receptors used in the modelling i.e. which façade of the building is it (are they) on for the before and after scenarios?
- (b) Predictions for the correct bedroom height (the bedrooms have been modelled at first floor height, whereas the house has rooms on the second floor).
- (c) A drawing showing the road segments used in the model and the table of the noise contributions from each segment so that we, the ExA and the Councils can compare them and identify where improvements to mitigation are needed, beyond what has been suggested in the revised landscape proposals.

As ever, if you would like to discuss any aspects in greater detail or have any questions you would like me to answer, I will be delighted to do so.

Yours sincerely



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