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Your ref: OBJ/9

Dear Dr Michael Drolet and Dr. Rosalind Thomas

Proposed Chiltern Railways (Bicester to Oxford Improvements) TWA Order

You have objected to the application for the above Order and this letter is a further response to your concerns about the effect of noise and/or vibration of the proposed Scheme and its impact on your property.

In response to the concerns in your letter of objection regarding noise and vibration a letter was sent on the 29 July 2010, which addressed these issues.

- Vibration and Risk of Structural Damage
- Noise
- Commitment to Mitigation

Since the Environmental Statement ("ES") was published and the letter of 29 July, further refined noise modelling and monitoring have been carried out.

Chiltern Railways is committed to using the Best Practicable Means to design the railway so as to avoid significant noise and vibration impacts. You have recently been sent the *Chiltern Railways (Bicester to Oxford Improvements) TWA Order Noise and Vibration Mitigation Policy (October 2010)*, which sets out in practical detail Chiltern Railways' commitment to control noise and vibration impacts.

The purpose of this letter is:

- to report the noise effects specifically at your property based on the refined noise modelling and monitoring carried out since the ES;
- to explain the noise mitigation that will be provided as a result of the Noise and Vibration Policy being implemented, noting that the final form of mitigation will be determined during detailed design before the Scheme is operational; and
- to explain the residual effect of noise with this mitigation in place.

The effect of the noise from the trains on persons at a property in an area depends on the nature of the area being considered. In built up areas, where noise levels are already high, the effect of a new noise source tends to depend on the change from the existing ambient noise level. In more open areas, with very low ambient noise levels, the effects of a new noise source on people tends to depend on how loud the noise is in isolation. So, in such open areas, the noise from the trains is compared to an absolute threshold level, and the impact is assessed based on the amount by which the train noise is likely to exceed that level.

The effect of the predicted noise from trains on your property assessed below is based on your property being situated in an open area since current ambient noise is low.

Table 1 Predicted Noise Impacts of the Scheme (Based on the Refined Noise Modelling and Monitoring)

Location	Noise Impact over Period Shown (dB)	
	Day	Night
OBJ9		
1 Existing noise level ($L_{Aeq, Period}$)	49	39
2 Future noise impact without mitigation	0	2
3 Mitigation proposed	2m barrier	
4 Future noise impact with this mitigation	0	1
5 Change in noise impact as a result of mitigating the scheme (item 4 compared with 2).	0	1

At your property an exceedance of 1 dB over night-time noise threshold has been predicted as the impact after a mitigation scheme based on the use of noise barriers. Since this impact is not significant further mitigation is not required.

To explain what this means, the smallest change in noise level that is noticeable under normal listening conditions (ie not in a laboratory) is 3 dB. Therefore, the noise change at this property has been classed as a "slight" noise impact because it is not expected to have a noticeable effect even at first floor level outside your property. The barrier will be more effective at ground floor level.

In terms of vibration Page 6-42 of the ES highlighted that levels of ground vibration are not expected to exceed the stringent assessment criterion beyond approximately 10 m from the tracks. Your property is beyond this distance from the tracks and vibration is not expected to result in significant disturbance based on these stringent thresholds. Measurements of existing vibration carried out since the ES was written have confirmed that no structural or cosmetic damage to property will occur as a result of train vibration whether within 10m of the line or further away.

We hope that this information answers your points of concern and that you will be able to remove your objection to the Scheme.

Yours sincerely,

Ian Gilder

Ian Gilder
Head of Planning

For and on behalf of the Chiltern Railway Company Ltd

