

**PROPOSED CHILTERN RAILWAYS (BICESTER TO OXFORD IMPROVEMENTS)
ORDER**

CHILTERN RAILWAYS' REBUTTAL PROOF OF EVIDENCE

IN RELATION TO

THE OBJECTION AND EVIDENCE OF

DR MICHAEL DROLET & DR ROSALIND THOMAS

1 Introduction

- 1.1 This rebuttal proof of evidence has been prepared on behalf of the Chiltern Railway Company Limited (Chiltern Railways) to respond to particular aspects of the objection and evidence of Dr Michael Drolet & Dr Rosalind Thomas.
- 1.2 In particular, Dr Michael Drolet & Dr Rosalind Thomas have raised new points in a Statement dated 26 October 2010 and provided for the Inquiry, that Chiltern Railways had not previously addressed in the proofs of evidence prepared by their witnesses, which were submitted to the Inspector and to certain objectors on 1 October 2010.
- 1.3 It is not intended that this rebuttal proof should repeat material that the witnesses for Chiltern Railways have already covered in their evidence. Cross-references to relevant paragraphs of those witnesses' proofs of evidence are given below, where appropriate.
- 1.4 It is intended that this rebuttal proof should be a composite response by Chiltern Railways to the points raised in the evidence of Dr Michael Drolet & Dr Rosalind Thomas and referred to above. In this respect, for cross-examination purposes, the name of the Chiltern Railways witness who is responsible for each aspect of this rebuttal proof is given at the beginning of each section below.

2 Defined Terms

- 2.1 The following defined terms are referred to throughout this rebuttal proof:

"the Correspondence" means correspondence in the form of emails exchanged between Chiltern Railways and Dr Michael Drolet & Dr Rosalind Thomas dated 23 January 2010, 28 January 2010, 29 July 2010, 18 October 2010 as set out in Appendix A;

<i>“the Objector”</i>	means Dr Michael Drolet & Dr Rosalind Thomas;
<i>“the Objector’s evidence”</i>	means the objection letter and the Statement of Dr Michael Drolet & Dr Rosalind Thomas;
<i>“the Order application”</i>	means the application for the proposed Order submitted on 6 January 2010 and the Proposed Modification dated 9 September 2010; and
<i>“the proposed Order”</i>	means the proposed Chiltern Railways (Bicester to Oxford Improvements) Order.

3 Chiltern Railways’ Rebuttal of the Objector’s Evidence

Context

3.1 The Objectors live at 3 First Turn, Oxford some 31 metres from the railway.

Adequacy of Consultation, Ian Gilder

3.2 The Objectors are concerned that Chiltern Railways has stated that they have sought to consult with affected landowners and interested parties. The Objectors state that they have received occasional letters responding to objections, but state that they have had no direct contact with any representative from Chiltern Railways either by telephone, a visit to the property and that no one has taken noise or vibration readings from their property.

3.3 Chiltern Railways has, on three separate occasions, written to the Objectors in response to their concerns and Chiltern Railways believe that it has adequately sought to engage with the Objectors. Chiltern Railways has generally sought to respond to objectors by correspondence but not received any response to any of the three letters sent to the Objectors. Clearly there are a number of residents of Wolvercote and North Oxford whose concerns are similar and it was an appropriate approach to provide standard answers to generic concerns. Where objectors have responded to Chiltern Railways correspondence or sought meetings, Chiltern Railways has responded accordingly.

3.4 As the Objectors acknowledge, the rationale for selecting a representative set of noise receptors for modelling is set out in the Environmental Statement, on page 6-11 of Volume 2 [CD/1.16]. It is not necessary to visit each individual property in order to carry out a robust noise assessment and predictions take into account the local circumstances.

Level of Freight Traffic, Allan Dare

3.5 The Objectors note that the expense in upgrading the line is considerable, and that Chiltern Railways has been seeking to ensure that the upgrade remains within budget. The Objectors state that this consideration is causing them concern because at every stage Chiltern Railways has been careful to separate Phases 1 and 2 of the Order Scheme and, where matters concerning noise and vibration arise, leaving it to EWR and Network Rail to undertake noise mitigation works should they deem this

necessary. The Objectors contend that it is Chiltern Railways' upgrading of the line which will inevitably result in an increase in freight traffic. The Objectors state that by emphasising the uncertainty of Phase 2, Chiltern Railways is not acting responsibly in dealing with objectors.

- 3.6 The Objectors believe that the Order Scheme will lead to increased freight traffic given the pressures on roads. The Objectors believe that Chiltern Railways should accept some responsibility for the impact this increase in freight traffic will have on those living along the line.
- 3.7 Freight train operations are referred to in Allan Dare's evidence [CRCL/P/2/A] and Appendix [CRCL/P/2/B].
- 3.8 The frequency of freight trains in Phase 1 is expected to be the same as today, since Phase 1 does not provide for longer distance links except to the Chiltern mainline, which is not used by freight services. The assumptions for Phase 1 are, therefore, realistic.
- 3.9 Phase 2 is dependent on the East West Rail (EWR) project proceeding. The planning assumption for EWR is one freight train path per direction per hour. This assumption takes account of the projected increase in rail freight traffic nationally, and has been discussed by the EWR Consortium with Network Rail and the Department for Transport (DfT) in the context of the DfT's 'Strategic Freight Network' report, which recommends the proposed use of the Oxford-Bicester-Bletchley line for container trains from Southampton to the Midlands.
- 3.10 The length and weight of freight trains for Phase 2 are, therefore, based on those for existing trains from Southampton. Day-to-day variations in demand mean that typically not all train paths are used, and the ES therefore assumes that only 50% of paths will actually be used on any given day. This is line with experience with freight operations on the main line through Oxford, and on the existing Oxford to Bicester line. Chiltern Railways, therefore, believes that the assumptions used are a "reasonable worst case" and are 'taking responsibility' for dealing with any potential environmental impacts of this.
- 3.11 The Noise and Vibration Mitigation Policy [CD/1.29] will apply to both Phase 1 and Phase 2 of the Order Scheme.

Noise Impacts, Michael Fraser

- 3.12 The Objectors note that correspondence from ERM (dated 29 July and 18 October 2010) on behalf of Chiltern Railways sets out noise assessments of Phase 2 noise levels of below 59 dB as being 'just noticeably higher' than the 55 dB threshold in PPG24, 'below which significant "community disturbance" is not expected'.
- 3.13 The Objectors state that Michael Fraser, in his proof of evidence [CRCL/P/9/C at paragraph 1.10], has stressed that '*Chiltern Railways is going beyond what the law strictly demands of them by operating a modern and highly desirable railway service, by offering mitigation at noise levels below statutory noise levels*'. The Objectors dispute the analogy that 50 dB can be compared to conversational speech as the noise of a train is unwanted and is an irritant, thereby a form of pollution. The

Objectors refer to paragraph 1.23 of Michael Fraser's proof where he states that '*a change of noise of 10 dB is generally judged to be a subjective doubling of noise*' but the Objectors state that this description fails to indicate that a person's actual exposure to noise doubles with every three decibel increase. The Objectors believe that this presents a less acceptable situation than that offered in Michael Fraser's evidence that '*changes in environmental noise levels of less than 2 to 3 dB are not noticeable to most people*'. The Objectors are concerned that contextualising noise as conversation, or a busy office, is an attempt by Chiltern Railways to minimise their responsibility to those who are directly affected.

- 3.14 The Objectors refer to correspondence of 29 July 2010, when ERM stated that daytime noise levels at Wolvercote School, the closest receptor to their property would be 59 dB, which is only 4 dB (just noticeably higher) than the 55 dB threshold, below which significant '*community disturbance is not expected*'. The Objectors are concerned that the 55 dB figure exceeds by 20 dB (four times as loud) the current WHO guideline for average classroom noise, which is 35 dB. The Objectors go on to refer to later passages in the letter, which states that residents will experience less noise or vibration than Wolvercote School and notes that no reason has been given to explain this. The Objectors state their concern about noise impacts on their ability to work at home with the windows open and enjoyment to be derived from their garden.
- 3.15 The noise levels that were referred to in paragraph 3.11 in this document were presented in a letter sent by ERM to the Objectors on 29 July 2010, and refer to unmitigated values at the nearest receptor where predictions were available, which was Wolvercote Primary School. This was used to estimate the levels at the Objectors' property, and to conclude that with mitigation the levels would be reduced to below the impact threshold levels both during the day and at night. Further predictions have been carried out at 3 First Turn since that time, and these have confirmed the estimated levels in earlier correspondence that the train noise levels are below the impact thresholds even without noise mitigation.
- 3.16 The examples of various noise levels have been provided to help members of the public to understand the inevitably technical issues based on a range of common noise sources. This is not intended to specifically compare the character of one noise source to another. Whilst the Objectors' suggestion that exposure to noise doubles with every 3 dB increase this is correct in as far as the amount of noise energy doubles. However, the subjective impression (ie loudness) does not vary in the same proportion, and a 3 dB change is, in terms of loudness, a small noise change. For a doubling of subjective loudness a greater change (10 dB) is required. I believe these to be reasonable descriptions of noise changes which are generally recognised.
- 3.17 The internal noise levels that are appropriate for classrooms are given in Building Bulletin 93 (<http://www.teachernet.gov.uk/doc/5649/ACF12DC.pdf>) which gives the relevant standards for classrooms in the UK. It quotes 35 dB as a desirable design level for noise levels inside classrooms. However, this is a level inside the classroom rather than external to the building. The comparison with the 55 dB threshold in the noise assessment which applies outside a building is not applicable as the level of noise inside a classroom will be lower than that outside. The reduction between

noise levels outside and inside the building will depend on the glazing that a school is fitted with during the design stage, and the layout of the school. The type of glazing at the school or its layout have not been surveyed, but even for partially open windows the reduction (outside to inside) would be of the order of 15 dB, which would result in noise levels in the school that are only marginally above the design standards for new schools.

3.18 It was explained in the letter to the Objectors of 29 July 2010 that noise at their property would be lower than at Wolvercote Primary School. The reason for this is that the railway cutting is deeper, there is more screening from intervening buildings and First Turn Bridge also screens the noise from the railway. Subsequent refined noise modelling has confirmed this.

3.19 The standard of 55 dB during the day is based on PPG24 [CD/3.4], and is a good standard for residential property, which would in many cases have gardens. It is not expected that noise levels of this order will interfere significantly with the use of the Objectors' garden.

Operational Noise Mitigation, Michael Fraser

3.20 The Objectors note that despite earlier assurances that daytime noise levels will not be adverse, Chiltern Railways has since made a commitment to build a noise barrier alongside the track facing Wolvercote Primary School. The Objectors note that Chiltern Railways has resisted any suggestion that this barrier should be higher than two metres. The Objectors believe that where such barriers already exist in Oxford, ie. near the Waterways development, they afford very little protection against noise and notes that barriers alongside motorways are significantly higher than two metres.

3.21 In relation to the proposed noise mitigation measures, the Objectors are seeking assurance that any noise barrier installed will be at least three metres high and that such a barrier will cover both sides of the track. The Objector is seeking a concrete noise barrier as they believe it to be the most effective medium for minimising noise levels.

3.22 Noise impacts are not expected at the Objectors' property as described above even without mitigation. Therefore, increases to the assumed heights of noise barriers are not required. It should be noted that the exact height of noise barriers will be determined during detailed design by the contractor and could, where necessary, be higher than two metres.

3.23 The engineering details will be developed during detailed design, but timber barriers have been placed next to major roads and mainline railways in the UK without the need to provide tunnels or earth embankments. A close boarded timber barrier can be designed to have sufficient surface mass to sufficiently attenuate the noise to the levels that are predicted for locations where these are required.

3.24 *Construction Noise Impacts and Mitigation, Michael Fraser*

3.25 The Objectors raise serious concerns with the programme of engineering works that will need to be undertaken resulting in a significant night-time noise impact for a

- 3.26 Mitigation of noise from construction (including the works at the Wolvercot Tunnel) is described on page 6-44 of the ES [CD/1.16]. However, mitigation will be considered in detail during the detailed design, and as noted in paragraph 3.6 of the Proof of Evidence of Michael Fraser [CRCL/P/9/A], further reductions may be possible through alternative mitigation such as carrying out the works during the day, or as developed through the Section 61 consent process as set out in Code of Construction Practice [CD/1.24], which will involve detailed consideration of the mitigation with the local authority. The contractor is obliged under this procedure to adopt 'best practicable means' to reduce noise impacts.

Vibration Impacts, Michael Fraser

- 3.27 The Objectors note that while Chiltern Railways has indicated that current vibration levels are well within statutory guidelines, they experience vibration in their home when freight trains pass and the property has suffered some cracking as a result. The Objectors claim that the railway at Upper Wolvercote originally had two lines but was reduced to one line due to 'excessive damage to surrounding houses'.
- 3.28 The Objectors also note that while Chiltern Railways has indicated that they have no record of complaints to British Rail about structural damage caused by vibration they are personally aware of damage through vibration at 5 First Turn (the other half of their building) and Bladon Drive. The Objector presents anecdotal evidence from residents who lived near the line at the time when it was double-tracked who recollect that structural damage had been caused to the First Turn bridge and properties fronting the line, the building, 5 First Turn required its foundations to be re-built as a result of vibrations and a neighbour in Bladon Drive had to reinforce his roof beams in order to prevent further cracking to his walls. The Objectors state that they are aware, from their local councillor, that Oxford City Council was aware that many houses in St. Peters Road were damaged by vibration despite the lack of documentary evidence. The Objectors state that a lack of a written complaint does not prove the absence of damage. The Objectors note that they have not been visited by a representative of Chiltern Railways to measure vibration, or to inspect the property.
- 3.29 The Objectors are seeking a commitment by Chiltern Railways to provide extra foundations, ballast and other measures to mitigate potential vibration impacts. The Objectors believe that the absence of proper ballast was one of the reasons for the excessive vibrations on the line when it originally was double track.
- 3.30 Although buildings may display structural defects such as cracking, this may be due to a number of factors, and it has not been possible to locate any evidence along the railway that damage is related to vibration. The steps that have been taken to identify records to locate claims of damage are discussed in the Proof of Evidence of Michael Fraser [CRCL/P/9/A] in paragraph 5.65 in response to Professor Korsunsky [OBJ 295].

- 3.31 In terms of vibration, Page 6-42 of the ES [**CD/1.16**] highlighted that levels of ground vibration are not expected to exceed the levels in BS 6472 at or below which the probability of adverse comments is low (page 6-8) beyond approximately 10 metres from the tracks. The Objectors' 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 10 metres of the line or further away. These are set out in Appendix MF 3 in **CRCL/P/9/B**. They also confirm the view that ground conditions are not likely to result in unusual vibration propagation conditions with the new track in place.

Structural Survey, Michael Fraser

- 3.32 The Objectors request an assurance that their home will be surveyed prior to the commencement of works to enable Chiltern Railways to measure and, therefore, compensate for any possible structural damage.
- 3.33 Since vibration damage from trains is considered unlikely, as explained above, Chiltern Railways does not consider that a structural survey is required.

Train Speeds, Stephen Barker

- 3.34 The Objectors express concern at Chiltern Railways' intention to run passenger trains on the line at speeds of 75 mph because of likely increases in noise and vibration and the potential for increased disruption due to increased frequency. The Objectors note that they currently experience vibration impacts and hear the noise of freight trains running on the line at relatively slow speeds and they are concerned that if speed restrictions are eased then freight services will run at higher speeds.
- 3.35 The Objectors state that it is essential that existing speed limits for freight services are maintained, and that passenger services should be kept to 50 mph in built up areas. The Objectors state that Chiltern Railways has produced no convincing evidence that a half hourly Bicester to Oxford service would be impossible with a 50 mph speed restriction through Wolvercote. The Objectors acknowledge that whilst a half-hourly service may be desirable from Chiltern Railways perspective, there is no reason why a service every 32 or 35 minutes would be impossible. The Objectors state that not to accommodate this would indicate a desire by Chiltern Railways to place profit before the environment and the well-being of those who live along the line.
- 3.36 The issue of train speeds is discussed in Section 5 of Stephen Barker's proof of evidence [**CRCL/P/6/A**]. A speed restriction would not only adversely impact on journey times but would also be unacceptable for timetable reliability. The speed limits proposed by Chiltern Railways are needed to offer attractive journey times; to allow the efficient use of single track sections; to maintain adequate turn-round times at Oxford station; and to give a degree of flexibility in train timings to fit in with the mainline timetable between Bicester South Junction and London Marylebone.

- 3.37 Any decrease in the speed of passenger services would reduce the turn-round time at Oxford. As the turn round time acts as buffer to prevent delays to an Oxford-bound train affecting its return working to London, any reduction in the turn-round time increases the possibility of delays being carried forward onto the return working. Should the return working depart late, it is likely to cause delays to other services further along its journey. The ability to operate the proposed train service reliably is critical to the viability of the scheme. The option of running, for example, a 32 minute interval service is not feasible. Train services timetables are largely based around a repeating hourly pattern. This makes the task of fitting together the diverse range of services that operate on the national network substantially easier. It is necessary for the Marylebone to Oxford services to follow this convention if they are to be fitted in between other services on the London Marylebone to Birmingham Moor Street line south of Bicester.

Noise and Vibration Mitigation Measures, Michael Fraser

- 3.38 The Objectors are concerned that the mitigating measures for noise and vibration will not be adequate. They state that Chiltern Railways has made a commitment to these measures, where applicable, but that this commitment appears to be at their discretion and as such is not guaranteed. The Objectors question ERM's conclusion that only six houses along the upgraded line qualify for noise mitigation measures.
- 3.39 The Objectors are seeking noise mitigation measures to reduce noise impacts on their property. The Objectors make reference to the possibility of screening by structural planting.
- 3.40 Where potential noise or vibration impacts are predicted, effective noise mitigation measures such as track based mitigation, noise barriers, or noise insulation will be applied, which will meet or exceed statutory requirements. The six dwellings referred to by the Objectors are those which were assessed as likely to qualify for statutory noise insulation. Since publication of the ES, Chiltern Railways has developed a Draft Noise and Vibration Mitigation [CD/1.29]. This document reflects the commitments that were made in the ES. The Draft Noise and Vibration Policy will be applied by both Chiltern Railways and the promoters of EWR, if and when it proceeds. This will be enforced through a planning condition.
- 3.41 Whilst planting can offer visual benefits, localised planting will not reduce noise levels significantly, and therefore is not proposed as a noise mitigation measure.

Frequency of Service, Allan Dare

- 3.42 The Objectors are concerned that services beginning at 05.30 and ending at 00.30 would have a serious impact on the neighbourhood. They believe that the proposed frequency of service, of six trains each way per hour, would adversely affect the locality, and especially the local primary school.
- 3.43 As noted in Allan Dare's evidence [CRCL/P/2/A] the train service in Phases 1 and 2A will consist of two Chiltern Railways passenger trains each hour each way, with a less frequent service in late evenings. This meets the requirements of the Secretary of State for Transport, as set out in Appendix 4 to that evidence [CRCL/P/2/B].

Freight services in Phases 1 and 2A will be similar to those currently operated. At present there are three eastbound and four westbound freight train paths per day.

- 3.44 Should Phase 2B proceed it is envisaged that the East West Rail service will add a further two passenger trains each hour, each way. This is in line with the frequency of service that might normally be specified by the Secretary of State for a route of this nature. As with the Chiltern Railways service, this would be likely to be less frequent in the late evening. If the East West Rail project and Phase 2B proceed, additional freight trains may run. The East West Rail planning assumption is for one freight train path each hour each way, including the existing freight services; however as noted in Allan Dare's evidence, typically only a proportion of allocated freight train paths are used on a given day.
- 3.45 The potential for an additional cross-country passenger train each hour, each way was included in the Environmental Statement as a "worst case". However, the East West Rail business case does not now include these services.
- 3.46 The maximum likely train service is thus five trains an hour each way, with fewer trains in late evenings and when freight train paths are not used.

Environmental Damage, Ian Gilder

- 3.47 The Objectors are concerned that the Order Scheme will seriously degrade the local environment, particularly in relation to the loss of trees and vegetation. The Objectors acknowledge that Chiltern Railways has stated its intention to replant, but is concerned that the measures are entirely at their discretion. The Objectors are seeking further clarification as to how the Order Scheme will enhance the natural environment in addition to mitigating air and noise pollution.
- 3.48 All construction work will take place within the standards set in the draft Code of Construction Practice [CD/1.24]. This Code of Construction Practice will be submitted and approved by the local planning authority under planning condition 15 [CD/1.12.1] to ensure work carried out minimises impact on the environment. There are a number of features associated with this Code that ensure Chiltern Railways do not act at 'their discretion' such as the appointment of a Liaison Officer, complaints hotline, an interactive website and complaints log.
- 3.49 As part of the Order Scheme, Chiltern Railways will commit to delivering identified landscaping schemes along the railway as identified in Planning Condition 5 Landscaping and Condition 7 Implementation and Maintenance of Landscaping [CD/1.12/1] which will provide enhancement to the natural environment at those locations. Other measures, including ecological mitigation and enhancement will also take place, where appropriate.

Property Valuation, Richard Caten

- 3.50 The Objectors are concerned about the impact the proposed upgrade on the value of their property. The Objectors are seeking a firm commitment from Chiltern Railways to compensate them for any loss in the value to their property, or changes they may have to make to their property to reduce the impact of noise. The Objectors are seeking a full commitment from Chiltern Railways that their property will be surveyed

before and after engineering works, and that they will be compensated for any damage caused.

- 3.51 Compensation is dealt with by the statutory compensation code that is brought into effect by the Order when made, as discussed in Richard Caten's evidence [CRCL/P/11/A]. Damage to property is likewise dealt with by the code, or by direct action against the contractor if it exceeds the statutory authorisation of the Order. In this situation the Objectors are in the same position as for any works carried out in the vicinity of their property.

4 Conclusion

- 4.1 This rebuttal proof has sought to deal fully with all of the Objectors' outstanding concerns. Noise levels at their property will not be such that, even when Phase 2 takes place, any noise mitigation measures are required under the terms of the Noise and Vibration Mitigation Policy.
- 4.2 The Objectors refer to anecdotal evidence that there was property damage caused when the line was double track before 1973. Despite strenuous efforts, Chiltern Railways has been unable to verify these or any other claims made about vibration damage along the railway in the past. There is well documented evidence that the levels of vibration, even from freight trains, will be far below the levels at which even cosmetic damage to property might occur. This is the case not only at the Objectors' property but generally throughout the route and beyond. No mitigation measures are likely to be needed at this property to meet the standards set in the Noise and Vibration Mitigation Policy [CD/1.29].

Appendix A

CRCL/R/OBJ9

Relevant Correspondence
between Chiltern Railways
and the Objector

RECEIVED IN

27 JAN 2010

TWA ORDERS UNIT

OBJ/9

3 First Turn,
Upper Wolvercote,
Oxford, OX2 8AG.

The Secretary of State for Transport,
c/o Transport and Works Act Orders Unit,
Dept for Transport, Zone 1/31,
Great Minster House,
76 Marsham St,
London SW1P 4DR.

January 23rd., 2010.

Dear Sir,

Proposed Chiltern Railways (Oxford to Bicester) Order.

I am writing in response to the invitation to comment on these plans which was put up in our street on about 6th. January. We live in the second of two semi-detached houses which form one building right next to the single track railway. We own no.3 First Turn, and the other half of the building is no.5, just before the railway bridge.

We welcome the proposed plan to use the railway more than it is being used at the moment. We are, however, concerned that all efforts should be made to keep the levels of vibration and noise to the minimum. As you know, the railway going through Upper Wolvercote did originally have two lines but was reduced to one line because of excessive damage to surrounding houses. I wrote to Chiltern Railways about this on 29 September, when the plans were explained and distributed to residents, but I received no reply.

I outline our concerns:

1. Vibration. We already feel vibrations in our house when the trains currently use the line. This occurs with the single line which exists at the moment, and particularly with heavy but slow freight trains. We are most concerned that with more, and faster trains, and more frequent services, there would be considerably more vibration and excessive damage to our house and other houses along the track.

We would like to have some clear statement and assurance that extra foundations, ballast and other measures to reduce the extent of vibrations were in the plan. The absence of proper ballast was one of the reasons for the excessive vibrations on the line when it was a double line.

2. Noise. We would like to see extensive measures to reduce noise for the proposed double railway line. Whether this should consist of trees, or other vegetation or other measures, we think that it is absolutely essential to have some plans to reduce the impact of the noise. Even now the trains are noisy, and they go slowly.


3. Structural Survey. We would like to have assurances that proper surveys will be done of our house before works begin to enable Chiltern Railways to measure any damage, and to compensate us if there is structural damage, which seems highly likely.

My wife and I are extremely concerned that the noise and vibration will be intolerable, and that considerably structural damage will occur.

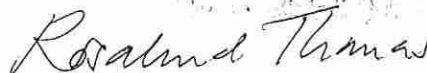
We look forward to hearing from you,

(P.T.O)

Yours sincerely,



Dr. Michael Drolet



Dr. Rosalind Thomas

cc. Mr. Alan Darr,
Development Director,
Chilton Railways

Dr. Michael Droler and Dr. Rosalind Thomas
3 First Turn
Wolvercote
Oxford
OX2 8AG

28th January 2010

Dear Drs. Droler and Thomas

Proposed Chiltern Railways (Bicester to Oxford Improvements) Order

Thank you for your letter of 23rd January, which I understand has also been formally submitted to the Department for Transport.

I very much appreciate your support for making better use of the railway through Upper Wolvercote.

On a point of detail, whilst you are correct in that the railway did originally have double track, this was removed in the 1970s on financial grounds. Between 1968 and 1987 the line was only used by a few freight trains each day, and neither these nor the limited passenger service that was reinstated in 1987 justified the retention of double track. Likewise when some years ago the remaining line was slewed towards the middle of the trackbed through the tunnel, this was in order to accommodate the greater height of the shipping containers then coming into use, and not on account of noise or vibration.

Equally I appreciate the issues that you raise; we will give these detailed consideration, and revert to you in due course. Our Consultation Team will also be contacting you, with details as to how noise and vibration are addressed in the Environmental Statement which forms part of our Transport & Works Act Application.

In the meantime please be reassured that we take your concerns very seriously.

Yours sincerely

Allan Dare
Strategic Development Manager

29 July 2010

Dr Drolet and Dr Thomas
3 First Turn
Upper Wolvercote
OX2 8AG

Ref: OBJ/6

Direct lines
Telephone 020 3206 5340
Email
charlene.baker@erm.com

Dear Drs Drolet and Thomas

Proposed Chiltern Railways (Bicester to Oxford Improvements) Order

Thank you for your letter of the 23rd January submitted to the Department for Transport. I am also aware of the response sent from Allan Dare of Chiltern Railways regarding the removal of the original double track on financial grounds.

I therefore write in response to your concerns regarding noise and vibration.

Vibration and Risk of Structural Damage

The Environmental Statement (ES) that was submitted with the Transport and Works Act Order Application considers the areas that are likely to require mitigation to reduce vibration, and further work will be carried out as part of detailed design studies to taken into account local ground conditions. The levels of vibration that will arise from the new train service and track have been carefully assessed.

Where it is predicted that vibration levels will increase, there are engineering methods, which may have to be used to "damp" vibration from the track. These will be used to ensure that, wherever practicable, everywhere along the railway, vibration felt inside residential properties is kept to below a very strict limit, which is defined in British Standard 6472 as a "low probability of adverse comment".

The levels of vibration that will arise from the new train service and track have been carefully assessed. These will be way below the levels which could cause any sort of damage to property. Even if, at present, you can feel or hear vibration or groundborne noise from trains, new track and ballast will be provided which will reduce vibration levels, even though it is accepted that there will be a greater frequency of trains passing.

You state the railway was reduced to a single line because of structural damage to surrounding properties. I have checked with Network Rail if they have records of any complaints of damage caused by vibration from trains, as this has been stated by a number of objectors. Their records, of all types, show no such claims have ever been made within the North Oxford area. These records predate the creation of Network Rail and go back into BR days, when the damage is claimed to have occurred. Colleagues have also spoken to Engineers who dealt with the area at that time and they also say that no such claim has ever been made. Please let me know if you have evidence to the contrary.

Noise

Predicted noise levels, with and without the Scheme, are reported in Volume 2, Table 6.13 on page 6-35 of the ES, including Wolvercote Primary School (15), which is in close proximity to First Turn. Noise levels at your property will be lower than at this location with daytime daytime/evening noise levels, lower than those predicted at the School (59 dB) without mitigation. Even the noise levels at the closest properties to the railway are only 4 dB higher (ie just noticeably higher) than the 55 dB threshold value, below which significant "community disturbance" is not expected. Noise barriers are designed to reduce noise at the school and residential properties in the area, including those at First Turn. This will reduce noise effects to levels that are likely to be below the 55 dB threshold level during the day and below the stringent night-time criterion of 45 dB so that no significant noise impacts are predicted.

Noise barriers and other mitigation will be installed during construction of the Scheme, wherever it is needed to mitigate the effects of Phase 1. Additional noise mitigation measures may be needed if Phase 2 of the Scheme, for the East West Rail project, is built. The effects predicted above are for Phase 2, and the effects in Phase 1 will be less than these predictions.


Commitment to Mitigation

The ES sets out, in a form which will be legally binding on Chiltern Railways, the noise levels above which mitigation will be applied. The preferred option for noise mitigation is one that contains noise at source, such as maintaining the rails and wheels and considering infrastructure solutions to the track bed which reduce noise. Where these are not possible, measures such as noise barriers will be considered. These interrupt the path of the noise between the rails and the windows of the nearest properties. All of these measures will provide benefits in terms of reducing noise both inside and outside the properties.

Chiltern Railways, in association with Network Rail, is doing everything that can reasonably be done to reduce the environmental impacts of the increased services after the Scheme is built. This includes the installation of effective noise and vibration mitigation, including noise barriers and insulation, where necessary. Those required to deal with noise from Phase 1 will be installed before any additional train services start running. If Phase 2, for the East West Rail project, is built, additional mitigation measures will be installed, where required.

Continuously welded track will be installed. A range of additional mitigation measures including rail dampers will be considered to mitigate impacts where these have been identified. The extent and type of mitigation at individual locations will be determined as part of the detailed design which will be developed following the approval of the Order. However, the ES identifies the noise and vibration limits for which mitigation will be provided.

Chiltern Railways operates modern trains and undertakes regular inspection and maintenance including regular wheel maintenance at its own facility to correct any wheel






flats or other defects that may increase operational noise. Wheel dampers are not normally fitted to trains and would only have a marginal effect under most conditions, and are not proposed for this Scheme.

Yours sincerely

Charlene Baker
Consultant
Environmental Resources Management

On behalf of Chiltern Railways



18 October 2010

Dr Michael Drolet and Dr. Rosalind Thomas
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Dear Dr Michael Drolet and Dr. Rosalind Thomas

Proposed Chiltern Railways (Bicester to Oxford Improvements) TWA Order

I write to you as an objector to the Chiltern Railways TWA Order. Specifically, you have raised concern about the effect of noise and/or vibration of the proposed Scheme and its impact on your property.

Chiltern Railways is committed to using the Best Practicable Means to design the railway so as to avoid significant noise and vibration impacts. Enclosed is the *Chiltern Railways (Bicester to Oxford Improvements) TWA Order Draft Noise and Vibration Mitigation Policy (October 2010)*, which sets out Chiltern Railways' commitment to control noise and vibration impacts in detail. This document will be finalised following consideration of improvements that are identified during the Inquiry.

The assessment of operational noise in the ES formed a worst-case view of the likely noise impacts, which was a satisfactory approach for the ES. However, the design of the Scheme has progressed as contemplated in the ES, so that lesser, or equivalent, impacts will result, and the likely mitigation has been refined to take account the current information and the views of stakeholders who have been consulted since the ES was published. That approach is integral to the Environmental Impact Assessment (EIA) process. This work is ongoing, and we intend to write to you in the near future to confirm the likely noise impacts at your property.

We hope that this policy, which will be legally enforced by planning condition, will satisfy your concerns regarding noise and vibration, 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