

Comments for Oxford City Council on the ERM 'Response to Caroline Robertson Objection Statement' of 14 May 2015

To: Fiona Bartholomew

From: Paul Buckley

22 May, 2015

I want to comment briefly on ERM's response to Caroline Robertson. ERM touch on many of the issues that I and others have been raising with you about the EWR scheme in recent months, so I hope these comments will also serve as a summary of my remaining objections to discharge of Condition 19 of the TWA Order, as things stand at present. Numbers in square brackets refer to paragraph numbers in the ERM response. Superscripts refer to the Notes at the end.

1. The train operating assumptions, as proposed in the VSoA and, especially, as revised very recently by Network Rail (NR), are unrealistic. The assumed numbers of trains in total¹, and the assumed numbers and speeds of heavy freight (stone freight) trains in particular², are far too low to represent a 'reasonable worst case' representation of train traffic on the EWR line after completion of phase 2.
2. Predictions of vibration in the VSoA and Technical Note, claiming to show compliance with Condition 19 thresholds without the use of any mitigation, are based on NR's train operating assumptions and hence are *under*-predictions. If more realistic assumptions are made, the **Condition 19 vibration thresholds are predicted to be exceeded**³ in the Wolvercote cutting (even after removal of the Bladon Close points), in the absence of any mitigation. Therefore, to satisfy the Noise and Vibration Mitigation Policy (NVMP) robustly, a vibration-reducing trackform is required⁴. But none is currently proposed. Therefore Condition 19 is not met with respect to vibration.
3. Worries about problem 2. above are made worse by the many failings in execution of the VSoA, now notorious among the track-side residents of Wolvercote. Thus there are widespread doubts about the reliability and relevance of Atkins' data used in the predictions - e.g. there are numerical errors in the VSoA, and Atkins failed to use a measurement methodology consistent with the public inquiry Inspector's specification. Hence there is understandable anxiety that vibration exceedances in practice could easily be much greater than predicted.
4. Predicted noise levels given in the NSoA are too low, because they too are derived using NR's train operating assumptions, which do not represent a realistic worst case. Consequently, the identification of properties qualifying for noise insulation, given in the NSoA, is not reliable. **Hence the NSoA does not show robust compliance with Condition 19 with respect to noise.**

5. Residents' doubts about predicted noise levels are compounded by several factors that so far have been neglected by ERM.
 - (i) Evidence from ERM's own data shows there is considerable uncertainty in predictions made with the Soundplan noise modelling software used by ERM (their data suggest a possible error is 5dB): this is ignored in the ERM predictions⁵.
 - (ii) Along Lakeside, heavy freight trains on the up line can be on power because of the upward incline. The downward gradient does not begin until later: this is ignored in the ERM predictions⁶.
 - (iii) The heaviest freight trains are observed by residents sometimes to have two engines on power: this is ignored in the ERM predictions.
 - (iv) A significant increase in train pass-by sound level has been measured by Lakeside residents since NR's de-vegetation (at least 10m on each side of the track): this is ignored in the ERM predictions.

6. The NVMP promises 'at source' noise mitigation. Until recently NR refused to countenance any kind of 'at source' mitigation. Now, NR have proposed some use of SilentTrack rail dampers in Wolvercote. But currently this remains a vaguely worded offer⁷, without any detail of where, or for how long, they will be deployed. Clearly, to honour the NVMP's commitment for Section H of EWR, NR must agree to deploy rail dampers *throughout* Section H on a *permanent* basis. A written commitment to that effect is needed before this aspect of Condition 19 could reasonably be considered satisfied. Furthermore, for consistency with the NVMP, if any part of Section H were to be excluded from the use of the rail dampers, NR must provide an explanation of why their deployment, in that particular location but not elsewhere, was not 'reasonably practicable'.

7. The NVMP promises two rounds of post-construction noise and vibration monitoring. This is necessary to achieve the twin goals (a) of measuring the performance of the noise and vibration mitigation measures, and (b) of measuring the actual final residual noise and vibration levels⁸. The latter can only be checked when all the new trains are running after phase 2 is complete. However, the NSoA currently proposes only a reduced, single round, of monitoring. This is neither adequate nor consistent with the NVMP. Clearly, NR must agree to honour the NVMP's post-construction monitoring commitment in full. A written commitment to that effect is needed before this aspect of Condition 19 is satisfied.

Notes

¹ERM asserts ([12], [13]) that the ‘*the [train] service levels specified in the NVMP take into account future growth in passenger and freight use of the line once EWR Phase 2 has opened.*’. This is no longer plausible in the light of information now available. The NVMP claims that only 50% of all available freight paths will be used, even on the busiest day or night in the future (to a 15 year horizon [3]). But, as was made clear by Arup in their report for Oxford City Council, there is no limit to the fraction of available freight paths that will be used in future. The figure of 50% now seems reckless, since plans for HS2 are much further advanced than was the case at the time of the public inquiries. It is now known that HS2 will be serviced with delivery of supplies and removal of spoil by EWR, via the Infrastructure Maintenance Depot (IMD) at Calvert. It is true that the hybrid HS2 bill is still under parliamentary scrutiny [17], but it is unreasonable to imply that HS2 may not go ahead, and it is irrelevant to point out that HS2 Ltd is a separate company from Network Rail – see [17]. HS2 has already been approved in principle, when the bill passed its second reading by a very large majority in April 2014. Current debate is only about matters of detail. Royal assent is currently expected in December 2016. There is widespread agreement that the most likely outcome, by far, is that HS2 will go ahead. Trains servicing HS2 will be competing with all the other anticipated freight demands on EWR. The likely effect will be to exert pressure on the number of available EWR freight paths. In the light of this, a much more sensible, cautious, assumption for EWR noise and vibration predictions is that *all* freight paths will be used – i.e. the number of assumed freight trains should be doubled. This would more fairly represent the intention of Condition 19.

²Network Rail’s revised train operating assumptions envisage *no* loaded stone trains at night (11pm-7am), and only two such trains per day (7am-11pm) in the down direction only. Also, their speed in future is envisaged to be no more than 20mph through Wolvercote. These assumptions are hopelessly unrealistic. *Currently*, residents routinely experience noise and vibration from heavy stone trains travelling towards Water Eaton after 11pm at night. *Currently*, heavy stone trains pass through Wolvercote towards Water Eaton at speeds of more than 20mph. For example, the VSoA records vibration measurements from only two loaded stone trains on the OXD (Oxford –Bicester) line: one was travelling at 35mph, the other at 28mph. One of the main supplies to the HS2 IMD will be ballast for the new tracks – i.e. there will in future be many stone trains supplying HS2. These will not be stopping at Water Eaton, so will be travelling at the full speed envisaged in the VSoA (60mph). Pressure on availability of freight paths will mean they are most likely to be at night. In the light of all this evidence, ERM’s claim [30] that ‘normal’ stone trains in future will run only between 6am and 7pm (weekdays) or 6am and 1pm (Saturdays) is wholly implausible.

³See my comments to Oxford City Council of 8 May, 2015. There (in Scenario B) I show that Approach 1 of the VSoA, together with baseline vibration data from the VSoA, predicts that all four of the most vibration sensitive receptors in Wolvercote (Quadrangle, 2b, 3 and 4 Bladon Close) will experience night-time VDVs in excess of the NVMP vibration threshold if even just *one* of the night-time freight trains is a stone train travelling at 60mph (for example towards Calvert). The exceedances will be up to 25%. If, in addition, all the night-time freight paths are assumed to be used, the maximum exceedance increases to 35% (Scenario C). Using the same approach, I

have found that all that is required for 2b Bladon Close (the most sensitive receptor) to suffer a night-time VDV in excess of the threshold is for just one of the freight trains to be a stone freight train travelling at only 31mph to Water Eaton. Remarkably, the VSoA does not even consider the case of 2b Bladon Close. The Atkins Technical Note of 18 February 2015 does refer to 2b Bladon Close, but assumes incorrectly that will be equally distant from the track as 3 Bladon Close, when in fact it will be closer.

⁴The NVMP promises (Section 2.9) that *'Trackforms will be designed and installed adjacent to vibration sensitive receptors using Best Practicable Means to keep within the thresholds'*.

⁵See 'Comments to Oxford City Council on the Noise Scheme of Assessment (NSoA) for Route Section H of East West Rail' (of 22 April, 2015) by a group of residents of Upper Wolvercote and Lakeside.

⁶ERM denies that freight locomotives will run at full power on the up line, on the grounds that this line has a *'gradient falling towards Oxford.'* [31]. But this is not true at Lakeside. Contour maps show that in the relevant portions of Sections G and H, the track climbs from Water Eaton to the Lakeside lake, before descending.

⁷ERM says that *'The exact extent of the installation of the Tata Steel Silent Track on a trial basis has yet to be agreed'* [36], while the NVMP's commitment is that *'Noise will be reduced at source where it is reasonably practicable to do so'*. There has been no suggestion from NR that it will not be 'reasonably practicable' to deploy rail dampers at particular any location in Section H, so it follows that they will be deployed throughout Section H.

⁸See Section 2.11 of the NVMP. ERM says that *'the intention of monitoring is to identify defects in the installed barriers, such as gaps or unforeseen issues with the mitigation'* [42]. It is clear from the NVMP that this is an incomplete description of the intention of monitoring. Another of the intentions is to ensure that the design of the mitigation meets the *'requirement to achieve the residual noise levels set out in the Environmental Statement'*. This can only be checked when all the trains are running after completion of EWR Phase 2. Hence there remains a need for two rounds of monitoring, as proposed in the NVMP. ERM imply [43] that this is not necessary, and only one round of monitoring is needed, because further increases in train traffic *'will be taken into account'* presumably by computational predictions. But this is not consistent with the NVMP, which makes clear it is the actual *achievement* of residual noise levels that is one of the requirements, not merely a predicted achievement. In view of this consideration, ERM's suggestion, that only one round of noise and vibration monitoring is needed because there will be only a single phase of construction, does not apply.