

Agenda Item 3

WEST AREA PLANNING COMMITTEE

13th September 2016

Application Numbers: 16/01858/VAR (route section H)
16/01861/VAR (route section I-1)

Decision Due by: 13th October 2016

Proposal: Application under Section 73 of the Town and Country Planning Act 1990 to remove condition 2 of 15/00956/CND in relation to the use of 'Tata SilentTrack' in Section H.

Application under Section 73 of the Town and Country Planning Act 1990 to remove condition 2 of 15/03503/CND in relation to the use of 'Tata SilentTrack' in Section I-1.

Site Address: Chiltern Railway From Oxford To Bicester **Appendix 1**

Ward: St Margaret's, Summertown, and Wolvercote Wards

Agent: ERM

Applicant: Network Rail

Recommendation

West Area Planning Committee is recommended to **refuse** these applications for the following reason:-

for 16/01858/VAR (route-section H) and 16/01861/VAR (route-section I-1):

- 1 It has not been demonstrated to the satisfaction of the Council that the provision of rail damping is not reasonably practicable for route-section H/I-1. While it may be reasonable to expect that rail damping will provide additional noise attenuation, and that safety and safe working conditions would not prevent the installation of rail damping, insufficient regard has been given in the application to local conditions and the financial considerations of installing rail damping. The application is therefore contrary to policies CP6 and CP10 of the adopted Oxford Local Plan 2001-2016, and policies CS13 and CS27 of the adopted Core Strategy 2026.

Principal Planning Policies:

Oxford Local Plan 2001-2016

CP6 - Efficient Use of Land & Density

CP10 - Siting Development to Meet Functional Needs

Core Strategy

CS13 - Supporting access to new development

CS27 - Sustainable economy

Other Material Considerations

- National Planning Policy Framework (NPPF)
- Planning Policy Guidance (NPPG)
- Environmental Information
- The deemed planning permission of 23 October 2012 and documents related to it including the Noise and Vibration Mitigation Policy (January 2011)

Relevant Site History

15/00956/CND - Details submitted in compliance with condition 19 (operational noise and vibration) of TWA ref: TWA/10/APP/01 (The Chiltern Railways (Bicester to Oxford Improvements) Order - deemed planning permission granted under section 90(2A) of the Town and Country Planning Act 1990). PERMITTED 30th June 2015.

15/03503/CND - Details submitted in compliance with condition 19(2) (Noise - Section I1) of TWA ref: TWA/10/APP/01 (The Chiltern Railways (Bicester to Oxford Improvements) Order - deemed planning permission granted under section 90(2A) of the Town and Country Planning Act 1990). PERMITTED 9th February 2016.

Public Consultation

Statutory Consultees

- Oxfordshire County Council – no comment
- Natural England – no comment
- Historic England – consultation not required

Representations

In respect of route section H representations have been received from 38 addresses and in respect of route section I-1 representations have been received from 52 addresses including: Bladon Close, Fairlawn End, Carey Close, Linkside, Portland Road, Rutherford, Merrivale Square, Plater Drive, Woodstock Road, Five Mile Drive, Rosamund Road, Fairlawn Flats, Complins Close, Polstead Road, Kingston Road, Lakeside, Quadrangle House, Upper Close, Blenheim Drive, Lark Hill, Stone Meadow, and Cox's Close. 5 representations had no residential address given. The MP for Oxford West and Abingdon, the Oxford Civic Society and the Waterways Management Company also commented.

The main points raised in those representations are:

- the binding nature of the Council's condition that SilentTrack should be installed and the failure of NR to meet that requirement;
- the condition was considered important and necessary at the earlier planning stage and nothing has changed to reduce its importance or necessity for this mitigation measure;
- this is a small cost to Network Rail but will have a huge impact on residents who live near the tracks. Cost cutting to attempt to avoid putting in noise and vibration mitigation over a small section of track is unacceptable. Over the lifetime of the revenue generation period for this railway line (10's years), adhering to the original proposals would be an insignificant outlay, but would make a huge difference for all residents over that time period and beyond;
- this is the most cost-effective method of reducing environmental noise and should not be removed;
- Since reducing noise at-source is the fundamental technology recommended in the NVMP and the TWAO for tackling noise nuisance, there is no possible way that its costs were not known or included from the outset;
- Network Rail promised to trial the technology in Section H and must therefore have made provision for this cost;
- there is evidence that NR is exaggerating the costs. They quote a figure of £3.1m for providing SilentTrack 'throughout' Sections H and I/1. This is a distance of approximately 3.3km, implying supply and installation of SilentTrack costs about £950k per km for a double track railway. According to expert advice we have received, previous experience is that a typical price is only about £560k per km. Clearly, NR need to explain in detail why installation in North Oxford would be 80% more expensive than elsewhere;
- The justification for NR's claim that the cost of SilentTrack is 'grossly disproportionate' to the benefit, rests on the particular choices of input data. But these data are open to question. For example, varying the assumptions as suggested by residents in all of questions Q2.2, Q2.4, Q2.5 increases the predicted BCR for Section H from 0.35 to: $BCR = 0.35 \times 1.14 \times 1.25 \times 1.59 = 0.79$. While this is still less than 1, it is certainly not consistent with the cost being '*grossly disproportionate*' to the benefit, which implies a BCR figure of *much less than 1*
- residents would not expect NR to install SilentTrack throughout Sections H and I/1, since there are parts where the railway is not close to gardens or domestic properties. The inclusion of such parts in the calculation will artificially lower the predicted BCR;
- to remove the condition the Council needs to agree that SilentTrack is not reasonably practicable *and that there is no suitable substitute*. NR needs to list what alternative means of providing at-source noise mitigation are available, and provide a convincing case for why none of them would be suitable for Sections H and I/1;
- NR's prevarication around and delay in submitting these applications;
- Should be rejected for the safety of residents;
- It is unacceptable to remove this condition which will have an adverse effect both physically (house structure) and acoustically (noise) on my property. I plan to independently monitor and take legal action when appropriate;

- The degree of certainty relating to these predicted noise contours, as calculated by the noise impact model, has been kept secret and the claim that the barriers will be effective by up to 15 dB cannot be independently verified. It is therefore false for Network Rail to state that their new predictions for the amount of noise damping that would be achieved without fitting Silent Track are valid;
- Network Rail claimed that the acoustic barriers will provide 12-15dBA Leq reduction in their submission to the Planning Committee meeting in December 2015. However, no actual test data has been provided to verify this and we note that they now state in their evidence of 13 July 2016 that the lower level may in fact be 8dBA Leq. It should also be noted that the installation of the barriers varies markedly across section H, not just in location in relation to the track, but also in composition. For example, in some cases it is mounted on a concrete base, whereas at other sites it rests on soil. In the latter case there is a gravel board, which has not been factored in to any of the testing that has been done (see the information sent to the December Planning Committee stated that testing would not include the gravel board at the base of the barrier). However, we note that at many sites along the top of the cutting (between the Wolvercote Tunnel and First Turn Bridge) the gravel board has been left partly exposed on both sides. Presumably this would lessen its effectiveness and make it even more imperative to install additional mitigation in the form of Silent Track;
- If indeed the Tata Silent track does not produce significant improvements to noise impact that means that, in essence, false representations were made in the planning application with regard to the effectiveness of the proposed noise reduction measures. The answer is not to abandon Silent Track, but rather to do something that fulfils the promises of effectiveness that were made for this action;
- It is more than obvious that mitigations were offered solely and cynically in order to get approval for their scheme. Such violation of public trust and abuse of the planning system is totally unacceptable and this should be made clear by all Councillors responsible and wholly backed by all the officers of Oxford Council, all of whom owe their responsibilities and positions to the residents and voters of Oxfordshire;
- At the public inquiry the applicant proposed mitigation at source as the most cost effective form of mitigation which benefits the most people. This was incorporated into the TWA Order in the form of Condition 19 which refers to the applicant's Noise and Vibration Mitigation Policy (NVMP): *Noise will be reduced at source where it is reasonably practicable to do so*;
- The Inspector concluded that, on the evidence before the public inquiry, there would be few, if any, situations in which the proposed mitigation would not be reasonably practicable and that 'reasonably practicable' should have its everyday meaning;
- Network Rail claim that "*reasonably practicable*" now exclusively means "*cost effective*", in direct contradiction of the findings of the Public Inquiry;
- Before Condition 19 was partially discharged, the applicant offered to install Tata SilentTrack and this offer was accepted by residents and the Council;
- The applicant has had nearly 4 years since the grant of the TWA Order to consider mitigation at source. More than a year ago, it offered to install SilentTrack. This application, made when construction is already at an

advanced stage, reneges on the applicant's commitments to the public inquiry and its promise to local residents and the Council;

- Claire Perry MP, Minister for Rail gave a commitment at a public meeting in 2015 to install Silent Track;
- Andy Milne's (Network Rail's representative's) statement to the Minister for Rail, Claire Perry MP, and to Nicola Blackwell MP at the Public Meeting in Summertown, to "use SilentTrack through the cutting at Wolvercote".
- Neither Network Rail nor the City Council attended the Public Inquiry but are now in charge of determining the mitigation;
- reducing noise at source was laid down by the Inspector to be the very *first* mitigation to be employed. This was endorsed by the Secretary of State for Transport when the Transport and Works Act Order was issued;
- Rail dampers reduce the *generation* of rail noise, and therefore improve the environment for *all residents*, not just those most adversely affected. They reduce the noise in gardens, school environments, street scene, homes a little further away, nearby rooms such as hallways, studies, kitchens etc - excluded by the regulations from receiving noise insulation. Network Rail claim that is not the '*common sense and practical way*' of dealing with noise;
- secondary or enhanced double glazing has only been offered where rooms are not protected by the barrier and, even then, only to specific rooms (for example, kitchens, halls, bathrooms, etc. are excluded). Moreover, the mitigation that enhanced double glazing offers only comes into play when the window is shut, no protection is afforded in hot weather when it is necessary to leave windows open. In our case, none of our bedroom windows are afforded any mitigation by the barrier and are, therefore, deemed eligible for enhanced double glazing, so we may be protected during the winter but certainly not when there is a heat wave! Silent Track would afford us some protection when the other proposed mitigations cannot.
- Network Rail have also singularly failed to consider any *other* method of noise-reduction-at-source (floating slab, under-track mats, pads etc) or any *other* supplier of rail dampeners;
- Because sound waves easily bend over the top of 2.5 metre barriers, they provide no protection to first floors or higher, or to the ground area outside of the sound shadow;
- Rail dampers would even allow more residents to open their windows on hot, stuffy summer nights;
- In comparison with the cost of noise barriers and noise insulation, rail dampers are much cheaper;
- The NVMP dictates the order of consideration and implementation: rail dampeners where reasonably practicable and only then are noise barriers and noise insulation to be considered. The National Planning Policy Framework says the same things, with reducing noise at source listed *first and foremost*, then barriers, and noise insulation last;
- NR took an early *unilateral* decision to ignore rail dampeners in their modelling, and so modelled for the installation of noise barriers *alone* to decide who did, and who did not, receive noise insulation. What NR should have done is model the beneficial effects of rail dampeners *first*, *then* decide where the more expensive noise barriers should go, and *finally* decide who still needed individual noise insulation;

- NR is concerned about setting a national precedent for the use of rail damping;
- The Independent Expert for noise should have considered in greater detail whether the noise mitigation hierarchy had been correctly applied rather than simply accepting that NR had discounted the use of rail damping as being of little effect;
- The East West Programme Board has decided *unilaterally* to apply a "value for money" test on SilentTrack, in direct contradiction of the finding of the Public Inquiry and the Transport and Works Act Order. It is pertinent, that the East West Programme Board made no objection to the Inspector at the Public Inquiry about the mitigation hierarchy when given the chance. The Inspector's Report records that their representatives approved the installation of noise reduction at source as the primary methodology;
- we ask that the City Council enforces its original condition that implementation of the SilentTrack is done BEFORE the train services come into operation. Network Rail has had ample time to test the SilentTrack, and its implementation after the resumption of services would mean that the work would most likely have to be done at night. Having been subjected to noise and vibration levels far exceeding those predicted in the Environmental Statement for almost a year, it would be nice not to have to suffer additional night work that could be completed during the current construction phase when the track is laid;
- the noise barriers have made almost no difference to the noise levels in the garden or ground floor bedrooms from construction works at the bottom of the cutting (probably because the barriers are not close to the noise source) and have made no difference at all to noise levels experienced to the upstairs study/bedrooms especially as in this hot weather we have to open the windows so the additional glazing is of no benefit. This means that rail dampers would be the ONLY effective way to reduce noise at this location in the cutting.

The Purpose of this Report

1. This report considers and recommends on the acceptability of Network Rail's (NR) application to remove condition 2 of planning applications: 15/00956/CND and 15/03503/CND, which would remove the requirement for the installation of SilentTrack or alternative rail damping on the grounds that such installation is not reasonably practicable.

Background

The deemed planning consent for EWRP1

2. The Transport and Works Act Order (TWAO) and deemed planning permission for EWRP1 was granted, subject to conditions, on 17th October 2012.
3. *Sustainability:* in granting deemed planning permission for the scheme, the Secretary of State concluded that there is a compelling case to increase rail capacity between Oxford and London, and that the scheme would bring

substantial transport benefits in terms of reduced travel times, better public transport connectivity, and better rail network capability. In the decision, the Secretary of State weighed these sustainability benefits against the potential adverse impacts that the scheme might cause. Those considerations gave rise to several of the planning conditions dealing with the natural environment and residential amenity.

The general approach to operational noise and mitigation

4. **Condition 19** of the deemed planning permission (**Appendix 2**) focusses on operational noise and vibration and was imposed in order to:

“ensure that operational noise and vibration are adequately mitigated at residential and other noise sensitive premises”.
5. **Condition 19(1)** states that the monitoring and mitigation of operational noise and vibration associated with the scheme, shall be undertaken in accordance with condition 19 and the Noise and Vibration Mitigation Policy (NVMP, dated January 2011, **Appendix 3**) which was approved by the Secretary of State as part of the deemed planning permission.
6. The NVMP aims to ensure that mitigation is provided on a fair basis for all occupiers and landowners along the route between Bicester and Oxford. In relation to noise it states (in the summary paragraph at the head of the document) that it will:-

“ensure that the following are achieved:

 - (i) *Noise will be reduced at source where it is reasonably practicable to do so.*
 - (ii) *Where this is not reasonably practicable, noise barriers or noise insulation to properties will be provided, where necessary, in accordance with relevant standards.*
 - (iii) *Where predicted noise levels exceed relevant levels set out in the Noise Insulation (Railways and Other Guided Systems) Regulations, noise insulation will be offered to the occupiers of eligible buildings to the standards required by those Regulations and provided at their request.*
 - (iv) *At other locations, where statutory noise levels are not exceeded but where significant noise impacts are predicted, noise will be mitigated wherever reasonably practicable. Significant noise impacts include a significant increase in noise in an already noisy area, or the significant exceedance of stringent thresholds in an area where the ambient noise is currently low. Chiltern Railways has chosen to offer this high standard of mitigation. It is not a statutory requirement”.*

'At-source' mitigation

7. In relation to 'at-source' mitigation, and specifically 'rail damping', the NVMP states that:

"2.2. The Promoter is committed to using the Best Practicable Means ⁽¹⁾ to design the railway so as to avoid significant noise and vibration impacts at existing sensitive receptors (e.g. residential properties, educational buildings and places of worship). The first preference will be to apply necessary noise control measures at source where this is reasonably practicable. These may include rail damping or other infrastructure measures to reduce noise at source. Where this is not reasonably practicable or sufficient to mitigate significant noise impacts, the Promoter will:

- where they are effective and reasonably practicable to install, provide noise barriers to mitigate noise between the track and sensitive receptors; and,*
- after considering all practicable mitigation measures that can be taken at source (i.e. within the railway corridor), including noise barriers, offer noise insulation to properties where residual noise impacts on sensitive receptors remain high.*

(1) Best Practicable Means are defined in Section 72 of the Control of Pollution Act 1974 as those measures which are "reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge, financial considerations and compatibility with safety and safe working conditions"

8. The provision of 'at-source' noise mitigation, selected "after considering all practicable mitigation measures that can be taken at source" is therefore a requirement of the NVMP except where it can be proven that it would not be reasonably practicable to implement it.

The assessment of operational noise and determination of appropriate mitigation

9. **Condition 19(2)** requires the submission of Noise Schemes of Assessment (NSoAs) and Vibration Schemes of Assessment (VSoAs) and associated proposals for monitoring and mitigation of the operational noise and vibration of the passenger and freight services on the rail line. The NVMP sets out the 'reasonable planning scenario': the assumptions that are to be used in the Schemes of Assessment for the numbers and timing of train movements.
10. In the NVMP, noise sensitive receptors are defined as "primarily residential properties". The NVMP does not require mitigation of operational rail noise in gardens or other open spaces.
11. The NVMP uses both predicted total noise, and predicted noise change to determine whether noise mitigation is needed and the type of mitigation to be

installed as follows. While not strictly a sequential process, it is simplified as such for easy understanding in the paragraphs below.

12. Firstly, the NVMP lays down noise thresholds to determine whether noise mitigation is needed at noise sensitive receptors:

Noise Threshold Levels	Day (0700-2300 hrs) 55dB LAeq	Night (2300-0700 hrs) 45dB LAeq	Adopted in NVMP as levels below which noise impacts are not considered to be significant
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13. Secondly, noise insulation commitments are made where noise levels at noise sensitive receptors are still high even after the installation of source mitigation measures and noise barriers:

Noise Insulation Trigger Levels	Day (0600-0000 hrs) > LAeq (66dB) <i>where the predicted noise level is 1dB above the ambient level</i>	Night (0000-0600 hrs) > LAeq (61dB) <i>where the predicted noise level is 1dB above the ambient level</i>	These are the statutory trigger levels which would apply under the Noise Insulation Regulations.
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14. Thirdly where noise levels at noise sensitive receptors do not exceed the Noise Insulation Trigger Levels but are more than 10dB above pre-existing noise levels, non-statutory noise insulation is offered.

15. Finally, the NVMP makes a further commitment to noise insulation where instantaneous peak noise from a train pass-by at night exceeds 82 dB LA max.

16. The NVMP then sets out how predicted total noise, and predicted noise change are used to determine the type of mitigation to be implemented:

- “*exceedances of 3 dB or greater and increases of 3 dB or greater—mitigation at source through rail infrastructure solutions will be implemented where reasonably practicable;*
- *exceedances of greater than 5 and up to 7 dB and increases of greater than 5 dB and up to 7 dB -- at source and/or in the form of noise barriers if reasonably practicable and have no other negative effects;*

- exceedances of greater than 7dB and increases of greater than 7dB – at source through rail infrastructure solutions and where these cannot be reasonably practicably achieved, noise barriers will be provided, where reasonably practicable”.

The Council’s planning condition referring to “SilentTrack”

17. Condition 19(12) of the deemed permission states that (officer highlighting):

“The situation may arise in which Chiltern finds “not reasonably practicable” the provision of mitigation measures that otherwise would be required by the Policy. In such circumstances, the mitigation measure or an equally effective substitute previously approved in writing by the local planning authority shall be installed in the timescale set out in item 1.10 of the Policy, unless the local planning authority has confirmed, in writing, its agreement that the mitigation in question is not reasonably practicable and that there is no suitable substitute”.

18. The NSoA for Section H of the scheme was approved by West Area Planning Committee (WAPC) on 30th June 2015 (15/00956/CND). The NSoA for route section I-1 was approved by the WAPC on 9th February 2016 (15/03503/CND).

19. When considering these NSoAs, the Council was not satisfied that rail damping as an ‘at source’ mitigation measure had been shown to be ‘not reasonably practicable’ in the terms of condition 19(12) of the deemed planning permission. The applicant had relied on the fact that rail damping was not ‘type-approved’ for this rail project (despite the fact that it had been suggested at the Public Inquiry and was a possible ‘first preference’ of the NVMP) but had not attempted to secure approval for its use of rail damping. The Council therefore imposed on each permission a condition regarding noise attenuation at source which reads:

“2. Within three months of this partial approval under condition 19 of the deemed planning permission, proposals shall be submitted for the written approval of the local planning authority showing how at-source noise attenuation by rail damping to at least the standard achievable by the use of Tata SilentTrack can be incorporated into the scheme. The development to which this approval relates shall not be brought into operation EITHER without that written approval having been obtained and other than in accordance with such approved details OR without the Council having given written confirmation that it is satisfied that the provision of such rail damping is not reasonably practicable.

Reason: the local planning authority is not satisfied that rail damping as an at source mitigation measure has been shown to not be reasonably practicable in the absence of any attempt on the part of the applicant to secure approval for the use of such a measure.”

20. Officers are satisfied that this condition was reasonable and necessary in the terms of paragraph 206 of the NPPF – it enabled the construction of the scheme to be commenced with associated noise mitigation provided to meet the noise thresholds and triggers of the NVMP, but in relation to which it had not been demonstrated that at-source noise mitigation measures were not reasonably practicable.

NR's case for removal of the conditions

21. The applications before the Committee comprise documents submitted by which provides NR's analysis of:

- i. the scope and requirements of condition 19 and the NVMP;
- ii. the approach taken to 'at source' noise mitigation in the approved NSoAs;
- iii. the meaning of the term 'reasonably practicable';
- iv. the noise attenuation properties of SilentTrack; and,
- v. a cost-benefit analysis of SilentTrack in route sections H and I-1.

22. As a result of this analysis, NR has concluded that the installation of SilentTrack or other rail damping is not reasonably practicable and has requested that the conditions applied by the Council relating to 'at source' mitigation should be removed from their respective consents on the grounds that:

- i. SilentTrack only helps to mitigate noise that is radiated from the rails themselves, not the engine, traction, wheel or other noise from locomotives or other rolling stock. The available evidence is that, installed without barriers, SilentTrack will deliver a noise reduction of around 3dBA Leq which is the level below which there is no discernible difference to most people – the Inquiry Inspector agreed with this;
- ii. the predicted operational noise impact of EWRP1 in sections H and I-1 exceeds the acceptable noise thresholds of condition 19 and the NVMP to such a level that extensive noise barriers and noise insulation (to some properties) are necessary regardless of whether SilentTrack is also installed. The combination of barriers and insulation currently being implemented meets the noise attenuation requirements of condition 19 and the NVMP, in which circumstances, additionally installing SilentTrack while physically possible is not reasonably practicable because it cannot be justified in terms of value for money. Alternative rail damping products are unlikely to cost less than SilentTrack; and,
- iii. while 'at source' mitigation is normally a first preference, the NVMP does not require the installation of SilentTrack if Silent Track alone would not be sufficient to mitigate the predicted noise impacts. The approved NSoAs have therefore correctly interpreted the requirements of condition 19 and the NVMP in relation to the hierarchy of noise mitigation and the role of 'at source' noise mitigation. The imposition by

the Council of condition 2 on the approval of the NSoAs was therefore neither reasonable nor necessary in terms of paragraph 206 of the NPPF that conditions should be: necessary; relevant to planning; relevant to the development; enforceable; precise; and, reasonable in all other respects.

Officers' assessment

23. To assist officers in the assessment of these applications, and to respond to residents' concerns, advice was sought from ARUP as they have current expertise and recent experience with rail damping measures. The ARUP report is attached as **Appendix 4**.

The planning purpose of at source noise mitigation

24. Local planning authority decisions have to be made for planning purposes. The planning purpose in this case is to enable development of EWRP1, which is regarded as sustainable development provided that the requirements of condition 19 are fulfilled: *that operational noise and vibration are adequately mitigated at residential and other noise sensitive premises.*

25. In pursuit of that aim, condition 19 and the NVMP require the installation of at source noise mitigation where it is reasonably practicable: this is because noise mitigation at source offers particular benefits to noise sensitive receptors (primarily, residential properties). ARUP advises that those benefits are as follows (paragraph 33 ARUP report):

- all else being equal, the benefits of noise reduction measures at source are universal i.e. not limited to particular directions or orientation;
- barriers are limited by physical factors so do not always provide sufficient mitigation;
- the installation of noise insulation is intrusive and its take up cannot be relied upon (the rate of uptake of offers is typically in the order of 50% but can vary significantly from scheme to scheme); and,
- the benefits of noise insulation are time limited and are not permanent and the noise reduction provided by secondary glazing falls diminishes over time.

26. Establishing the reasonable practicability of at source measures, in particular rail damping, is required in order to gain assurance that the particular benefits of at source measures are available to residential properties adjacent to or near the line if at all possible (to fulfil the planning purpose).

Consideration of all possible 'at-source' rail noise mitigation measures

27. It has been established in the foregoing that at source noise mitigation is a first preference for EWRP1 where it is reasonably practicable; and that the type of at-source noise mitigation to be provided should be selected after considering *all practicable mitigation measures* that can be taken at source.

28. ARUP has advised that the following are the recognised train noise mitigation measures for surface running trains (paragraph 7 ARUP report):

Source of train noise	Source based mitigation	Path based mitigation	Receiver based mitigation
Rolling noise generated by wheel and rail vibrations that are induced at the wheel/rail interface	Maintaining a low level of rail roughness through maintenance such as rail grinding	Noise barriers	Noise insulation
	Maintaining a low level of wheel roughness		
	Optimisation of track design parameters such as rail pad stiffness		
	Rail damping		
	Wheel damping		
Curving noise generated by unsteady transverse forces in the wheel/rail interaction during curving	Flange and top-of-rail lubrication	Noise barriers	Noise insulation
	Wheel damping		
Aerodynamic noise caused by unsteady airflow over the body of the train	Aerodynamic design of rolling stock		
Traction noise from diesel engines, intake and exhaust, traction motors and fans, gearboxes, turbocharges etc	Rolling stock traction design		

Source: ARUP Report dated 2nd September 2016, Table 1

Definition of reasonably practicable

29. Whether or not it is reasonably practicable to install rail damping as a noise mitigation measure for EWRP1 is determined by the meaning of 'reasonably practicable' as defined in the Control of Pollution Act 1974, reiterated in the NVMP:

"reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge, financial considerations and compatibility with safety and safe working conditions"

Local conditions and circumstances

30. It is relevant to the assessment of reasonable practicability that route-sections H and I-1 run through or adjacent to residential properties (noise sensitive receptors) where a high value is placed on the mitigation of noise from rail. NR's application does not include analysis of the full range of source-based

mitigation in these local circumstances. To assist the consideration of this aspect officers obtained some of the necessary relevant information and made it available to ARUP (**Appendix 5**).

The current state of technical knowledge (effectiveness of rail damping)

31. ARUP advises (paragraphs 26 and 27 ARUP report) that while reasonable estimates of the noise reduction performance of SilentTrack on EWRP1 can be derived from comparable studies, additional prediction work is required to provide the best estimate of the performance of SilentTrack on EWRP1
32. With that proviso, and on the basis of the information available to them, ARUP states that a reasonable estimate of the noise reduction performance of SilentTrack for EWRP1 is 2.5dB given the type of track and construction method for EWRP1 (NR estimates this to be around 3 dB so there is a measure of agreement on this point). ARUP states that this is likely to be in addition to noise reduction afforded by the noise barriers (paragraph 30 ARUP report). ARUP does not agree with NR's assertion that there will be only marginal noise reduction over and above the installed barriers.

Financial considerations

33. NR's arguments on financial considerations follow the Treasury WebTAG cost-benefit analysis and conclude that given the low return/value for money of rail damping for route-sections H and I-1, there is insufficient benefit for the proposal to be supported financially by the Government.
34. In the view of officers the WebTAG analysis does not allow the reasonable practicability of rail damping in financial terms to be determined. The WebTAG analysis is indicative only: it uses generic assumptions, it does not take into account local circumstances, and it puts a monetary value on benefits: this 'monetisation' is a concept which is designed for cost-benefit analysis which is different from analysis of 'reasonable practicability'.
35. Further this submission:
 - a. does not provide evidence to support NR's assumption that other damping products are unlikely to be cheaper than SilentTrack. ARUP advises that there are potentially significant cost differences between the available types of product (ARUP report paragraph 16);
 - b. only examines the costs and benefits of applying rail damping to locations within 100m of all noise sensitive receptors. It does not explore further targeted implementation and how that may reduce costs as suggested by ARUP (ARUP report paragraph 25);
36. Officers consider that the question of reasonable practicability in financial terms is not whether the sponsor is willing to pay for rail damping but rather, whether in financial terms the project could reasonably be expected to include rail damping. An assessment is required of the financial capacity of the overall project to absorb the costs of rail damping: the costs of installing rail damping related to the overall cost of EWRP1 (Bicester to Oxford).

Compatibility with safety and safe working conditions

37.NR has stated that rail damping presents no issues in respect of safety and safe working conditions. Officers have no reason to disagree with that.

The significance of the estimated noise reduction

38.Given that a reduction of 2.5dB - 3dB in noise level is considered to be achievable, a material issue in planning terms is whether this is significant enough to serve the planning purpose in this case.

39.In their submission NR refer to a general convention on “perceptibility”: that a change in noise level of 3 dB is the smallest change discernible to most people. They refer to comments by the Inspector at Inquiry that *“changes in environmental noise levels of less than 2 to 3 dB are not noticeable to most people”* and also to the use of 3 dB in the NVMP which states that *“An increase of 3 dB is generally accepted as the smallest change that is noticeable in ordinary conditions”*. Further, within the NVMP, 3 dB is used as the amount by which the predicted noise level must exceed the Noise Thresholds to give rise to a need for mitigation.

40.However, because the NVMP uses a defined numerical threshold, relative change and trigger values, the question of perceptibility is less relevant than the calculated predicted effect of such changes on the need to install noise mitigation. Officers therefore asked ARUP to comment upon the likely changes that a 3 dB reduction at-source would have on noise sensitive receptors in this specific case. Their analysis indicates that a 3 dB change is significant.

41.ARUP considers that were rail damping to be installed with noise barriers in situ, there could be a change in eligibility for non-statutory noise mitigation (noise insulation) at a significant number of properties that are currently eligible as the noise levels would be lower as tabulated below. In accordance with the NVMP such improvement to the noise environment is regarded as beneficial and significant.

Address of receptor	Eligibility for statutory and non-statutory noise insulation assuming the installation of rail dampers (with noise barriers in situ) and a resulting additional 3dB noise reduction
Quadrangle House	Still eligible for statutory and non-statutory noise mitigation because noise levels still in excess of NVMP criteria
7 First Turn, 4 Bladon Close, 3 Bladon Close, Cedar House	Still eligible for non-statutory noise mitigation because noise levels still in excess of NVMP criteria
Peartree Hill Farm 8 Carey Close 396 Woodstock Rd 1 Upper Close 15 Sheriffs Drive Wolvercote Primary School	No longer eligible for non-statutory noise mitigation because noise levels no longer in excess of NVMP criteria
Cox's Ground 25 Cox's Ground 30-47 Cox's Ground	Still eligible for non-statutory noise mitigation because noise levels still in excess of NVMP criteria
58-92 Stone Meadow 94-110 Stone Meadow	No longer eligible for non-statutory noise mitigation because noise levels no longer in excess of NVMP criteria

Conclusions

42. All parties conclude that rail damping is practicable to install in route-sections H and I-1. On the basis of the information available to the Council, officers conclude that rail damping has the potential to alter to a significant extent the impact of operational noise on noise sensitive receptors. This level of noise benefit would serve the planning purpose of helping to secure reasonable noise mitigation for residential properties adjacent or near to the new railway.
43. In the view of officers NR's submission does not demonstrate that rail damping is not reasonably practicable because insufficient regard has been given in the application to local conditions and the financial considerations of installing rail damping. Accordingly the application is recommended for refusal.

Human Rights Act 1998

Officers have considered the Human Rights Act 1998 in reaching a recommendation to grant planning permission, subject to conditions. Officers have considered the potential interference with the rights of the owners/occupiers of surrounding properties under Article 8 and/or Article 1 of the First Protocol of the Act and consider that it is proportionate.

Officers have also considered the interference with the human rights of the applicant under Article 8 and/or Article 1 of the First Protocol caused by imposing

conditions. Officers consider that the conditions are necessary to protect the rights and freedoms of others and to control the use of property in accordance with the general interest. The interference is therefore justifiable and proportionate.

Section 17 of the Crime and Disorder Act 1998

Officers have considered, with due regard, the likely effect of the proposal on the need to reduce crime and disorder as part of the determination of this application, in accordance with section 17 of the Crime and Disorder Act 1998. In reaching a recommendation to refuse planning permission, officers consider that the proposal will not undermine crime prevention or the promotion of community safety.

Background Papers: 15/00956/CND, 15/03503/CND, 16/01858/VAR,
16/01861/VAR

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Date: 5th September 2016

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