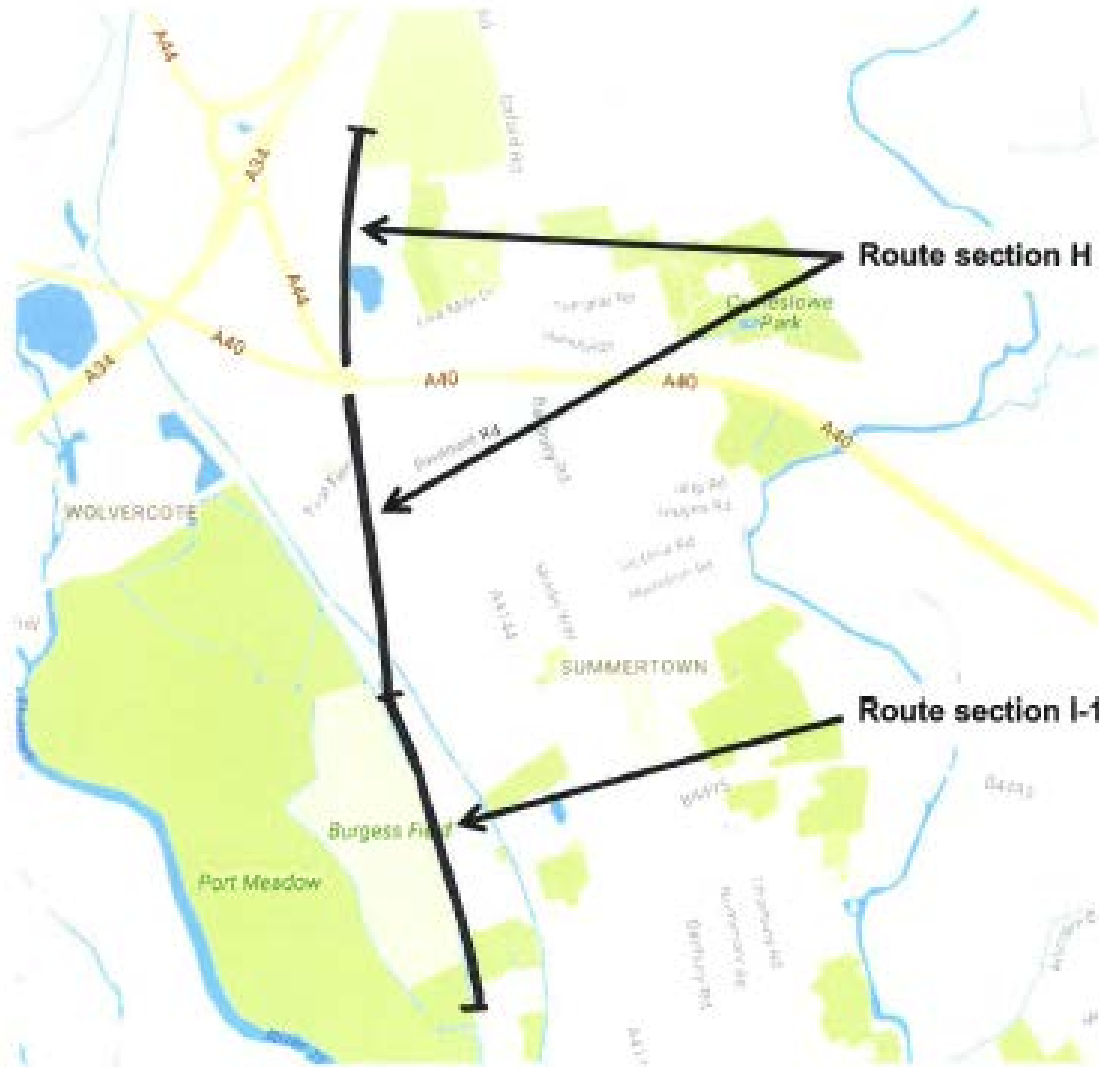


# Welcome to the Planning Review Committee

- This planning committee meeting is held in public but it is not a public meeting.
- Members of the public can speak to the committee for or against applications on the agenda for up to five minutes.
- If you wish to speak, you must register before the meeting starts. You can ask the clerk to add your name to the speakers' list if you did not register beforehand.
- Information on meeting protocol and conduct at the committee is set out in the Code of Practice in the agenda. Copies are available.

# Site Plan

## ROUTE SECTIONS H AND I-1



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# Background to East West Rail Phase1 (EWRP1 - Bicester to Oxford)

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- Deemed planning permission subject to conditions was given by the Secretary of State for Transport for EWRP1 in October 2012.
- Condition 19 was imposed by the of State to *ensure that operational noise and vibration are adequately mitigated at residential and other noise sensitive premises.*
- <sup>3</sup> Condition 19 requires submission of Noise and Vibration Schemes of Assessment (to be verified by an Independent Expert) which:
  - Predict operational noise and vibration,
  - Identify mitigation to be installed if prescribed levels exceeded;
  - Make proposals for monitoring the performance of the mitigation installed
- Noise and Vibration Mitigation Policy (agreed by Secretary of State)
  - lays down the reasonable planning scenario to be used in predicting noise and vibration for the Schemes of Assessment;
  - the prescribed noise and vibration thresholds and triggers for mitigation and/or insulation;
  - monitoring is to be conducted of installed mitigation



# The Council's role in EWRP1



- Council's role is to discharge a large number of the conditions attached to the deemed permission – cannot revisit the Secretary of State's original decision
- A principal task is to discharge condition 19 - consider and determine the Noise and Vibration Schemes of Assessment (NSoA and VSoA)
- The NSoAs and VSoAs must meet the noise and vibration mitigation and monitoring requirements set out in condition 19 and the Noise and Vibration Mitigation Policy (NVMP).
- The scheme was the subject of an Environmental Impact Assessment which preceded the Secretary of State's decision

# Applications before the Committee

## Noise Schemes of Assessment (NSoA)

- route section H: 16/02507/CND
- route section I-1: 16/02509/CND

These NSoAs have been approved before by the Council subject to :

**(i) a condition requiring the installation of rail damping if reasonably practicable**

*removal of that condition refused by the WAPC in September 2016 because it hadn't been demonstrated that rail damping was not reasonably practicable*

**(ii) a condition restricting the pattern of train services**



# Purpose of these applications

NR intends to appeal against

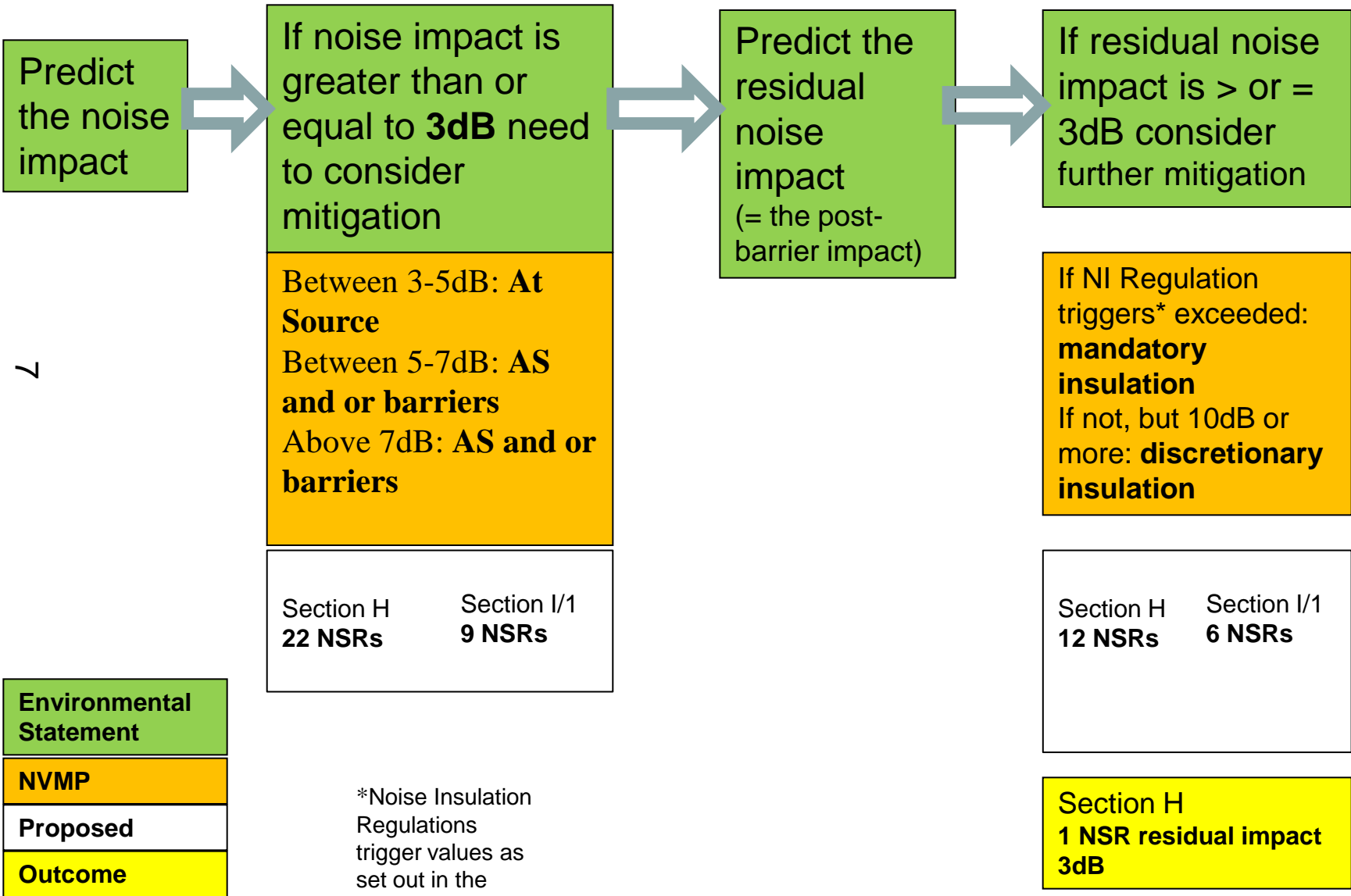
- the Council's refusal to remove the rail damping condition; and
- the imposition of the condition restricting the pattern of rail services

In advance of these appeals the approved NSoAs have been resubmitted with additional information responding to the background to the Council's reasons for refusal so that the issues around rail damping and rail services can be reconsidered.

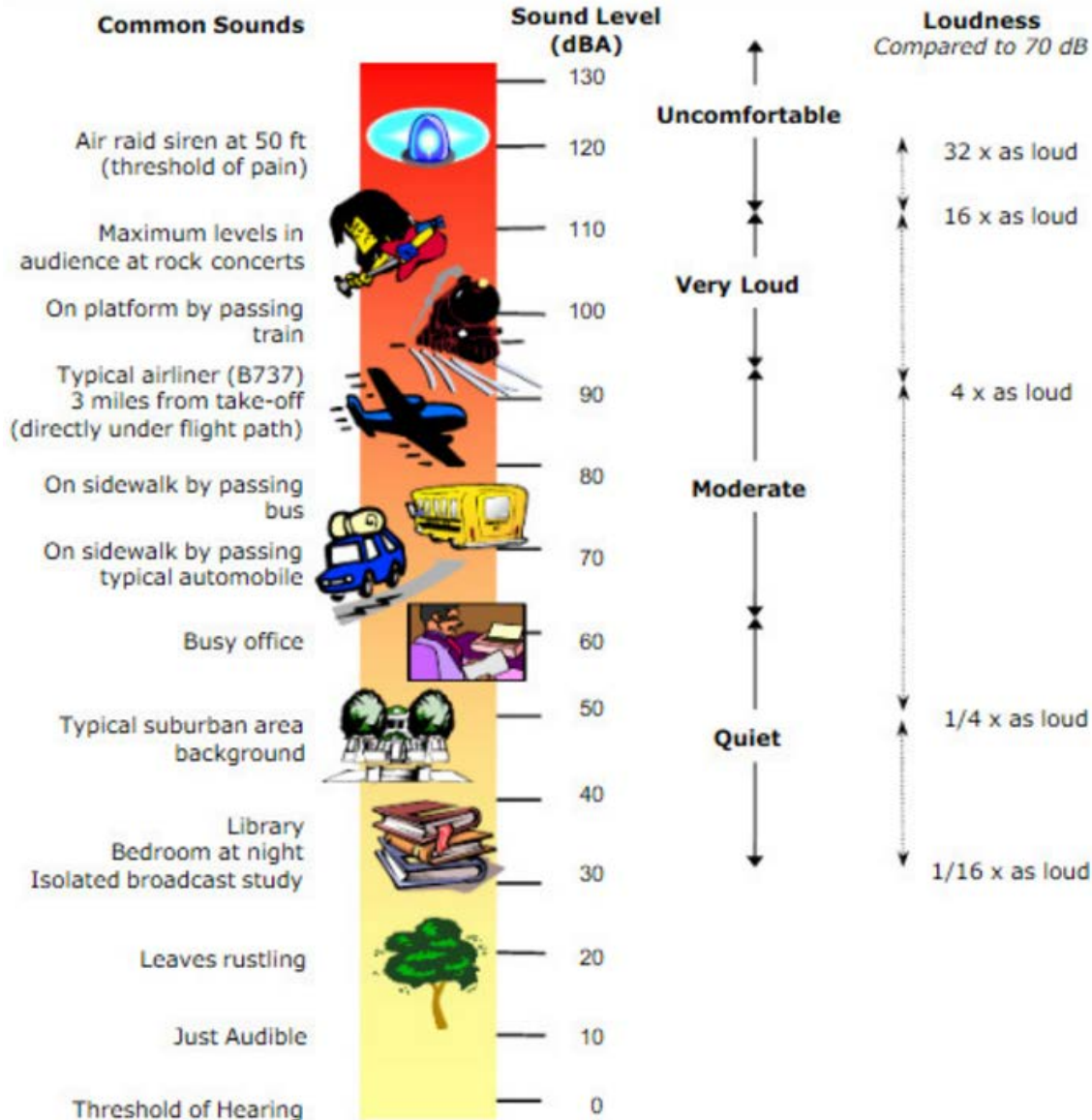
This accords with best practice – to bottom out material planning issues prior to an appeal



# Approach to noise mitigation in the ES and NVMP



# Typical sounds and decibel levels



Source: Handbook of Environmental Acoustics, James P. Cowan, 1994

Figure A-2. Typical A-Weighted Sound Levels of Common Sounds





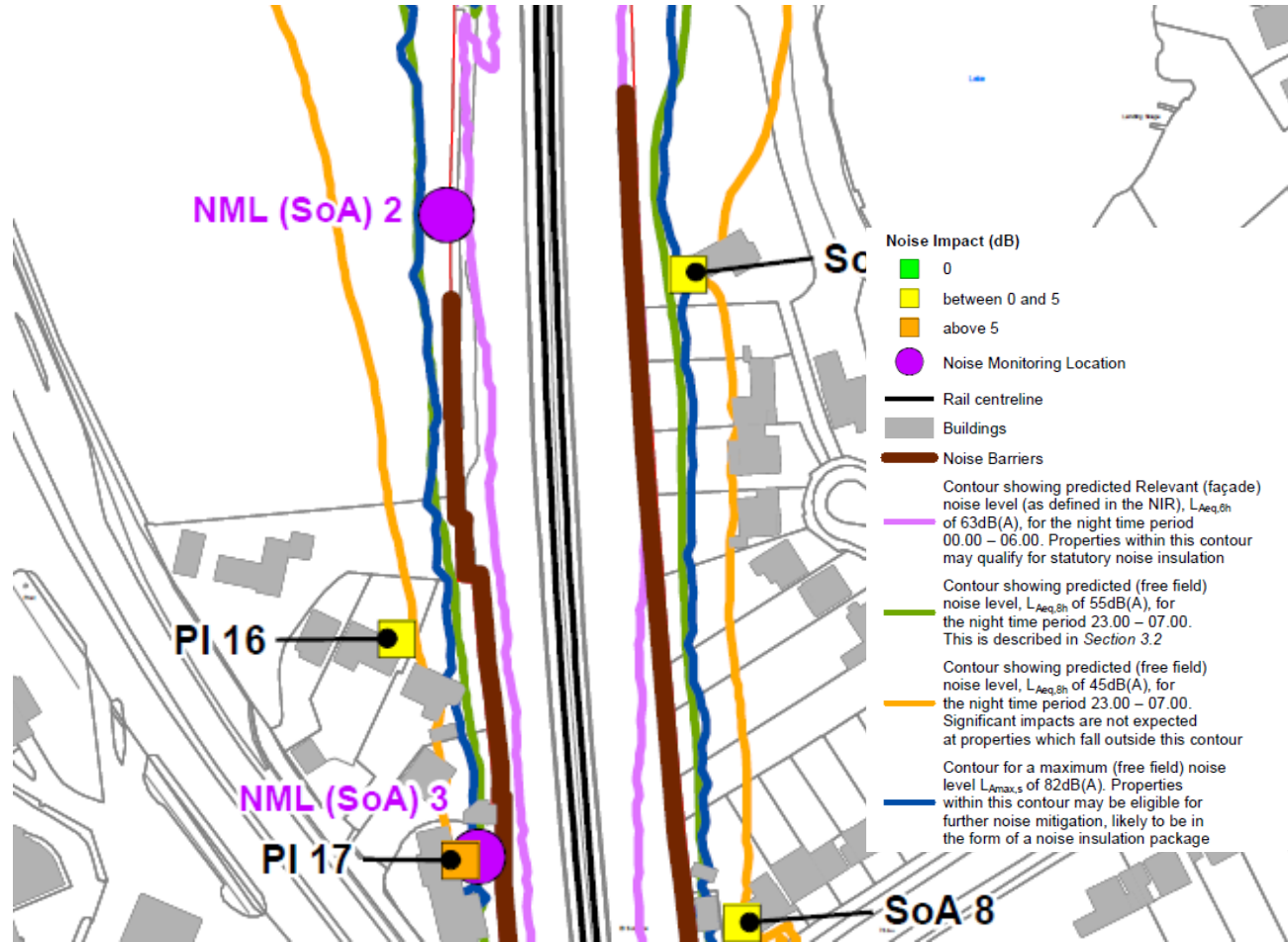
# Perceiving loudness

SPL Change	Subjective impression	Power	Pressure
0 dB		x 1	x 1
+ 1 dB	Not noticeable	x 1.25	x 1.12
∞ + 3 dB	Just noticeable	x 2	x 1.41
+ 6 dB	Easy to hear	x 4	x 2
+ 10 dB	Twice as loud	x 10	x 3.15
+ 20 dB	Four times louder	x 100	x 10



# Excerpt from noise Scheme of Assessment for Section H showing NSR PI16, 398 Woodstock Rd

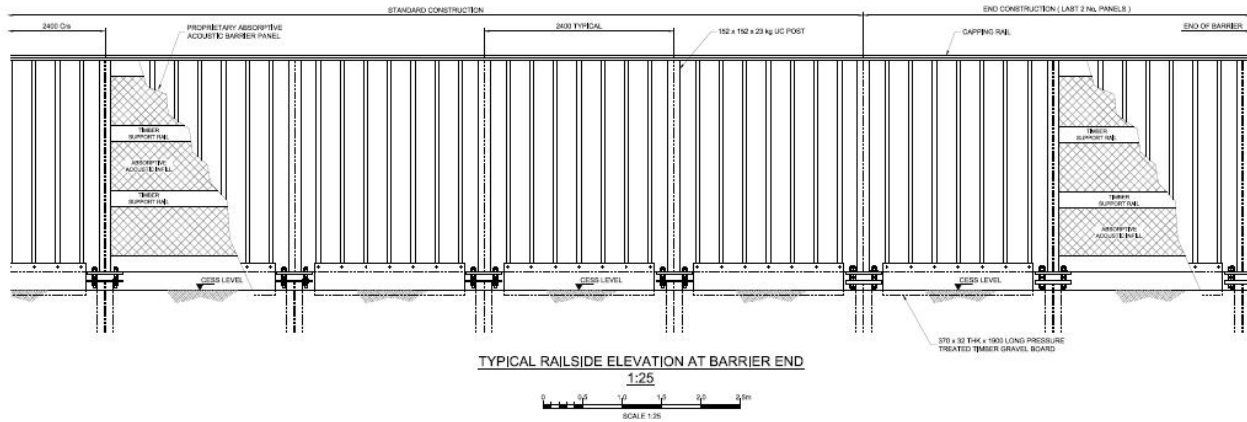
10



- Noise Impact (dB)**
- 0
  - between 0 and 5
  - above 5
  - Noise Monitoring Location
- Legend:**
- Rail centreline
  - Buildings
  - Noise Barriers
- Contour showing predicted Relevant (façade) noise level (as defined in the NIR),  $L_{Aeq,6h}$  of 63dB(A), for the night time period 00.00 – 06.00. Properties within this contour may qualify for statutory noise insulation
- Contour showing predicted (free field) noise level,  $L_{Aeq,6h}$  of 55dB(A), for the night time period 23.00 – 07.00. This is described in Section 3.2
- Contour showing predicted (free field) noise level,  $L_{Aeq,6h}$  of 45dB(A), for the night time period 23.00 – 07.00. Significant impacts are not expected at properties which fall outside this contour
- Contour for a maximum (free field) noise level  $L_{Amax,5}$  of 82dB(A). Properties within this contour may be eligible for further noise mitigation, likely to be in the form of a noise insulation package

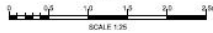


# Barrier details

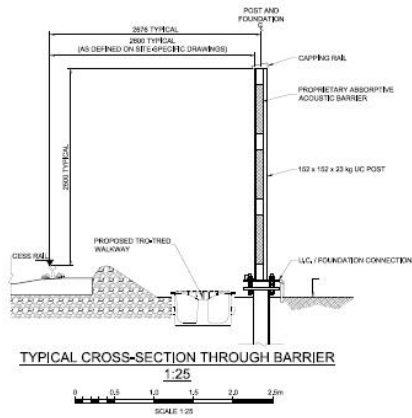


TYPICAL RAILSIDE ELEVATION AT BARRIER END

1:25



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TYPICAL CROSS-SECTION THROUGH BARRIER

1:25



TYPICAL VIEW OF BARRIER FROM RAIL SIDE



TYPICAL VIEW OF BARRIER FROM PUBLIC SIDE



# Key points of NR's case on rail damping (RD)

- RD alone cannot achieve the noise standards of the NVMP - need barriers and noise insulation
- the benefits of RD would be only marginal (up to 2.5dB to 3dB), not likely to be noticeable, and would involve significant cost;
- RD does not represent value for money given that the costs are grossly disproportionate to the benefits (details on next slide).
- the financial test is not whether NR can afford RD but whether the costs are disproportionately large relative to the benefits;
- removal of the need for property insulation is not a benefit since insulation reduces noise by about 10dB compared to 3dB for RD



# Arup's advice

- Arup was asked to comment on specific technical matters in NR's Supplementary Statement
- Arup's technical advice has clarified matters for officers and was taken into account by QC
- Arup has also advised on all of Prof Buckley's submissions and has acknowledged that the alternative performance estimate provided via Prof Buckley should be taken into account as a potential outcome for the performance of rail dampers on EWR, albeit for a different damping product to SilentTrack and for a single type of rolling stock.

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# Queen's Counsel's Advice 1

The key aspect of his advice is (page 88 of the WAPC report):

- **The NVMP does not require 'at source' mitigation if the other measures already provided will achieve the objectives of the NVMP (para 77)**

or as written at para 62 (c) (page 85 of the report):

- 14
- **“At source” is preferred but where it is not sufficient to mitigate noise impacts or not reasonably practicable, other measures will be considered – there is no suggestion that if not sufficient “at source” has to be used first and then additions to it provided”**

or as in para 62 (f) (page 85)

- **[the NVMP] “cannot be construed as requiring both [barriers and rail damping] to be provided”**



# Queen's Counsel's Advice 2

- A “significant impact” means 3dB or above (para 58)
- QC assumes that rail damping may mitigate noise impacts by 2.5dB (para 4)
- A 3dB difference is at the margin of perceptibility (para 73)
- The NVMP standards concern internal, not external noise levels (para 14c)
- For those who already have noise insulation, open window noise will be reduced
- If rail damping were to be installed there would be, at one house, a reduction in noise from 3dB to less than 3dB



# Officer assessment

Queen's Counsel's Updated Advice	Officer assessment
<p><b>The context</b></p> <ul style="list-style-type: none"> <li>The NVMP does not require 'at source' if the other measures already provided will achieve the objectives (para 77)</li> </ul>	<p>In current circumstances with barriers and insulation already installed, the potential role for rail damping is only to supplement that existing mitigation at NSRs experiencing significant residual (post barrier) noise impacts (3dB or more) if reasonably practicable.</p>
<p><b>The severity of the impacts</b></p> <ul style="list-style-type: none"> <li>Noise impacts below 3dB are not considered to be significant (para 58)</li> </ul>	<p>The barriers and insulation together meet the requirements of the NVMP (in both route sections H and I-1) apart from in relation to one Noise Sensitive Receptor (NSR) in section H where the residual noise impact is 3dB.</p>
<p><b>The scale of benefits</b></p> <ul style="list-style-type: none"> <li>QC assumes that rail damping may mitigate noise impacts by 2.5dB (para 4)</li> <li>3dB difference is at the margin of perceptibility (para 73)</li> <li>The NVMP standards concern internal, not external noise levels (para 14c)</li> </ul>	<p>A 2.5dB difference is less than the level considered to be "significant" for residual noise impact purposes by the approved NVMP.</p> <p>Rail damping could only be relevant at the <u>one</u> NSR referred to above where the residual noise impact is 3dB.</p> <p>The approved NVMP does not require mitigation of noise to open areas or gardens.</p>
<p><b>How many people will benefit</b></p> <ul style="list-style-type: none"> <li>For those who already have noise insulation, open window noise will be reduced</li> <li>At one house there will be noise reduction from 3db</li> </ul>	<p>Not relevant to this decision - the approved NVMP does not require mitigation of noise where windows are opened.</p> <p>The one NSR benefit will involve mitigation of a noise impact which is of itself at the limits of perceptibility.</p>





# Officer conclusion and recommendation on rail damping

- Officers conclude that a reduction in residual noise resulting from the installation of RD which is at the margins of perceptibility, occurring at one NSR, is of such limited benefit that, given the costs indicated in the submissions , it is not reasonably practicable to install rail damping in route sections H and I-1.
- The recommendation is therefore that the NSoAs relating respectively to route sections H and I-1 be approved subject only to a condition specifying the documents that form part of the permission, excluding the previously imposed condition regarding rail damping.

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# Restrictions on train services

- Queen's Counsel has advised that the NVMP does not require any assessments to address any future increases in service and that these potential changes do not need to be modelled (paragraph 84 of his Advice).
- 18 NR can increase services without being in breach of condition 19 of the deemed planning permission, and do not need to seek further consent (paragraph 85).
- In the view of officers therefore, since there is no legal basis for the imposition of this condition, it is not recommended.



# Recommendation

- the respective NSoAs are considered to be robust and to have demonstrated that the required standards of noise mitigation set out in the Noise and Vibration Mitigation Policy will be achieved subject to the installation of the specified mitigation measures.
- The applications are recommended for approval subject to a condition that the development shall take place in accordance with the submitted details.
- The previous conditions relating to rail damping and limitations on the patterns of train services are not recommended.

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