NR16

Network Rail response to objections/representations made in respect of application 16/02507/CND

Submitted to Oxford City Council 9 January 2017

A1 CONSULTATION RESPONSES TO 16/02507/CND

A1.1 INTRODUCTION

As at 3 January 2017, approximately 112 consultation responses have been received through the Oxford City Council (OCC) online portal and these cover a range of concerns and comments. Section A1.2 provides a detailed response from Network Rail to a selection of the key issues raised. This is not intended to be a comprehensive response by Network Rail, since many of the other issues raised have already been addressed in the application or in other correspondence with OCC.

A1.2 SELECTED KEY ISSUE RESPONSES

Reversal of the SilentTrack 'commitment' of the TWAO and concerns over the resulting noise that could be experienced without the implementation of SilentTrack

SilentTrack installation was not a condition of the Transport and Works Act Order (TWAO) but was a condition imposed by Oxford City Council (OCC) should the technology be deemed 'reasonably practicable' within Section H. SilentTrack (whether or not in combination with barriers) is unlikely to deliver more than a 3dbA Leq reduction in day or night time noise levels (and the reduction could be substantially less). This reduction needs to be considered in the light of the TWA Inspector's view (shared by noise experts) that 'changes in environmental noise levels of less than 2 to 3dB are not noticeable to most people'. Noise barriers and insulation are already being installed in Sections H and I/1 at a cost of around £3.5 million. These are the only methods that can deliver the substantial noise mitigation required by the Noise and Vibration Mitigation Policy (NVMP) where there is housing close to the track.

Interpretation of the noise mitigation hierarchy and the prioritisation of 'at source' mitigation, such as 'SilentTrack'

Paragraph 2.2 of the NVMP notes that the 'first preference will be to apply necessary noise control measures at source where this is reasonably practicable'. The NVMP does not require the installation of track based measures, even though these are 'first preference', if these would not be sufficient to mitigate significant noise impacts, which is the case in most of Sections H and I/1.

In Sections H and I/1, neither SilentTrack (nor any other rail dampers) alone can achieve the noise mitigation standards set out in the NVMP, without being installed in combination with extensive noise barriers and some noise insulation in the form of secondary or double glazing. The 'noise mitigation hierarchy' should be interpreted in a common sense and practical way and, in considering whether the installation of SilentTrack would be 'reasonably practicable', it is proper to consider the marginal additional costs and benefits (or 'value for money') of SilentTrack assuming that those other measures will need to be installed in any event.

NR believes that it is appropriate to apply the reasonably practicable test to all of the measures provided in combination, in order to properly confirm that mitigation is correctly focussed on the most cost effective mitigation package.

Concerns over Benefit Cost Ratio changes in Section H

The Appellant has submitted two statements to OCC containing evidence that the provision of rail dampeners in Section H is not 'reasonably practicable'. NR's originally published analysis, in the statement in support of the s73 applications to remove condition 2 of 15/03503/CND and 15/00956/CND, showed a Benefit Cost Ratio (BCR) of 0.35 in Section H, ie. a return of £3 for every £10 invested. In reviewing the BCR in light of the Arup Technical Note, NR found that the published numbers actually over-estimated the original assessment of the benefits of SilentTrack as a result of the refined Net Present Values (NPV). The BCR was therefore adjusted to take this into account to 0.2 within the Not Reasonably Practicable (NRP) supporting statement for application 16/02507/CND.

Concerns over the cost calculations used and the monetary value attached to the long term benefits to health and well-being experienced by local residents

The method used to assess the monetary valuation of noise impacts employed has been undertaken using the Department of Transport (DfT) standard economic appraisal method, in particular TAG Unit A3, December 2015, and the accompanying TAG Data Book Table A3.1 and the TAG Noise Workbook.

WebTAG is an accepted economic appraisal tool for placing a monetary value on the environmental effects, in this case, of reducing noise and the consequent effects on eg. disturbed sleep. It is the only way of comparing directly the financial costs and the economic benefits of a mitigation measure that only provides an environmental rather than financial return.

The WebTAG methodology allows for the consideration of local conditions in Oxford, through the use of the specific noise model outputs for Section H and I/1 to derive monetarised benefits and bespoke costing of the installation of SilentTrack in Sections H and I/1. These are the main determining components in deriving the costs and benefits of the installation of SilentTrack in Sections H and I/1.

The method used to assess the cost/benefit of SilentTrack utilises the standard economic appraisal tool available for this type of calculation and NR is not aware of any other reliable tools which are in common use for noise impact economic appraisals.

Concerns regarding the removal of a restriction on train movements and impacts upon Noise SoA modelling

The number of train movements specified by OCC as a limit has been derived from the reasonable planning scenario for East West Rail after Phase 2 as contained in the NVMP, imposed by the Secretary of State under Condition 19. This planning assumption was used in the noise and vibration SoA and formed the basis for determining mitigation in both the noise and vibration SoAs in line with the Secretary of State's decision.

The reasoning behind the imposition of the train movements condition was directly linked to the incorrect assumption that the purpose of the noise monitoring was to enable a comparison of actual residual noise levels in comparison with those predicted in the Environmental Statement (ES), which rely on the 'reasonable planning scenario.'

The intended purpose of the noise monitoring is to check the effectiveness of the noise mitigation installed in pursuance of the approved noise SoAs, so that any defects in construction or performance can be identified and rectified in a timely manner.

Neither the TWA Order nor the deemed planning permission granted by the Secretary of State contains any restriction on the total number of train movements.

Concerns over the current EWR Phase 1 Timetable and NSoA

The 'reasonable planning scenario' used for the NSoA for the period between 23.00 and 07.00 includes EWR Phase 2 and freight services. The timetable that will be in operation from 11 December 2016 between Oxford and Oxford Parkway allows for 10 passenger services each day during the 23.00 to 07.00 period, which is only one third of the 29 passenger and freight services assumed in the 'reasonable planning scenario'.

Noise and Health

The TWAO planning conditions do not require a specific Health Impact Assessment to be undertaken. However, the stringent standards which have been applied in the Noise and Vibration Mitigation Policy (NVMP) provide adequate protection against noise and take account of its potential effects on health. This approach was endorsed by the Secretary of State when the TWA Order was approved, in requiring the NVMP to be applied to the design and implementation of noise mitigation.

HS2

HS2 is not yet an approved scheme and no assessment has been undertaken of the likely train operations that may take place on any part of EWR (Oxford to Bletchley or Princes Risborough to Milton Keynes) to serve HS2 construction or operations. The future service levels accepted by the Inspector at the TWA Inquiry (and confirmed by the Secretary of State's decision to grant the Order) are seen as 'reasonable assumptions of likely future service frequencies' and therefore correctly form the basis for the consideration of the

NSoA by the Council. This does not include any potential train movements related to HS2 construction or operation.

Devegetation

Vegetation clearance was required in advance of the approved Scheme's main construction work to remove existing areas of trees and scrub, where these would impede construction. There are no specific requirements for landscaping or for replanting on this section of the Scheme. In addition, Network Rail guidance covering new construction states that no tree planting should be within 5m of the outside rail. Where feasible, some replacement trees are being planted, at the conclusion of construction.

Speed Restrictions

Objections have suggested that a speed limit for trains be implemented to reduce noise and vibration at properties along the route. This was a matter discussed at length at the TWA Inquiry and rejected by the Inspector and the Secretary of State as neither appropriate nor necessary.

If Network Rail were to restrict train speeds to well below the safe line speeds through Section H, this would result in passenger train operations along the route becoming unviable.

Frequency of Trains

The service levels used in the NSoA were discussed and agreed by the Inspector at the TWA Inquiry (and confirmed by the Secretary of State's decision to grant the Order). They continue to represent a 'reasonable assessment of likely future service frequencies' following the opening of East West Rail Phase 2 between Bicester and Bletchley etc, which was the basis on which the Noise and Vibration Mitigation Policy was devised. Unfortunately, if Network Rail were to restrict the frequency through Section H, this would result in train operations along the route becoming unviable.

Adequacy of Noise Baseline Surveys

The noise baseline survey has been designed carefully to provide sufficient noise data for the Noise Scheme of Assessment. Noise levels have been measured at selected locations that are representative of the noise environment in that area. So that noise levels at other locations can be established where necessary, the measured noise levels have been adjusted by taking into account the distance to the track and measured differences in noise environment between locations. This method provides a robust approach to establishing noise mitigation requirements, without the need to measure noise at each individual property in the area.

Noise and learning at Phillip and James School

Noise modelling has been carried out at all noise sensitive locations including the school to determine the optimal length and height of the noise barriers in, as part of the assessment of the mitigation required under the Noise and Vibration Mitigation Policy. In the case of the School, a noise impact of 2 dB was modelled without any mitigation. Following the procedure set out in the Policy noise barriers are provided when noise impacts of greater than 5 dB are predicted, so that the modelled noise at the school is not sufficiently high to justify noise mitigation.

It is noted that there is a barrier between part of the school and the railway that is installed to provide noise mitigation for the residential properties on Navigation Way. This will, because of its close proximity, attenuate noise both from the existing railway and from EWR trains to parts of the school building and playground with predicted reductions in train noise of 7 dB at the building based on a receptor height of 6 m. To put this reduction into context, a change of 3 dB is considered to be the smallest change in noise levels which is generally noticeable with changes of 5 dB being clearly noticeable and changes of 10 dB representing a halving of sound. Therefore, this barrier will provide a noticeable reduction in noise levels for parts of the school, and higher reductions would be predicted to occur at lower receptor heights.

Noise Monitoring

The Noise and Vibration Mitigation Policy defines the times at which measurements will be undertaken (6 months and 18 months after opening). By that time, sufficient passenger and freight trains of the right types will be running to enable accurate measurements to be made. Potential future increases in passenger and freight service frequencies (and train lengths) will be taken into account. These calculations will be based on the future service levels which are set out in the Noise and Vibration Mitigation Policy. These future service levels were discussed and agreed by the Inspector at the TWA Inquiry. They continue to represent a 'reasonable assessment of likely future service frequencies' following the opening of East West Rail Phase 2 between Bicester and Bletchley etc., which was the basis on which the Noise Policy was devised.

Vibration Levels and Property Damage

Some residents maintain that they experience vibration levels which they believe to be unusually high as a result of their particular building type or location. The vibration prediction methodology that was used is based on measurements of trains under appropriate geological conditions at an agreed local site, and this methodology has been reviewed extensively and accepted by Oxford City Council in relation to Section H. Even after applying the "reasonable worst case" assumption, there are no dwellings where vibration will exceed the thresholds which are specified in the planning condition, which are designed to ensure a good standard of protection against disturbance as a result of vibration. By taking this precautionary approach it has not been necessary to carry out measurements in individual properties. It should be noted that the vibration magnitudes are sufficiently low that there is no probability of vibration damage as a result of the railway operations.

Vibration Monitoring

The s73 application for Section H Plain Line (16/01410/VAR) included the basis of an undertaking by Network Rail to undertake one round of vibration monitoring at three residential properties of different structural types, close to the railway. The detail of this undertaking is currently being agreed with OCC.

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