

Fiona Bartholomew,
Principal Planning Officer,
The Planning Department,
Oxford City Council,
St Aldate's Chambers,
109 St Aldate's,
Oxford,
OX1 1DS



27 November 2015

Our Ref: TWA/10/APP/01/Oxford City/C 19 (13)

Dear Fiona,

**Partial Discharge of Planning Condition 19 Part 13 (Section H) 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
Application 15/03110/CND**

Network Rail, in conjunction with Chiltern Railways, is proposing to construct a new railway (including the reconstruction of an existing railway) between Bicester and Oxford, together with the construction or reconstruction of stations at Bicester Town, Islip and Water Eaton. These improvements will facilitate the operation of direct railway services between London Marylebone, High Wycombe, Bicester Village (formerly Bicester Town) and Oxford.

The Secretary of State has made the Chiltern Railways (Bicester to Oxford Improvements) Transport Works Act Order "the Order" with modifications, and directed that planning permission be deemed to be granted, subject to the conditions set out in Annex 1 to the letter from Martin Woods (Head of TWA Orders Unit) dated 17th October 2012 (ref: TWA/10/APP/01).

An application [15/03110/CND] to partially discharge Condition 19 Part 13 of the deemed planning direction attached to the Order in relation to Section H was made on 22 October 2015. This application which relates to the approval of details of the size, appearance and location of the noise barriers

Registered office
2nd Floor, Exchequer Court
33 St Mary Axe
London EC3A 8AA

Registered number
1014622 England

VAT Registration
404 6180 80

A member of
Environmental Resources
Management Group

promoted in the approved Schemes of Assessment has been formally consulted upon by OCC. As a result of that consultation a number of comments and queries have been raised on which we think it would be helpful to OCC, in making its decision, to have our responses.

I feel it is worth stating at the outset that the location of the noise barriers shown on the planning drawings which form application 15/03110/CND are based on the approved Section H Noise Scheme of Assessment (SoA) barrier locations. We have checked the locations at the receptors mentioned in consultation responses, and there are no substantive differences in the barrier locations from those which were modelled and approved in the Section H Noise SoA.

It is noted that whilst the submitted barrier designs take account of known constraints, the final barrier locations that will be approved for construction will inevitably show minor variations which will reflect on-site factors which affect constructability and that are not currently known to the team e.g. unexpected ground conditions and buried services. Post construction noise monitoring will be required which will check the effectiveness of the mitigation and allows the provision of putting right any defects in mitigation or its performance if required.

The location of the noise barriers was subject to extensive discussion at the time of writing the Section H Noise SoA, during the draft SoA public consultation. A public meeting was held on 16 December 2014. Following the public meeting, local residents were invited to submit their comments on the draft Noise SoA for a period up until 12 January 2015. In total 56 responses were received during this period. ERM replied to all the responses on 11 February 2015, with copies also provided to OCC for review by the Independent Expert.

Responses on the location of the barriers were dealt with at that time. Some of the consultation responses on planning application 15/03110/CND revisit issues that were adequately dealt with at that time. ERM's consultation responses to the Section H SoA on barrier location, length and height and associated amenity issues were submitted and approved as part of the Section H Noise SoA.

The Noise SoA has subsequently been approved, after having been reviewed by the Independent Expert and forms the basis of the location of the barriers in this current submission. The requirement under Condition 19 (13) is that *'where noise barriers are promoted in an approved scheme of assessment, they shall be installed only once the local planning authority has given written approval*

of their size, appearance and location'. Condition 9 (9) clearly states that 'Noise mitigation measures shall be permanently installed as approved'.

On this basis it is clear that the 'in principle' decision about where the noise barriers are to be located has already been made through the approval of the Section H Noise SoA. The requirement under condition 19 (13) is merely to provide more detail on the locations than previously within the SoA. It is on this basis that application 15/03110/CND should be determined.

Having said that, we have gone through a further set of checks in order to inform our responses on the consultation points raised on this application.

I have set out our response to each of the main points raised in turn. and have annexed a summary table to this letter which cross refers our responses to the consultees.

Location of the barrier at Quadrangle House

The location of the noise barriers shown on the planning drawings which form the application 15/03110/CND are based on the approved noise SoA barrier locations. The Project's design contractor, Atkins, has been involved in the project from the early stages of the Project's design and has produced the current design based on the barrier specifications in the Noise SoA. The barrier location at Quadrangle House has been checked, once again as requested, by importing both barriers into an electronic drawing package and there are no substantive differences in the barrier locations from that which has been modelled and approved in the Noise SoA. It is, therefore deemed to be acceptable as it reflects the mitigation proposed in the Noise SoA. The noise modelling was undertaken for the barrier in this proposed location, as set out in the approved Scheme of Assessment.

The existence of a retaining wall at the southern end (Ulfgar Road) was a determining factor for setting back the location of the acoustic barrier and was shown at this location when the draft SoA was published in advance of the public consultation event on 16 December 2014. We considered siting the barrier closer to the track but there are significant engineering concerns around locating acoustic barriers on retaining walls.

Also the continuous barrier in front of Quadrangle House is for the benefit of the properties along St Peter's Road to avoid noise flanking around the barrier. It was acknowledged, and discussed and agreed as part of the Section H SoA Approval Process, that the barrier will not provide significant protection to windows on Quadrangle House that face the track but that these properties will be provided with noise insulation measures to mitigate the noise from the railway.

The potential for making a gap in the barrier as it passes Quadrangle House was investigated and discounted at the SoA design modelling stage as the design submitted and approved provides better noise attenuation with no significant effects on amenity.

The barrier will remain within Network Rail land located 1.2 metres from the Network Rail boundary which is formed of a palisade fence and the wall of Quadrangle House. This will allow sufficient space for access by relevant parties should maintenance be required. The barrier height has been designed to the optimum height for noise attenuation and constructability.

Rationale for parallel overlapping barriers at Bladon Close

An overlap is required as one Barrier is at track level whilst the other is set back to allow the installation of a retaining wall. Joining these two Barriers was considered during the SoA modelling process but it was decided that an overlap provided better noise attenuation.

Also the extent of the overlap required to achieve this attenuation, and as presented in the SoA and the planning drawings, has been checked and was found to be optimal at this location.

The principle of the approach to designing barriers to avoid the flanking paths around the end of barriers and were approved by the Independent Expert as they formed part of the calculation method in the SoA.

Extension of the barrier in the vicinity of Bladon Close

The noise barriers in this location are the same as those in the final Noise SoA that has been formally submitted and approved as part of the planning approval process. The length of the barrier in this location was accepted by the Independent Expert as part of the Section H Noise SoA approval process, and it has been designed to meet the requirements of the Noise and Vibration Mitigation Policy.

Location of the barrier in the vicinity of St Peters and Ulfgar Roads

As noted above, the decision to locate barriers 2.6 m from the railway or close to the boundary of Network Rail's land is based on engineering factors rather than topographic features. The current design information shows the a retaining structure adjacent to Ulfgar Road which is the reason for the change in the barrier alignment from 2.6 m from the railway to close to the Network Rail boundary in this area. Since the barriers discussed above are not located at "line side" locations (i.e. 2.6 m from the track), the barrier height is specified relative to the local ground height in the Noise SoA. The absolute height of the top of the barrier is therefore relative to the finished ground level which will form its base at the specified location. There is no requirement for it to meet a specific absolute height as suggested. Barriers

have been placed at locations at which they are effective in reducing noise impacts.

Barrier length in the vicinity of Lakeside

Noise modelling has been carried out to determine the optimal length and height of the noise barriers in Section H, as part of the assessment of the mitigation required under the Noise and Vibration Mitigation Policy. The length of the barriers has been determined through an iterative process to identify the point at which further significant reductions in train noise cannot be gained by further extensions in barrier length. The end point of the barrier in this location was accepted by the Independent Expert as part of the Section H Noise SoA approval process. There is no difference in the barrier location from that which was modelled and approved in the Noise SoA. It is, therefore deemed to be acceptable as it reflects the mitigation proposed in the Noise SoA.

Provision of 4m Barrier at Lakeside

We are unable to find any reference to a formal offer of a 4m barrier in this location. The barriers have been specified taking into account their noise attenuation benefits and practicability, which included the difficulties presented by taller barriers on health and safety, wind loading, engineering, installation and cost grounds. Barriers of 2.5 m (above rail height close to the tracks or above local ground height when on a cutting) have generally been found to be practicable in North Oxford and elsewhere along the route to Bicester. The provision of a 2.5m barrier in this location rather than a 4m barrier was accepted by the Independent Expert as part of the Section H Noise SoA approval process.

Length of Barrier in the vicinity of Bleinham Drive

The location of the noise barriers shown on the planning drawings which form the application 15/03110/CND are based on the approved Noise SoA barrier locations. The Project's design contractor, Atkins, has been involved in the project from the early stages of the Project's design and has produced the current design based on the barrier specifications in the Noise SoA.

Location of the barrier in relation to Upper Close and Woodstock Road

The barrier designs do seek to locate barriers at a location that is effective and is reasonably practicable. The potential for the need for retaining structures in this location determined the location of the barriers close to the NR boundary as there are significant engineering concerns associated with locating barriers on retaining walls.

Request for inclusion of cross section in vicinity of Upper Close

Figure 1.4 of the “Note to Provide Requested Additional Information to the Independent Expert For Noise on the Noise Scheme of Assessment covering Route Section H” December 2014 shows a cross section through the cutting at Upper Close (available at http://public.oxford.gov.uk/online-applications/files/745E34CB17396A07EA3DEE68638A8B0D/pdf/15_00956_CND-NOISE_ASSEMENT-1571637.pdf). This is one of a number of cross sections provided to the Independent Expert to allow him the fully test the result from the now approved SoA.

In addition, drawing No: 5114534-ATK-DRG-CV-003500 Rev P1 shows a typical cross-section through a 2.5 metre high barrier.

Visual impact of barriers

The commitment to mitigate noise considered under the approved SoA has been balanced against that of any potential for visual impacts on property.

Exceedance of modelled noise predictions

The Noise SoA from which the barrier locations are derived is based on the service levels that 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’.

Design of the acoustic barriers

The barriers have been designed to absorb rail noise and are carefully specified in terms of design, materials and installation to ensure that the noise reductions which are required will be achieved and that the barrier will only require minimum maintenance. The barriers will have an external timber finish, similar to those used for highway noise barriers.

Barrier protection for first and second floor windows

As stated previously, the optimal length and height of the noise barriers has been determined by the noise modelling. Noise mitigation required under the Noise and Vibration Mitigation Policy requires that eligible rooms will be provided with noise insulation, but the final decision on these will be made once the eligibility surveys have been completed.

Barrier Life Expectancy

The barriers have been designed to achieve a service life of 40 years and require no maintenance for 20 years, as is required for highways noise barriers. Network Rail will be responsible for maintaining the barriers over the life of the railway.

OS mapping

The latest version of OS base mapping has been used in the assessment. At the time of the assessment checks were made to make sure that the modelling did take account of recent changes that have not yet been registered by OS (e.g. Bladon Close), to ensure that these properties were considered in the assessment.

Impact of the loss of vegetation

The foliage of trees and shrubs can provide only a small amount of attenuation to noise, even then only if it is sufficiently dense and deep. ISO 9613-2 [1] includes a small allowance for attenuation through foliage, where it is between 10 m and 20 m deep (no allowance is made for depths less than 10 m). However, CRN, the standard prediction methodology for railways, provides no allowance for attenuation from foliage, which is a cautious approach.

We look forward to receiving your confirmation that the Council is satisfied that the requirements relating to the partial discharge of Condition 19 part 13 for Section H have been met.

Yours sincerely



Sarah Goodall
Principal Consultant
ERM

[1] International Organisation for Standardisation (ISO), (1996); International Standard 9613-2: Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation.

Resident/Property	Issue
McClements, 14 Quadrangle House	Location of the barrier at Quadrangle House
Rosser, 7 Quadrangle House	Location of the barrier at Quadrangle House
10, Quadrangle House	Location of the barrier at Quadrangle House
Edmondson, 3 St Peters Rd	Location of the barrier at Quadrangle House
Dancey, 15 Quadrangle House	Location of the barrier at Quadrangle House
	Location of the barrier in the vicinity of St Peters and Ulfgar Roads
	Design of the acoustic barriers
	Barrier Life Expectancy
Robinson and Osborne, 2b Bladon Close	OS mapping
	Rationale for parallel overlapping barriers at Bladon Close
Thorowgood, 41 Bleinham Drive	Length of Barrier in the vicinity of Bleinham Drive
	Exceedance of modelled noise predictions
	Impact of the loss of vegetation
Taylor, 15 Lakeside	Barrier length in the vicinity of Lakeside
	Provision of 4m Barrier at Lakeside
Lewis, 3 Bladon Close	OS mapping
	Rationale for parallel overlapping barriers at Bladon Close
	Extension of the barrier in the vicinity of Bladon Close
Dyson, 2 Upper Close	Location of the barrier in relation to Upper Close
	Request for inclusion of cross section in vicinity of Upper Close
	Visual impact of barriers
Channer, 313 Woodstock Road	Length of Barrier in the vicinity of Bleinham Drive and Woodstock Road
	Exceedance of modelled noise predictions

Resident/Property	Issue
	Impact of the loss of vegetation
Kauffmann, 61 Blenheim Drive	Length of Barrier in the vicinity of Bleinham Drive
	Exceedance of modelled noise predictions
Scott, 23 Blenheim Drive,	Length of Barrier in the vicinity of Bleinham Drive
	Exceedance of modelled noise predictions
	Impact of the loss of vegetation
Johnson, 57 Blenheim Drive,	Length of Barrier in the vicinity of Bleinham Drive
Boyd, 23a Bleinham Drive	Length of Barrier in the vicinity of Bleinham Drive
	Exceedance of modelled noise predictions
	Impact of the loss of vegetation
Peppiatt, 62 Blenheim	Length of Barrier in the vicinity of Bleinham Drive
	Exceedance of modelled noise predictions
	Impact of the loss of vegetation
White, 24 Blenheim Drive	Length of Barrier in the vicinity of Bleinham Drive
	Exceedance of modelled noise predictions
Stedman, 63 Blenheim Drive	Length of Barrier in the vicinity of Bleinham Drive
	Exceedance of modelled noise predictions
	Impact of the loss of vegetation
Whitby, 1 Upper Close Oxford	OS mapping
	Barrier protection for first and second floor windows
	Location of the barrier in relation to Upper Close
	Request for inclusion of cross section in vicinity of Upper Close
Bleach, 47 Rosamund Road	Request for inclusion of cross section
	Visual impact of barriers
Robertson, 37 Lakeside	Provision of 4m Barrier at Lakeside

This page is intentionally left blank