

**PROPOSED CHILTERN RAILWAYS (BICESTER TO OXFORD IMPROVEMENTS)**

**TWA ORDER**

**IMPLEMENTATION OF THE NOISE AND VIBRATION**

**MITIGATION PLANNING CONDITION AND POLICY**

**1 Introduction**

- 1.1 Chiltern Railways has adopted a well established and industry standard approach to the assessment of noise and vibration from the railway, set out in the Environmental Statement and Michael Fraser's evidence (**CD/1.16** and **CRCL/P/9/A**).
- 1.2 CRCL has proposed a draft Noise and Vibration Mitigation Policy (**CD/1.29**) setting out the standards and means by which this mitigation will be delivered.
- 1.3 In order to respond to questions raised by the Inspector and objectors, this further note has been prepared, which sets out, in more detail, the procedure to be used in implementing the policy, including post-construction monitoring.

**2 Proposed Planning Condition**

- 2.1 Revised draft planning condition 16 in **CD/1/12.1** is the latest working draft. It sets out the requirements to be followed, after approval of the Order, to discharge CRCL's commitments to implementing the Noise and Vibration Mitigation Policy which will ensure that the residual noise and vibration effects are no worse, at any location, than those set out as commitments in the Environmental Statement.
- 2.2 Draft Condition 16 states:

*16. Operational Noise and Vibration Monitoring and Mitigation*

*No later than six months after commencement of development within each individual Section a detailed assessment of likely noise impacts during operation of Phase 1 (and such other phases as are being constructed at the same time) of the railway works and details of proposed mitigation measures, which achieve the standards for noise and vibration attenuation set out in the Noise and Vibration Mitigation Policy, shall be provided to the local planning authority. All mitigation measures, including those prescribed in the Noise Insulation Regulations 1996, required for Phase 1 (and such other phases as are being constructed at the same time) shall be undertaken as soon as possible after commencement of the works and no later than the date on which Chiltern Railways commence a passenger rail service on the railway comprised in the development.*

*Before the commencement of the laying of the second track between the MoD Depot at Bicester and Islip, which is the principal component of the Phase 2 works, a detailed assessment of the likely noise and vibration impacts of the additional services likely to operate under Phase 2 and details of proposed mitigation measures, which achieve the standards of noise and vibration attenuation set out in the Noise and Vibration Mitigation Policy shall be provided to the local planning authority.*

*All mitigation measures, including those prescribed in the Noise Insulation Regulations 1996, required for Phase 2 shall be undertaken as soon as possible after commencement of the works and no later than the date on which the second track is brought into use.*

*Reason: to ensure that operational noise and vibration is adequately mitigated at nearby residential premises.*

- 2.3 A planning condition in this or a very similar form has been applied to numerous recent TWA Order planning directions, both for tramway and heavy rail schemes. These have all made reference to a Noise and Vibration Mitigation Policy or similar document which sets out the performance standards to be achieved and the arrangements for implementing the mitigation in a fair and transparent manner. These arrangements have been successfully implemented by Scheme Promoters after permission has been granted, for example, for the Docklands Light Railway Extensions.

### **3 Legal Background**

- 3.1 The legal structure of the proposed condition is well established. First, the planning permission takes effect as if granted under the Town and Country Planning Act 1990<sup>1</sup>. Second, that ensures that the enforcement regime of the Town and Country Planning Act 1990 is available. This regime<sup>2</sup> includes enforcement notices and breach of condition notices with criminal sanctions<sup>3</sup>. Third, conditions which have a negative structure so as to secure the undertaking of certain steps no later than a given event are well known to the law<sup>4</sup>.
- 3.2 The condition operates in a logical manner. In considering its terms it can be remembered that it uses a number of words or phrases which have an established or

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<sup>1</sup> By section 90(2A) of the Town and Country Planning Act 1990 on making an order under section 1 of the Transport and Works Act 1992 the Secretary of State may direct that planning permission for development be deemed to be granted. By virtue of subsection (3) if that occurs the provisions of the Town and Country Planning Act 1990, bar Part XII, apply as if the permission had been granted by the Secretary of State on an application under section 77 of the 1990 Act. (Part XII is concerned with validity of orders under the Town and Country Planning Act. It is unnecessary because the validity of an order under the Transport and Works Act is dealt with under section 22 of the 1992 Act).

<sup>2</sup> It is set out in Part VII of the Town and Country Planning Act 1990. The provisions include planning contravention notices to gather information; temporary stop notices; enforcement notices; stop notices; breach of condition notices; and injunctions.

<sup>3</sup> See section 187A(9) and section 179.

<sup>4</sup> See *Grampian Regional Council v City of Aberdeen* (1984) 47 P & CR 633.

defined meaning. Thus, commencement of development signifies the start of development which refers, as a well known expression in planning, to the execution of a modest level of work; each individual section is defined as a geographical part; and phase is also defined.

- 3.3 Consequently by virtue of the condition, (i) within 6 months of minor works being carried out within a defined geographical area a detailed assessment of likely noise, impacts during operation of all phases being constructed is to be provided to the local planning authority<sup>5</sup>; and (ii) the assessment has to include details of proposed mitigation measures<sup>6</sup>.
- 3.4 Thus, the local planning authority see both assessment and mitigation. Further, (iii) the mitigation measures have to achieve the standards set out in the Noise and Vibration Mitigation Policy. It follows that the local planning authority is able to ensure that each of the identified steps occurs.
- 3.5 The Noise and Vibration Policy (**CD/1.29**) contains standards which the mitigation has to achieve. These standards include for noise: (i) the use of 'best practicable means' to mitigate noise (para 2.2); (ii) the use of noise control measures at source (para 2.2); (iii) where those source measures are insufficient, mitigation of significant noise impacts, that is any increase of greater than 5 dB, where the 'noise impact thresholds' of 55 dB by day or 45 dB at night are exceeded by more than 5 dB, by the provision of noise barriers where reasonably practicable and acceptable in other respects (para 2.5), (iii) the provision of statutory noise insulation, where the 'noise insulation trigger levels', of 66 dB by day and 61 dB at night, are exceeded (para 2.6), (iv) the provision of noise insulation, where maximum night time noise levels will regularly exceed 82 dB (para 2.8), and (v) at other properties where the residual noise impacts would otherwise be greater than +10 dB, and these properties do not already qualify for statutory noise insulation, they will be offered noise insulation (para 2.7) With the exception of (iii), the mitigation being provided is much more generous than the statutory requirements. Section 2.5 of the Noise and Vibration Mitigation Policy has been slightly amended to reflect the wording above to clarify this approach, which is consistent with the approach in the ES.
- 3.6 The standards that will apply to the mitigation of train vibration will be based on BS 6472 and, except where existing levels of vibration from other sources already exceed the standard, mitigation will be installed to keep the Vibration Dose Value (VDV) below 0.4 m/sec, during the day, and 0.2 m/sec at night. Where existing levels already exceed the standard, mitigation will be provided where the VDV will be increased by trains by 50% or more than the standard. This change is half that which exists between the two adjacent impact categories in BS 6472.

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<sup>5</sup> It may be enquired why such a course is necessary when assessments have been carried out for the purpose of the environmental impact assessment and the inquiry. The answer is that noise is not an ever fixed subject. Background noise may decline (or increase). Consequently, it is necessary that assessment be temporally proximate to the proposed works.

<sup>6</sup> This is plainly sensible as there is a clear connection between assessment and mitigation.

3.7 These standards are set against the existing baseline and will apply to works in both Phases 1/2A and 2B.

#### **4 Further Revisions to the Planning Condition and Noise and Vibration Policy**

4.1 In the light of questions raised by the Inspector and objectors, CRCL will propose further minor modifications to the planning condition, in due course. These will address two points:

- (i) that the 'noise and vibration assessment reports' should be subject to 'submission to and approval by the LPA'.
- (ii) that where noise and vibration mitigation measures required for Phase 2B are most sensibly installed during the Phase 1 and 2A, works this will be required to be done.

4.2 Objectors have also raised certain questions regarding the exact drafting of certain parts of the draft Noise and Vibration Mitigation Policy. While, in CRCL's view, none of these go to the heart of the policy, it would be helpful to the Inspector and objectors if those parts of the Policy were clarified. The vibration mitigation standard is to be amended slightly in line with the commitment in the final sentence of para 3.6.

4.3 A revised version of the condition and Policy will be prepared and previous consultees, including groups such as Engage, will be sent copies well before the end of the Inquiry. If they were to have further comments, this could usefully be considered at or in advance of the Conditions session.

#### **5 Noise and Vibration Assessment and Implementation**

5.1 Figures 1 and 2 have been prepared to provide a clear summary of the steps in the process of assessing and mitigating adverse noise and vibration effects. The figures include the steps to date, in the ES and those undertaken since submission of the TWA Order application to set the context for the Implementation of the Noise and Vibration Mitigation Policy.

5.2 Figures 1 and 2 show the steps that will be undertaken to implement the Policy, firstly for noise and, secondly, for vibration. These illustrate the process for the Phase 1 and 2A works, which will take place as soon as the TWA Order is granted. The planning condition requires a further noise and vibration assessment prior to the Phase 2 works, which are likely to take place in association with EWR. These assessments and additional mitigation, if necessary, will be focussed on the sections of the route where new track is to be laid, between the A41 bridge in Bicester through to Islip station and from close to Peartree Farm through Wolvercote, where a second track is to be laid through the tunnel.

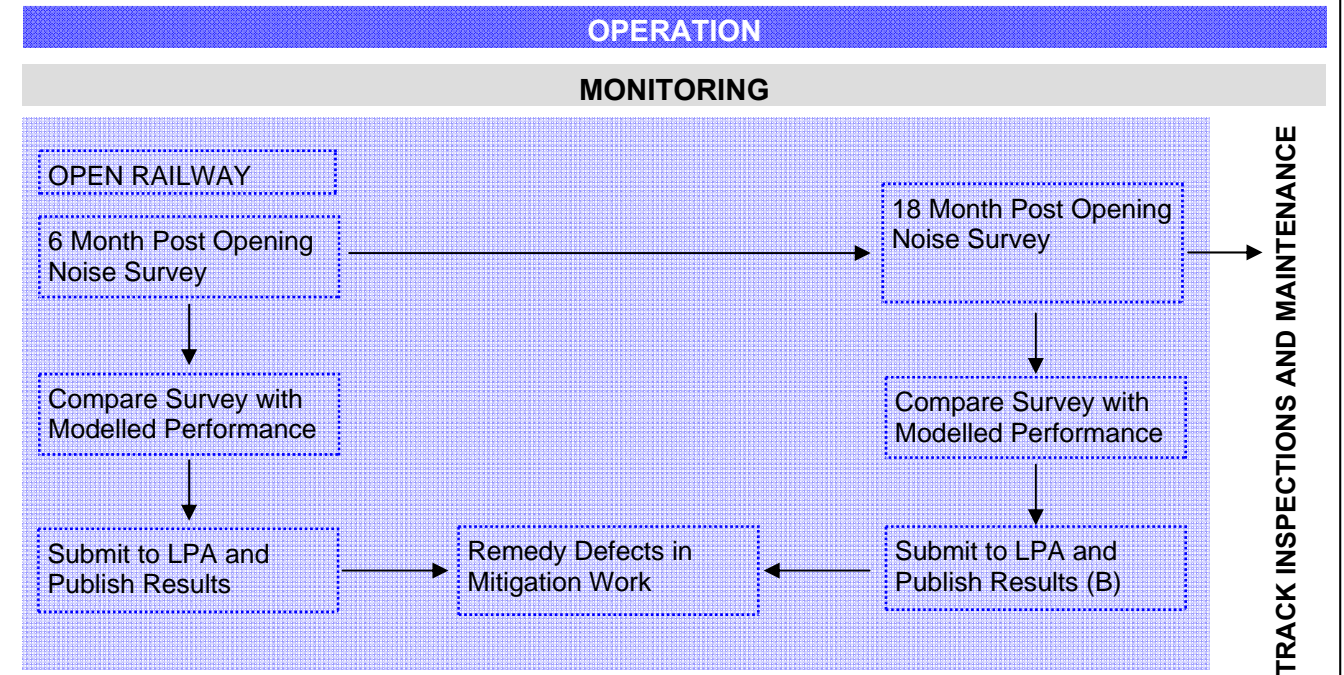
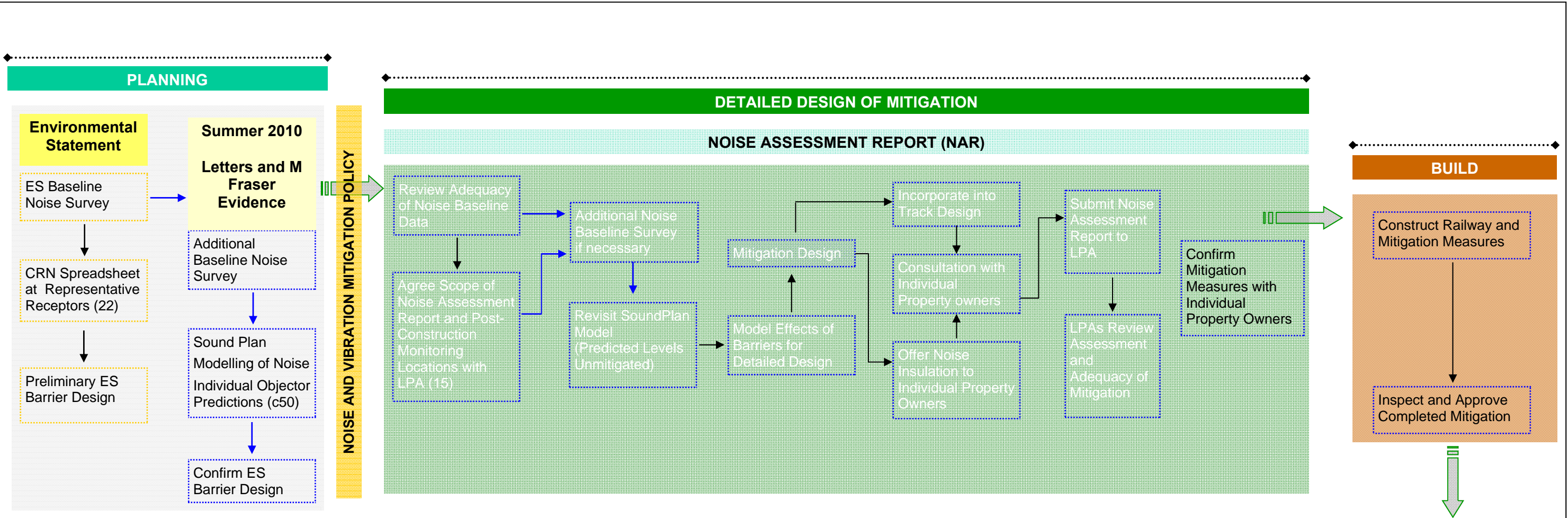
5.3 The key steps in the detailed design and implementation of mitigation, to be undertaken post Inquiry, are:


- (i) additional baseline surveys, where necessary;

- (ii) agreement of the scope of the detailed noise and vibration assessments with the local planning authorities (LPAs);
- (iii) detailed permanent way (ie formation and track) designs;
- (iv) refined assessment of the predicted noise and vibration levels;
- (v) detailed design and refinement of noise and vibration mitigation measures;
- (vi) submission of Noise and Vibration Assessment Reports for each section of the railway for approval by the LPAs. These will be subject to technical review by Environmental Health or other specialists advising the LPAs;
- (vii) construction of the railway and any mitigation works, including inspection and testing of the mitigation works;
- (viii) monitoring of the effectiveness of the mitigation measures, by surveys 6 and 18 months after Chiltern passenger services commence, for Phsae 1 and 2A works and similarly for Phase 2 works; and
- (ix) publication of the survey results and implementation of any remedial mitigation works, if necessary.

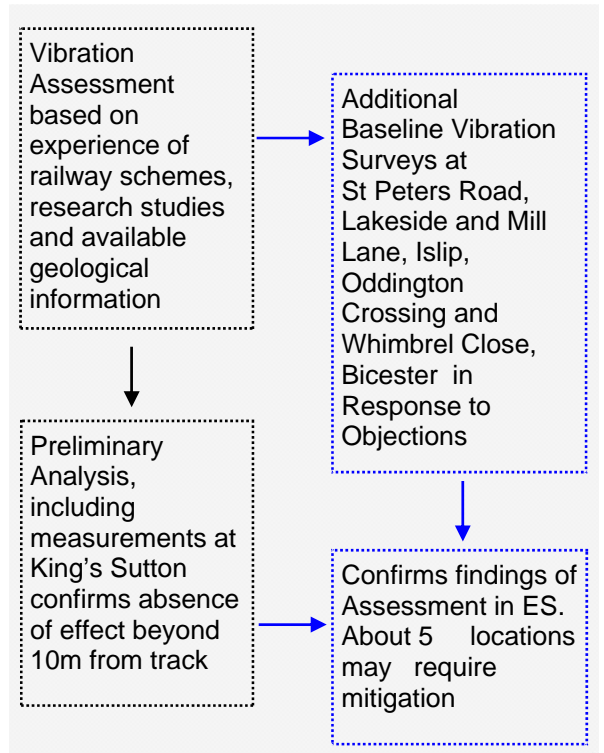
5.4 The approach being adopted allows for all residents to be kept informed at key stages and for those in properties immediately adjoining the railway, where mitigation measures are planned, to be kept informed individually and consulted at appropriate stages. The Noise and Vibration Assessment Reports and the post construction monitoring reports will be submitted to the LPAs and also be made widely available on the Chiltern Railways' Evergreen 3 website and through other liaison arrangements, such as newsletters.

Ian Gilder  
Michael Fraser  
24 November 2010



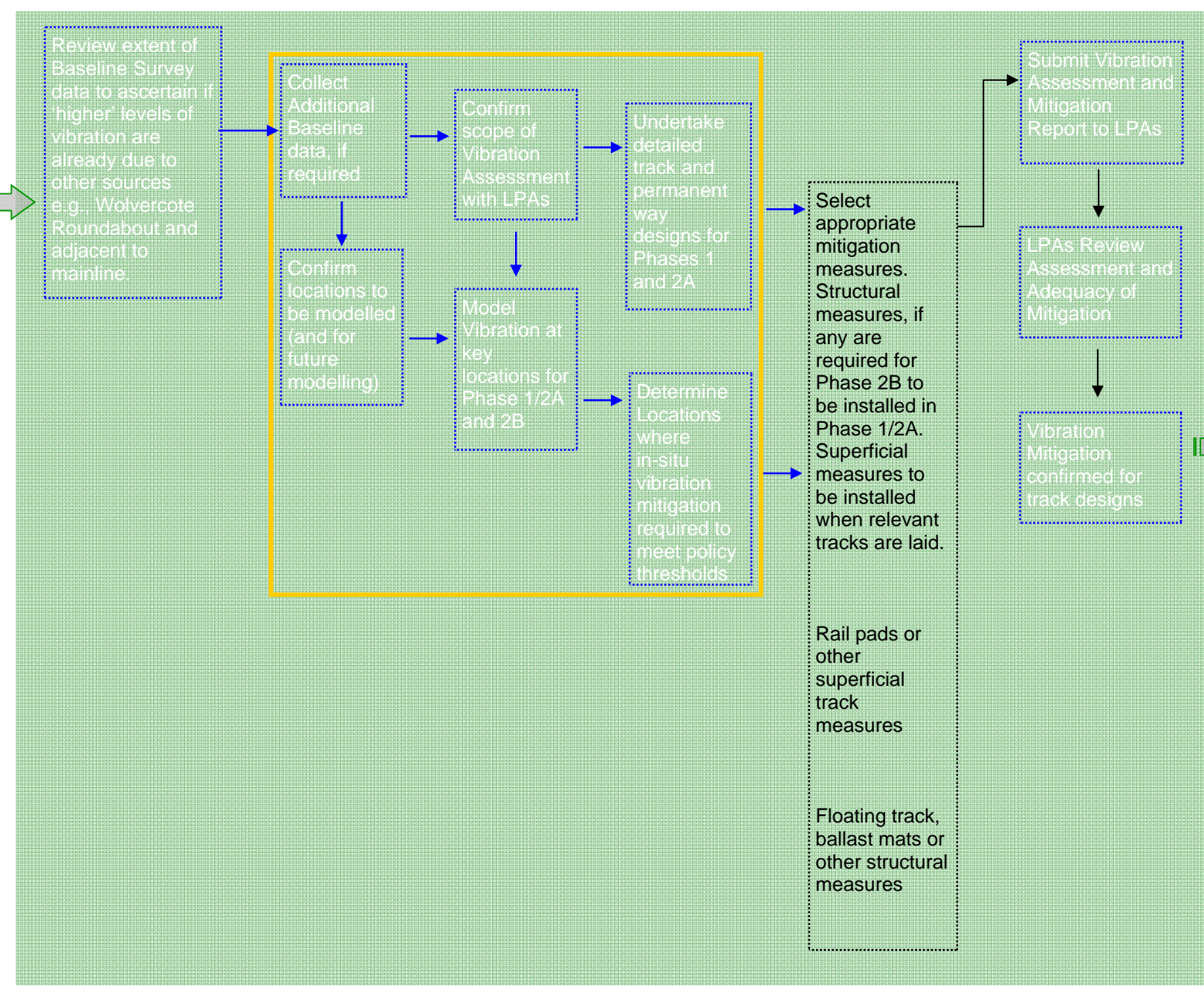
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ERM 2nd Floor, Exchequer Court 33 St Mary Axe London EC3A 8AA Tel: 020 3206 5200 Fax: 020 3206 5440		DATE: 28/06/2010 CHECKED: MF PROJECT: 0110147
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**Environmental Statement**      **M Fraser Evidence & Rebuttal Evidence**

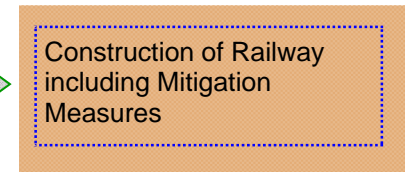


**NOISE AND VIBRATION MITIGATION POLICY**

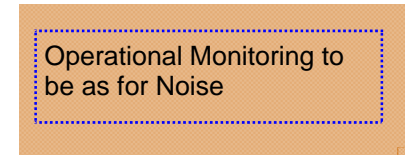
**DETAILED DESIGN OF MITIGATION**



**BUILD**



**OPERATION**



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