HOUSE OF LORDS

Select Committee on the Crossrail Bill

1st Special Report of Session 2007–08

Crossrail Bill

Volume I: Report

Ordered to be printed 19 May 2008 and published 27 May 2008

Published by the Authority of the House of Lords

London: The Stationery Office Limited
£price

HL Paper 112–I

The Select Committee on the Crossrail Bill

The Select Committee on the Crossrail Bill was appointed by the House of Lords on 17 January 2008 with the orders of reference "to consider the Crossrail Bill".

Current Membership

Lord Brooke of Alverthorpe
Viscount Colville of Culross (Chairman)
Baroness Fookes
Lord James of Blackheath
Lord Jones of Cheltenham
Lord Snape
Lord Young of Norwood Green

Publications

The report and evidence of the Committee are published by The Stationery Office by Order of the House.

General Information

General information about the House of Lords and its Committees is on the internet at: http://www.parliament.uk/parliamentary_committees/parliamentary_committees26.cfm

Contact details

All correspondence should be addressed to the Clerk of the Select Committee on the Crossrail Bill, Private Bill Office, House of Lords, London, SW1A 0PW
The Committee's email address is prbohol@parliament.uk and the Committee's website can be found at: http://www.parliament.uk/parliamentary_committees/lords_crossrail.cfm

CONTENTS

SUMMARY

This Report explains some of the decisions and recommendations the Select Committee on the Crossrail Bill made after sitting in public for 29 days of hearings and considering the cases presented on 45 of the 113 petitions[1] deposited against the Crossrail Bill.

This Report details many, but not all of the cases presented in Committee. The Committee has only commented on cases where it was deemed necessary. In all other cases, the Committee was satisfied with the undertakings and assurances offered by the Promoter to the Petitioner.

[1] A petition is a summary of objections to particular aspects of the Bill. It is a request to the House of Commons or the House of Lords for the Petitioner to be allowed to argue their case before a Select Committee, in this instance, on the Crossrail Bill.

Crossrail Bill

CHAPTER 1: INTRODUCTION

Crossrail

1. The Crossrail Bill provides for a "railway transport system running from Maidenhead, in the County of Berkshire, and Heathrow Airport, in the London Borough of Hillingdon, through central London to Shenfield, in the County of Essex, and Abbey Wood, in the London Borough of Greenwich"[2]. The said railway transport system is a proposal affecting primarily London and the South East of England. The intention is to deliver a railway with a frequent train service across the capital by 2017. The route will begin in Maidenhead and Heathrow and travel via Paddington, Liverpool Street, and Stratford to Shenfield, and via Whitechapel to Abbey Wood. The railway will travel underground through central London between Paddington and East London.

The History of Crossrail

2. The proposals for such a transport scheme are not unique to this Bill. Parliament considered a Crossrail Bill over a decade ago. That Bill, promoted by Transport for London, was developed following the 1989 Central London Rail Study. It was presented as a private Bill to the House of Commons on 22 January 1991.

3. However, the Bill was blocked at several of its Parliamentary stages. The 1991 Bill had 314 petitions deposited against it. At that time, an Opposed Bill Committee was appointed to hear those cases and it subsequently sat for 7 months. The Bill was finally rejected by that Committee on 11 May 1994. The Committee reported that the case for the Bill had not been made and the Bill was therefore not passed by the House. However, the Government issued Safeguarding Directions to protect the alignments of the route through central London and ensure that no developments could occur which would prevent the Crossrail scheme from being built in the future. We note, as did the House of Commons Committee in their Special Report[3], that the Safeguarding Directions have had a long term impact on some of the landowners along the route.

The Promoter of this Crossrail scheme

4. The Department for Transport and Transport for London formed a 50/50 joint venture company, Cross London Rail Links (CLRL), to promote and develop the Crossrail scheme. The Department of Transport is referred to as the 'Promoter' of the Bill in this Report.

5. The construction of a project such as Crossrail requires the authority of Parliament in the form of an Act. The Crossrail Bill was accordingly presented before Parliament by the Secretary of State for Transport on 18 May 2005.

---

2 Crossrail Bill, HL Bill 14, page 1

3 House of Commons Select Committee on the Crossrail Bill, First Special Report, Session 2006–07, HC 235, volumes I–V. The Report relates to the present Crossrail Bill.

6. The Bill is a hybrid bill because, although promoted by the Secretary of State as a matter of public policy, it adversely affects the private interests of certain individuals and organisations who may therefore be entitled to have their objections considered by a Select Committee under a quasi-judicial procedure akin to that for private bills. Objections are made by depositing a petition against the Bill in either, or both, House(s).

The Powers conferred by the Bill

7. The Bill will confer a range of powers on the nominated undertaker[4] to build and operate Crossrail. These include the right to construct and maintain Crossrail and the other associated and enabling works. These works are summarised in the Environmental Statement[5] and the explanatory memorandum accompanying the Bill. A summary of the main powers sought in the legislation follows below:

   (a) The Bill will grant deemed planning permission for the construction of Crossrail and other associated and enabling works. The Bill will also remove the need for listed building consent under Section 8 of the Planning (Listed Building and Conservation Areas) Act 1990.

   (b) The Bill will provide for the demolition, alteration or extension of the listed buildings specified in the Bill where this is necessary to construct the scheme and it removes the need to obtain conservation area consent under Section 74 of the 1990 Act, for the demolition of buildings and other structures specified in the Bill within designated conservation areas where this is necessary to construct Crossrail and the other associated and enabling works.

   (c) The Bill will confer powers of compulsory acquisition or temporary possession of the land needed to construct Crossrail and it authorises the stopping up or closure of highways and other public thoroughfares both permanently and temporarily, and the alteration of highways.

   (d) The Bill also gives the Promoter enabling rights to use certain rail facilities to be taken, or varied, for the purposes of providing Crossrail services; it authorises interference with navigable waterways; and it confers other powers required in connection with the construction and operation of Crossrail and other associated and enabling works.

   (e) There are provisions in the Bill that will deem planning permission to be granted for the authorised works, but such permission is to be subject to conditions requiring the approval of the local planning authority for certain matters of detail. The extent of matters subject to approval under these conditions will depend upon whether the local planning authority is a 'qualifying authority', that is, has given an undertaking to the Secretary of State about the way in which it will handle applications for approval of details. For qualifying authorities, the matters subject to approval will include certain construction arrangements. Where works affect highways, the Bill will also provide for certain matters to be subject to the approval of the relevant highway authority.

---

4 The nominated undertaker is the person who in due course will be appointed to construct Crossrail.

5 The Environmental Statement can be found online at: http://billdocuments.crossrail.co.uk/80256FA10055060F/pages/environmentalstatement

8. In short, the Bill provides the legislative framework to allow the construction of Crossrail. It amends existing powers, where the Promoter deems necessary, to ensure the construction and operation of the proposed transport scheme.

The House of Commons Select Committee

9. A Select Committee in the House of Commons considered petitions deposited against the Bill in that House. It sat for 84 days in public and private between 17 January 2006 and 18 October 2007 and considered cases presented on 205 of the 457 petitions deposited against the Crossrail Bill, and against the four sets of Additional Provisions deposited by the Government.

10. As a result of its sittings the Committee made certain amendments to the Bill to meet, in whole or in part, the requirements of Petitioners where they judged that to be appropriate. There were also a number of issues where the Committee made recommendations or suggested a course of action to the Promoter instead of making an amendment to the Bill. The Committee's Special Report was published on 23 October 2007 and explained some of the decisions and recommendations they made.

The Passage of the Bill to the House of Lords and the Formation of this Select Committee

11. Once the House of Commons Select Committee had introduced the four sets of Additional Provisions and reported the Bill, the Bill went through its remaining stages in the House of Commons—namely Committee on re-commitment, Report and Third Reading. The Bill was then brought up to the House of Lords and read for a first time on 14 December 2007.

12. This Select Committee was appointed on 17 January 2008 in the following terms:

BOX 1

Committee Appointment Terms

†**Crossrail Bill** The Chairman of Committees to move that, as proposed by the Committee of Selection, the following members be appointed to the Select Committee to consider the Crossrail Bill:

Lord Brooke of Alverthorpe	Lord Jones of Cheltenham
Viscount Colville of Culross (Chairman)	Lord Snape
Baroness Fookes	Lord Young of Norwood Green
Lord James of Blackheath	

That the quorum of the Committee be four;

That the Committee have power to adjourn from place to place;

That the Reports of the Committee shall be printed, regardless of any adjournment of the House;

That the evidence taken by the Committee shall, if the Committee so wishes, be published;

That the Committee meet on 19 February at 11.00am.

13. Members of the Select Committee on the Crossrail Bill were selected in part because they did not have any local or personal interests in the Bill, ensuring that they could judge impartially each case before them.

CHAPTER 2: THE SELECT COMMITTEE IN THE HOUSE OF LORDS

14. This Committee has sat in public for 29 days of hearings and has considered cases presented on 45 of the 113 petitions deposited against the Crossrail Bill as amended by the House of Commons.

15. We have been on several site visits, including to the Spitalfields area, the Isle of Dogs and Paddington station (see Appendix 2) and have attended teach-ins with various expert witnesses on subjects including noise, settlement and compensation.

What the Committee could and could not do

16. Select Committees on hybrid bills do not operate under the same parliamentary rules as other Select Committees. They are quasi-judicial and operate more like a court. Committees such as ours do not have an extensive remit and serve only to consider the issues raised by petitioners, where the Petitioner has *locus standi*[6].

17. Unlike the House of Commons Select Committee, the House of Lords Select Committee was not given any instructions by the House itself.

Basic Rules Observed in Committee

18. Both Promoter and Petitioner have the right to appear before the Committee to make their cases. The practice of the House allows Petitioners to be heard either in person, or by their agent or Counsel. The Promoter of the Bill, the Secretary of State for Transport, was represented by her parliamentary agents, the firm of solicitors Winckworth Sherwood, and by legal Counsel. All petitions not withdrawn were referred to the Committee. There were no challenges to the *locus standi* of Petitioners in this House; they were thus all entitled to be heard. A programme of hearings was arranged.

19. Petitioners could only be heard on matters included in their petitions, and were not able to make additional arguments before the Committee.

20. Petitioners could only seek to represent themselves and those who had authorised them to petition on their behalf by signing the petition or a letter of authority. Any attempt to raise the concerns of neighbours or others who had not petitioned the Committee was not permitted. This was because the Committee could not reasonably determine why others had not chosen to petition.

Significance of Second Reading

21. A hybrid bill has a Second Reading[7] in the House of Lords before it is committed to a Select Committee. Once the House agrees that the Bill

---

6 The Promoter of the Bill may argue that, in their view, a Petitioner does not have a right, or *locus standi*, to petition against a Bill. Usually such a view is taken because the Petitioner does not seem to be locally or specifically affected by the Bill, although other reasons may exist. If the *locus standi* of a petitioner is objected to, it is decided upon by the Committee on whom the decisions of the Court of Referees are binding. (See Erskine May, *Parliamentary Practice*, Twenty-third edition, Chapter 39, LexisNexis Butterworths)

7 A debate on the principle and merits of the Bill

should be read a second time it is deemed to have approved it in principle. This means that a Select Committee on a hybrid bill cannot reject the bill. Furthermore, petitioners are subsequently limited in the arguments they promote in committee; they may seek to amend the Bill but may not argue that the Committee should reject it.

22. This Committee agreed that, at Second Reading, the House approved the principle of the Bill, and that the principle of the Bill should be understood to mean the works proposed (outlined in the Bill—its clauses and schedules) within the limits of deviation. In the Bill there is an intimate connection between the powers conferred and the places where those powers may be exercised. For this reason, and because of complications over Additional Provisions in the Second House[8], we declined to hear, in any detail, any Petitioner arguing for amendments to the Bill to provide for alternative route alignments that would go outside the limits of deviation. The Chairman set out the Committee's position on this matter on 13 March 2008 (paras 4443–4446).

Additional Provisions

23. The House of Commons Select Committee on the Crossrail Bill made two types of amendment to the Bill in response to petitions and to other events. They made amendments to—

    (a) limit the powers included in the Bill, or to

    (b) extend the obligations of the Government and/or extend the powers contained in the Bill.

24. The latter type of amendment is known as an Additional Provision. Since such an amendment could potentially have an impact on people not previously affected by the Bill, Additional Provisions need to be advertised and authorised by the House in the same way as the original provisions of the Bill, and may be subject to petitions.

25. Four sets of Additional Provisions were introduced in the House of Commons.

26. The position in the House of Lords is different, as the Chairman explained on the Committee's behalf on 13 March. On a Private Bill, it is not possible to introduce a Petition for Additional Provision in respect of a Bill in the Second House, as this is expressly forbidden by Private Bill Standing Order 73[9]. Procedure in a Select Committee on a hybrid bill "broadly follows the procedure on an opposed private bill"[10]. We therefore concluded that we had no power to make an amendment which would have amounted to an Additional Provision, unless we were specifically instructed to do so by the House. We received no such instruction.

Order of proceedings

27. In a Select Committee on a hybrid bill the onus is on the Petitioner, or their agent, to prove that they are unreasonably affected by the Bill. It is usual in these circumstances to allow the Petitioner both the first and last words on

---

8 See paragraphs 25-28 of this Report

9 House of Lords Standing Orders can be viewed online at: http://www.publications.parliament.uk/pa/ld/ldpubns.htm

10 Erskine May, *Parliamentary Practice*, p.566

their case. However, like the House of Commons Select Committee, we recognised that this practice often disadvantaged Petitioners, many of whom had had no previous experience of a parliamentary committee, by requiring them to explain complicated technical matters.

28. We therefore agreed that the Counsel for the Promoter would briefly open each case. The Petitioner would then have the opportunity to set out their concerns and objections, calling witnesses where desired. The witnesses could be cross-examined by Counsel for the Promoter, and re-examined by the Petitioner.

29. Once the Petitioner's case had been made, the Counsel for the Promoter would open his case. Again, witnesses could be called, examined, cross examined and re-examined. Closings then followed from the Promoter's Counsel and the Petitioner respectively.

Who petitioned?

30. The Committee set a petitioning period for the Bill from 8 January to 30 January 2008. Any individual, group of individuals, or organisation "directly and specially" affected by the Crossrail Bill was able to petition against it. 113 petitions against the Bill were deposited and a full list of these can be found at Appendix 3.

31. The Committee heard from many, but not all, of the Petitioners during its hearings. As in the House of Commons, all hearings took place in public and were transcribed and webcast.

32. Some Petitioners chose not to appear and some withdrew their petitions after satisfactory negotiations with the Promoter of the Bill. We were pleased that a sizeable number of Petitioners were able to settle with the Promoter in this way and we are grateful to the specialist experts employed by Crossrail on noise, settlement and compensation issues particularly, Mr Rupert Thornely-Taylor, Professor Robert Mair and Mr Colin Smith respectively, for their work with Petitioners and for their explanation of issues to the Committee and to those Petitioners who did appear.

Register of Undertakings and Assurances

33. Some Petitioners against the Crossrail Bill were offered assurances or undertakings by the Promoter either in the Committee hearings or during discussions outside Committee. These undertakings set out what a Petitioner could expect from the Promoter. The Department for Transport has published drafts of the Crossrail Register of Undertakings and Assurances. This register is intended to capture all the individual undertakings and assurances given to Petitioners in a single document thus ensuring that the nominated undertaker, as well as the Secretary of State for Transport or any other organisation exercising the Bill powers, complies with them. The Committee understands that the register will form part of the Crossrail Environmental Minimum Requirements (EMRs) and that an undertaking has been given that any nominated undertaker will be contractually bound to comply with the controls set out in the EMRs[11].

[11] For more information on undertakings and assurances see paras 3448–3455 in the transcript

34. Chapter Three onwards details the Committee's recommendations relating to some of petitions deposited in this House. As was the case in the House of Commons' Special Report, we have made no comment on some petitions, having taken the view that the existing law, and the Environmental Minimum Requirements (including the registered list of undertakings and assurances) ought to meet the points raised by Petitioners.

Crossrail Information Papers

35. Crossrail Information Papers are documents prepared and published by the Promoter setting out the Promoter's position on a wide range of topics relevant to the Crossrail project. They can be found on the internet at: http://billdocuments.crossrail.co.uk/80256FA10055060F/pages/informationpapers.

36. They are intended to be a useful guide to petitioners and to all of those who are interested in or affected by Crossrail. They were originally published when the Bill was in the House of Commons and have been updated and revised from time to time since then, in some cases following discussions and agreement with local authorities. Where Information Papers include commitments made by the Promoter these have been recorded as entries in the Register of Undertakings and Assurances maintained by the Promoter.

37. Whilst not otherwise binding (unlike the EMRs), they could be of use to any local resident or business person who wishes to complain as the project proceeds, through the methods to be provided (see paras 169-170).

CHAPTER 3: DECISIONS ON VARIOUS SPECIFIC PETITIONS

Cyclists' Touring Club

38. The Cyclists' Touring Club raised three main issues in their Committee hearing: bicycle carriage on trains, provision for bicycle parking at stations and the danger that the construction period would pose to cyclists.

39. We are sympathetic to the Petitioners' concerns and we understand the need to provide adequate facilities for cyclists and to protect them on the road.

40. On the first two issues raised by the Petitioners we can do little. Bicycle carriage on trains will be a matter for the Train Operating Company [TOC] once appointed. We expect whatever policy is adopted by the TOC to be cycle-friendly, so far as is feasible, and in line with Transport for London and London Underground policy. Provision for bicycle parking at stations is largely a matter for local authorities. We would encourage the Petitioners to enter into a dialogue with the TOC [once appointed] and with relevant local authorities on these issues.

41. Furthermore, we would encourage the Petitioners to continue their dialogue with the Promoters on their final concern. The problems often arise when a lorry turns left, unaware of a cyclist between it and the kerb. The Promoters have assured the Petitioners that they will include a cycle awareness session in their site induction programme—there may be scope for other practical measures and we would encourage both parties to continue their dialogue on safety issues.

Iver Parish Council, the Ramblers' Association and the Open Spaces Society

42. Iver Parish Council, the Ramblers' Association and the Open Spaces Society petitioned the Committee to require the Promoters to provide a new pedestrian footbridge to replace Dog Kennel bridge—a bridge that has been earmarked for demolition. Dog Kennel bridge was partly designed by Brunel[12] but expert witnesses for the Petitioners freely admitted that the bridge had no unique characteristics in the oeuvre of Brunel (paras 1789–1793) and English Heritage did not petition against its demolition.

43. The Petitioners did not argue against the demolition of the bridge but contended that the bridge should be replaced. They also argued that, if it was decided that it would not be replaced, their choice of alternative footpath should be accepted.

44. The Committee are not persuaded by the Petitioner's case. The Petitioners failed to show that the bridge is well used and the cost of providing a replacement bridge does not make this an attractive proposition. Furthermore, there is no public footpath over the bridge itself on the Buckinghamshire County Council definitive map.

45. We agree with the Petitioners that an alternative footpath should be established to link into the existing footpath network. We note that the Promoters have offered an alternative footpath route which would do so.

---

[12] Under examination it was established that only one central arch of the bridge appeared to have been built by Brunel and the remaining outer arches were added in about 1919.

However, this is not the Petitioners' preferred route. The Petitioners' preferred route goes outside the limits of deviation set out in the Bill. We would therefore encourage the Petitioners to negotiate with the landowners to see if an acceptable path can be established.

Mr James Middleton

46. Mr Middleton argued that the Promoter was fundamentally promoting the wrong scheme. He argued that Crossrail should be a regional scheme that, amongst other locations, should go to Milton Keynes, Aylesbury and more far-flung places around the East and South-East of England.

47. The Promoter made clear their position that the petition fell outside the principle of the Bill but they did not challenge Mr Middleton's *locus standi.*

48. We allowed Mr Middleton to present his petition, and listened with interest to some of his suggestions, but we made clear to him that his petition did indeed fall outside the principle of the Bill and that therefore we would be unable and unwilling to do anything about it.

Mr David Saunderson

49. Mr Saunderson is the part owner of a property which falls within the area of the proposed Crossrail Farringdon East ticket hall. Mr Saunderson petitioned in the House of Commons and the main issue before that Committee was the question of whether or not the Promoters would accept a blight notice on the property if served by Mr Saunderson. Subsequent to that petition hearing Mr Saunderson served a blight notice on 18 December 2006 and on 16 February 2007 the Promoters accepted that notice. There have since been discussions over the valuation of the property between the Promoters, various agents and Mr Saunderson's agents and there has been a dispute over the valuation and about payment of agents' and surveyors' fees.

50. We recognise that an impasse has been reached in negotiations between Mr Saunderson and the Promoters and we would encourage Mr Saunderson to take his case to the Lands Tribunal which is the proper statutory body to deal with such a valuation dispute.

Petitions from the Spitalfields area

51. We spent a good deal of time hearing from Petitioners from the Spitalfields area. Petitioners had many concerns over the construction of the Hanbury Street shaft and the running tunnels through the Spitalfields area. The Petitioners divided up responsibility for presenting their concerns to the Committee to avoid repetition and for that we are grateful. Below we set out our response to the Petitioners' main concerns.

Relations between Promoter and Petitioners and the Community Liaison Panel

52. The House of Commons Committee's Special Report noted that "there has been a lack of clear information about the project in the area" and concluded that "a certain amount of action is necessary in the locality immediately"[13]. In response to Petitioners' concerns over a lack of communication on the

[13] House of Commons Select Committee on the Crossrail Bill, First Special Report, Session 2006–07, HC 235-I, para 92

project and involvement with the project the House of Commons Committee asked the Promoter to set up a local monitoring body in conjunction with the Tower Hamlets Borough Council and representatives from the community[14].

53. This body was duly set up but, whilst the Bill was still with the Commons Committee, there were complaints from Petitioners that the Promoter had not done enough to set up a sufficiently independent local panel. In response to these concerns the Promoter engaged an independent charity, Planning Aid, to facilitate meetings of the Liaison Panel.

54. The Petitioners who appeared before this Committee argued that the Panel was still not functioning correctly for various reasons. There was some suggestion that because the Promoter covered the costs to the charity of conducting the facilitation work the charity was somehow in the Promoter's pocket. Other concerns included a suggestion that the Panel was not properly constituted and that it should have decision-making powers which it does not have at present.

55. Petitioners have repeatedly said to us that they welcomed the instruction from the Commons Committee to set up the Panel and that they want it to work properly. We can only re-iterate that we think the Panel has, potentially, a very important role to play and we would encourage the Petitioners to work with Planning Aid to come to satisfactory arrangements to make the Panel work. There are many issues that the Panel could tackle to mitigate the impact of the Crossrail works on the local community; for example we would suggest that the Panel could start by focusing on lorry routing issues and health issues related to the construction of works in the area[15]. We hope that the Panel will be in a position to start work on these issues in the near future and that the Tower Hamlets Borough Council will be actively involved. We note that the relevant local authority, the London Borough of Camden, took a leading role on a similar panel set up in connection with the Channel Tunnel Rail Link scheme.

Settlement

Information Paper D12—the settlement assessment process

56. Under Crossrail's policy on settlement, as set out in Information Paper D12, buildings along the route which may be subject to settlement are assessed using a three phase process, similar to that developed on other projects including the Jubliee Line extension and the Channel Tunnel Rail Link.

57. Full descriptions of these three phases are given in the Information Paper; suffice it to say that where the predicted settlement from bored running tunnels and excavations is less than 10mm, and the predicted ground slope is less than 1/500, buildings are not subject to further assessment after completing Phase 1. Those for which predicted settlement is 10mm or more, or for which predicted ground slope is 1/500 or more, are subject to a Phase 2 assessment. However, this does not mean that all buildings which progress to Phase 2 are predicted to suffer damage from settlement.

58. Under Phase 2 processes a generic area-wide assessment of settlement identifies zones in which buildings might be at risk of sustaining damage at

---

14 ibid., paras 93–95

15 Issues that we discuss further in paragraphs 60–65.

levels which require individual investigation (risk category 3 or above) based on correlation with the calculated maximum tensile strain values.

59. In Phase 3 each building is considered individually. The Phase 3 assessment consists of three steps, referred to as "iterations", each refining the building and tunnel model to a higher degree. As a result of the Phase 3 assessment, the risk category of the building is assessed or reassessed, the requirement for any protective works is established and the design and implementation of any protective works and associated specialised monitoring are determined.

Petitions from Spitalfields' residents related to settlement

60. Petitioners argued that the Promoter had not carried out sufficiently detailed investigations into the condition of listed buildings within the limits of deviation in the Spitalfields area. Specifically, Petitioners argued that the Phase 3 assessments that had been completed were inadequate and incomplete because, in many cases, they did not include an internal inspection of the buildings in question. Petitioners also argued that not all listed buildings in the area had been reported on individually.

61. The Petitioners asked the Committee to require the Promoters to give them an undertaking that all listed and historic buildings would undergo an accurate and comprehensive individual inspection and assessment, to include internal features, now, and not once work has started, to determine possible settlement impact and mitigation measures. The purpose of this, to the Petitioners' minds, would be threefold:

    (1) for the long term protection of the individual affected buildings;

    (2) to give a clear idea of the likely impact of the Promoter's preferred route alignment on the historic fabric of the area; and

    (3) in support of a proper analysis of the best route east out of Liverpool Street station (para 3243).

62. All buildings in Spitalfields have been subject to the assessment procedures outlined above. Additionally, all the listed buildings in the Spitalfields area, within the 10mm settlement contour, have automatically progressed to Phase 3, Iteration 1 of the assessment process in line with Crossrail's policy outlined in section seven of the Information Paper. They have not yet gone through Phase 3, Iterations 2 and 3, but they will do so at a later date where this is deemed necessary as a result of the settlement 'scoring' system explained to us by Professor Mair on 20 February and again on 12 March (para 3292).

63. Furthermore, all the owners of these buildings will be entitled to a Settlement Deed [an agreement], which will include a requirement to survey the interior of the building in some detail before tunnelling actually starts (para 3293), and will provide for prevention or repair of any damage.

64. Such settlement deeds are not only available to the owners of listed buildings in Spitalfields but to anyone who meets the criteria set out in Appendix A to Information Paper D12. In brief these criteria specify that anyone who has a legal estate within 30 metres on plan of the tunnels, retained cuttings, shafts and boxes forming part of the works authorised to be carried out under the Bill is eligible for a deed.

65. It is our view that the Petitioners are therefore adequately protected under existing policies [set out in Crossrail Information Paper D12 which includes the draft text of the Settlement Deed]. It may be that there has been some confusion over the content of these policies and the nature of the settlement assessment process and we hope that Petitioners' appearances in Committee on this matter have helped to clarify the situation. We would encourage all affected and entitled Petitioners[16] to take out a Settlement Deed, as the Promoters have already encouraged them to do (para 3433), for their own protection.

Noise—groundborne and from fixed installations

Explanation of noise measurements

66. As this is the first time noise has been discussed in this Report we thought it would be helpful for the reader to include an explanation of how noise measurements are expressed, and what the suffix $L_{Amax,S,}$ which is used throughout this Report, means.

67. The symbol "L" indicates a value expressed in decibels (abbreviated dB). The dB scale measures relative magnitudes of sound power or intensity (sound power per unit area) a property proportional to the mean squared value of the amplitudes of the air pressure oscillations that cause sound.

68. Every doubling of intensity is a 3dB increase and every tenfold increase in intensity is a 10dB increase. A standard reference level (0dB = 20 micropascals of root mean square sound pressure) is used so that the dB scale can measure absolute levels as well as relative levels. The symbol "A" signifies that the measured sound pressure has been subjected to frequency weighting using the standard "A-weighting scale", to approximate the frequency response of the human ear—relatively insensitive at low frequencies and very high frequencies. Every 10dB increase in A-weighted sound level is perceived as approximately a doubling of loudness—slightly more than a doubling for sound of low frequency.

69. The symbol "S" specifies a method of averaging the oscillating sound pressure, by exponential averaging, using the standard "slow" time constant of one second—the alternative being the "F" or "fast" time constant of 1/8 second. "S" has a greater smoothing effect on sound that varies in level. The symbol "max" means the highest averaged value reached during an event such as the passage of a train. The value of $L_{Amax,S}$ nearly equals the value of $L_{Amax,F}$ for a steady sound that lasts for one second or more, otherwise $L_{Amax,F}$ levels exceed $L_{Amax,S}$ levels by an amount dependent on the rapidity and magnitude of the variations. For groundborne noise from a modern underground railway $L_{Amax,S}$ levels are typically 2dB lower than $L_{Amax,F}$ levels. $L_{Amax,S}$ can alternatively be written as L_{ASmax}.

Petitions from Spitalfields residents related to noise

70. Petitioners from the Spitalfields area argued that the groundborne noise level of 40dB$L_{AMAX,S}$, set as the highest level for residential properties, was unacceptable for the Spitalfields area. Petitioners argued that the noise levels that they currently experience in their properties should not be exceeded by

---

16 Property owners whose property lies within 30 metres on plan of the running tunnels (para 3337)

the frequently running Crossrail trains and asked the Committee to require the Promoter to set a maximum level for groundborne noise in the Spitalfields area of 25dB$L_{AMAX,S}$, a figure which is five decibels below the level proposed for sound-recording studios (para 4272).

71. Crossrail Information Paper D10 sets out the Promoter's approach to the design of the permanent track form. The maximum level of groundborne noise residential properties will experience is 40dB$L_{AMAX,S.}$ We undertook a visit to the Renaissance Chancery Court hotel in High Holborn to experience the groundborne noise emanating from trains running along the Central and Piccadilly underground lines below the hotel. We heard a number of trains pass below the hotel and readings were recorded on the experts' meters of between 30dB and 41dB[17]. We believe that 40dB$L_{AMAX,S}$ is an acceptable criterion as the maximum level of groundborne noise that residential properties along the route will experience.

72. However, most property owners are likely to experience levels below the maximum. In Spitalfields, the Promoter's estimate of the maximum level of groundborne noise, based on noise modelling and groundborne noise contours, is 28dB$L_{AMAX, S}$ (para 4275). We are therefore of the opinion that no special measures need to be taken in Spitalfields to reduce groundborne noise levels.

Health Impact of Crossrail on local residents

73. Petitioners had understandable concerns that the existing poor health of some local residents would be further affected by the Crossrail works in the Spitalfields area. The Petitioners asked this Committee to require the Promoter to conduct a site specific Health Impact Assessment for Spitalfields.

74. We note that the Promoter has produced a Health Impact Assessment for the Crossrail project as a whole which includes a section on the Whitechapel and Hanbury Street area. We do not doubt the strength of local feeling on the health impact of Crossrail works in the area but we were concerned to learn that to date there had not been any engagement with the appropriate authorities on health issues through the forum of the Community Liaison Panel. We urge the Petitioners and the Promoter to engage on health issues through the forum of the Community Liaison Panel.

Lorry routes and the Construction Code

75. Several Petitioners raised the issue of lorry routing in the Spitalfields area with us. There were concerns over the number of lorries and the frequency of movements, the narrowness of the streets and the number of schools in the area. The Committee undertook a visit to the area and saw the narrow streets and school locations[18].

76. The Committee was sympathetic to these concerns and explored the issue of lorry routing in several hearings with Petitioners and the Promoter. We heard about the lorry-holding area in Burdett Road and about the proposed lorry routes in the area in some detail and we hope that Petitioners will have benefited from the chance to explore these issues with the Promoter. The

---

17 For more details of the visit see Appendix 2

18 For more details of this visit see Appendix 2

Promoter has produced the swept path diagrams[19] for the anticipated four axle large tipper lorries for specific roads in Whitechapel and Spitalfields in response to concerns raised by Petitioners. Details of lorry traffic to be generated by the project in each area are available in the Environmental Statement[20].

77. In the forthcoming months and years, we would urge Tower Hamlets Borough Council, as the local highway authority, to continue to pursue, and negotiate on, lorry routing issues. We recognise the importance of lorry routing, junction alterations (temporary or permanent) and road safety to local residents and we urge the Council to pursue this matter rigorously with the Promoter and, in time, with the nominated undertaker.

78. We take the opportunity to note here that the Schools Panel (a Sub-Group of the Community Liaison Panel—composed of school representatives, representatives from the Education Authority (Tower Hamlets), and Crossrail representatives) has met several times successfully. Crossrail has given an undertaking that lorry stoppages will take place for 30 minutes at the start of the school day and 30 minutes at the end of the school day[21]. Exact timings will be agreed with individual schools according to their timetables. We have received no petitions from schools in the Borough of Tower Hamlets and are pleased that negotiations between schools and the Promoter seem to be progressing well. It is our view that safety of school children in these narrow streets deserves continuous attention and demands ongoing liaison with the schools affected.

The Southern Alignment—'Route B' and the adequacy of the Environmental Assessment

79. The Spitalfields Small Business Association, also acting on behalf of other Spitalfields' petitioners, put forward two arguments concerning the adequacy of the Environmental Statement as concerns alternative routes and the alignment of the route between Liverpool Street and Whitechapel stations.

80. Firstly, the Petitioner contended that there was an error of law in relation to the requirements for an Environmental Impact Assessment (set out in Environmental Impact Directive 85/337/EEC as amended), in failing in that assessment to have studied the 'Route B' southern alignment and to have given the main reasons as to why it was rejected. The Petitioner asked the Committee: a) to rule that 'Route B' should have been considered as a 'main alternative', and b) to should treat it as such, opening it up to comment by

---

19 A swept path diagram shows the area taken by a vehicle making a turning movement and is used to check whether a manoeuvre can be made in the space available. It is produced by a computer simulation package such as Autotrack and can be specified for a wide range of vehicles. The vehicle can be placed on a suitable scale plan on the computer and "driven" to create the swept path of the vehicle. This includes not only the wheel track but also any overhang of the vehicle's body as it turns. The computer program contains information about the vehicle's wheelbase, body dimensions and steering capability. For the assessment of construction traffic entering and leaving worksites we have used a large 4 axle tipper lorry which is typical of the type of lorry which will be used to remove excavated material. Swept paths have been shown to have a good correlation with what actually happens on the ground.

20 Details of lorry movements in Route Window C8, which includes both the Hanbury Street shaft and Whitechapel station, are available in Supplementary Environmental Statement 3, Table 8.1. This table can be found online at: http://billdocuments.crossrail.co.uk/80256FA10055060F/pages/supplementaryenvironmentalstatement3?open&file_downloads#viewcontents

21 Undertaking number 187 on the Register of Undertakings and Assurances

the public and study by the House of Lords. We do not intend to rehearse the Petitioner's argument in full here—it can be found in paras 3782–4092 of the transcript.

81. In response to this Petitioner's argument the Chairman gave a ruling, on behalf of the Committee, on 18 March 2008. The ruling is reproduced in full in Appendix 9 to this Report (and in paras 5552–5565) and we do not intend to dissect it fully here.

82. In essence the Committee decided that without doubt 'Route B' had never been presented as a 'main alternative' by the Promoters, within the meaning of the Directive, and there was therefore no requirement on them under the Directive to write it up in the Environmental Statement as such.

83. We are satisfied that the Promoters have fulfilled the requirement in the House of Lords Private Business Standing Order 27A, including the provision of an Environmental Statement which did contain an outline of the main alternatives studied and an indication of the main reasons for the choice of route as set out in the Bill as it stands currently.

84. In conclusion, we decided that there was no flaw in the Promoters' compliance with the requirements of the EIA Directive, and the Regulations which transpose that Directive into UK law, which would lead us to recommend to the House that there are faults in the procedural requirements concerning this sort of legislation or that the House should further postpone consideration of the Bill.

85. On the second argument we were urged to recommend the adoption of 'Route B' as part of the scheme of the Bill. However, 'Route B' lies outside the limits of deviation in the Bill, and so, for reasons explained in paragraphs 23,24, 28 and 29 of this Report we held ourselves unable to pursue this proposition.

Whitechapel Station and the Kempton Court Residents' Committee

86. We heard a good deal of evidence about the proposed re-development of Whitechapel station under the Crossrail scheme. We are pleased to note that the new Crossrail station at Whitechapel will be fully accessible to persons of reduced mobility. We hope that the London Borough of Tower Hamlets will take the opportunity afforded them by the construction of this station to upgrade buildings adjacent to the proposed new station which are in need of modernisation.

87. Patricia Singleton appeared on behalf of the Kempton Court Residents, who live in the vicinity of Whitechapel station, to bring to our attention the disturbance that the residents would suffer as a result of the Crossrail project and to update us on the state of negotiations between themselves and the Promoter.

88. We are in no doubt that the residents of Kempton Court are suffering real disturbance, which will continue, as a result of various railway and other construction projects taking place in and around Durward Street in the forthcoming decade; including, significantly, the construction of the Crossrail station at Whitechapel and associated works.

89. In the circumstances we are very pleased that negotiations between the residents and the Promoter seem to be progressing well, that undertakings have been given, and that progress has been made towards putting in place

mitigations to lessen the disturbance the residents will suffer. We would encourage the Petitioner to continue to communicate with the Promoter, and *vice versa*, to ensure that information is shared and concerns are brought out and discussed.

Trustees of the SS Robin Trust

90. The Trustees first appeared before the Committee on 19 March but asked for more time to continue their constructive negotiations with the Promoter. We were happy to accede to this request. On 1 May the Petitioners returned, having reached agreement with the Promoter, to read a brief statement.

91. The SS Robin is the oldest surviving working complete steamship in the world and is docked at the West end of North Dock which is part of the West India Quay dock complex in the Isle of Dogs. The parties have agreed that the ship will be removed from the dock for necessary maintenance work before Crossrail works start and will then be returned and 'locked in' for the duration of the works by the construction of temporary coffer dams to enable the Isle of Dogs station to be constructed under the middle of the dock. In the event that the vessel cannot be returned in time to be 'locked in' it will be brought to an alternative, suitable mooring until it can return to West India Quay once Crossrail works have been completed. These arrangements involve material financial support, which includes support from the Promoter.

92. We are very pleased that such an agreement has been reached and thank both parties for the constructive way in which they approached negotiations.

Association of West India Dock Commercial Ship Owners

93. The Association represents four vessels which are presently moored in the western part of West India dock, near the SS Robin—the *Leven is Strijd*, which operates as a licensed restaurant, *St Peter's Church Barge*, *The Prins*, which operates as a commercial art gallery, and *The Dana*, an office and home to Mr and Mrs Cartwright. Mr Cartwright appeared as agent on behalf of all Petitioners.

94. At the time of the Select Committee proceedings in the House of Commons it was thought that it would be necessary to relocate the vessels for the duration of the works. Under current construction arrangements, however, relocation is no longer needed. Instead, like the SS Robin, the vessels will be 'locked in' for the construction works. The Petitioners' concern was to obtain clarity and satisfaction as to the compensation arrangements that are in place to cover disturbance costs and other losses which might arise from the vessels' loss of the right of private navigation in and out of the dock for the duration of the Crossrail works in this location.

95. The Petitioners were afforded the opportunity to air some of their concerns regarding compensation and we hope they benefited from the opportunity to further explore their concerns with the Promoter. Both parties agreed that they would go away and continue negotiations with a view to coming to a private arrangement to alleviate the Petitioners' concerns (paras 6452 and 6508).

Canary Wharf Group plc

96. The Canary Wharf Group plc proposed an amendment to clause 6 of the Bill to remove the Promoter's ability to extend their right to serve a Notice to Treat[22]. At present the Bill allows the Promoter five years to serve a Notice to Treat after which the Promoter can have a further five years to serve a notice subject to Parliament's agreement to such an extension through the Special Parliamentary Procedure, a rigorous scrutiny progress. The Canary Wharf Group wished to amend the Bill to remove this right to an extension of the further five years.

97. We are not minded to accept the amendment proposed by the Petitioner. Accepting the amendment would set a precedent for other petitioners who may be similarly affected and, more importantly, the protection afforded to the Petitioner under the Bill as it currently reads is, to our minds, sufficient.

Souzel Properties Ltd

98. Souzel Properties Ltd appeared to ask the Committee to encourage the Promoter to strengthen the agreement they had drawn up with the Petitioner. The Petitioners wanted the Committee to require the Promoters to give them an undertaking stating that they would buy their property after Royal Assent in any event.

99. We are not minded to accede to the Petitioner's request. We ask that the Promoter put the agreement they have made with the Petitioner, in its current form, into a binding undertaking but we do not ask the Promoter to strengthen it. The Petitioners are afforded sufficient protection under the agreement as it currently stands and we note that the agreement is in line with statutory provision for compensation.

City of London Corporation

100. The City of London Corporation reached agreement with the Promoter shortly before their scheduled hearing and so did not appear. We were pleased to learn that the Corporation had reached agreement with the Promoter on all counts and that a document would be drawn up setting out the agreement in due course.

Mr Michael Pritchett

101. Mr Pricthett occupies a flat in a building which will be compulsorily acquired for the purposes of constructing Crossrail. The Committee are grateful to him for taking the time to present his petition and hope that the opportunity gave him a chance to explore his concerns with the Promoters fully and get them on the public record.

102. The Petitioner argued that the Statutory Home Loss Payment he was entitled to, under the provisions of the Land Compensation Act 1973, was insufficient. The Statutory Home Loss payment is currently 10% of the

---

22 A Notice to Treat is a formal notice served upon an owner of an interest in land by an Authority with the benefit of compulsory powers giving formal notice of intention to purchase under compulsory powers and usually giving a period after which possession of the premises will be taken. The notice also usually invites an owner to submit a claim for compensation. A Notice to Treat represents implementation of the compulsory powers and commits the authority to purchase the land interest of the owner upon whom a Notice has been served and can only be withdrawn by agreement with the landowner.

market value of the property but there is a cap on the maximum payment. This cap is currently £44,000 and was set by a statutory instrument in mid 2007. £44,000 is less than 10% of the value of some properties affected in central London, including the Petitioner's own, and the Petitioner argued that this was an unsatisfactory situation as he felt, mistakenly it appears, that the original intention of the 1973 Act had been to award homeowners 10% of the market value of their property in the event of compulsory purchase[23], as an addition to the market value itself.

103. The Petitioner therefore asked the Committee to amend the provisions of the Land Compensation Act, as it relates to Crossrail, to remove the maximum cap on the Home Loss Payment to ensure that all property owners affected received 10% of the market value of their property as the compensatory payment.

104. Additionally, the Petitioner had concerns over the timing of compulsory purchase and over the provisions potentially enabling residents to reacquire land once the works are complete.

105. In the light of the Petitioner's representations the Committee thought it prudent to get more information on Home Loss Payments and a note was provided to the Committee by the Promoter. That note is published as Appendix 5 to this Report.

106. The current cap on the value of the Home Loss Payment (£44,000) was last set in a Statutory Instrument made only last year and we are not minded to alter this cap in relation to those affected by the Crossrail Bill.

107. We have come to the conclusion that Mr Pritchett's argument that the Land Compensation Act 1973 intended that homeowners displaced by compulsory purchase should be entitled to 10% of the market value of their home as an additional compensatory payment for involuntary ejection from their homes is misguided. Under Section 30 of the 1973 legislation as enacted, the amount of a Home Loss Payment was calculated by a specified multiplier of the rateable value of the dwelling and this amount was subject to specified minimum and maximum payments. Provision was made for the Secretary of State, from time to time, to alter both the multipliers and the specified minimum and maximum payment amounts.

108. Domestic rating was abolished with effect from 1 April 1990, and in response to this the statutory rules for determining the amount payable by way of Home Loss Payment were changed in the Planning and Compensation Act 1991. Under this Act, a qualifying owner-occupier displaced from his home was to receive 10% of the market value of his interest in the dwelling, subject to minimum and maximum payments. Again, provision was made for the Secretary of State to set different minimum and maximum payment amounts by way of regulations.

109. Figures provided to us by the Promoter[24] show that in 1973 the maximum Home Loss Payment happens to have been 15.09% of the average UK house price. In 2007 the maximum Home Loss Payment was 19.86% of the average UK house price. Mr Pritchett made the point that London house prices are substantially higher than the average UK house price. However,

---

23 The Petitioner's argument can be found in full in paras 6720–6727 in the transcript.

24 In the note provided to the Committee in the week commencing 21 April 2008—see Appendix 5.

the maximum Home Loss Payment in 2007 was still 12.86% of the average London house price.

110. As regards the Petitioner's other concerns we are satisfied that the Petitioner is afforded sufficient protection under existing Crossrail policies and statutory provisions which give dispossessed owners an opportunity to participate in redevelopment of the site of their former properties.

Mr Roy Carrier

111. Mr Carrier had concerns over the combined impact of traffic flows generated in the area of Abbey Wood from the proposed Crossrail station at Abbey Wood and other proposed future transport works in the vicinity (namely the Thames Gateway Bridge and the Greenwich Waterfront Transit), not related to Crossrail. Traffic modelling should also include any impact on traffic flows in the area connected to the Channel Tunnel station at Ebbsfleet.

112. During the course of the House of Commons proceedings the Promoter agreed Undertaking No.153 with Bexley Council which paved the way for further dialogue on traffic management in the area between themselves, Bexley, and Greenwich Borough Council in the forthcoming months and years. We note that shortly before Mr Carrier's hearings the Promoter agreed to expand Undertaking No.153, given to Bexley, to make it clearer and more specific.

113. The revised undertaking commits the Promoter to continuing "discussions with the London Borough of Bexley, in consultation with the London Borough of Greenwich with a view to agreeing the highway improvements that may be necessary to mitigate the impact of the Crossrail scheme associated with passengers arriving and departing from Abbey Wood Station". Furthermore, the undertaking commits the Promoter to funding "reasonable transport measures that are agreed by the London Borough of Greenwich, the London Borough of Bexley and the Promoter to be reasonably necessary in order to mitigate the impact of the Crossrail project as a result of passengers arriving at and departing from Abbey Wood Station".

114. We hope that this expanded undertaking will give further reassurance to the Borough Council and to Mr Carrier and other residents in the area. We are grateful to Mr Carrier for raising these issues before us.

The House of St Barnabas-in-Soho

115. The Petitioners, Mr David Duncan Coode Monro and Reverend Adam Scott, are the Holding Trustees of the charity in the House of St Barnabas-in-Soho. The Petitioner's premises, at 1 Greek Street and on the northern side of Manette Street, are Grade I listed and of historic importance, containing an important cantilevered staircase and elaborate plasterwork ceilings. Additionally, at present, a mobile tuberculosis x-ray screening service, provided by University College Hospital, is operating in the property.

116. The Petitioners raised concerns over ground settlement before the Committee and also had some worries about the ability of the Trustees to secure compliance with undertakings given to the Trust in the unlikely event that in the future the nominated undertaker should experience financial difficulties, or in a worst case scenario, become insolvent.

117. The Petitioner's premises have been through Phase 3, Iteration 1 of the settlement assessment process and will go through further assessment, including detailed appraisal and the identification of appropriate protective and preventative measures, before construction work begins. At the time of the petition hearing the Promoter was negotiating a bespoke Settlement Deed with the Petitioners which would allow for certain additional provisions, including the meeting of reasonable costs for a number of experts whom the Petitioners would wish to have instructed to participate in the process of appraising the premises and providing for their protection against any potential damage inflicted by the Crossrail scheme. The expert witness for the Petitioners himself concluded that it would be "impossible" to identify and commit to particular mitigation measures at this stage (para 7895)—the work is ongoing and is necessarily so. We therefore believe and expect that the Petitioners' premises will be afforded adequate protection against damage related to ground settlement as a result of the Crossrail works. Furthermore, we expect the Petitioners to be informed at the earliest possible time of the specific measures that will be taken to protect their property from damage caused by ground settlement, especially if these would affect the tuberculosis screening service.

118. The Petitioners' second concern—over the hypothetical situation in which the liabilities undertaken by the Promoter are transferred to a nominated undertaker which then becomes insolvent—led them to ask us to amend the Bill so that, were that hypothetical situation to materialise, liability for the project would revert to the Promoter. Though we acknowledge the genuine concern of the Petitioners we are not minded to accede to this request. In the unlikely event that the nominated undertaker becomes insolvent during the construction phase, or at any other time, the Heads of Terms document[25] provides for step-in rights for the Secretary of State who would of course be anxious to ensure the completion of the scheme.

119. We do however emphasise here the necessity for the Secretary of State to ensure that there is a continuing responsibility for the construction, maintenance and operation of Crossrail—this will be a matter of concern for everyone whose property would otherwise be affected by the failure of a nominated undertaker, and for the public at large.

Smithfield Market Tenants' Association

120. The Petitioners obtained from the House of Commons Select Committee a recommendation for ameliorative measures to protect them against repercussions from the Crossrail works at the Farringdon ticket hall. As a result of this recommendation the Promoters offered an undertaking[26] in an attempt to protect the Petitioners. The Petitioners appeared before this Committee in the House of Lords because they consider that that undertaking is insufficient properly to protect them.

121. The problem arises in this way: the Market deals in boxed meat, which arrives and departs in sealed containers, and in carcasses. These latter are transported in lorries which load and unload in sealed docking facilities which are to be found on the north and south frontages to the market. Under

---

25 The Heads of Terms document can be found online at: http://www.dft.gov.uk/pgr/rail/pi/crossrail/crossrailheadsofterms/

26 Undertaking No.234 in the Register of Undertakings and Assurances

European law carcasses must not be kept at a temperature higher than 7 degrees centigrade and there is a strict inspection regime, enforced by a permanent team, which also ensures that they are not contaminated by airborne particles. Contamination leads to the classification of the meat as unfit and such meat must then be destroyed.

122. Work to the Crossrail Farringdon ticket hall will take place at the eastern end of the market, off Lindsey Street. The original works scheme included substantial work in and below the eastern end of the market but changes in the plans for Thameslink trains, which also run through Farringdon, should now allow for the vast majority of the Crossrail work to be confined to the east side of Lindsey Street. The Promoters are making careful arrangements for dust suppression throughout the scheme but are proposing particularly stringent measures in the Lindsey Street vicinity (which has been categorised as a tier 3 site for these purposes[27]).

123. We fully understand the Petitioners' concerns. The Petitioners wish to obtain protection which goes beyond the undertaking already agreed. Their concerns turn on what in the provisions for compulsory purchase is known as 'injurious affection'—even if none of a claimant's property is to be acquired the construction and then the use of proposed works may adversely affect a claimant's land or business carried out on it. There are limits in the general law on the extent to which this will attract compensation—Section 10 of the Compulsory Purchase Act 1965 reproduced the provisions in Victorian legislation in this respect[28]. The entire code for compensation has been reviewed by the Law Commission but their 2003 and 2004 Reports[29] have not been implemented by Government legislation. Undertaking No.234, as agreed, provides for compensation of this sort but only in cases where it can be shown that the nominated undertaker has acted unreasonably and not in accordance with undertakings and assurances given.

124. The Petitioners requested us to recommend the insertion into the Bill of a new special clause providing them with comprehensive compensation for 'injurious affection'—if we accepted this recommendation the amendment would be brought forward by the Department for Transport during public bill proceedings in the House. The Promoters noted that the petitioners' proposal did not accord with the Law Commission's recommendations on this issue. Furthermore we recognise that it would be very difficult to change compensation provisions for one Petitioner without offering the same provisions to all similarly affected along the route and we do not wish amend this Bill to anticipate a change in general law. We therefore did not accede to the Petitioners' request for a new clause.

---

[27] Dust control is dealt with under the Crossrail Construction Code (see Information Paper D1). Three levels of control are planned with Tier 3 being the most advanced.

[28] The wording of subsection 2 of this provision indicates that it is based upon section 68 of the Lands Clauses Consolidation Act 1845: "This section shall be construed as affording in all cases a right to compensation for injurious affection to land which is the same as the right which section 68 of the Lands Clauses Consolidation Act 1845 has been construed as affording in cases where the amount claimed exceeds fifty pounds". This view is confirmed by Keith Davies in *Law of Compulsory Purchase and Compensation* (1984):" [Section 68 of the Lands Clauses Consolidation Act 1845] has been re-enacted, without being repealed, in section 10 of the Compulsory Purchase Act 1965" (page 183).

[29] The Law Commission's Reports are entitled *Towards A Compulsory Purchase Code: (1) Compensation Final Report*, (LAW COM No 286, December 2003: Cm 6071) and *Towards A Compulsory Purchase Code: (2) Procedure Final Report*, (LAW COM No 291, December 2004: Cm 6406) and can be found on their website at: http://www.lawcom.gov.uk/pubs.htm

125. As an alternative way forward the Petitioners asked for an undertaking from the Promoters in a form which would amount to a comprehensive indemnity—there is no novelty in this request since a number of Petitioners have likewise requested indemnities for their own particular perceived problems with the Crossrail scheme.

126. We also did not accede to the Petitioners' request for such an undertaking. However, we have sympathy with the Petitioners' particular predicament and spent a good deal of time in Committee looking at the Deed the Promoters have offered to the Petitioners. We asked both parties to go away and see if the Deed might be strengthened to provide the Petitioners with some additional comfort, short of the full indemnity they requested.

127. In response to our request the parties met and agreed amendments to the undertaking to be given to individual traders. The undertaking includes a substantial section on compensation which provides for, amongst other things, compensation "under clause 2.1 in any case where a Trader suffers losses arising from the condemnation of meat by environmental health officers in consequence of dust emanating from authorised works being carried out adjacent to the market". It also allows for compensation "under clause 2.1 in any case where a trader suffers loss from the removal of loading bays on the market side of Lindsey Street".

128. We are satisfied that the content of this undertaking will now give petitioners adequate protection and are grateful to the parties for their efforts in reaching such an agreement.

Contaminated land at Smithfield

129. A member of the Committee raised with the Promoter the possibility that there could be anthrax spores contained within a burial pit in the area of Charterhouse Square. The Promoter is aware, from the contaminated land assessment in the Environmental Statement, that there is a burial pit in the area known as the Charterhouse Outer Cemetery, which may extend over the site of the Farringdon East ticket hall.

130. In accordance with the methodology set out in the Environmental Statement the Charterhouse Outer Cemetery site would constitute a medium or high risk. Under that methodology the site therefore requires further investigation including soil sampling and analysis. The investigation is itself carried out in accordance with best practice and in carefully controlled conditions. This work is currently in the course of being commissioned.

131. If that investigation shows that there are anthrax spores in the ground then there is a well established methodology for dealing with the contaminated land. This closely follows the methodology for removing asbestos from a site. The contaminated area is sealed and all operatives are issued with special protective equipment. The contaminated material is then removed in sealed containers and taken to appropriately licensed sites to be disposed of under highly secure conditions.

132. In these circumstances, the Committee is satisfied that if anthrax is found during the works at Farringdon East it will be appropriately dealt with.

Paddington Residents' Active Concern on Transport

133. Paddington Residents' Active Concern on Transport (PRACT) appeared before the Committee to seek protection from the adverse effects of Crossrail construction and operation. PRACT supported the petition of the Westbourne Park Villas Residents' Association (who appeared on the following day) regarding the surface section of railway around Paddington and the footbridge over the tracks.

134. PRACT are a very active local residents group who have been continuing a constructive dialogue with the Promoter for some time and have been closely involved with the Paddington Liaison Group. As a result of their meetings with the Promoter PRACT had resolved that there was one major issue outstanding for them—the local impact of decisions yet to be taken during the detailed design phase of Crossrail.

135. The Petitioners accept that that detailed design work may well alleviate their concerns but at present there is uncertainty. The Petitioners further accept that all designs for rail-connected structures, for which planning permission is conferred by the Bill once enacted, will be subject to Schedule 7 procedure, under which the nominated undertaker puts detailed designs to qualifying local authorities with an eight-week period for the authority to state reasonable grounds for objection.

136. The Petitioners are confident that they will be consulted by the local authority under this procedure but they are concerned that they have much to offer before this procedure is reached and that they may not be able to contribute as they would wish to do. PRACT believe that they could offer useful inputs to the design process during its early stages because of their local knowledge and they seek an opportunity to do so.

137. In order to ensure they can contribute in this way PRACT would like the existing Liaison Group to be adapted. They believe that Crossrail should undertake to call, on an ad-hoc basis, more frequent meetings of the Group when required during the detailed design stage. They suggested that small subsections of the Group could be called to contribute as appropriate.

138. PRACT also raised concerns over sub-surface construction consultation, the design of the Crossrail Paddington station, including provision for taxi ranks, noise from trains and the removal of spoil by lorry in the vicinity of Paddington station.

139. The Committee wishes to thank the Petitioners for the time and effort put into their petition and for the constructive way in which they have approached the petitioning process. We are pleased that the Paddington Liaison Group has been working well and we are further pleased that the Petitioner has confidence in their local authority and has no doubt that they will be consulted, as they ought to be, during detailed design work on Crossrail. We look to the local authority to ensure that the Petitioner *is* fully consulted and that the Liaison Group remains effective and responsive to the needs of its members.

140. We hope that the Promoter's responses to PRACT's other concerns were useful to the Petitioners. They can be found in brief at paragraphs 10844–10847 of the transcript.

Westbourne Park Villas Residents' Association

141. The Petitioners raised two main issues: the footbridge over the railway tracks near the Petitioners' homes and noise resulting from the construction and operation of Crossrail in the Paddington vicinity.

142. The Promoter accepts that the footbridge is an important pedestrian link which runs from the residential area in the south through to the area to the north of the tracks, the site of the newly built Westminster Academy. The bridge is well used and a source of much campaigning by residents who feel that it is an attractive site for criminals, partly because it kinks in the middle and is poorly lit, and for other reasons. We asked the residents to provide crime statistics for the bridge which they duly produced. The statistics show that in the past eighteen months two crimes have been committed on the bridge and that it is used as a 'getaway' for criminals who have committed offences on either side of the tracks. The bridge belongs to Network Rail and falls within the area of Westminster City Council.

143. Crossrail needs to heighten the northern span of the bridge to allow new tracks to go underneath but otherwise does not need to do extensive work on the bridge. However, the Promoter has agreed to do further work to make the bridge fully compliant with the Disability Discrimination Act 1995 [DDA] as a result of representations before the House of Commons Select Committee, and to light the bridge appropriately.

144. Ideally, the Petitioners would like the bridge to be re-built to remove the kink, but, failing that, they have been campaigning hard for improvements to the bridge including the installation of suitable lighting, concave mirrors, the lowering of the bridge sides and re-painting. They have been successful in gaining some funding for such improvements to the bridge and surrounding areas from the National Lottery through Sustrans, an organisation which promotes sustainable transport.

145. Progress was made on the issue of the footbridge during the Petitioners' hearing. The Petitioners accepted that the Promoter was not prepared to go any further, in terms of physical works to the bridge, than the works they had already committed to, namely to raise the northern span of the bridge, to make it fully DDA compliant and to provide lighting. However, the Promoter agreed to work together with Network Rail and the Paddington Liaison Group to bring forward the works to the bridge with reasonable expedition. The bridge will be made DDA compliant at the same time as the northern span is raised and the lighting will be put in at a suitable time to be agreed with Westminster City Council.

146. We support such joint working and strongly recommend that the relevant parties continue to discuss the issue and work together to ensure the works on the bridge are completed expeditiously and satisfactorily to all concerned.

147. The Petitioner also raised the issue of noise in the vicinity of their properties. They recognise that they live in a 'noise hot spot' as their properties overlook the railway tracks and the Westway but argued that the cumulative effect of noise on the railway resulting from various different schemes and railway operations was becoming intolerable. They noted that, to date, no detailed noise study had yet been carried out in their vicinity. To mitigate the impact of the Crossrail scheme on the already noisy environment the Petitioners asked the Committee to require the Promoters to construct a noise barrier on

top of the existing wall which runs between their properties and the railway tracks.

148. The Promoter accepted that since the initial noise study had been undertaken in the vicinity of Westbourne Park Villas for the purposes of the Environmental Statement the noise environment from the railway at this location had changed. Old engines on high-speed Great Western Main Line trains have recently been replaced with a newer form of engine which produces substantially less noise.

149. This means that background noise in the location has fallen and so the contribution of noise of Crossrail trains is likely to be proportionately higher. As a consequence of this, when the next stage of noise assessment is carried out in this location more properties in the area might become eligible for noise insulation measures.

150. One current noise source derives from diesel locomotives which bring aggregates, often at night, to the batching plant. Under the Crossrail scheme, this batching plant is to be relocated and trains supplying it will stop well to the west of their current terminus.

151. The Petitioners argued that, aside from any noise insulation they might be entitled to, residents should be further protected from the noise of Crossrail trains by a noise barrier to be erected on top of the existing wall (which was plainly built as a noise barrier, among other uses) which runs along Westbourne Park Villas. The Petitioners argued that the installation of a one and a half metre high barrier on top of the existing wall would result in a 3dB drop in noise level in the vicinity which they said would be a halving of unwanted noise.

152. The Promoter was clear that a noise barrier would be a complicated undertaking and would be disruptive and expensive to erect—figures were given in the region of five million pounds. The Promoter also called evidence which suggested that the existing wall would not be able to sustain the wind blow effect of an additional structure, even one of only one and a half metres in height. Furthermore, complications were anticipated because the wall is in a conservation area. The Petitioners did not put forward a design for the barrier or any costings, and we accept this would have been a difficult undertaking for them as lay people, but they disputed the Promoter's figures and thought the barrier could be built for a far lesser sum.

153. We do not recommend that the Promoter constructs the noise barrier as requested by the Petitioners. We accept that the construction of such a barrier would be complex, disruptive and expensive and we are not convinced there would be much to be gained from such a use of funds as there are serious doubts about its effectiveness in any event.

154. We understand that residents have been genuinely concerned that a detailed noise study has not yet been undertaken. However, we hope they have benefited from listening to the Promoter and that they are now reassured that such a study will be undertaken and that the results of that study will be publicly available. Following this study, where appropriate, noise insulation measures will be offered to affected residents.

155. We want to emphasise that the Petitioners' relationship with the Promoters does not end here and we encourage the Petitioners to maintain a

constructive dialogue with the Promoters through Royal Assent to the construction phase and thereafter.

Hammerson (Paddington) Limited and Domaine Developments Limited

156. The Petitioner's agent appeared on 7 May to read out a short statement confirming that the Petitioner had reached agreement with the Promoter over the future of their development proposals near the mainline station. The agreement was read onto the record (paras 12217–12222) and will become a deed between the parties in due course. The Committee is grateful to both parties for their efforts in reaching agreement.

Mr John Payne

157. Mr Payne asked the Committee to require the Promoter to install floating slab track along the running tunnels in the vicinity of his property. Mr Payne claimed that he should be eligible for the use of floating slab track under the House of Commons Select Committee's '15 metre rule' because he disputed the accuracy of the Promoter's diagrams showing the depth of the running tunnels under his property.

158. The Petitioner claimed the running tunnels would be at a depth of approximately 14 metres under his property. The Promoter called evidence and made clear that there was no possibility that upon construction either the westbound running tunnel or the eastbound running tunnel under the Petitioner's property will be at a level which is less than 15 metres below the basement of the property. The top of the tunnels will be at a depth of approximately 23.7 metres under the Petitioner's property and the track will be approximately 29 metres below the basement of the Petitioner's property (para 12456).

159. These measurements are shown on the deposited plans, subject to the limits of deviation, and once this Bill becomes law the Promoter cannot excavate tunnels at the depth which the Petitioner fears they will. We therefore do not accept Mr Payne's case and do not require the Promoter to install floating slab track at this location.

160. The Petitioner also raised the issue of the Hyde Park emergency intervention shaft (near the Victoria Gate). We understand that the Promoter is still in discussions with the emergency services as to whether a shaft is required at this location (and indeed at other locations). Clearly, if it is decided that it is not needed, disruption at this location would be minimised but we understand that the decision needs to be made by the proper authorities, including the emergency services, and is not one for us.

161. On compensation, which was raised in the Petitioner's written submissions, we are satisfied that the Petitioner is adequately protected. The Promoter made clear that he is entitled, in principle, in the event that his property sustains 'injurious affection' by virtue of the impact of the Crossrail scheme, to make a claim under Section 7 of the Compulsory Purchase Act 1965.

Residents Society of Mayfair and St James's, the Mayfair Action Group; Mr Leo Walters; and the Crossrail Coalition of Residents and Petitioners

162. The Residents Society of Mayfair and St James's and the Crossrail Coalition presented their petitions jointly with the same Counsel. Mr Leo Walters presented his petition immediately following theirs but in effect gave support to the combined presentation on behalf of both petitioners.

163. The Petitioners asked the Committee is consider three distinct issues: the deletion of clause 21 of the Bill, the provision of an independent advice and assistance agency and a Supplementary Environmental Statement on what has come to be known as the Cavendish Square alternative route.

164. Clause 21 of the Bill deals with proceedings in respect of statutory nuisance. The clause provides that local authorities will safeguard the interests of residents in respect of nuisance. All local authorities have agreed a construction plan which will apply under Section 60 of the Control of Pollution Act 1974. In consequence of this, the clause also removes the ability of residents to take statutory nuisance cases to the courts. It would be for the local authorities to enforce any breach of the conditions of the construction plan.

165. The Petitioners asked for this clause to be deleted to enable them to take statutory nuisance cases to court if necessary. The Petitioners do not have confidence in their local authorities to protect their interests and so asked for this clause to be deleted to give them more control, as they saw it, over action to be taken arising from statutory nuisance.

166. Secondly, the Petitioners asked for an independent advice and assistance service to be set up for the benefit of all those affected by Crossrail. The suggestion was that that service might have experts in various fields available to those affected so that they could seek independent, expert advice. The Petitioners did not present detailed proposals for this service and had not costed the suggestion.

167. Lastly the Petitioners raised the issue of the Cavendish Square alignment and asked the Committee to recommend that a Supplementary Environmental Statement be completed for this alignment. The Petitioners claimed that they did not necessarily want the route to be re-aligned in consequence of such a statement but that they wanted a comparative exercise to be done between the statement for the Cavendish Square alignment and the Bill scheme route. If the Cavendish Square alignment were to emerge as a 'less harmful' route the Petitioners felt they would be entitled to more extensive mitigation measures to protect themselves and their properties from any harm that might be caused by Crossrail.

168. We are not minded to require the deletion of clause 21 of the Bill. Clause 21 is needed so that the nominated undertaker knows what work it can carry out without the threat of a member of the public taking a case to the magistrates' court. The local authorities have been charged with protecting residents from statutory nuisance and have together drawn up a construction plan which has to be adhered to by the nominated undertaker. The substance of the clause was included in the Channel Tunnel Rail Link Act—it is a sensible provision

and does not in any way remove the power of local authorities to step in where the nominated undertaker breaches the Section 60 agreement[30].

169. We are further not minded to require the setting up of a form of independent advice/assistance service. We are satisfied that there is adequate protection for those affected under current proposals. The Promoter will run a 24 hour helpline which will be available to anyone with concerns during the construction phase of Crossrail. The Promoter will also appoint an independent Complaints Commissioner who will act as a form of Ombudsman. We believe and expect that this person will be of suitable stature to take on such an important role (paras 12997–13001).

170. The Petitioners and all others affected by Crossrail will also be protected by their local authority. We agree with the Promoter that local authorities are taking on a suitable and sensible role as regards Crossrail. Local authorities are democratically elected to represent the interests of all local people. They have access to relevant expertise and can advise residents accordingly. Under Schedule 7 to the Bill, and Section 61 of the Control of Pollution Act 1974, the local authorities have an extensive set of powers that they can use on behalf of local residents. It is unfortunate that some Petitioners have expressed reservations about the competence of their local authorities but that is not adequate reason to spend funds on another advice service without a clear purpose or rationale beyond what is already on offer to those affected by Crossrail.

171. We do not require the Promoter to carry out a Supplementary Environmental Statement for the Cavendish Square alignment. We consider that such an exercise would be costly, in financial terms, and in terms of time, as it would involve extensive consultation with those who would be affected by the alternative route. We believe that cost would be unjustified. We accept the Promoter's case that there are no clear advantages to the Wigmore Street/Cavendish Square alignment and that it was never considered to be a 'main alternative' and so was not included in the Environmental Statement.

[30] Section 60 of the Control of Pollution Act 1974

CHAPTER 4: PETITIONS FROM LONDON BOROUGHS

172. There are a number of generic issues affecting the broader constituents represented by the local authorities. Negotiations on these generic issues have taken place with a lead local authority, agreement has been reached between all local authorities and the Promoter, and the results have been made available to the general public, generally through publication of a revised project document of some description (e.g. an Information Paper).

173. Agreement on a number of these generic issues was reached in advance of the Bill being introduced into the House of Lords, a summary of these agreed issues was provided to the Lords Select Committee in the letter sent to the Committee by Mr Keith Berryman, Managing Director of CLRL, on 11 April 2008 and a slightly amended version of the table presented in that letter is presented below. The table has been amended to reflect the fact that since the last note was issued to the Committee agreement was reached with the London Borough of Havering, lead local authority on the issue of noise from fixed installations. For those wanting more information on these issues Appendix 4 to this Report contains a detailed explanation of the generic agreements.

TABLE 1

London Borough Negotiations

Issue	Lead Local Authority	Relevant Document(s)
Agreed prior to the House of Lords Select Committee		
Construction noise mitigation	London Borough of Tower Hamlets	Information Paper D9, *Noise and Vibration Mitigation Scheme* (Version 3, 20 November 2007)
Dust monitoring	Royal Borough of Kensington and Chelsea	Crossrail Environmental Minimum Requirements for Design and Construction: Construction Code (Annex 1 to the EMR) (Revision 4.9, 2 November 2007)
Surface railway noise and vibration	London Borough of Newham	Information Paper D26, *Surface Railway Noise and Vibration* (Version 2, 20 November 2007)
Crossrail Construction Code (which covers the whole range of construction impacts)	All the boroughs, but in particular Westminster City Council	Crossrail Environmental Minimum Requirements for Design and Construction: Construction Code (Annex 1 to the EMR) (Revision 4.0, 2 November 2007)
Agreed during the House of Lords Select Committee		
Environmental Minimum Requirements (EMRs)—General Principles	London Borough of Havering	Crossrail Environmental Minimum Requirements for Design and Construction—General Principles (Revision 3.2, 29 February 2008). The key elements agreed during the Select Committee are paragraphs 1.3 and footnotes 2, 3 and 4.

Groundborne noise and vibration	London Borough of Camden	Information Paper D10, *Groundborne Noise and Vibration* (Version 4, 3 April 2008). The key elements agreed during the Select Committee are paragraphs 2.10, 2.11, 2.13 and 2.14, and the entirety of sections 3–5.
Noise from fixed installations	London Borough of Havering	Information Paper D25, *Noise from Fixed Installations* (Version 3, 23 April 2008). The key elements agreed during the Select Committee are paragraphs 1.1, 2.5, 2.7, 2.9 and 3.2.

174. We are greatly indebted to all the local authorities for the time and effort put into negotiations with the Promoter to reach agreement on these issues. We believe that the process for negotiations with local authorities, involving a local authority taking the lead on a particular issue on behalf of all local authorities, has worked very well and has enabled us to discharge our duties more expeditiously than would otherwise be the case. We stress to petitioners that although different local authorities took the lead on each issue the generic agreements will be binding on all local authorities and on the Promoter.

175. Where local authorities had individual outstanding issues to raise they appeared before this Committee and we detail some of their cases, and our decisions on those cases, below.

London Borough of Bexley

176. The London Borough of Bexley appeared before the Committee to discuss extending the South Eastern limb of the route from Abbey Wood to Ebbsfleet.

177. The Petitioner asked the Committee to express support for the extension of Crossrail to Ebbsfleet by either:

- making a recommendation that the Secretary of State establish powers under the Transport and Works Act 1992 to bring the extension forward without delay; or
- making the same recommendation, and making an amendment to clause 57 of the Bill to require that if an application is made for an extension to Ebbsfleet under the Transport and Works Act, Section 9 of that Act (procedure where the Secretary of State considers an application is concerned with a scheme of *national* significance) would have effect in relation to that application.

178. We accept that neither option would require the extension to go ahead or commit any funds to it. We recognise the significant benefits that an extension to Ebbsfleet would bring and note that the route is already safeguarded and that consultation is underway to expand that safeguarding to provide for a four track railway between Slade Green and Dartford.

179. However, we are not persuaded by the Petitioner's case. The extension from Abbey Wood to Ebbsfleet is not a project of national significance and there is no reason why it should be treated as such, with detriment to the rights of individual objectors, when, and if, an application is made under the

Transport and Works Act 1993. Any such application should be subject to the normal procedures.

London Borough of Camden

180. The London Borough of Camden appeared on Thursday 3 April as the lead authority on the issue of groundborne noise and vibration/track design. The Borough had reached agreement with the Promoters on the wording of the Information Paper D10 relating to this subject, but they had a statement that they read to the Committee.

181. That statement outlined the basic point of dispute that remained between the two parties—the numerical standard that is to be applied in the case of residential properties affected by groundborne noise. The Promoter has put forward a design standard which permits levels of up to 40dB$L_{Amax,S}$ whereas the local authorities were looking for a standard not to exceed 35dB$L_{Amax,S}$.

182. In response to the Petitioner's statement the Promoters read a statement which made clear that they believe a design noise criterion of 40dB$L_{Amax,S}$ affords an appropriate level of protection to amenity within residential properties from noise from underground railways. The Promoter further stressed that, notwithstanding the continuing disagreement between themselves and the London Borough of Camden regarding the appropriate design noise criteria to adopt, the wording of Information Paper D10 had been agreed.

183. We decided not to call evidence on this matter. We said we would print the two statements as an Appendix to our special report and so they are published here as Appendix 10.

London Borough of Havering

184. The London Borough of Havering is the lead authority on the issue of noise from fixed installations. They appeared before the Committee on 23 April to make a statement outlining the agreement they had reached with Promoter regarding the wording of the 'Environmental Minimum Requirements—General Principles' paper and Information Paper D25. The former sets the general principles which will govern the Environmental Minimum Requirements which, together with the powers in the Act, and the Register of Undertakings and Assurances, will ensure that the impacts which have been assessed in the Environmental Statements are not exceeded.

185. Information Paper D25 deals with noise from fixed installations, i.e. noise generated by new Crossrail related machinery and equipment, other than the rolling stock when it is in motion.

186. The Promoter's general position on this issue is set out in paragraph 2.5 of the Information Paper. The paragraph reads: "The nominated undertaker will be required to design and construct fixed installations … so that, with additional allowances made for calculation uncertainty … the assessment at the worst-affected residential building … obtained by subtracting the existing background noise level ($L_{A90,T}$)from the rating level $L_{Ar,Tr}$ of the fixed installations in normal operation, is not more than +5dB, determined in accordance with BS 4142:1997".

187. The local authorities' position is different, as they explained to us. The majority of supporting local authorities impose conditions on planning

permissions which require the rating noise level to be 5dB below background noise level. In Kensington and Chelsea and Westminster the requirement is more stringent—10dB below background. However, amendments were made to the Information Paper that allowed the local authorities to reach agreement with the Promoter.

188. As regards tunnel ventilation, draught relief and the operation of plant and equipment at deep-level stations, paragraph 2.7 of the Information Paper makes clear that, if, despite using reasonable means to reduce noise levels below the design criterion of 5dB over background, the overall noise rating level is expected to be above the collective local authorities' preferred standard of 5dB below background, Crossrail will be obliged to provide the authorities with certain information explaining the situation; the information in question is listed in bullet points in paragraph 2.7 of the Information Paper.

189. As regards noise from surface railway and surface stations, paragraph 2.9 of the Information Paper states that the "nominated undertaker will … be required to employ best practicable means in designing and constructing the fixed installations associated with surface railway and surface stations … with the aim of reducing noise so that with additional allowances made for calculation uncertainty … the assessment at the worst-affected residential building … is not more than $L_{A90,T-5}$". Where, despite best efforts, rating levels at the worst-affected residential building are expected to exceed $L_{A90,T-5,}$ the Information Paper makes clear that the nominated undertaker will be obliged to provide information to the relevant local authority on the calculated rating levels, details of the performance of the proposed noise mitigation measures, and a description of the limitations to any or further mitigation being practicable.

190. Whilst the Petitioners remain disappointed that the Promoter has not committed to a minus 5dB rating across the board, they have accepted the wording of the Information Paper, recognising that it acknowledges their preferred position and places a requirement on the nominated undertaker positively to justify why the authorities' preferred criteria cannot be practicably met.

191. The Promoter made a brief statement in front of us in which they thanked Havering for their commitment to the issue and their productive approach to negotiations. They also made clear that they do not accept that there is any scientific basis for accepting background minus 5dB as an appropriate threshold for the protection of amenity in the context of the Crossrail scheme. Furthermore they noted that the local authorities' policies provide background minus 5dB to each individual noise source, whereas the Promoter's approach of background plus 5dB applies (with the exception of public address systems and audible warning systems) to all fixed installation noise sources installed and operated in any location within the Crossrail development. The local authorities' approach is not cumulative and the Promoters noted that it would be possible for a number of individual noise sources, designed to meet background minus 5dB criteria, cumulatively to result in noise greater than background plus 5dB.

192. Notwithstanding the difference of approach between Petitioners and Promoter we are pleased that agreement has been reached and consider that affected residents will be afforded suitable protection against any intrusive noise from fixed installations.

London Borough of Newham

193. The London Borough of Newham petitioned the Committee to require the Promoters to provide step-free access at Maryland and Manor Park stations on the North-East limb of the Crossrail route.

194. Newham argued that Crossrail, as a 'new railway', should achieve full accessibility and that the people of the borough would be unacceptably disadvantaged if provision for step free access was not made at Maryland and Manor Park Stations.

195. The Committee were pleased to note, from the Promoter's submissions, that 93% of all journeys on Crossrail would be step free, and that all new Crossrail stations will be fully accessible to persons of reduced mobility[31].

196. We are not persuaded by Newham's case. Crossrail is a new railway scheme that will operate, to some extent, on existing tracks and from existing stations. Furthermore, other Crossrail stations in the near vicinity of Maryland and Manor Park stations are fully accessible to persons of reduced mobility and are easily reached, from near most resident's homes, by alternative forms of public transport. For example, Stratford station will be only 600–850 metres from Maryland station and can easily be reached by buses which will deposit passengers directly outside the station.

197. We recognise the importance of accessibility, but consider that, in the particular circumstances, providing step free access at Maryland and Manor Park stations, at an estimated cost of some £14 million, would not be a prudent use of funds. At the moment there appears to be no compromise solution to this problem.

London Borough of Tower Hamlets

198. The London Borough of Tower Hamlets appeared before the Committee on 4 March to explain the position they had reached with the Promoters over the gypsy and travellers' site at Eleanor Street (paras 2001–2025) and to make a statement in relation to the Bill in general (paras 2028–2064). The Council's statement covered undertakings on the employment of local people in the construction of Crossrail, stations at Whitechapel and the Isle of Dogs, the shaft in Hanbury Street, the Stepping Stones City Farm, consultation and community liaison, as well as the Eleanor Street site.

199. The Council had reached agreement with Crossrail on all matters set out in their petition and was satisfied that it had secured the relevant appropriate formal undertakings (para 2028).

Westminster City Council

200. Westminster City Council appeared before the Committee to confirm that they had reached agreement with the Promoters on all matters.

201. The Petitioner's Counsel also outlined the Council's position on an issue involving the Congestion Charging Zone, although they accepted that it was not a matter within the remit of Crossrail. At present, Eastbourne Terrace is the boundary street for the Congestion Charging Zone. It has been suggested

---

[31] We further note that no new Crossrail stations will be constructed under thoroughfares

that, given the works that are going to go on at Paddington, the boundary should be moved so that Eastbourne Terrace is no longer the boundary.

202. The House of Commons Select Committee had asked the Promoter to "liaise with the Mayor of London and Transport for London to seek a sensible way forward on this matter with a view to the temporary or permanent alteration of the boundary of the Congestion Zone to accommodate a more friendly and sustainable use of the area". The Committee accepted "that any relocation of the boundary would be a matter for TfL" but stated that "we remain firmly of the view that this matter is within the influence of the Promoter. We look to Crossrail and TfL to make a sensible commitment to relocating the Congestion Zone boundary".

203. The Petitioner, whilst accepting that this Committee could not approve any amendment of the Congestion Charging Zone boundary, asked us to support the contention that TfL be required fully to involve the City Council in carrying out the unfinished studies into the impact of any amendment to the boundary before they take any decision on amending that boundary.

204. We recognise the Petitioner's request and endorse the Promoter's commitment to "continue to review and discuss the findings of the TfL study into the Congestion Charging Zone boundary with TfL, Westminster City Council and relevant stakeholders".

CHAPTER 5: RAILWAY INTERESTS PETITIONERS

The House of Commons Report

205. In Chapter Nine of their Report, the House of Commons Select Committee summarised the petitions they had heard from rail freight groups and came to the following conclusion:

> "The Committee is persuaded that the freight industry faces an increasing challenge, with current capacity insufficient for the needs of growth and we believe that the Government should take steps to address this. However, the Committee believes that these issues are largely the responsibility of Network Rail and others rather than that of the Crossrail project."

206. They went on to say that they were concerned over the uncertainty surrounding the Access Option and that they looked "to the Committee in the House of Lords to ensure that the Access Option and any other remaining issues relating to the freight industry are adequately evaluated"[32].

The Access Option and the Railway Bill Clauses

207. The Bill, as it stood before the House when we were in session, contained provisions which, if enacted as a whole, would modify the duties of the rail regulator, the ORR, in order to ensure the operation of Crossrail and provide sufficient statutory powers to ensure the running of Crossrail in the event that an appropriate access agreement was not available.

208. Concern was expressed over these clauses before the House of Commons Select Committee. The Promoter, however, has made clear throughout the Bill process that the use of standard regulatory and industry mechanisms was preferred and so an access option was applied for.

209. Following the necessary industry-wide consultation the ORR issued a provisional decision on the access option on 3 March 2008. After that provisional decision, the rail industry and other concerned parties had a further opportunity to make representations to the ORR before their final decision was issued on 14 April 2008.

210. We do not intend to outline the ORR's decision on the access option here. It can be found in full at: http://www.rail-reg.gov.uk/index.php. Suffice it to say that the option requires Crossrail to meet a Public Performance Measure (PPM) of 92% and does not commit Crossrail to building any specific infrastructure to achieve this output. Public Performance Measure (PPM) is the standard measure used to determine the performance of Britain's passenger railways. It combines figures for punctuality and reliability into a single measure of the percentage of scheduled services running correctly to timetable. It covers all scheduled services, seven days a week and is measured at the final destination. If Crossrail fail to meet this PPM the regulator can remove some of the paths allocated to them.

211. In response to the ORR's decision on the access option the Minister made clear in her statement of 18 April (following a policy statement made on 11

---

[32] House of Commons Select Committee on the Crossrail Bill, First Special Report, Session 2006–07, HC 235-I, paras139–141

April 2008) that the Government's intention was to cut back the powers sought in the Bill. The statement explained that:

"Ministers wish to make clear their intention to bring forward amendments at subsequent public bill stages to:

(a) delete clauses 23 to 34 from the Bill;

(b) make provision to address an issue relating to blocking rights during construction; and

(c) make provision to require the ORR to report on how it is and how it has and how it intends to exercise its functions as they concern Crossrail" [sic.].

212. The amendments, as public provisions, were to be brought forward at the public bill stages in the House once this Committee had reported the Bill. However, drafts were produced for the benefit of Petitioners.

213. It is fair to say that these amendments went some significant way to allaying the concerns of Petitioners before this Committee. However, some issues remained outstanding and below we detail some of the cases of the Petitioners we heard.

Jean Lambert MEP and others; and BAA Ltd

214. Ms Lambert's petition raises a number of issues and objects to the Crossrail scheme on the basis that it should be significantly extended so that it provides a range of services not currently provided for in the Bill. We declined to hear any detailed argument on this wide-ranging proposal since it is outside the principle of the Bill.

215. The Petitioner also specifically raised the issue of capacity on the Great Western Main Line and we heard argument on this which can be found at paragraph 8268 onwards in the transcript. The Petitioner put forward several ideas for increasing capacity on the line, though none were designed in any detail or costed, and the Promoters explained to us why some of these proposals were not workable (para 8321 onwards)

216. However the Petitioner did put forward one proposal that attracted our attention—the suggestion that there might be a line starting at Heathrow and going to the west, following the path of the existing 'Colnbrook branch' (previously the 'Staines West Line') which is currently used for freight, to join the Great Western Main Line with a western curve. We were surprised that no west linking line is to be provided from Heathrow and that it is proposed that Crossrail trains will not stop at Heathrow Terminal 5.

217. In response to the Petitioners' presentation the Promoter explained that providing such a west linking line would be expensive and that there would be difficulties in constructing the line as it would traverse an existing water works and would require a connection to be made from the end of the Terminal 5 platforms at Heathrow through the end of the airport facilities to join up with the 'Colnbrook branch'. The Promoter's submission was that there was not enough traffic on offer at present to justify such works but that if that situation changed in the future it would be open to BAA to provide such a linking line. The Promoter also mentioned another scheme currently being promoted by BAA—the Air Track scheme.

218. BAA did not appear before us but on Wednesday 30 April the Promoter read out a statement, containing the wording of the undertaking agreed between the parties, on their behalf, concerning works on the Piccadilly Line and the Heathrow Express line. The Promoter also recalled Mr Berryman on this date to deal with the issue of the Heathrow Western link in more detail

219. Mr Berryman explained which trains will serve Heathrow's Terminals when the Crossrail line is up and running. Crossrail services will subsume the current Heathrow Connect Services. The Heathrow Express service will run into the central terminals and then on to Terminal 5. Crossrail will run to the central terminals and then on to Terminal 4. Passengers will therefore need to change at the central terminals as necessary to take either a Crossrail train or a Heathrow Express train to their final destination. Whilst this may not appear an entirely satisfactory arrangement we recognise that it is what BAA have agreed with Crossrail and we further recognise that it is impossible for Crossrail to serve both Terminal 4 and Terminal 5 with the current layout of buildings at the airport.

220. Mr Berryman also explained in more detail the west facing connections that Crossrail had considered and rejected. A west facing curve at Airport Junction had been considered and rejected because it would be impossible to fit in due to the constraints of the site and the geometry of the lines (para 9584). A loop line via the existing Colnbrook branch was also considered. Again this option was rejected because of the geometry of the line and the need to traverse a group of lakes and the treatment works of the Three Valleys Water Company.

221. Mr Berryman further outlined the scope of BAA's proposed Air Track scheme which would provide for a southern link to Staines from Terminal 5. Trains would go from Staines to Guildford, Reading and Waterloo and there would be two trains an hour from each of those originating points. The station at Terminal 5 has been built with platforms to accommodate this service and BAA have already committed the necessary funds to obtain consent for this scheme through a Transport and Works Act procedure.

222. We recognise the Promoter's arguments and the difficulties that would be involved with providing a west facing connection from Heathrow. We further recognise that Air Track, if built, will provide for much improved access to Heathrow's Terminal 5. Whilst we do not require Crossrail to provide a west facing connection at this time we do consider that such a connection would be desirable and we hope that in the future it might be provided for. We thank the Petitioners for bringing the issue to our attention.

Association of Train Operating Companies

223. The Association of Train Operating Companies (ATOC) appeared before the Committee on 22 April. Two main issues remained outstanding following ATOC's appearance: an undertaking to deal with the issue of compensation, and an undertaking to deal with the issue of access to depots and other stabling. In relation to the former, ATOC had been concerned to enshrine the principles of no-net loss/no-net gain, and in relation to the latter, ATOC were concerned that access to depots at Ilford Yard and stabling at Plumstead Yard, might be affected, both by the Crossrail works and by its inter-relationship with other proposals, such as Thameslink.

224. We were pleased to receive a letter on 7 May which confirmed that agreement had been reached between the parties on these issues. The Promoter offered undertakings on compensation, Ilford Yard and Plumstead Yard, which were accepted by the Petitioner, and these will now be entered onto the Register of Undertakings and Assurances.

Network Rail Infrastructure Ltd

225. Network Rail appeared on Wednesday 30 April and raised the issue of infrastructure management for the central tunnel section of the Crossrail route.

226. The Petitioners were seeking an undertaking that would guarantee that they would be infrastructure manager of, and hence have responsibility for and control over, the operation and maintenance of the Crossrail system from end to end, including the central tunnel section.

227. The legislation here is complex. The requirements of the Railways Act 1993 are overlain by two sets of regulations which transpose EU Directives—the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (the ROGs) and the Railways Infrastructure (Access and Management) Regulations 2005. The effect of the legislation is that a body meeting the definition of infrastructure manager under the ROGs is not necessarily an infrastructure manager under the 2005 Regulations.

228. In the case of Crossrail we were told by the Promoter that "it is agreed that Network Rail should be infrastructure manager for the purposes of the ROGs; that is not in dispute" (para 9204). Network Rail will therefore be the infrastructure manager of the surface Crossrail lines and the infrastructure manager under the ROGs of the central tunnel section.

229. The Petitioners' concern was that they might not be appointed infrastructure manager under the 2005 Regulations for the central tunnel section which will not be on Network Rail's network.

230. The Petitioners produced an email sent to them by Transport for London on 9 April which set out TfL's bid for securing greater control over the infrastructure for which it is providing significant funding. In the email TfL accept that Network Rail should be the infrastructure manager under the ROGs but suggest that "other services could be unbundled with for instance maintenance being contracted directly by TfL or through Network Rail … The nature and extent of Network Rail's role would be controlled through commercial negotiations as would its costs and performance". The Promoter stressed that this email represented TfL's bid and not departmental policy.

231. The Petitioners made clear that they were unsure whether they could operate the safety regulations properly without also being given responsibility for operating and maintaining the railway. In a note to us the Promoter also made clear that Network Rail is under no obligation to accept arrangements that it considers would:

- prevent it from performing its role as infrastructure manager under the ROGs in relation to the central tunnel section;
- prevent it from obtaining safety authorisation from the ORR; or

- impair the delivery of access to the main network as approved in the Crossrail Access Option[33].

232. We recognise that the three delivery partners (the Secretary of State, TfL and Network Rail) need to reach agreement on the identity of the infrastructure manager(s) within the framework of the legal and related safety requirements to ensure that the Crossrail service can operate seamlessly over three networks (the Great Western Main Line, the Great Eastern Main Line and the central tunnel section). There is a proper negotiating process to be concluded and it would be improper for this Committee to require the Promoters to give the Petitioner the undertaking they seek and so tie the Secretary of State's hands in this matter. We hope that negotiations will be brought to a satisfactory end before long.

233. However, we take this opportunity to state that we would be concerned if more than one body was to be given infrastructure management responsibilities. We would be further concerned if Network Rail were required to be infrastructure manager for the purposes of the ROGs in the central tunnel section without also being given responsibility for the operation and maintenance of the railway in this section.

Rail Freight Group and other rail freight petitioners, and English Welsh and Scottish Railway Ltd

234. Lord Berkeley presented the petitions of six rail freight Petitioners: the Rail Freight Group, Freight Transport Association, Hutchinson Ports UK Ltd, Quarry Products Association, Freightliner Group Ltd and Mendip Rail Ltd. We are grateful to the freight Petitioners for organising themselves and presenting their cases efficiently and clearly.

235. The Petitioners told us that they welcomed the ORR's decision on the access option and saw it as being "fair and reasonable and in line with its duties under Section 4 of the 1993 Railways Act" (para 8653). They further recognised that the Promoters had "come a long way since the start of the process in Parliament" and paid tribute to "their willingness to make changes as a result of the representations made by the rail freight industry" (para 8654).

236. However, the Petitioners had a few outstanding issues to raise, mostly related to infrastructure works. The Petitioners asked us to require the Promoters to commit to building several specific pieces of infrastructure that would be beneficial to freight traffic. The Promoters noted that they had already committed to building the Acton dive-under[34] and argued that they should be able to retain some flexibility as to what infrastructure is built and noted that the ORR's decision on the access option did not require them to build any specific infrastructure, but was based on output and required them to meet a Public Performance Measure of 92%. They argued that detailed design had not yet been undertaken and it might transpire that certain works would not be needed. In this event they did not want to be already committed to spending funds on expensive, unnecessary infrastructure. The

---

33 Note from the Promoter circulated to the Committee on 7 May 2008-see Appendix 7

34 The dive-under is, in effect, a short tunnel taking Crossrail passenger trains from Maidenhead and Heathrow towards Paddington under the tracks which freight trains use to access Acton Yard. This will enable freight trains to leave the yard and proceed towards Reading on the down relief line without impeding passenger trains on the up relief line.

Petitioners also asked us to ensure that the capacity and gauge upgrade works to enable two-way freight traffic on the Ipswich-Peterborough-Nuneaton corridor are completed before Crossrail works on the Great Eastern Route begins. On a different note, the Petitioners asked that clauses 40–41 be removed from the Bill.

237. We recognise the importance of rail freight to the UK economy, as indeed does the Promoter, who told the Petitioner that "there is no issue between us over the importance of rail freight and making appropriate provision for growth in rail freight" (para 8677). Both Promoter and Petitioner are in agreement that it is necessary to balance the various competing interests seeking to use the rail infrastructure and that the appropriate means to do so is via the normal regulatory processes for the rail industry.

238. We do not require the Promoter to commit to building the specific infrastructure works as requested by the Petitioners. Doing so would deny the Promoter the understandable freedom they argue for and could lead to a waste of funds. Furthermore we do not wish to modify in any way the decision of the independent rail regulator. However, on Tuesday 6 May we did ask the Promoter to give an undertaking to give further comfort to rail freight Petitioners. The Promoter agreed and on Wednesday 7 May gave an undertaking in the following terms:

> "I undertake on behalf of the Promoter that any subsequent decisions by the Promoter not to carry out all of the proposed infrastructure works authorised by the Crossrail Bill will be taken on the basis that, as determined by the Office of Rail Regulation using the Crossrail model, it should not have an overall negative impact on the capability of the existing rail network to handle the current and forecast growth in rail freight traffic to 2015—as accepted by the ORR in its decision dated 14 April 2008 to grant an Access Option to Crossrail".

239. In response to the Petitioners' other concerns we accept the Promoter's argument that the Peterborough-Nuneaton works are not required in order to make Crossrail workable and that they are the subject of Transport Innovation Fund funding and as such that it would be inappropriate for us to make them the subject of a Crossrail undertaking.

240. Clauses 40–41 were raised by these Petitioners and also by English Welsh and Scottish Railway Ltd (EWS). EWS accepted that there was a need for clause 40, which has the specific function of providing a mechanism for reconciling disputes in the case of certain railway assets, but argued that clause 41(3) was unnecessary. Clause 41(3) gives the Secretary of State the power, on request or otherwise, to direct the arbitrator as to what result the arbitration is intended to achieve. The Petitioners argued that an arbitration clause could adequately replace clause 41(3) and looked to us to require its removal from the Bill.

241. In response to this the Promoter provided us with a note which explained the purpose of clauses 40 and 41[35]. The purpose of clause 41(3) was explained in this note in the following terms:

> "The Secretary of State may … under clause 41(3), specify the results to be achieved by arbitration … This is to avoid the possibility that the result of the arbitration frustrates the ability of the Nominated

[35] Note from the Promoter circulated to the Committee on 1 May 2008

undertaker to deliver essential Crossrail works, which have been authorised by Parliament".

242. The note went on to explain that the Promoter is clear that "it does not intend that clauses 40 and 41 will apply to railway operators on the Network Rail network". This is because clause 40 should not supplant or override the allocation of access rights under the Railways Act 1993 and clauses 40 and 41 do not directly empower the Secretary of State in making a direction to modify any access arrangement directed by the ORR under the Railways Act.

243. The note gave an example of when the powers contained in clause 41(3) might be used. The example involved the Crossrail works as Farringdon station which will involve a "complex interface with other works, such as Thameslink, and non-regulated asset controllers, such as London Underground".

244. The Promoter mentioned in their note that they were "considering whether it is appropriate to, during the later stages of the Bill process, make it explicit that clause 40 or 41 should not be invoked by either party where the matter may be referred to the ORR for determination in accordance with its statutory duties or functions". We would strongly support such a move and believe that it would give further comfort to those Petitioners who raised the issue.

245. English Welsh and Scottish Railway Ltd also asked us to require the Promoters to commit to building some specific infrastructure, and we are not acceding to that request for the reasons specified above, and raised an issue over compensation in respect of losses incurred during construction.

246. The Network Code is the financial mechanism that generally operates between railway operators. As the Petitioners explained to us, the standard procedures provide for certain circumstances in which no compensation is payable. The Petitioners argued that those procedures "were never intended to address the construction of a new railway and railway of the sort which will be involved in the construction of Crossrail" and that as a consequence of this "one would expect there to be special provision made to ensure that all losses lie with the Promoters rather than some of them being picked up by the railway operators" (para 9683).

247. The issue is this—the Network Code provides for compensation for losses arising from a 'network change' and for losses arising from a lesser change that lasts over six months (even if it does not meet the definition of a network change). The majority of Crossrail works will involve changes "in or to any part of the Network (including its layout, configuration or condition)". As a result these will be 'Network changes' for the purpose of Part G of the Network Code and the compensation mechanism in Part G will therefore be engaged in respect of the majority of the works. However, the Petitioners wanted to be compensated for *all* losses arising from construction—in other words they wanted an extension to the industry mechanism.

248. The Petitioners accepted that over 80% of the losses that they might incur during construction of Crossrail were recoverable under current railway industry provisions and this figure is likely to prove conservative. In the circumstances we are not minded to require the Promoter to pay compensation for *all* potential losses as the Petitioners requested us to do. Industry mechanisms should be used and we believe that those mechanisms provide adequate protection to the Petitioner.

249. Furthermore, we note that a consultation process is currently underway at present within the industry relating to Part G of the Network Code and that it is open to the Petitioner to make representations.

CHAPTER 6: CONCLUSION AND THE FUTURE OF THE PROJECT

250. The House of Commons' Committee, in their First Special Report (HC 235-I) left a number of matters outstanding, not least the Railway clauses. These we have addressed elsewhere in the Report. They also drew particular attention to the need to enable members of the public to understand this enormous project and the way in which it may affect their community, their property, their businesses and their homes. We endorse that concern and, at the end of our proceedings, we wonder whether the material which had been made available by the Promoter has been assimilated by members of the public.

251. There is a huge range of information in the form of the Information Papers, the Environmental Minimum Requirements, and the Register of Undertakings and Assurances. All these documents can be seen by any interested party—they are all online and have been updated throughout the Parliamentary proceedings in both Houses[36]. We urge the Promoter to continue to ensure that all information provided to the public is clear, accessible and comprehensive.

252. We wish to stress that Petitioners' dialogues with the Promoter do not end with the publication of this Report. It will be important for both parties to continue to communicate with each other through construction and beyond to ensure that Crossrail is built with minimal disruption to those directly affected by its' construction.

253. The Committee's view throughout proceedings has been that there are clearly many and continuing problems likely to encountered by those with properties or businesses above the running tunnels or adjacent to surface works but that machinery is in place to resolve these. We agree that the members of the public particularly affected by the works must have recourse to remedies to mitigate the nuisance they will suffer but we also believe that such remedies should not place an undue burden on public finances. There is a balance to be struck and where Petitioners sought our recommendation for measures which would overload the impact on public funds we had to decline.

254. Petitioners will be protected by the Crossrail Environmental Minimum Requirements, Crossrail policies (as set out in their Information Papers), settlement deeds and other undertakings, assurances and deeds negotiated in specific cases with individual petitioners. Those affected by Crossrail will have access to the 24 hour Information and Helpline Service and, in some instances, to 'one stop shops'.

255. We expect the helpline service to be an effective means for individuals with complaints and concerns to channel their views. In particular we expect the nominated undertaker to ensure that the staff employed on the helpline are sufficient in number and expertise and are able to deal tactfully and helpfully with callers. Above all, we expect that there will be no resort to a system of disembodied voices and call queuing.

256. A Complaints Commissioner will be appointed to act as a form of Ombudsman and investigate any cases forwarded to him/her. The Commissioner will be a person of suitable stature and relevant qualifications

---

[36] These documents can be found online at: http://billdocuments.crossrail.co.uk/

and will be independent. Local Authorities will also be active in taking measures to protect their residents and will ensure that the Construction practices, which have been agreed by all local authorities along the route, are observed.

257. Community Liaison Groups also have an important role to play in ensuring that those affected are fully informed and have an opportunity to discuss their concerns and frustrations with the Promoter. As was noted by several Petitioners, such a device proved very useful in the case of the Channel Tunnel Rail Link construction in the King's Cross area of London—the London Borough of Camden set up and chaired just such a Group which was successful in giving satisfaction over many issues. It is proposed that such groups should operate along the Crossrail route. It has to be said, however, that to be of any use the Group must include members of the local community who are fully prepared to participate. Such an organisation cannot be imposed and will never function without the element of trust and cooperation respected by all concerned.

258. Our Committee was presented with far fewer Petitions than the House of Commons' Committee; not least because we did not have to deal with any Additional Provisions and their accompanying new rounds of petitioning. Before us a great many Petitions were settled as a result of diligent and patient negotiation by both parties; in other instances a compromise was reached before the scheduled hearing date or after the hearing. In such cases the basis for agreement was often another undertaking or assurance which will now appear in the Register.

259. With the publication of this Report the Committee has formally reported the Bill. The Bill will now go through its remaining stages in the House of Lords (Committee on re-commitment, Report and Third Reading) before being returned to the House of Commons for consideration of amendments. When both Houses have agreed the provisions of the Bill the Bill will gain Royal Assent and become an Act. A nominated undertaker can then be appointed, contracts can be let and Crossrail construction can then commence.

260. We have made some minor, technical amendments to the Bill and have amended clause 16 (for an explanation of why we have amended clause 16 in this way see Appendix 13). When the Bill returns to the House it is proposed that ministers will move amendments to omit clauses 23–34 which have been overtaken by the decision of the Rail Regulator in early May to grant an Access Option to Crossrail under the Railways Act 1993. There remains some concern over clauses 40–41 (especially clause 41(3)) and their retention can be discussed in the Chamber. For the benefit of the House a note on clauses 40 and 41, presented by the Promoter to the Committee, is published as Appendix 12 to this Report.

APPENDIX 1: LIST OF MEMBERS AND MEMBERS' INTERESTS

The members of the Committee were:

Lord Brooke of Alverthorpe
Viscount Colville of Culross (Chairman)
Baroness Fookes
Lord James of Blackheath
Lord Jones of Cheltenham
Lord Snape
Lord Young of Norwood Green

Declaration of Interests

Full lists of Members' interests are recorded in the Lords Register of Interests. Details can be found at the following web address:
http://www.publications.parliament.uk/pa/ld/ldreg.htm

APPENDIX 2: COMMITTEE VISITS

During the process of the Lords petition hearings the Committee made four visits to inspect various sites of interest on the proposed Crossrail Route. The Committee also visited the Renaissance Chancery Court Hotel and a ventilation shaft at Rotherhithe. The Committee welcomed the participation of Petitioners, relevant experts and Crossrail representatives in these visits. At each location we were given an overview of the particular issues that had been raised by Petitioners, together with construction methodology.

Whitechapel and Hanbury Street, 20 February 2008

Viscount Colville of Culross	Baroness Fookes
Lord Brooke of Alverthorpe	Lord Young of Norwood Green

The Committee undertook a visit to Whitechapel. The Committee were shown around the London Underground station at Whitechapel and were given an overview of how Crossrail would interchange with the current District and East London Lines. The Committee were then shown where the project would impact on the local environs. In particular, we were shown the locations of the proposed eastern and western ticket halls, at Cambridge Heath Road and Fulbourne Street respectively. The Committee then visited Durward Street to see how the local petitioners would be affected by the proposals in the Bill.

The Committee then visited the proposed site of the Hanbury Street Shaft where emergency access and ventilation would be provided. We then walked the proposed route of lorries that would remove the excavated material from the Hanbury Street shaft site, via Spital Street, Buxton Street and to the junction of Buxton Street and Vallance Street.

The Committee are grateful to PC Stephen Mills, Operational Planner, and the Metropolitan Police Service (Tower Hamlets Borough) for assisting the Committee during the visit.

Isle of Dogs, 21 February 2008

Viscount Colville of Culross	Baroness Fookes
Lord Brooke of Alverthorpe	Lord Young of Norwood Green

The Committee participated in a visit to the Isle of Dogs. The Committee viewed the proposed North Dock site, the site of the Isle of Dogs station, from a vantage point on the Great Wharf Bridge. Here the Committee were given an indication of where the, Isle of Dogs station eastern entrance island and ticket hall would be located.

The Committee then went to Adams Place to view the proposed site of the Isle of Dogs station western ticket hall entrance island and ticket hall. We were also able to note the proximity of a variety of petitioners in conjunction with the proposed works.

High Holborn and Rotherhithe, 5 March 2008

Viscount Colville of Culross	Lord James of Blackheath
Lord Brooke of Alverthorpe	Lord Jones of Cheltenham
Baroness Fookes	Lord Young of Norwood Green

A recurrent concern for many Petitioners was groundborne noise resulting from the running of a railway, and the issue of what levels of noise would be acceptable or not. To achieve a better understanding of the operational groundborne noise criteria as explained in Crossrail Information Paper D10—*Groundborne Noise and Vibration*, the Committee undertook a visit to the Renaissance Chancery Court Hotel in High Holborn. The Committee are grateful to the Renaissance Chancery Court Hotel for allowing one of their rooms to be set up to allow the Committee to listen to a varying range of groundborne noise made by London Underground trains on the Central and Piccadilly lines.

The Committee then visited a ventilation shaft at Culling Road, Rotherhithe. The purpose of this visit was to experience the noise emitted from a current fixed installation, between Bermondsey and Canada Water stations on the Jubilee Line Extension. This assisted the Committee in gaining an understanding of some of the issues pertinent to Crossrail Information Paper D25—*Noise from Fixed Installations*.

Paddington, 28 April 2008

Viscount Colville of Culross
Baroness Fookes
Lord James of Blackheath
Lord Jones of Cheltenham
Lord Snape

The Committee's final visit was to Paddington and included other locations in the vicinity of the station. The Committee saw where the Crossrail Station would be constructed beneath Eastbourne Terrace. We were advised of the impact of the proposed traffic access and restrictions along Bishop's Bridge Road, Eastbourne Terrace and Praed Street. We were then shown the Red-Star Depot which had been identified as a suitable alternative to the existing taxi facilities at the station.

The Committee then visited the proposed site of the Royal Oak Portal, where Crossrail's tunnels would surface and join with the existing tracks before the service continued west. The Committee were also shown Westbourne Park Bus Garage which will provide a clear worksite to handle spoil produced from the construction of the Royal Oak Portal and the Paddington Station box.

The Committee were then shown the Westbourne Park footbridge, on the Great Western Main Line which links the newly built Westminster Academy and Westbourne Park Villas. The Committee also visited the property of Mr Payne on Stanhope Terrace.

APPENDIX 3: PETITIONERS AGAINST THE CROSSRAIL BILL IN THE HOUSE OF LORDS

PETITIONERS WHO APPEARED BEFORE THE COMMITTEE

Tuesday 26 February 2008

The Petition of the London Borough of Newham

Wednesday 27 February 2008

The Petition of the London Borough of Newham

Thursday 28 February 2008

The Petition of the Cyclists Touring Club

Monday 3 March 2008

The Petition of Iver Parish Council, the Ramblers Association and the Open Spaces Society

Tuesday 4 March 2008

The Petition of the London Borough of Tower Hamlets

The Petition of Mr James Middleton

Wednesday 5 March 2008

The Petition of Mr David Saunderson

Monday 10 March 2008

The Petition of the Spitalfields Community Association

Tuesday 11 March 2008

The Petition of Selina Mifsud and others

The Petition of Nicholas Morse and others

The Petition of the Spitalfields Community Association

Wednesday 12 March 2008

The Petition of the Spitalfields Community Association

The Petition of the Spitalfields Small Business Association Ltd

Thursday 13 March 2008

The Petition of the Spitalfields Society

Monday 17 March 2008

The Petition of the Kempton Court Residents Committee

Tuesday 18 March 2008

The Petition of Ms Patricia Jones

Wednesday 19 March 2008

The Petition of Canary Wharf Group plc

The Petition of Trustees of The SS Robin Trust

The Petition of the Association of West India Dock Commercial Ship Owners

Thursday 20 March 2008

The Petition of Souzel Properties Ltd

The Petition of the City of London Corporation

Wednesday 26 March 2008

The Petition of Mr Michael Pritchett

Tuesday 1 April 2008

The Petition of the London Borough of Bexley

The Petition of Mr Roy Carrier

Wednesday 2 April 2008

The Petition of Mr Roy Carrier

Thursday 3 April 2008

The Petition of the London Borough of Camden

The Petition of David Monro and Adam Scott in their capacity as Holding Trustees of the charity known as the House of St Barnabas-in-Soho

Tuesday 22 April 2008

The Petition of Jean Lambert MEP and others

The Petition of the Association of Train Operating Companies (ATOC)

Wednesday 23 April 2008

The Petitions of the London Borough of Havering, the Royal Borough of Kensington & Chelsea, and Brentwood Borough Council

Tuesday 29 April 2008

The Petitions of the Freight Transport Association Ltd; The Rail Freight Group; Freightliner Group Ltd; Mendip Rail Ltd; Quarry Products Association Ltd; Hutchison Ports (UK) Ltd; The Felixstowe Dock & Railway Company; Harwich International Port Ltd; and Maritime Transport Services Ltd

Wednesday 30 April 2008

The Petition of Network Rail Infrastructure Ltd

The Petition of English Welsh & Scottish Railway Ltd

Thursday 1 May 2008

The Petition of English Welsh & Scottish Railway Ltd

The Petitions of the Freight Transport Association Ltd; The Rail Freight Group; Freightliner Group Ltd; Mendip Rail Ltd; Quarry Products Association Ltd; Hutchison Ports (UK) Ltd, The Felixstowe Dock & Railway Company, Harwich International Port Ltd; Maritime Transport Services Ltd

The Petition of the Trustees of the SS Robin Trust

Friday 2 May 2008

The Petition of the Smithfield Market Tenants Association (SMTA)

Tuesday 6 May 2008

The Petition of Westminster City Council

The Petition of Paddington Residents Active Concern on Transport (PRACT)

The Petition of Woodseer and Hanbury Residents Association (WHRA)

Wednesday 7 May 2008

The Petition of Westbourne Park Villas Residents Association

The Petition of Mr John Payne

Thursday 8 May 2008

The Petitions of the Crossrail Coalition of Residents and Petitioners; and the Residents Society of Mayfair & St James's Mayfair Action Group

The Petition of Mr Leo Walters

FULL LIST OF PETITIONERS IN THE HOUSE OF LORDS

1.James Middleton

2.Domaine Developments Limited

3.Mintel International Group Limited

4.Roy Alfred Carrier

5.Leo F. Walters

6.Paddington Residents' Active Concern on Transport ("PRACT")

7.John Payne

8.Patricia Mary Singleton

9. Hutchison Ports (UK) Limited, The Felixstowe Dock and Railway Company, Harwich International Port Limited and Maritime Transport Services Limited

10.Iver Parish Council; The Rambler's Association; and The Open Spaces Society

11.Greene King Retailing Limited and Greene King Neighbourhood Estate Pubs Limited

12.BAA Ltd, Heathrow Airport Ltd and Heathrow Express Operating Co Ltd

13.Bonhams 1793 Limited and 101 New Bond Street Limited

14.Sir John Cass's Foundation

15.Association of West India Dock Commercial Ship Owners

16.Lancaster Investments

17.Greater London Offices (Old Broad Street) Limited

18.Patricia Gaynor Jones

19.The Spitalfields Society

20.Selina Mifsud and others

21.Ainscough Crane Hire Limited

22.Nicholas Morse and others

23.Smithfield Market Tenants' Association

24.Gray's Waste Services Limited

25.Possfund Custodian Trustee Limited

26.Scottish Widows plc and Scottish Widows Fund and Life Assurance Society

27.Jean Lambert MEP and others

28.Coal Pension Properties Limited

29.Three Valleys Water plc

30.EMI Music Publishing Limited

31.Buccleuch Property Fund (Hayes) Limited

32.Mendip Rail Limited

33.The Freight Transport Association Limited

34.The Rail Freight Group

35.Residents Society of Mayfair and St James's Mayfair Action Group

36.David Duncan Coode Monro and Adam Scott

37.Great Western Studios Management Ltd

38.David James Saunderson

39.Maidenhead Civic Society

40.Westbourne Park Villas Residents Association

41.Port of London Authority

42Tesco Stores Limited; Tesco Property Holdings Limited; Tesco Red (Nominee 1) Limited; and Tesco Red (Nominee 2) Limited

43.Tesco Pensions Trustees Limited

44.London Borough of Bexley

45.Brentwood Borough Council

46.British Board of Film Classification

47.Camden London Borough Council

48.Canary Wharf Group plc

49.Ferrotec (UK) Limited

50.Grand Central Studios Limited

51.Lamborfore Management Limited

52.Council of the London Borough of Havering

53.Council of the London Borough of Newham

54Council of the Royal Borough of Kensington and Chelsea

55.Seymour Development Limited

56.Westminster City Council

57.Council of the Royal Borough of Windsor and Maidenhead

58.Wood Wharf (General Partner) Limited

59.Landor (Dundee Wharf) Limited (1) Landor Residential Limited (2) and Ballymore Ontario Limited (3)

60.Fortress Limited

61.London Borough of Hillingdon

62.Trustees of the SS Robin Trust

63.City Aviation Properties Limited

64.London City Airport Limited

65.Marketspur Limited

66.Eleanor Street Travellers All Residents Group

67.Bond Street Investments Limited

68.ATOC Ltd—Association of Train Operating Companies

69.BS Services (Hayes) Limited and Leemark Engineering (Hayes) Limited

70.Land Securities plc; LS Portfolio Investments Limited; LS ONC Holdings Limited; and LS Victoria Properties Limited

71.Royal Docks Management Authority Ltd

72.Quarry Products Association Ltd

73.Tilfen Land Ltd

74.Tarmac Ltd

75.Kingsgate London Properties

76.South West Regional Assembly

77.Consolidated Developments Ltd

78.Hammerson (Paddington) Limited and Domaine Developments Limited

79.Mr Lloyd Christopher Biscoe as liquidator for JTA Joinery Limited

80.EDF Energy Networks Ltd

81.BNP Paribas Jersey Unit Trust Corporation Limited and Anley Trustees Limited as Trustees of Henderson Central London Office Fund

82.Standard Life Investments Limited

83.Aggregate Industries (UK) Limited; London Concrete Limited; and Plasmor Limited

84.British Land Company plc

85.Habitat UK Limited

86.The Mayor and Burgesses of the London Borough of Tower Hamlets

87.National Grid Property Limited

88.Centrewest London Buses Limited

89.Centrewest London Buses Limited

90.First Greater Western Limited

91.FirstGroup plc *and behalf of its subsidiaries* First Greater Western Limited and Centrewest London Buses Limited

92.City of London Corporation

93.CTC—Cyclists Touring Club

94.Bombardier Transportation UK Limited

95.The Spitalfields Community Association

96.Woodseer and Hanbury Residents Association

97.The Crossrail Coalition of Residents and Petitioners (The Coalition)

98.Blaxmill Limited

99.Staffordshire County Council

100.Everest Properties Limited

101.The Moor House Limited Partnership

102.Freightliner Group Limited

103.English Welsh & Scottish Railway Limited

104.Souzel Properties Limited
105.The Brewery Trust
106.British Waterways Board
107.Great Portland Estates plc and others
108.Summerpark Homes Limited
109.The Prudential Assurance Company Limited
110.Network Rail Infrastructure Limited
111.Spitalfields Small Business Association Ltd
112.Michael Pritchett
113.Khoodeelaar!

APPENDIX 4: GENERIC ISSUES AGREED WITH LOCAL AUTHORITIES—FURTHER INFORMATION

Information Paper D10 "Groundborne Noise and Vibration"

The Promoter and Camden London Borough Council as lead authority have reached agreement as to the measures that will be put in place to control the effects of groundborne noise and vibration that might otherwise arise from the construction and operation of the railway in the Crossrail tunnels. The measures are set out and explained in Information Paper D10 "Groundborne Noise and Vibration".

For ease of reference the relevant paragraphs from the information paper relating to each of these areas of agreement are presented below.

Paragraphs 1 and 2.1 introduce the Information Paper and the issue of groundborne noise.

1. Introduction

1.1 This Information Paper explains the measures that will be put in place to control the effects of groundborne noise and vibration that might otherwise arise from the construction and operation of the railway in the Crossrail tunnels.

2. Groundborne Noise

'2.1 Groundborne noise could arise from the movement of trains in Crossrail tunnels, during construction of the railway, during commissioning of the railway, or once the railway is operating passenger services'.

Significance criteria and performance specification

Paragraphs 2.2, 2.3, 2.4, and Table 1 describe the levels of significance for groundborne noise which were used in the assessment carried out for the Crossrail Environmental Statement and which have also been adopted as part of the performance specification of the Crossrail railway.

'2.2 There are no UK legislative standards or criteria that define when groundborne noise becomes significant. Crossrail has therefore drawn upon available experience in constructing new underground railways, e.g. the Jubilee Line Extension, Thameslink and High Speed 1 (Channel Tunnel Rail Link). All of these projects adopted a design criterion for groundborne noise in residential properties of 40dB$L_{AMax,s}$. This criterion was therefore adopted to assess the significance of potential groundborne noise impacts in residential properties during both construction and operation of Crossrail.'

'2.3 In the case of buildings lawfully used as reference libraries, lecture theatres, auditoria, theatres, hospitals, places of meeting for religious worship, schools and similar buildings, the use of which is particularly sensitive to noise or vibration, either the same or more stringent assessment criteria were adopted. The thresholds of significance used to assess the groundborne noise impacts of Crossrail are presented in Table 1 below.'

Table 1

Construction and Operational Groundborne Noise Criteria

Building	Level/Measure
Residential buildings	$40dBL_{Amax,S}$
Offices	$40dBL_{Amax,S}$
Hotels	$40dBL_{Amax,S}$
Theatres	$25dBL_{Amax,S}$
Large Auditoria/Concert Halls	$25dBL_{Amax,S}$
Sound recording studios	$30dBL_{Amax,S}$
Places of meeting for religious worship	$35dBL_{Amax,S}$
Courts, lecture theatres	$35dBL_{Amax,S}$
Small Auditoria/halls	$35dBL_{Amax,S}$
Schools Colleges	$40dBL_{Amax,S}$
Hospitals, laboratories	$40dBL_{Amax,S}$
Libraries	$40dBL_{Amax,S}$

'2.4 These criteria will be adopted as the performance specification for the railway as the detailed design is developed. They do not apply to the noise of the tunnel boring machine (TBM) passage, including other tunnelling related activities, which is short-term and transitory and which was therefore qualitatively described in the Crossrail Environmental Statement and assessed as likely to have no significant impact.'

Control of groundborne noise during the construction of Crossrail is addressed in paragraph 2.4 of the information paper (quoted above) in relation to tunnel boring machines.

Mitigation measures assumed available in the assessment of groundborne noise from the construction railway at the time of the Environmental Statement are given in the bullet points under paragraph 2.5.

'2.5 The potential impact for construction and operation of the railway is set out in the Environmental Statement. The assessment assumes that where necessary, the potential impact is mitigated.

For the temporary railway during construction the mitigation measures available were assumed to be:'

- *'the use of smooth track (new rail without corrugations or discrete irregularities) will be installed at the start of the works with joints achieving variation in rail height of not more than 2mm;*
- *where appropriate the use of adequate elasticity in the track support system in order to reduce the transmission of vibration and groundborne noise from the passage of rail vehicles, for example the use of resilient rail pads in the fastening system between the rails and the sleepers.*
- *a speed limit on construction trains of 15km/h;*
- *all diesel locomotives used will be fitted with efficient exhaust silencers; and*

- *a maintenance programme that ensures the condition of the track does not deteriorate over time thereby causing noise in breach of the agreed threshold.'*

Control of groundborne noise from the operation of the temporary construction railway is addressed in paragraph 2.6–2.7. Paragraph 2.6 of the information paper also describes the findings of this assessment i.e. no significant impacts were predicted.

'2.6 The findings of the assessment (reported in the Environmental Statement) show that adoption of these measures is likely to result in the criteria for the performance specification for residential buildings, offices, hotels, schools, colleges, hospitals, laboratories and libraries not being breached at any location during the construction of Crossrail.'

'2.7 The nominated undertaker will endeavour to ensure that the groundborne noise from the operation of the temporary construction railway that is experienced by any theatre, large auditorium/concert hall, studio, place of meeting for religious worship, court, lecture theatre or small auditorium/hall, does not exceed the levels to which it is already subject by the presence of London Underground, other railway and road transport operations, or the levels listed in Table 1, whichever is the higher noise level, during the periods for which the buildings are in use'.

Measures assumed available in the assessment of groundborne noise from the operation of the permanent railway at the time of the Environmental Statement are given in the bullet points under paragraph 2.8 of the information paper. The findings of the assessment of groundborne noise impacts from the operation of the permanent railway are given in paragraph 2.12.

'2.8 During operation after construction, the following measures were assumed to be available:

• standard trackform design to use continuously welded rail;

• the rails in tunnels will be supported on resilient track support systems, and track installation will be carried out using modern technology to achieve very much more accurately laid and smoother track than exists in traditional tube tunnels; and

• floating slab track or similar technology, including where it is predicted that standard trackform would result in the criteria in Table 1 being breached.

Control on groundborne noise in the design and maintenance of the permanent railway are addressed in paragraphs 2.9, 2.10, 2.11, 2.13 and 2.14'.

'2.9 The nominated undertaker will be required to design the permanent track system so that the level of groundborne noise arising from it near the centre of any noise-sensitive room is predicted in all reasonably foreseeable circumstances not to exceed the levels in Table 1. The nominated undertaker will be required to install the permanent track using a standard track system for the Crossrail tunnel sections. In any location where the standard system is predicted during detailed design to cause levels of groundborne noise exceeding the relevant assessment criterion an enhanced track support system will be installed.'

'2.10 The nominated undertaker will put in place measures that will ensure that at no point during the operational life of the Crossrail passenger service will the combined power spectral density of the wheel and rail roughness amplitudes be worse than 30 dB re 1 micron in the 1/3 octave centred on a wavelength of 2m, decreasing by 15dB per tenfold reduction in wavelength.'

'2.11 Prior to opening, the nominated undertaker will ensure that the rails of the underground sections of Crossrail are conditioned by grinding, or other suitable means, and are appropriately maintained thereafter. The nominated undertaker will be required, as part of the final track design development, to provide details to the local authorities

addressing the frequency of routine maintenance regimes, and the criteria under which maintenance activities such as wheel turning and rail grinding will be triggered, to demonstrate that Best Practicable Means will be adopted in respect to those matters so far as relevant for the purpose of maintaining the system to achieve the performance levels set out in Table 1 above.'

'2.12 The findings of the assessment (reported in the Environmental Statement) show that adoption of these measures is likely to result in the criteria for the performance specification not being breached at any location during the operation of Crossrail.'

'2.13 In recognition of the Local Authorities' preference for groundborne noise levels within residential dwellings which are no greater than 35dB$L_{Amax,S}$ during the operation of Crossrail, the nominated undertaker will provide the information identified in paragraph 4.2 to the relevant Local Authority where any residential property is predicted through modelling as being likely to experience noise levels exceeding 35d $L_{Amax,S.}$'

'2.14 Further as paragraph 1.5 of the Environmental Minimum Requirements explains, the nominated undertaker will use reasonable endeavours to adopt mitigation measures that will further reduce any adverse environmental impacts caused by Crossrail, insofar as these mitigation measures do not add unreasonable costs to the project or unreasonable delays to the construction programme. This requirement will be applied to any residential property in which the level of groundborne noise arising from the operation of the Crossrail passenger service near the centre of any noise-sensitive room is predicted to equal or exceed 35dB$L_{Amax,s}$.'

Controls on groundborne vibration in the design of the permanent railway are addressed in paragraph 3.1 and Table 2 in the information paper.

'3.1 During the detailed design stage referred to in paragraph 2.9, the nominated undertaker will also be required to design the permanent track system, in accordance with the guidance in British Standard 6472:1992 "Guide to evaluation of human exposure to vibration in buildings (1 Hz to 80 Hz)", so that operational vibration arising from it at buildings identified in Table 1, expressed as vibration dose value (VDV), is predicted in all reasonably foreseeable circumstances not to exceed the levels presented in Table 2'

Table 2

Construction and Operational Vibration Criteria

In the Absence of Appreciable Existing Levels of Vibration		Appreciable Existing Levels of Vibration
VDV $ms^{-1.75}$ Daytime (07:00–23:00)	VDV $ms^{-1.75}$ Night-time (23:00–07:00)	% Increase in VDV
0.31	0.18	40

'3.2 The nominated undertaker will endeavour to ensure that the groundborne vibration from the operation of the construction railway that is experienced by any theatre, large auditorium/concert hall, studio, place of meeting for religious worship, court, lecture theatre or small auditorium/hall, does not exceed the levels to which it is already subject by the presence of London Underground, other railway and road transport operations, or the levels listed in Table 2, whichever is the higher vibration level, during the periods for which the buildings are in use.'

Section 4 of the information paper explains how the nominated undertaker will be required to apply the design criteria to the design of the railway.

'4. Application of the Crossrail Design Criteria to the Design of the Permanent Track System'

'4.1 The nominated undertaker will be required to do the following in relation to the permanent track system for the tunnel sections

(a) At design stage, to apply the relevant Crossrail design criteria relating to tables 1 and 2 which are referred to above to predict, through the use of appropriate modelling, the engineering requirements of the track system to meet those criteria.

(b) In acting under paragraph (a) above, to design a standard trackform for the tunnel section with the objective of meeting as many of those design criteria as can reasonably be achieved by such a standard track system and to design an enhanced trackform, such as floating slab or alternative better technology, for locations where it is predicted that the standard track system will not meet the criteria or to discharge other project commitments and undertakings.

(c) To translate the engineering requirements established under paragraphs (a) and (b) above into contract specifications for the permanent track system.

(d) To procure and install a permanent track system to meet the contract specifications established at (c) above.'

'4.2 The nominated undertaker will be required to provide details of the steps taken and to be taken in accordance with paragraph 4.1 above to the relevant local authority, whose comments will be taken into account, including modelling results and details of the type of rail/and or track support system proposed and its predicted performance, and to continue technical discussions concerning groundborne noise issues with local authorities. In accordance with paragraph 2.13, this will include any situation where groundborne noise levels are predicted to exceed 35dB$L_{AMax,s}$ but be less than 40dB$_{Lamax,s}$ in residential properties.'

The requirements of groundborne noise and vibration modelling are addressed in paragraph 5.1.

'5.1 For the detailed design of the permanent track system in Crossrail tunnels, the Nominated Undertaker will be required to adopt a groundborne noise and vibration prediction model that is fully compliant with the guidance provided in ISO 1487–1:2005 Mechanical Vibration—Groundborne noise and vibration arising from rail systems—Part 1: General Guidance, and will provide details of the model development, calibration, validation and verification procedures undertaken to comply with that guidance and the resulting model accuracy to the Local Authorities whose comments will be taken in to account.'

Information Paper D9 "Noise and Vibration Mitigation Scheme"

The Promoter and London Borough of Tower Hamlets as lead authority have reached agreement on Information Paper D9, "Noise and Vibration Mitigation Scheme". The noise and vibration mitigation scheme makes provision for mitigation in the form of noise insulation and/or temporary re-housing to be provided in circumstances where construction noise is predicted to exceed certain levels over particular periods of time. Information Paper D9 describes how the scheme will work, and how eligibility will be assessed.

An introduction to the scheme is given in paragraphs 1.1 to 1.4.

'1.1 The construction of Crossrail will cause noise and vibration impacts in some locations.'

'1.2 During construction, the Secretary of State will seek, through design and mitigation, to control the effects of noise and vibration from within the construction site. Nevertheless, there will be circumstances in which noise impacts will arise which will need to be mitigated still further. In certain circumstances, explained below, the Secretary of State or his agent will either provide and install free of charge, or provide grant aid for, noise insulation. In certain cases where the level of noise created by construction activity is predicted to be acute, the Secretary of State or his agent will contact you to arrange temporary re-housing, or help residents to arrange it for themselves and recoup the costs from the Secretary of State or his agent.'

'1.3 The Secretary of State has adopted a set of noise and vibration thresholds in relation to the provision of grant aid for noise insulation and, if appropriate, temporary re-housing. These thresholds follow the precedents established by recent and similar major schemes'

'1.4 The purpose of this information paper (IP) is to explain both how the noise insulation and temporary re-housing schemes work, and what you should do next if you think that you may be eligible for either scheme.'

A number of important definitions are given in section 2.

'2 Definitions'

'"A-weighted" is the A-weighted level, expressed as "dB(A)", allows for the frequency dependent characteristics of hearing. Corrections are applied for each octave frequency band, and the resultant values summed, to obtain a single overall level;'

'"claimant" means an owner or occupier of an eligible building who makes a request, or is made an offer under the Crossrail Noise and Vibration Mitigation Scheme;'

'"construction" includes demolition and execution;'

'"contiguous façade" means a façade of a building that is horizontally separated from other facades by a stairwell, corner or some other discontinuity;'

'"decibel (dB)" is the ratio of sound pressures which we can hear—a ratio of 106 (one million: one). For convenience, therefore, a logarithmic measurement scale is used. The resulting parameter is the 'sound pressure level' (Lp) and the associated measurement unit is the decibel (dB). As the decibel is a logarithmic ratio, the laws of logarithmic addition and subtraction apply;'

'"eligible building" has the meaning assigned to it in regulation 7 of Statutory Instrument 1996 No. 428, The Noise Insulation (Railways and Other Guided Transport Systems Regulations 1996 excluding that part of regulation 7 (1) which refers to distances from running rail or the nearest apparatus corresponding thereto which is not applicable to noise from construction sites, but does not include any building with respect to which a notice to treat has been or is intended to be served for its acquisition, or with respect to which a vesting declaration for its acquisition has been or is intended to be made;'

'"eligible room" means a living room or a bedroom having a qualifying door or a qualifying window in an eligible building;'

'"equivalent continuous sound pressure level (Leq)" another index for assessing overall noise exposure is the equivalent continuous sound level, Leq. This is a notional steady level which would, over a given period of time, deliver the same sound energy as the actual time-varying sound over the same period. Hence fluctuating levels can be described in terms of a single figure level. The A-weighted Leq is denoted as LAeq.'

'"façade" means an outer wall of a building';

'"insulation work" means work carried out to insulate an eligible building against noise which will include adequate ventilation and may include blinds;'

'"Nominated Undertaker" means the organisation or organisations which will be appointed by the Secretary of State to design, construct, operate and maintain Crossrail;'

"pre-existing ambient noise" means the level of ambient noise, expressed as a level of LAeq determined with respect to the relevant time period and the relevant LAeq averaging time, prevailing one metre in front of relevant windows or doors in a façade of a dwelling, immediately before the placing of a contract for the construction of the relevant part of the Crossrail works;'

'"qualifying door" means an external door opening directly into an eligible room which is in that part of the façade in respect of which the relevant noise level satisfies the requirements of Appendix A of this Information Paper or meets the criteria for a contiguous façade as set out in Appendix B;'

"qualifying window" means a window in an eligible room which is in that part of the façade in respect of which the relevant noise level satisfies the requirements of Appendix A of this Information Paper or meets the criteria for a contiguous façade as set out in Appendix B;'

"the Regulations" means the Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996;'

'"the relevant specifications" means the items in Part I of Schedule 1 to the Regulations except where they are amended by the provisions of this Information Paper, such of the items in Part II of Schedule 1 to the Regulations as may be approved by the Secretary of State and such of the specifications set out in Part III of Schedule 1 to the Regulations as are applicable in the circumstances of the case or items whose performance is equivalent thereto;'

'"the works" is the construction works required for Crossrail which fall within the remit of the Crossrail Construction Code.'

Paragraphs 2.1 to 2.4 explain the circumstances under which noise insulation and/or temporary housing will be offered.

'2.1 Construction noise insulation and temporary re-housing arrangements apply to dwellings and other buildings lawfully used for residential purposes.'

'2.2 To be eligible you must own or occupy a private dwelling and the dwelling must be one in which the predicted or actual construction noise exceeds the relevant "noise trigger level" (as shown in Appendix A) for:

- *'a period of 10 or more days of working in any 15 consecutive days; or'*
- *'for a total of 40 days or more in any 6 consecutive months.'*

'The rooms to which this scheme applies, eligible rooms, are defined as living rooms or bedrooms having a qualifying door or a qualifying window in any eligible building. On your behalf the Secretary of State or his agent will prepare the predictions and monitor the actual noise levels in consultation with the relevant local authority.'

'2.3 Initially eligibility for the scheme depends on the predicted noise level following the assessment that will be carried out for that purpose once detailed construction plans are in place. If those noise predictions indicate that a property is eligible, the offer of noise insulation will be made and, if accepted and all necessary approvals obtained, the insulation installed before the works commence. However, the actual noise may turn out to be more or less than the prediction and therefore the noise levels will be monitored as work progresses. If it is found that noise levels are not as high as expected, the insulation package will not be removed. If it is found that the noise levels are higher than expected and meet the thresholds set out in this Information Paper, you will be informed and the

provisions set out in paragraphs 9.5 to 9.11 will apply. Full details of the noise trigger levels, for both noise insulation and temporary re-housing are set out in Appendix A.'

'2.4 Some buildings and/or their occupants will be treated as special cases:'

- *'Mobile homes (e.g. the travellers' site at Eleanor Street in East London) and houseboats will be treated on a case by case basis. Given that noise insulation does not represent a viable option for mobile homes, where eligibility is confirmed, appropriate alternative mitigation measures will be adopted. The sorts of measures that will be considered include works management methods (e.g. adopting quiet times, rescheduling works, and imposing noise limits), or where this is not effective or appropriate, temporary re-housing will be offered even if the Temporary re-housing thresholds are not exceeded.'*
- *'Night workers, those needing a particularly quiet home environment to work in, or those that have a medical condition which will be seriously aggravated by construction noise, will also be considered on a case by case basis.'*

'Whilst these discretionary arrangements only apply to residential properties, buildings which may be particularly sensitive to noise (including, commercial, educational and community) will be subject to individual consideration by the Secretary of State or his agent on the application of any body or person responsible for, or holding a legal interest or estate in, any such building.'

Paragraphs 3.1 to 3.6 explain what noise insulation involves (e.g. additional glazing, ventilation and blinds).

'3. What is the Noise Insulation Package?'

'3.1 The package will consist of:

- *Secondary glazing or thermal double glazing (see also sections 5.1, 5.2 and 5.5) for living room and bedroom windows on eligible facades, plus additional ventilation if required under the relevant specifications.*
- *Blinds, for south facing windows.*
- *Insulation treatment for external doors on eligible facades.'*

'3.2 Depending on the type of window you already have, secondary glazing will usually comprise another pane of glass in its own frame (wood, metal or plastic) 100–200 mm inside the existing window. This can be opened for cleaning or ventilation.'

'3.3 Secondary glazing works best when closed—so additional ventilation is usually required. The package includes an electric ventilator fan in a slim metal cover, fitted inside the room in question, to an outside wall (a 75–100 mm hole is drilled through the wall, through which the fan draws in air from the outside).'

'3.4 On a south facing window secondary glazing may make the room too hot. As set out under the relevant specifications, subject to the agreement of the claimant, blinds will be fitted between the main window and the secondary glazing to minimise this effect. If the claimant chooses not to accept blinds as part of the noise insulation package the possible impacts of this will be explained to them, blinds will not be retrofitted post installation of the noise insulation package should the claimant change their mind at a later date.'

'3.5 The Secretary of State or his agent may be able to install a "secondary" door to improve noise insulation. If the design of your house prevents this, other methods can be used, such as sealing strip between the existing door and its frame.'

'3.6 There may be circumstances in which it is not possible to fit secondary glazing. Such cases will be considered on a case by case basis. Where eligibility is confirmed, appropriate

mitigation measures will be adopted. The sorts of measures that will be considered include works management methods (e.g. adopting quiet times, rescheduling works, and imposing noise limits), or temporary re-housing even if the Temporary Re-housing thresholds are not exceeded.'

Paragraphs 4.1 to 4.5 cover the actual process and the terms under which noise insulation would be offered

' 4.1 Once the Secretary of State or his agent has conducted an initial survey and the details of the insulation for your house are agreed with you, the Secretary of State or his agent will either offer to do the work at his expense, or offer grant aid for you to carry out the works.'

'4.2 The Secretary of State asks you to ensure that you provide adequate access for the survey and installation; and if you should incur expense in arranging access, the Secretary of State or his agent will reimburse you provided he has agreed the amount before the cost is incurred.'

' 4.3 In the cases where the Secretary of State or his agent offer you a grant so that you can have the work done yourself, the grant would be made on the following conditions:

(i) You must first obtain 3 independent written quotations.

(ii) The work must comply with the relevant specifications.

(iii) You must select the quote that represents the best price for complying with point ii, above.

(iv) The amount of the grant will be for whichever is the lesser amount of either your selected quote, or the actual cost of the installation.

(v) The Secretary of State or his agent may pay 10% of the estimated cost in advance, and the balance when the work is satisfactorily completed.

(vi) The work must be completed within 12 months of any advance payment, or before completion of the Crossrail construction works for which insulation is needed, whichever is the earlier. If this condition is not complied with, no further grant will be paid, and any payments already made will have to be repaid to the Secretary of State or his agent.

(vii) You must obtain the consent of any other person or body that may be required to permit the carrying out of insulation work (e.g. your landlord if you are a tenant, or any consents required from your local authority).'

'4.4 Please note that the Scheme can not be used for work needed to remedy existing building defects.'

'4.5 The scheme also covers the making good of the existing fabric and decoration (not including curtains) after the installation of double windows, ventilation equipment, and second doors, including the adaptation of any existing pelmet and curtain rack.'

Answers to frequently asked questions regarding noise insulation are provided under Section 5, paragraphs 5.1 to 5.10.

'5. Frequently Asked Questions relating to Noise Insulation'

'5.1 Is secondary glazing the same as double glazing? No. Secondary glazing is a separate pane of glass installed 100–200 mm inside the existing window, and the existing window remains in place. Double glazing consists of two panes of glass in the same casing, typically around 20mm apart which replace the existing window.'

'5.2 What if I already have double glazing? The noise assessments are based on the expected noise immediately outside the building so the type of glazing you currently have installed would not affect your eligibility under the scheme (subject to 5.4 below). You are not obliged to accept the offer of insulation if you do not think you need it. The Secretary of State or his agent will provide advice as to the effectiveness of any currently installed double glazing in terms of attenuation of external noise compared to the offer of secondary glazing. You may, at your own discretion, and accepting the reduced level of noise attenuation, choose only to have ventilation units and blinds installed.'

'5.3 What if I choose not to accept the offer of noise insulation but subsequently wish to adopt it? A decision to accept an offer of noise insulation must be made within a certain timeframe. Specifically an offer must be accepted no later than 6 months after the date it is made in writing to you or one month before the Secretary of State or his agent intends to install the other noise insulation at eligible properties affected by the same Crossrail construction works, whichever is the sooner. In the latter case, you will receive notice of the cut-off date for acceptance at the time the offer is made or shortly thereafter. If you do not respond within the time-frame due to circumstances beyond your control, the secretary of state will give due consideration to your case but the construction works will continue as programmed. If you choose not to accept the offer of noise insulation there is no scope to change your mind later. However, if the noise levels change during the course of the works such that you would be eligible for temporary re-housing, then the process set out in paragraphs 9.5 to 9.11 will apply.'

'5.4 What if I already have secondary glazing installed as the result of a grant from another public works scheme? If your home has already had insulation work carried out or a grant for such work in respect of another public works scheme (such as a road or earlier railway works) you will not be eligible for further work or grant from Crossrail. However, the existing noise insulation will be inspected to ensure that it is in a state adequate to attenuate the construction noise to the extent that it should. If it is not, the works will be carried out or a grant made to have them carried out to bring the installed noise insulation package up to the appropriate standard.'

'5.5 What if I have already had secondary glazing or thermal double glazing installed privately i.e. not as the result of a grant from another public works scheme? If you have had a noise insulation package (i.e. secondary glazing or thermal double glazing, plus ventilation units and blinds) installed privately since the Crossrail Bill was deposited in February 2005, it will be inspected to check whether it is in a state adequate to attenuate the construction noise to the extent that it should. If the Secretary of State or his agent identifies that you are eligible for noise insulation following the procedure set out is section 8 of this IP, and the package meets the specification of the works set out in this IP, the person who incurred the cost of those works can receive a grant in respect of the work already done. The amount of that grant will be for the full amount (as qualified by section 4.3 (iv) and, in the case of thermal double glazing, section 5.6), and excluding any element of cost attributable to work in excess of the specification for the works in this IP, if you have followed the procedure for seeking and selecting a quotation set down in sections 4.3 (i) and (iii) of this IP for private installation. If you have not followed that procedure, the Secretary of State or his agent will make a grant to the amount that he would have offered if the procedure set out in section 8.1 for his carrying out the works had been followed. If the noise insulation package does not meet the specification set out in this IP, the works will be carried out, or a grant made to you to have them carried out, to bring the installed noise insulation package up to the appropriate standard. In addition, the Secretary of State will make a grant to the person who incurred the cost of the work previously carried out to the amount of the difference between:

- *The amount he would have offered if the procedure set out in section 8.1 for his carrying out the works meeting the specification had been followed; and,*
- *The cost of the remedial works to bring the installed package up to the appropriate standard. If the cost of the remedial works is greater than the amount of grant that would have been paid under the procedure set out in section 8.1 then no such further grant will be paid.'*

'5.6 Can I just have thermal double glazing installed instead of secondary glazing? Once an offer of noise insulation has been made pursuant to section 4.1, thermal double glazing can be provided instead of secondary glazing only if it is specifically requested by the claimant. The claimant will be made aware of the potential shortfall in sound insulation performance of the thermal double glazing compared to the secondary glazing. The amount of the grant payable for the installation of thermal double glazing will be no more than the cost of installing the secondary glazing package specified in this information paper. If you arrange for the work to be carried out yourself, the amount paid to you in reimbursement will be for no more than the cost that would have been incurred if the secondary glazing package specified in this information paper had been installed. The Secretary of State or his agent will calculate the cost that would have been incurred for installing the secondary glazing package using the experience gained from installing it in the nearest similar properties. Neither secondary nor thermal double glazing can be provided without additional ventilation and or blinds where required to comply with the Noise Insulation (Railways and other Guided Transport Systems) Regulations 1996, Schedule I, Specifications.'

'5.7 If I choose to just have thermal double glazing installed instead of secondary glazing and find later that due to the noise impact I would like secondary glazing due to the construction noise can I claim again? No. As noted in 5.6, the claimant will be made aware of any potential shortfall in sound insulation performance of the thermal double glazing compared to the secondary glazing. If the claimant elects to take a grant for the installation of thermal double glazing no further grant will be made or works undertaken to later install secondary glazing on top of the thermal double glazing.

'5.8 Can I take the grant and not do the works? No. If a grant is offered and you accept it, you must have the works carried out to the specification in the offer. Otherwise you must repay the grant. You are not obliged to accept the offer if you do not think you need it. See also para 4.3 (vi).'

'5.9 What if my landlord / tenant does not want the work carried out, but I do? The Secretary of State will try to reach agreement between all parties where possible. In any event, the party wishing to have the work carried out is requested to do all that they reasonably can to reach agreement with all other interested parties that can influence whether or not the work can be carried out.'

'5.10 Will there be a maintenance grant for the noise insulation package? No. There will be no obligation to repair, maintain or make any payments in respect of repairing or maintaining any equipment or apparatus installed under the application of this IP or to pay for the running costs, which will be minimal for mechanical ventilation units. Notwithstanding this, should equipment such as the ventilation units fail after installation of the noise insulation package through no fault of the resident, and this occurs during Crossrail construction works, the failed apparatus will be repaired or replaced as necessary.'

Paragraphs 6.1 to 6.4 cover the process under which temporary re-housing would be offered, the options available and the terms which would apply.

'6. What is the Temporary re-housing Package?'

'6.1 If, following the assessment that will be carried out for that purpose once detailed construction plans are in place, the predicted or actual (see section 9) construction noise level exceeds the trigger level for temporary re-housing, the Secretary of State will notify you that you are eligible for alternative temporary accommodation.'

'There are two options:

Option A—to arrange temporary alternative accommodation to meet your agreed needs, or

Option B—to provide information and guidance to help you arrange your temporary alternative accommodation.'

'6.2 If you choose Option A, the services provided by the Secretary of State will include arranging for:

- *Temporary alternative accommodation (which, where appropriate, could be a local hotel or guest house).*
- *Removals.*
- *Storage and insurance of your personal effects.*
- *Insurance for the house you vacate.*
- *Where appropriate your pets to go into kennels, catteries etc.*
- *Where appropriate the disconnection and later reconnection of gas, water, electricity etc.'*

'6.3 If you choose Option B then, instead of actually identifying the alternative accommodation and making the arrangements for you, the Secretary of State will supply you with information and guidance on all the matters listed above, to enable you to make the arrangements yourself; and the Secretary of State will also help you ensure that the costs you incur can be agreed and paid to you as soon as practicable.

'6.4 Whether you choose Option A or Option B, the Secretary of State will bear (or reimburse you with) the reasonable costs associated with your temporary re-housing together with the continuing, unavoidable costs of maintaining your own house whilst you are away. However, these will be paid less the costs that you would have paid if you had stayed in your own house over the same period.'

Paragraphs 7.1 to 7.7 list frequently asked questions in relation to temporary re-housing.

'7. Frequently Asked Questions relating to Temporary re-housing'

'7.1 Do I have to move? No. The acceptance of any offer of temporary re-housing is discretionary. You do not have to move if you do not want to. If you do decide to stay, you cannot claim compensation for disruption due to the noise of the works.'

'7.2 What happens in relation to my existing tenancy? The offer of temporary accommodation will be in addition to your current home. You will still be responsible for the rent, bills and other outgoings at your current home and you will still be a tenant there. The offer will include the additional cost of the relocation accommodation. You are free to visit and use your current home as you wish during the relocation, subject to the terms of your existing tenancy. If your tenancy agreement expires during the relocation you should (if you want to) renew it with your landlord in the normal way. If you choose not to renew your tenancy, grant to meet the cost of the alternative accommodation will cease when your tenancy expires.'

'7.3 What about insurance, mail redirection etc? Most temporary relocations will be short term. In some areas, the relocation may be longer term and you will be reimbursed reasonable additional costs which you incur due to long term absence from your property.'

'7.4 Will the temporary accommodation offered be of the same quality as my current home? The type of re-housing offered will depend on the duration of the relocation. For short durations hotel accommodation may be appropriate. For longer periods, alternative rented accommodation would be more suitable. In all cases account will be taken of your existing accommodation as far as possible.'

'7.5 How far away will I be moved? The accommodation offered will be governed by what is available at the time and your reasonable requirements. Some people may be prepared to move to another area on a temporary basis if they would be nearer friends, family or work. Others may need to stay in the same area.'

'7.6 Can I have noise insulation and temporary relocation? This will depend on the circumstances. The noise generated by the works will vary over the course of the job. In some areas, the noise may qualify for temporary relocation for one period, and noise insulation only for a different period. In these circumstances you would receive a temporary relocation offer for one period and a noise insulation offer for the other period. In other areas, a home may qualify for temporary relocation for a given period, but outside that period the noise may not trigger a separate noise insulation offer. In such a case, a temporary relocation offer only would be made and noise insulation would not be offered. If you qualify for temporary relocation but not noise insulation, you do not have to accept the offer of relocation and may request noise insulation instead. You will be made aware of any shortfall in sound insulation performance of the noise insulation in relation to the thresholds presented in Appendix A and that the degree of disturbance could be high even with the noise insulation in place. If you choose to adopt this approach and noise insulation is provided you will not be able to later request temporary relocation under this scheme.'

'7.7 I am a landlord. Will you compensate me for lost rent if you temporarily relocate my tenant? No. Your tenant will remain your tenant and remain liable to pay rent in the normal way.'

Paragraphs 8.1 to 9.11 give further details of the process by which actual eligibility for noise insulation and/or temporary housing will be established, including the process if actual noise levels are higher than predicted.

'8.1 The procedure comprises 7 steps. '

(i) *'Secretary of State or his agent will carry out an assessment in every area likely to be affected by Crossrail construction noise, so as to predict what the noise levels will be and will discuss and agree the findings with the relevant local authority.'*

(ii) *'The Secretary of State or his agent will then notify owners or occupiers of buildings which, on the basis of the assessment, the Secretary of State or his agent considers qualify, and accordingly which type of assistance (noise insulation or temporary re-housing) they are eligible for. The Secretary of State or his agent will also send an application form at this stage '*

(iii) *'If you receive such a notice and application form, you should complete and return the form to The Secretary of State or his agent. The Secretary of State or his agent will then assess your application and if acceptable notify you in writing.'*

(iv) *'The Secretary of State or his agent will then arrange to visit you in order to discuss the application with you generally; view your home and in the case of noise insulation take any necessary measurements; and identify any special issues or requirements (such as any other approvals that may be required in the case of noise insulation).'*

(v) 'The Secretary of State or his agent will then assess your case in detail and, if it is accepted, notify you of:'

- *'any further survey likely to be needed at your house, and (in insulation cases) the work the Secretary of State or his agent thinks should be done and his offer to do it; or '*
- *'(in re-housing cases) either his proposals to re-house you temporarily or the information and guidance you need to make your own rehousing arrangements. In either case the proposals will be discussed with you and you will not be under any obligation to accept the offer.'*

(vi) 'Assuming you agree, the noise insulation package or temporary re-housing plan (as the case may be) is then put into effect.

(vii) The Secretary of State or his agent reimburses you for any agreed costs, which you have incurred or (in grant cases) pays the balance of the grant.'

'Alternatively, the Secretary of State or his agent pays for noise insulation or removal/re-housing costs where he or his agent has done the work. A noise insulation package will not be offered if the noise trigger level is only exceeded whilst you are in temporary alternative accommodation (however see section 7.6 above).'

'9 What if I am not initially considered eligible to receive either noise insulation or temporary re-housing but it is found subsequently that I qualify?'

'9.1 The following sections address the procedure that will be followed in the case of people who consider themselves affected by construction noise and eligible for noise insulation or temporary re-housing who have not been offered either form of mitigation. Such claims may arise before or after the start of construction work.'

'Predictions of eligibility for noise insulation/temporary re-housing'

'9.2 Predictions will be carried out on behalf of the Secretary of State using the British Standard method of calculating construction noise, based on the contractor's method of working and plant lists.'

' 9.3 Noise levels received at dwellings near the construction site will only vary significantly from the predictions already produced if there has been

(i) a significant variation in the method of working or plant used from that currently anticipated or (ii) an error in the predictions.'

'Claims Before the Start of Construction'

'9.4 If a person does not receive notification of eligibility for noise insulation/temporary re-housing according to paragraph 8.1 (ii) above, they may request a copy of the noise predictions on which the determination of the extent of eligibility was based. If they consider there to be any error in the predictions (for example incorrect identification of the claimant's property) they should provide to the Secretary of State or his agent sufficient information concerning the claimed error. The Secretary of State or his agent will then reconsider the matter of eligibility and either make an offer of noise insulation/temporary re-housing or confirm that the claimant remains ineligible.'

'Claims After the Start of Construction'

'9.5 The trigger levels for eligibility for noise insulation/temporary re-housing involve both noise levels and durations (temporal criteria). There are two possible cases that may arise:

(i) The predictions do not identify that noise insulation/temporary re-housing thresholds will be exceeded, but in practice they are and this is expected to continue for a period of time sufficient to exceed the temporal criteria.

(ii) The predictions identify that the noise insulation/temporary re-housing thresholds will be exceeded but will not carry on for a sufficient duration to trigger the temporal criteria. However, in practice the works go on for longer and the temporal criteria are triggered. In both cases the approach will essentially be the same.'

'9.6 If a person claims, after the start of construction work, that the noise levels actually experienced are such as to cause eligibility for noise insulation/temporary re-housing where none was predicted, or that received noise levels are sufficient for eligibility for noise insulation/temporary re-housing where this was predicted, and that the noise has continued, or seems to them likely to continue for longer than the temporal triggers where that had not been predicted, the claim will be considered by the Secretary of State or his agent according to the following process.'

'9.7 A claim after the start of construction will inevitably take the form of a complaint or formal representation to the nominated undertaker. On receipt of the claim, the nominated undertaker will review the works being undertaken that have generated the claim and assess whether it is likely that the claim is valid. Where the nominated undertaker considers there is a potentially valid claim short-term site monitoring will be undertaken to identify whether the noise insulation/temporary re-housing trigger levels are indeed being exceeded. Whether or not monitoring is undertaken the nominated undertaker will discuss the results of the review with the claimant and explain the findings and any actions that have been taken.'

'9.8 At the same time, the nominated undertaker will inform the local authority that granted the Section 61 consent about the claim and what actions are being taken to address it. If the nominated undertaker considers that works are being carried out in breach of the Section 61 consent, they will ensure that all necessary steps are taken to put it right and inform the local authority of the actions taken. On being informed by the nominated undertaker about the claim and the steps being taken to address it, it is for the local authority to consider whether enforcement action should be taken pursuant to the Section 61 consent.'

9.9 If the short-term noise monitoring identifies that the noise insulation/temporary re-housing thresholds are being exceeded, but that operations are being performed in accordance with the terms of the relevant Section 61 consent, the nominated undertaker will identify whether the activities causing those levels will carry on for longer than a period of 10 or more days of working in any 15 consecutive days or for a total of days exceeding 40 in any six consecutive months. If they are not, then no further action is required. The findings will be made known to the local authority who issued the S61 consent and discussed with them.'

'9.10 If the works causing noise levels above the noise insulation/temporary re-housing thresholds are projected to go on for longer than a period of 10 or more days of working in any 15 consecutive days or for a total of days exceeding 40 in any six consecutive months, but the construction works are being carried out in accordance within the terms of the relevant Section 61 consent, then the nominated undertaker will require action to be taken to reduce the level of noise being caused, or offer noise insulation and/or temporary re-housing to the affected property as appropriate. Works will not cease during the organisation and installation of the noise insulation. However, if appropriate, temporary re-housing will be offered to cover the period during which the noise insulation is installed. The temporary re-housing will be withdrawn:

- *once the noise insulation is installed; or*
- *if the claimant unnecessarily delays obtaining any necessary consents in accordance with paragraph 4.3 (vii). If it is not possible to fit secondary glazing*

appropriate measures will be considered on a case by case basis (see paragraph 3.6).'

'9.11 If the complainant is not satisfied by the response of the nominated undertaker following a claim under section 9.7 above, they may register their complaint with the Complaints Commissioner. If they are not satisfied with the response of the Complaints Commissioner, they may refer the matter to the Secretary of State who is the final arbiter for deciding whether an offer of noise insulation and/or temporary re-housing will be made.'

Paragraphs 10.1 to 10.4 of the information paper advise residents on the steps to take if they think that they might have been overlooked by the scheme.

'10. How do I start making a request for assistance?

10.1 In the majority of cases where residents are eligible, they will receive from the Secretary of State or his agent a notice and application form. Once you receive a notice, you simply complete and return the form.'

'10.2 If you do not receive a notice, but you believe you may be eligible (e.g. because your neighbours have received notices, or you have some particular reason to think you will be affected by construction noise even if you might not strictly speaking be eligible under the Scheme) please contact the Secretary of State or his agent at the address given below, and he will then consider your position individually. See also section 9.4 above.'

'10.3 Whilst every endeavour will be made to ensure all those who might be eligible under this policy receive notices and application forms, some properties may be inadvertently missed, particularly in relation to special cases where specific circumstances may not be apparent. Clearly, we would hope that such an occurrence does not occur. The Nominated Undertaker or his agents will liaise with the relevant local authority to minimise the risk of any inadvertent omissions.'

'10.4 This noise and vibration mitigation scheme will be implemented together with any relevant procedures set down in any detailed community relations plan established by the Secretary of State or his agent to ensure that residents understand how any concerns raised will be made known to the Secretary of State or his agent and the lines of communication available through which action will be initiated'.

Paragraph 11 provides contact details for residents who have further questions.

'11. I have further questions that are not answered here. Where can I get further information? Call our helpdesk on 0845 602 3813 (open 24 hours) Email us at: helpdesk@crossrail.co.uk Write to us at: Helpdesk Cross London Rail Links Ltd Portland House Bressenden Place London SW1E 5BH.'

Technical details of the eligibility criteria for the noise and vibration mitigation scheme are presented in Appendix A.

'APPENDIX A'

'1. Noise Insulation'

'Where the total noise level due to construction of the railway (pre-existing ambient plus airborne Crossrail construction noise), measured or predicted at a point one metre in front of the most exposed of any windows and doors in any façade of a building which is an eligible dwelling, exceeds whichever is the higher of either:'

'(a) any of the following criteria in Table 1:

Table 1

Noise Insulation Trigger Level Table

Time	Relevant Time Period	Averaging Time T	Noise Insulation Trigger Level dB $L_{Aeq, T}$
Monday to Friday	07:00–08:00	1 hr	70
	08:00–18:00	10 hr	75
	18:00–19:00	1 hr	70
	19:00–22:00	3 hr	65
	22:00–07:00	1 hr	55
Saturday	07:00–08:00	1 hr	70
	08:00–13:00	5 hr	75
	13:00–14:00	1 hr	70
	14:00–22:00	3 hr	65
	22:00–07:00	1 hr	55
Sunday and Public Holidays	07:00–21:00	1 hr	65
	21:00–07:00	1 hr	55

Or

(b) 5dB above the pre-existing airborne noise level for the corresponding times of day (i.e. the Relevant Time Periods presented in column 2 of Table 1); and

for a period of 10 or more days of working in any 15 consecutive days or for a total of days exceeding 40 in any six consecutive months.'

'2. Temporary Re-housing'

'Where the total noise level due to construction of the railway (pre-existing ambient plus airborne Crossrail construction noise), measured or predicted at a point one metre in front of the most exposed of any windows and doors in any façade of an eligible dwelling, exceeds whichever is the higher of either:

(a) 10dB above any of the noise levels in the table above or

(b) 10dB above the pre-existing airborne noise level for the corresponding time of day (i.e. the Relevant Time Periods presented in column 2 of Table 1); and

for a period of 10 or more days of working in any 15 consecutive days or for a total number of days exceeding 40 in any six consecutive months.'

'3. Interpretation of the trigger levels'

'In interpreting and applying the trigger levels in Table 1, two conventions will be adopted. The first is that in interpreting the noise insulation/temporary re-housing policy where eligibility arises if noise levels in Table 1 are exceeded, a resolution of 0.1 dB will be applied. For example, a value of $L_{Aeq,T}$ of 55dB (with pre-existing ambient at least 5dB lower) will not trigger eligibility. A value of 55.1dB will trigger eligibility.[1]'

'The second convention relates to the choosing of minimum one-hour $L_{Aeq.T}$ levels at night to define the pre-existing ambient, given that a series of survey results often shows different minima over a series of nights. The approach will be to select a 7-day survey period during

which favourable weather conditions existed[2] and select the lowest one-hourly value from that data set.'

Further technical information describing how eligibility for the scheme will be determined in relation to airborne noise predictions at building facades are provided in Appendix B.

'Appendix B'

'As explained in the main body of this IP, eligibility for noise mitigation arises under the Scheme when three requirements are met

(i) the total predicted (or actual) noise level due to construction works (pre-existing ambient plus airborne Crossrail construction noise) exceeds a trigger level

(ii) the margin between the construction noise level plus the pre-existing ambient and the pre-existing ambient is at least 5dB and

(iii) the temporal requirements (10 out of 15 days of working etc) are met. If the eligibility requirements were applied strictly this could lead to anomalies whereby some dwellings in a terrace might be included and not others or it might result in dividing the facades of apartment blocks into eligible and ineligible properties. The procedure to be followed by the Secretary of State or his agent in implementing the Scheme so as to avoid dividing facades in a manner likely to be contentious for residents is set out below.'

'2. Procedure for Administering the Policy While construction noise predictions made using a noise model such as SoundPlan can be presented using contours that will indicate a finite value for any location of interest, the same is not true of eligibility. The principal reason for this is that measured baseline noise levels are of necessity carried out at discrete locations. While interpolation between discrete values is possible in theory, it is in many circumstances impracticable.'

'The procedure will normally identify a single representative noise measurement location per façade, except for long facades. Sometimes a noise measurement location may serve as a surrogate for other comparable facades as well. Measurement locations should generally be towards the centre of the façade or façade section that they represent. The noise measurements from these locations may well be rounded.'

'The predicted noise including the contribution from the construction works will then be made for the worst affected window in the façade under consideration.'

'Whether a property is eligible for noise mitigation or not will then be determined using this predicted level. This determination will be applied to all the dwellings for which the measurement location was taken as representative. In the case of a very long façade, it may be appropriate to utilise more than one noise measurement location. However, since measured values will vary slightly with quite small movements in position, a protocol needs to be established to avoid anomalous results as described above. The solution is to determine that more than one measurement location will be adopted for the same continuous facade only if the results from different noise measurement locations alongside the same façade differ by at least 3dB. For a façade at right-angles to a noise source such as a road or railway, this broadly means a doubling of distance from the source and would therefore normally only apply to long facades.'

'3. Protocol for Determining Eligibility

1) Establish baseline LAeq for relevant time of day for appropriate monitoring locations.

2) Assign monitoring results to facades according to the following rules:

'a. Monitoring results to apply to whole façade where there is only one monitoring location for that façade. The monitoring location is to be as near as possible to the centre of the façade.'

'b. Monitoring results to apply to whole façade where another façade is used a surrogate.'

'c. Where more than one monitoring location exists for the same façade, only if the LAeq levels for any period differ by 3dB or more shall the façade be divided, in which case façade areas around the location to be apportioned equally (i.e. as far as practicable each monitoring location to be in the centre of the area assigned to it)'.

'd. The definition of a façade of a building is one that is horizontally separated from other facades by a stairwell, corner or some other discontinuity, as set out in section 2 of this IP.

'3) The predicted noise levels including construction noise to be utilised for the whole facade are those for the worst affected window/door in any façade'.

Information Paper D9 Technical Explanatory Note

The Promoter and London Borough of Tower Hamlets as lead authority also reached agreement on a Technical Explanatory note to Information Paper D9 Noise and Vibration mitigation Scheme. The technical note is primarily intended for reference by Environmental Health Officers.

Information Paper D25 "Noise from Fixed Installations"

The Promoter and London Borough of Havering as the lead authority have reached agreement as to the measures that will be put in place to control the effects of noise from fixed installations. The measures are set out and explained in Information Paper D25 "Noise from Fixed Installations".

An introduction and description of the items that constitute "fixed installations" is given in paragraphs 1.1 to 1.5.

'1.1 This Information Paper explains the measures that will be put in place to control the effects of noise and vibration from the operation of fixed installations designed and installed by the nominated undertaker as part of the Crossrail scheme, but it does not cover rail-served or other installations provided by the nominated undertaker for other parties affected by the scheme and not intended for use by the Crossrail operator as part of the operational Crossrail system.'

'1.2 The term "fixed installations" is used to describe the following:

- *forced ventilation shafts located along the tunnelled sections;*
- *draught relief shafts located along the tunnelled sections;*
- *electrical trackside equipment located along the surface railway;*
- *power supply facilities e.g. transformers located along the surface railway;*
- *mechanical ventilation and air conditioning equipment associated with Crossrail buildings including those located at depots, sidings, control rooms and stations;*
- *static sources of noise located at depots and sidings (for example train washes, wheel lathes and stationary trains) but excluding noise from the movement of trains; and*
- *public address systems and audible warning systems at stations, depots and sidings.'*

'1.3 The measures that are available to control the effects of noise from each of these sources are set out below.'

'1.4 As described in the Crossrail Environmental Statement, the Crossrail scheme includes 26 tunnel forced ventilation shafts. The shafts house large ventilation fans that are sources of noise whose significance was assessed in the preparation of the ES. It is proposed to operate these fans intermittently in response to circumstances such as demands during congested running in the tunnels and emergency response.'

'1.5 To avoid a significant noise impact from the operation of the tunnel forced ventilation fans, noise attenuators will be designed and installed on each side of the tunnel ventilation fans as necessary to meet the Crossrail assessment criterion for fixed plant.'

Paragraphs 2.1, 2.2, 2.3, 2.4, describe the assessment criterion for fixed installations used in the assessment carried out for the Environmental Statement which has also been adopted as the performance specification for the Crossrail railway.

2. The Crossrail Assessment Criterion for Fixed Installations

'2.1 In accordance with BS 4142:1997 (Method for Rating industrial noise affecting mixed residential and industrial areas), the Crossrail assessment criterion for fixed installations other than public address systems and audible warning systems is founded upon the difference between the noise from the fixed installations (expressed in terms of the rating level) and the existing background noise (expressed in terms of the $L_{A90,T}$ noise level). The rating level takes account of tonal or impulsive characteristics of mechanical and electrical services plant.'

'2.2 The Crossrail assessment criterion is as follows: airborne noise arising from fixed installations is not significant if the predicted value, as determined for the worst-affected residential building, obtained by subtracting the existing background noise level ($L_{A90,T}$) from the rating level of the fixed installations in normal operation is not more than +5dB, assessed in accordance with BS 4142:1997. For the purposes of the Crossrail Environmental Statement (ES) it was applied to existing known residential buildings, and future developments based upon the Greater London Authority's London Development Monitoring System using the most recently available data at the time.'

'2.3 The $L_{A90,T}$ is the A weighted noise level exceeded for 90% of the specified measurement period in the absence of the noise which is the subject of the assessment. The lowest background noise ($L_{A90,T}$) levels occur at night, so any use and assessment of the operation of the fixed installations at night constitutes the strictest test. BS 4142:1997 requires that, at night, the reference time interval for determining the specific noise level is 5 minutes, and it is likely that any occasion on which a tunnel forced ventilation shaft fan will run at night will involve continuous noise for a duration of at least 5 minutes. This means that the specific noise level does not need to be corrected for duration. If the noise has distinguishing characteristics, for example, in the case of fans it is tonal, a further 5dB correction is then added and the specific noise level becomes the rating level.'

'2.4 Thus, effectively, the Crossrail assessment criterion means that, for the usual case of fan noise with an audible tone, the forced ventilation shaft fan sound level alone should not be greater than the background $L_{A90,T}$ noise level without it.'

Paragraph 2.5 describes the design criterion to be applied to fixed installations.

'2.5 The nominated undertaker will be required to design and construct fixed installations (including the forced ventilation shafts which will include noise attenuators on both sides of each fan and other forms of mitigation as necessary, but excluding public address systems and audible warning systems) so that, with additional allowances made for calculation uncertainty, under all reasonably foreseeable circumstances the assessment at

the worst-affected residential building, as identified in the ES, obtained by subtracting the existing background noise level ($L_{A90,T}$) from the rating level $L_{Ar,Tr}$ of the fixed installations in normal operation, is not more than +5 dB, determined in accordance with BS 4142:1997.'

Paragraphs 2.6 and 2.7 describe the further endeavours to be employed in designing and constructing the fixed installations

'2.6 While the degree of attenuation required is site dependent, not least because of different levels of background noise at different sites, the nominated undertaker will (in cases not covered by paragraph 2.9 below) be required to use reasonable endeavours when designing the fixed installations to reduce the noise below the design criterion set out in Section 2.5 where it is practicable to do so.'

'2.7 In recognition of the local authorities' preference for rating levels which are no greater than $L_{A90,T}$-5 for Crossrail, the nominated undertaker will prior to the commencement of procurement of equipment provide to the relevant local planning authority the following information in situations where, despite using reasonable endeavours to reduce noise levels below the design criterion of $L_{A90,T}$+5 referred to in paragraph 2.5 at the worst-affected residential building, as identified in the ES, the overall rating noise levels associated with tunnel ventilation, draught relief and the operation of plant and equipment at the deep level station sites are still expected to be above $L_{A90,T}$-5:

- *the calculated rating levels at the most sensitive receivers under the range of operational modes anticipated, including noise from mechanical fan operation and draught relief;*
- *for tunnel ventilation, the frequency and duration of use of the fans expected as a result of possible congestion and train headway simulations;*
- *details of the performance of noise mitigation incorporated into the deep level station, ventilation shaft and headhouse structures;*
- *a description of the limitations to any or further mitigation being practicable.*

For the purposes of the above commitment, the term 'deep-level station' refers to stations with sub-surface platforms within tunnels, accessed from ground level.'

Paragraph 2.9 describes the further endeavours required to be employed in the design of fixed installations associated with the surface railway and surface stations, paragraph 2.8 gives a definition of such installations.

Fixed Installations associated with surface railway and surface stations

'2.8 In the following paragraphs of this IP (i) references to the surface railway are to the Crossrail running lines, and do not include depots and sidings, and (ii) references to surface stations do not include any deep-level station as defined in paragraph 2.7.'

'2.9 The nominated undertaker will, notwithstanding paragraph 2.5, be required to employ best practicable means in designing and constructing the fixed installations associated with the surface railway and surface stations (including electrical trackside equipment located along the surface railway, power supply facilities e.g. transformers located along the surface railway and static noise sources associated with Crossrail at surface railway stations, but excluding public address systems and audible warning systems) with the aim of reducing noise so that, with additional allowances made for calculation uncertainty, under all reasonably foreseeable circumstances the assessment at the worst-affected residential building, as identified in the ES, obtained by subtracting the existing background noise level ($L_{A90,T}$) from the rating level $L_{Ar,Tr}$ of the fixed installations in normal operation, is not more than $L_{A90,T}$-5, determined in accordance with BS

4142:1997. Where despite the employment of best practicable means, rating levels at the worst-affected residential building are expected to exceed $L_{A90,T}$-5, the nominated undertaker will prior to the commencement of procurement of equipment provide to the relevant local planning authority the following information:

- *the calculated rating levels at the most sensitive receivers under the range of operational modes anticipated;*
- *details on the performance of the proposed noise mitigation measures;*
- *a description of the limitations to any or further mitigation being practicable.'*

Paragraphs 3.1 and 3.2 set down the protocol for the application of the Crossrail design criterion for fixed installations.

3. Protocol for the application of the Crossrail design criterion to the design of fixed installations

'3.1 With the exception of public address systems and audible warning systems which are addressed solely in Section 4 of this IP, the nominated undertaker will be required to apply the Crossrail design criterion to the totality of all fixed installations at a single Crossrail development and the specific noise source defined by BS 4142:1997 shall mean all the fixed installation noise sources (including mechanical plant and machinery) installed and operated in any location within the Crossrail development. Thus, for example, at a central London station it will apply to the design of the forced ventilation shafts, draught relief shafts and station mechanical ventilation and air conditioning equipment.'

'3.2 When designing all fixed installations other than public address systems and audible warning systems, the nominated undertaker will be required to:

- *Incorporate the design criterion into contract documents such that it will apply to the design of all the fixed installations that are to be installed and operated in any location within the Crossrail development.*
- *When designing fixed installations, take the further endeavours which are referred to in paragraph 2.6 or 2.9 (as the case may be) to reduce the noise below the design criterion in paragraph 2.5.*
- *Translate the design criterion into specific requirements in specifications for the procurement and operation of Crossrail plant, equipment and machinery for fixed installations taking into account the further endeavours referred to in bullet point 2 above.*
- *Determine the relevant $L_{A90,T}$ levels, to be jointly established with the relevant local authorities.*
- *Procure, install and commission plant, equipment and machinery, including noise attenuation equipment that meets the specific requirements referred to in bullet point three above.*
- *Provide details of the measures undertaken to ensure that, under all reasonably foreseeable circumstances, the design process and procurement process for fixed installations is adequate to achieve compliance with the design criterion taking into account the endeavours referred to in bullet point 2 above (including proposals for maintenance and monitoring) to the relevant local authority whose comments will be taken into account.*
- *Before the fixed installation may be operated, satisfactorily complete the standard suite of acceptance tests required for such plant and provide information on those tests to the relevant local authority'*

Paragraph 4.1 addresses noise from public address systems and audible warning systems.

'4. Noise from public address systems and audible warning systems'

'4.1 The nominated undertaker will be required to agree appropriate criteria for assessing noise arising from any new or materially altered public address system and audible warning systems with the relevant local authority, prior to the specification and detailed design of such systems. Such systems shall be designed to meet the agreed noise criteria. In the event that appropriate noise criteria cannot be agreed with a relevant local authority, any dispute will be resolved in accordance with the procedure set down in clause 63 of the Bill (arbitration).'

Information paper D26 "Surface Railway Noise and Vibration"

The Promoter and London Borough of Newham as the lead authority have reached agreement as to the measures that will be put in place to control the effects of surface noise and vibration from the operation of Crossrail trains. The measures are set out in Information Paper D26 "Surface Railway Noise and Vibration".

Paragraph 1.1 simply introduces the paper.

'1. Introduction'

1.1 This Information Paper provides a summary of both the assessment of surface railway noise associated with the operation of Crossrail, and the undertakings the Promoter proposes to adopt in terms of the measures to be put in place to control the effects of surface noise and vibration from the operation of Crossrail trains. It also explains how people living along the Crossrail route may perceive changes in noise as a result of changes to the rail service. More detailed technical explanations of these matters are presented in a Technical Note which has been developed primarily for use by local authority environmental health officers but is also available on request. This Information Paper does not apply to fixed installations which are covered by the Information Paper on fixed installations, Information Paper D25, Noise from Fixed Installations.'

Paragraph 2.1 lists the factors relevant to the predicted changes in railway noise.

'2.1 The predicted change in railway noise at any given location depends upon a number of factors including whether trains have been brought closer to a noise sensitive location (e.g. residential property), the speed of the rolling stock, the size and type of rolling stock, and the number of train passes at any given period.'

Paragraphs 3.1, 3.2, 3.3 and 3.4 explain the noise indices and time periods used to assess surface railway noise.

'3. Measurement and Prediction of Railway Noise'

'3.1 Railway noise is conventionally measured and assessed using the L_{Aeq} index. The L_{Aeq} is a measure of the mean square sound pressure during a period of time, in what is referred to as A weighted decibels or dB(A)'

3.2 For Crossrail, the noise assessment has addressed two different but related aspects:

- *The assessment of impact based upon noise change over the daytime (07:00 to 23:00 hours, i.e. 16 hours), and night-time (23:00 to 07:00 hours, i.e. 8 hours) periods; a significant impact was deemed to occur if a change of 3 dB(A) or more was predicted.*

- *The assessment of potential eligibility for noise insulation (NI) under the Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996, where various criteria are assessed for the daytime (06:00 to 24:00 hours, i.e. 18 hours) and the night-time (00:00 to 06:00 hours, i.e. 6 hours) periods.'*

'3.3 The overall effect of additional services associated with Crossrail is predicted to be relatively small, as it is proposed that the services would mostly use existing lines where on the surface.'

'3.4 Research into the effects on the population exposed to railway noise, indicates that it is the least annoying of all the transportation sources.'

A summary of the assessment of surface railway noise (reported in the Environmental Statement) is presented in paragraphs 4.1 and 4.2.

'4. Summary of the Assessment of Surface Railway Noise Impacts'

'4.1 As described in the Crossrail Environmental Statement (ES)[1] the Crossrail scheme runs along the surface from Maidenhead to Royal Oak Portal (the western section of the scheme); from Pudding Mill Lane Portal to Shenfield (the northeastern section); and, on its southeast section where it surfaces three times, firstly, between Victoria Dock Portal and the existing Connaught Tunnel, then between Connaught Tunnel and the North Woolwich Portal and finally, between Plumstead Portal and Abbey Wood.'

'4.2 The assessment of the western and northeastern sections of the scheme identified no significant noise and vibration impacts from the operation of Crossrail. The assessment of operational railway noise for the southeastern section identified that, following mitigation, there are likely to be adverse impacts on an estimated 20 properties. Seven of these properties are likely to qualify for noise insulation under the Noise Insulation (Railways and other Guided Transport Systems) Regulations 1996 as amended (from hereon referred to as 'the Regulations'). The majority of the properties are located around Abbey Wood station. The ES identifies the use of permanent noise barriers as a means to mitigate the operational noise impacts along the southeast section. These would be located primarily between Plumstead Portal and just east of Abbey Wood station. It is estimated that the residents of 55 properties, located primarily around Abbey Wood Station, would experience significant reductions in railway noise as a result of these barriers.'

The control of surface railway noise is addressed in paragraphs 5.1, 5.2, 5.3, 5.4 and 5.5.

'5. The Control of Surface Railway Noise'

'5.1 In circumstances prescribed by the Noise Insulation (Railways and other Guided Transport Systems) Regulations 1996 as amended, predicted changes to existing noise levels may, in the case of dwellings and other buildings used for residential purposes, lead to mitigation in the form of the provision of noise insulation.'

'5.2 The Regulations set out a requirement to carry out or make a grant toward the provision of insulation works in eligible buildings, where noise levels from new surface railway, or additional tracks that will be located next to an existing surface railway, exceed certain thresholds and triggers set out in the Regulations.'

'5.3 The new surface sections of the railway will be designed and constructed using continuously welded rail to the greatest extent practicable with the objective of reducing noise and vibration due to the operation of the surface railway.'

'5.4 The design of new surface railway, or alteration of existing surface railway tracks will endeavour to achieve, in all reasonably foreseeable circumstances, predicted[2] operational noise level increase less than 3dB $L_{Aeq,T}$ at the nearest sensitive receptor identified in the ES when calculated in relation to the periods of a day (07:00 to 23:00) and of a night (23:00

to 07:00), although as mentioned in paragraph 4.2 there will be cases where noise will exceed this. The design will include consideration of mitigation measures such as noise barriers.'

'5.5 The Regulations, and hence this information paper, do not apply to stationary trains, station activities, shunting or groundborne noise.'

The control of vibration from the surface railway noise is addressed in paragraphs 6.1 and 6.2 and Table 1.

6. The Control of Vibration from the Surface Railway

'6.1 The design of the new surface railway, or altered railway, in accordance with the guidance set out in British Standard 6472:1992 "Guide to evaluation of human exposure to vibration in buildings (1 Hz to 80 Hz)", will endeavour to achieve, in all reasonably foreseeable circumstances, predicted operational vibration, expressed as vibration dose value (VDV), at sensitive receptors identified in the ES, no greater than the levels presented in Table 1'.

Table 1

Operational Surface Railway Vibration Criteria

In the Absence of Appreciable Existing Levels of Vibration		Appreciable Existing Levels of Vibration
VDV $ms^{-1.75}$ Daytime (07:00–23:00)	VDV $ms^{-1.75}$ Daytime (07:00–23:00)	% Increase in VDV
0.31	0.18	40

'6.2 Where, when carrying out that design work, vibration at sensitive receptors as identified in the ES, arising from any section new, additional or altered surface railway, is predicted to exceed the levels set out in Table 1, endeavours shall be made to include mitigation measures (for example under-ballast mats) in the design, which are predicted to result in compliance with the levels in Table 1 in all reasonably foreseeable circumstances.'

Paragraph 7.1 sets out the maintenance requirements of the surface railway and rolling stock wheels in relation to groundborne noise and vibration.

'7. Maintenance of the Surface Railway and Rolling Stock Wheels.'

'7.1 For those parts of the surface railway that are part of the National Rail network that will be modified by Crossrail, maintenance of them will remain the responsibility of Network Rail. For any parts of the surface railway for the maintenance of which a person other than Network Rail is the nominated undertaker, they are to be maintained in accordance with Railway Group and Network Rail Company Standards. With regard to the generation of vibration and groundborne noise at the wheel/rail interface, the wheels of the Crossrail rolling stock will be maintained, as a minimum, at the level defined by the maintenance requirements necessary to meet the undertaking on this issue set out in Information Paper D10, Groundborne Noise and Vibration.'

Technical Paper Surface Railway Noise and Vibration

The Promoter and London Borough of Newham as lead authority also reached agreement on a Technical Explanatory note to Information Paper D26 'Surface Railway Noise and Vibration'. The technical note is primarily intended for reference by Environmental Health Officers.

Environmental Minimum Requirements—General Principles

The Promoter and the London Borough of Havering as lead authority have reached agreement on the text of the general principles section of the environmental minimum requirements documentation. The relevant paragraphs from the general principles section are presented below together with a brief description of what they cover.

Paragraphs 1.1 to 1.3 set out the role of the controls contained in the Environmental Minimum Requirements in contributing to ensuring that the impacts that have assessed in the Environmental Statement for Crossrail are not exceeded.

'1.1 The original Environmental Statement for Crossrail was published in February 2005. It has been supplemented by a number of additional volumes as further information has become available, and in the light of proposed changes to the project[1]. It is the intention of the Secretary of State to carry out the project so that its impact is as assessed in the Environmental Statement (ES). The Secretary of State will require the nominated undertaker to adhere to the arrangements provided for in the Environmental Minimum Requirements in designing and constructing the Crossrail Works.'

'1.2 This document presents the text of the relevant minimum requirements, which are referred to as the Environmental Minimum Requirements (EMR). It also contains as Annexes a series of papers which support the EMR, including the Construction Code, the Environmental Memorandum and the Planning and Heritage Memorandum. '

'1.3 The controls contained in the EMR along with powers contained in the Act and the Undertakings given by the Secretary of State will ensure that impacts which have been assessed in the ES will not be exceeded, unless any new impact or impacts in excess of those assessed in the ES:

- *results from a change in circumstances which was not likely at the time of the ES; or*
- *would not be likely to be environmentally significant; or*
- *results from a change or extension to the project, where that change or extension does not itself require environmental impact assessment under either (i) article 4(1) of and paragraph 22 of Annex 1 to the EIA Directive; or (ii) article 4(2) of and paragraph 13 of Annex 2 to the EIA Directive; or*
- *would be considered as part of a separate consent process (and therefore further EIA if required).*

Paragraphs 1.4–1.6 explain who will be bound to comply with the Environmental Minimum Requirements, and set out an additional general obligation on the nominated undertaker in relation to reducing adverse environmental impacts.

'1.4 Any nominated undertaker will be contractually bound to comply with the controls set out in the EMR and as may be developed during the passage of the Act through Parliament.'

'1.5 The nominated undertaker will in any event, and apart from the controls and obligations referred to in paragraph 1.3, use reasonable endeavours to adopt mitigation measures that will further reduce any adverse environmental impacts caused by Crossrail, insofar as these mitigation measures do not add unreasonable costs to the project or unreasonable delays to the construction programme.'

'1.6 In addition, where a statutory undertaker is carrying out development in connection with Crossrail for which it has planning permission because that development has been

assessed in the ES, it will be required to comply with the controls set out in the undertakings and assurances referred to in paragraph 3.4 and documents contained in the Annexes, in so far as they are relevant and properly applicable to the undertaker. References to the nominated undertaker in those documents should be interpreted as references to the relevant statutory undertaker in such cases.'

Section 2 provides a series of definitions that apply throughout the environmental minimum requirements documentation.

'2.1 It should be noted that the term 'impact" is used in the title of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 to describe the environmental outcome arising from a project, while the main body of the text of the Regulations refers to the term "effect". The EMR takes these two terms to have the same meaning. For consistency, the term used throughout the EMR is 'impact'.

'2.2 In this document the following terms shall have the meanings ascribed to them for the purpose of understanding the Environmental Minimum Requirements:

"Construction Code" means the series of objectives and measures to be applied generally throughout the construction period to maintain satisfactory levels of environmental protection and limit disturbance from construction activities, which is set out in Annex 1;

"Crossrail" means the railway that runs between the termini at Heathrow, Maidenhead, Shenfield, and Abbey Wood;

"Crossrail Works" means works in relation to the design, construction, commissioning and completion of Crossrail authorised by the Crossrail Act;

"Environmental Management System" means the management system to be developed by the nominated undertaker pursuant to Annex 3;

"Environmental Memorandum" means the memorandum relating to the environmental aspects of the design and construction of the Crossrail Works, which is set out in Annex 3;

"Environmental Statement" (ES) means the Crossrail Environmental Statement submitted in February 2005 together with all subsequent additional or supplementary volumes and errata corrections5.

"Crossrail Act" means the Parliamentary Act in respect of the Crossrail scheme given Royal Assent on …;

"Nominated Undertaker" means the organisation or organisations which will be appointed by the Secretary of State to design, construct, operate and maintain Crossrail;

"Planning and Heritage Memorandum" means the memorandum setting out undertakings given by the local authorities with respect to the handling of planning and heritage matters for the Crossrail Works arising under Schedule 7 to the Crossrail Act which is set out in Annex 2; and

"Secretary of State" means the Secretary of State for Transport.

Section 3 defines the Environmental Minimum Requirements and the nominated undertaker's obligations in relation to them.

3.1 "Environmental Minimum Requirements" means the requirements:

(i) of the memoranda and agreements referred to in paragraph 3.2;

(ii) of the undertakings and assurances referred to in paragraph 3.4; and

(iii) set out in paragraphs 1.5 and 3.6 to 3.10.

3.2 The nominated undertaker shall comply with and, where required to do so by the Secretary of State, shall at such time and within such period as may be reasonably

required by the Secretary of State execute and deliver memoranda and agreements on planning, heritage and related matters, in the form reasonably required by the Secretary of State, including but not limited to the Planning and Heritage Memorandum, listed building agreements and overarching archaeological written scheme of investigation.

3.3 The nominated undertaker shall comply with all undertakings and assurances as specified by paragraph 3.4 and those undertakings or assurances shall take priority over the remainder of the Environmental Minimum Requirements to the extent of any inconsistency.

3.4 The nominated undertaker shall comply with all undertakings and assurances concerning the project specified in the "Crossrail Register of Undertakings and Assurances" published by the Department for Transport or as otherwise notified to the nominated undertaker.

3.5 The nominated undertaker shall also execute and deliver to the relevant party the deeds or agreements required by those undertakings or assurances. Those deeds and agreements must be delivered and executed in the form and at the time specified in the relevant assurance or undertaking or, if no form or time is specified, as reasonably required by the Secretary of State.

3.6 Where the nominated undertaker has agreed with the beneficial recipient of an undertaking or assurance referred to in paragraph 3.4 to amend, change, waive or in any way alter the terms of that undertaking or assurance, the nominated undertaker shall notify, if relevant, the local authority of the geographical area to which the undertaking or assurance relates of the new agreed terms of that undertaking or assurance, and shall comply with the new agreed terms of that undertaking or assurance. However, the nominated undertaker is not to amend, change, waive or in any way alter the terms of a specific undertaking given by the Secretary of State to Parliament.

3.7 The nominated undertaker shall build Crossrail on the lands defined in the Crossrail Act. This does not preclude the nominated undertaker from building peripheral facilities on other land provided that the necessary approvals are obtained using the normal procedures.

3.8 In the circumstances described in the first bullet point of paragraph 1.3, if the significant adverse impacts identified in the ES are likely to be exceeded, the nominated undertaker will take all reasonable steps to minimise or eliminate those additional impacts.

3.9 The nominated undertaker shall adopt and implement the Construction Code, which is set out in Annex 1. The nominated undertaker shall develop and implement the Environmental Management Plans envisaged by the Construction Code.

3.10 The nominated undertaker shall adopt and implement the Environmental Memorandum which is set out in Annex 3. The nominated undertaker shall develop and implement an Environmental Management System, in accordance with the requirements of the Environmental Memorandum, for ensuring compliance with the nominated undertaker's environmental policy, with relevant environmental legislation, and with all the Environmental Minimum Requirements other than non-environmental aspects of undertakings and assurances. The Environmental Management System covering construction is to be developed and implemented before construction begins.

3.11 Where there are references to issues being agreed in the Construction Code, Planning and Heritage Memorandum and Environmental Memorandum, that agreement shall not be unreasonably withheld and any dispute or difference arising between the parties shall be referred to and determined by the Secretary of State.

Section 4 lists the annexes to the general principles section of the environmental minimum requirements documentation which set out certain of the Environmental Minimum Requirements. .

4.1 The following documents, which are referred to in the Environmental Minimum Requirements, are attached as Annexes:

Annex 1: Construction Code

Annex 2: Planning and Heritage Memorandum

Annex 3: Environmental Memorandum

Environmental Minimum Requirements: Construction Code—Working Hours

The Promoter and Westminster City Council as lead authority have reached agreement as to the working hour's arrangements under the Construction Code, requirements which any nominated undertaker will be contractually bound to comply with. For ease of reference the relevant paragraphs from the Code are presented below together with a brief description of what they represent.

Paragraph 3.2.1 sets out the requirement for the nominated undertaker to obtain Section 61 consents for construction works.

'3.2.1 The nominated undertaker will obtain consents from the relevant local authority under the Control of Pollution Act 1974, Section 61 (which will include noise limits and vibration limits where relevant) for the proposed construction works, as set out in section 5.1 below. The applications for consent will include details of the work to be undertaken, including proposed hours of work. All construction activities carried out on site, whether in core hours or on a 24 hour basis, will be agreed with the local authorities through the Section 61 process. All of the arrangements for working hours may be varied by agreement with the relevant local authority. The right to appeal against a withholding of consent or against conditions subject to which it is given is retained, and references to agreement are to be so construed.'

Paragraphs 3.2.2 to 3.2.3 set out the core working hours and provision for shoulder hours.

'3.2.2 Core working hours will be from 0800 to 1800 on weekdays and 0800 to 1300 on Saturday. Only non-disturbing preparatory work, repairs or maintenance will normally be carried out on Saturday afternoons or Sundays between 0900 and 1700. The nominated undertaker will adhere to these core working hours for each site as far as reasonably practicable and where feasible, operations anticipated to cause disturbance would be limited to these hours. Except in the case of emergency, any work required to be undertaken on a Sunday on sites without 24 hour activity will be agreed with the local authority in advance. There are certain exceptions to the core working hours, which are described below'.

'3.2.3 In order to maintain the above working hours, the nominated undertaker will require a period of up to one hour before and up to one hour after core working hours for start up and close down of activities. The activities to be undertaken during this period may include: deliveries to and from site; loading; unloading; arrival and departure of workforce and staff at site and movement to and from place of work; general refuelling; site inspections and safety checks prior to commencing work; site meetings; site clean up; site maintenance; and maintenance and checking of plant and machinery, but not including operation of plant or machinery giving rise to noise likely to exceed the noise trigger levels for the periods either side of the agreed core working hours as set out in the

Crossrail Noise and Vibration Mitigation Scheme. The start up and close down periods are not to be considered an extension of core working hours, and particular care will be taken to limit and control disturbance to local residents during such periods. The nominated undertaker will, as far as reasonably practicable, arrange for deliveries in the start up period to take place close to the end of that period and in the close down period close to the start of that period.'

Paragraphs 3.2.4 to 3.2.16 identify activities that may take place outside of the core working hours and any particular arrangements that must be carried out in relation to them.

'3.2.4 All construction related traffic serving the Crossrail work sites will abide by the agreed hours of working for each specific location. These hours will cover the timing of deliveries, off-loading and loading from the public highway. Deliveries, other than abnormal loads, will not take place outside the core working hours and the start up and close down periods without the prior agreement of the local authority, specifically through the Environment Health Department, or as otherwise advised by the local authority. Vehicles awaiting loading or offloading will not leave engines running when not directly in use unless prior agreement has been sought.'

'3.2.5 From sites where works are not undertaken on a 24 hour basis, excavated material will only be removed by road during core working hours.'

'3.2.6 The following activities will normally be undertaken on a 24 hour per day, 7 day per week basis:

- *tunnelling works together with directly associated activities (such as maintenance of tunnelling equipment, construction of cross passages and installation of tunnel linings);*
- *delivery of materials, consumables and plant to the tunnel face from the drive portal or access shaft and for tunnel fit out by train from tunnel logistics sites at Aldersbrook and Old Oak Common.*
- *transportation, storage and removal of excavated material by conveyor, barge and rail;*
- *track laying and internal fit out works within the stations, shafts and tunnels (including construction of the track bed and cable laying).*
- *operation and maintenance of items of plant and equipment needed in order to safeguard and support the works, such as fans, compressors, generators and batching plant. Any such equipment will be shielded in order to provide appropriate noise attenuation (this is covered further in section 5.3);*
- *Staff may also be required to collect data and samples outside normal working hours; and*
- *surface support to the underground work, including welfare facilities, cranage, workshops and stores.'*

3.2.7 Where the nominated undertaker can demonstrate that overall progress would be significantly affected by not being able to remove excavated material outside of the core working hours, then additional hours for the removal of excavated material would be agreed with the local authority. The nominated undertaker would expect the agreement of the local authority not to be unreasonably withheld.

3.2.8 In order to safeguard the works it may be necessary for certain items of plant and equipment to be kept running 24 hours per day, which would include pumps and generators. Any such equipment will be shielded in order to provide appropriate noise

attenuation. Staff may be required to collect data and samples outside core working hours at times.

3.2.9 Certain works requiring temporary possession of roads and railways for safety or operational requirements, to limit disruption to road and railway users and the travelling public, and works in connection with utilities when demand is low will need to be undertaken outside core working hours. This will include Saturday afternoon, night-time, Sunday and/or bank holiday working from time to time. On occasion longer term possessions (in excess of one week) will be required for more major works.

3.2.10 In the case of work required in response to an emergency or which if not completed would be unsafe or harmful to the permanent works, the relevant local authority will be informed as soon as reasonably practicable of the reasons for, and likely duration of, the works. The local authority will provide a telephone number and nominate an office to receive such notification, which will be reviewed regularly. Examples of the type of work envisaged would include where pouring concrete takes longer than planned due to equipment failure or where unexpected poor ground conditions, encountered whist excavating, require immediate stabilisation.

3.2.11 Where work has to be rescheduled for reasons not envisaged and is expected to extend beyond the agreed or core working hours or exceed the agreed limits and dispensation to the Section 61 consent, the nominated undertaker will apply for a variation to the Section 61 consent to the relevant local authority at least 14 days in advance of the start of those works.

3.2.12 Where rescheduling relates to work of a critical nature for reasons not envisaged and beyond the control of the nominated undertaker (such as key activities likely to delay other key activities) applications will be made where practicable at least 48 hours in advance and at least 7 days in advance if the work is expected to last for a period of 5 days or more. The variation will be sought by means of an application setting out the revised construction programme or method and the relevant noise calculations.

3.2.13 Where such working outside core hours has been discussed and accepted (as in 3.2.12 above) nearby occupiers who are likely to be affected by the works will be informed as soon as reasonably practicable by the nominated undertaker about the nature and likely duration of the works.

3.2.14 Deliveries will be arranged to minimise impacts on the road system so far as reasonably practicable. Abnormal and special loads may be delivered outside core working hours subject to the requirements and approval of the relevant authorities.

3.2.15 Where reference is made above to seeking local authority agreement then an application will be made under the Control of Pollution Act 1974, Section 61, as detailed in 3.2.1 above.

3.2.16 In relation to works on the national rail network and existing stations, please also refer to section 2.7.

APPENDIX 5: NOTE FROM THE PROMOTER TO THE COMMITTEE ON HOME LOSS PAYMENTS

Under the statutory Land Compensation Rules (Section 5 of the Land Compensation Act 1961) no allowance is to be made in assessing land compensation for compulsory purchase on account of the compulsory nature of the acquisition. Essentially, land compensation is determined by reference to the price which the market would pay for the property to be acquired disregarding the existence of the scheme for the purpose of which the acquiring authority requires to purchase that property.

The statutory disregard of the compulsory nature of the acquisition was first introduced in the Acquisition of Land (Assessment of Compensation) Act 1919 on the recommendation of the Scott Committee. Its purpose was to abolish the then universal practice of awarding the owner of land compulsorily acquired a sum over and above the open market value of his land, in acknowledgement of the compulsory nature of the acquisition. In 1919, it was felt that this practice was misplaced in the climate of national reconstruction which followed the First World War.

By the end of the 1960s, a more generous approach had gained ground. Both the Report of the Commission on the Third London Airport (HMSO 1971) and the Report of the Urban Motorways Committee (HMSO 1972) recognised that when a person's home is acquired compulsorily for public projects, he is displaced and suffers a loss over and above that represented by the open market value of his interest in land plus disturbance. That further loss embraces personal upset and inconvenience, loss of social ties and having to leave his home at a time not of his own choosing. Such losses are difficult to quantify or value in money terms.

Parliament enacted Part III (sections 29–33) of the Land Compensation Act 1973 for the purpose of providing a remedy for such losses—the "Home Loss Payment". The legislative intention was to provide some limited monetary compensation to a qualifying person who was displaced from his home as a result of the compulsory purchase of his interest in the dwelling in question, such monetary compensation being in addition to the land compensation payable to him as landowner for the acquisition of his interest in the dwelling (which compensation continues to be determined in accordance with the statutory rules under the Land Compensation Act 1961).

Under Section 30 of the 1973 Act as enacted, the amount of a Home Loss Payment was calculated by a specified multiplier of the rateable value of the dwelling, subject to specified minimum and maximum amounts. For a qualifying person displaced after 1 April 1973, the amount of Home Loss Payment was 3 x rateable value, subject to specified minimum and maximum amounts of £150 and £1,500 respectively.

Provision was made for the Secretary of State by order from time to time to alter both the multipliers and the specified minimum and maximum levels of Home Loss Payment.

There is no evidence that the rules for determining the amount of a Home Loss Payment (including the specified maximum payment) were intended to represent 10% or any particular percentage of the capital value of the dwelling. It was introduced as a multiplier of rateable value, which value was a measure of the estimated annual letting value of the dwelling rather than a capital value.

In 1989, in the light of the response to the consultation paper "Land Compensation and Compulsory Purchase", the Government made the Home Loss

Payments Order 1989 (SI 1989/ 24) which increased the multiplier from 3 to 10 x rateable value and minimum amount payable to £1,200. The maximum amount payable was not increased from £1,500.

Following the abolition of domestic rating with effect from 1 April 1990, the Planning and Compensation Act 1991 substituted the current statutory rules for determining the amount payable by way of Home Loss Payment under Section 30 of the 1973 Act. In the case of a qualifying owner-occupier displaced from his home, the amount of Home Loss Payment payable was to be 10% of the market value of his interest in the dwelling, subject to a minimum payment of £1,500 and a maximum payment of £15,000. In the case of a qualifying tenant, the amount of the Home Loss Payment was a flat rate of £1,500. Provision was made for the Secretary of State by regulations from time to time to prescribe a different minimum and maximum level of Home Loss Payment; and a different amount payable to tenants. Section 29, which specifies the qualifying conditions that must be met in order for a payment to be made, was also substituted by the Planning and Compensation Act 1991. This introduced a new discretionary payment for displaced persons who did not meet the qualifying conditions. Any discretionary payment must not exceed the amount available to a qualifying person.

In 2003, both the Deputy Prime Minister and the Welsh Assembly Government accepted the recommendation of the Compulsory Purchase Policy Review Advisory Group (CPPRAG) that "the current amounts payable for home-loss payments should be reviewed as soon as possible and, thereafter, annually to ensure that they are revised as necessary to reflect relative changes in property values". The Office of the Deputy Prime Minister and the Welsh Assembly Government jointly consulted on options for giving effect to CPPRAG's recommendation.

Following that consultation, the Deputy Prime Minister made the Home Loss Payments (England) Regulations 2003 (SI 2003/1706). Those regulations resulted from the first annual review for England of the amounts payable for Home Loss Payments. In the case of a qualifying owner-occupier displaced from his home, the minimum amount payable was increased to £3,100 and the maximum amount payable increased to £31,000. In the case of a qualifying tenant, the flat rate was increased to £3,100.

Subsequent annual reviews have resulted in further annual increases in both minimum and maximum amounts payable to a qualifying displaced owner-occupier and the flat rate amount payable to a qualifying displaced tenant. For England, responsibility for undertaking the review each year of the amounts payable for Home Loss Payments and, in the light of that review, making appropriate revisions to those amounts by regulations now rests with the Secretary of State for Communities & Local Government.

The maximum and minimums amounts of Home Loss Payment payable to a qualifying displaced owner-occupier, as prescribed by regulations for 2003 and subsequent years (with effect from 1 September of each year), are as follows:—

2003	-	Maximum	£31,000	Minimum	£3,100
2004	-	Maximum	£34,000	Minimum	£3,400
2005	-	Maximum	£38,000	Minimum	£3,800
2006	-	Maximum	£40,000	Minimum	£4,000
2007	-	Maximum	£44,000	Minimum	£4,400

Maximum Amount of Home Loss Payment as a percentage of average house prices:

Year	Max Home Loss £	Average House Price £	%
1973	1,500	9,942	15.09
1989	1,500	54,846	2.73
1991	15,000	62,455	24.02
2003	31.000	155,627	19.91
2004	34,000	180,248	18.86
2005	38,000	190,760	19.92
2006	40,000	204,813	19.53
2007	44,000	221,580	19.86

Note

- From 1996–2003 average UK house prices are based on the 5% survey from building societies.
- From 2003 average house prices are based upon a significantly larger sample size from the Survey of Mortgage Lenders.
- Data from 2005 is collected from the Regulated Mortgage Survey.

As can be seen from the table of maximum amounts of Home Loss Payment and average house prices, the maximum amount originally enacted in the 1973 Act was in effect 15% of the then average house price. This is merely an analysis and, as noted in paragraph 7 above, there is no evidence that the intention was to link the maximum amount payable to the capital value of dwellings.

The Planning and Compensation Act 1991introduced the substituted approach of calculating the amount of a Home Loss Payment payable to a qualifying displaced owner by reference to a percentage of market value, but retaining the concept of nationally applicable, specified minimum and maximum amounts of Home Loss Payments, which has been and remains a consistent feature of the statutory scheme of the 1973 Act. A different approach to calculating the amount of Home Loss Payment, within the limits set by the specified minimum and maximum amounts payable, was necessitated by the abolition of the domestic rating regime with effect from 1 April 1990. The change to a calculation based upon 10% of the value of the dwelling was then subject to a maximum of £15,000, which was 24% of the average house price.

From 2003 onwards the calculation remained at 10% of the value of the dwelling but subject to maximum payments just below 20% of the average UK house price.

Mr Pritchett raised the point that London house prices were higher that the average UK house prices. It may be of interest to the Committee to compare the current maximum Home Loss Payment with the average London house price:—

Year: 2007

Average London house price £342,122

Maximum Home Loss Payment £44,000

Maximum Home Loss compared to average London house price 12.86%

Parliament has recognised that when a person's home is acquired compulsorily for public projects, he is displaced and suffers a loss over and above that represented by the open market value of his interest in land plus disturbance. That further loss embraces personal upset and inconvenience, loss of social ties and having to leave his home at a time not of his own choosing. Such losses are difficult to quantify or value in money terms. Parliament enacted Part III (sections 29–33) of the Land Compensation Act 1973 for the purpose of providing a remedy for such losses—the "Home Loss Payment". The legislative intention, therefore, was to provide some limited monetary compensation to a qualifying person, such monetary compensation being in addition to the land compensation payable to him as landowner for the acquisition of his interest in the dwelling (which compensation continues to be determined in accordance with the statutory rules under the Land Compensation Act 1961).

The amount of a Home Loss Payment currently payable to a qualifying displaced owner-occupier is 10% of the market value of his interest in his dwelling subject to a minimum amount payable of £4,400 and a maximum amount payable of £44,000. This maximum payment is 19.86% of the average UK house price and 12.86% of the average London house price. There does not appear to have been any erosion in the real value of the maximum amount of Home Loss Payment compared with the average UK house price in the period since the Home Loss Payment was introduced in 1973. It has, in fact, increased over that period from about 15% to about 20%. The Government undertakes a review of both the minimum and the maximum amounts payable for England on an annual basis and promotes revisions to those amounts, as appropriate, by Regulations which are laid before Parliament. The most recent regulations (the Home Loss Payments (Prescribed Amounts)(England) Regulations 2007 (SI 2007/1750)) increased both the minimum and maximum amounts payable for England by reference to the Department for Communities and Local Government's house price index, which varies in line with changes to house prices.

APPENDIX 6: NOTE FROM THE PROMOTER TO THE COMMITTEE ON RAILWAY COMPENSATION

The Committee asked two questions:—

1. Whether other comparable large-scale rail schemes have provided 100% compensation (i.e. not just compensation for disruption resulting from network changes or disruption lasting beyond a six month period 6) for other users of the railway affected by construction works. The petitioners referred to provisions in the TWA Order for the East London line. Are such provisions now commonplace in comparable legislation?

1.1 Schedule 11 of the East London Line Extension (No. 2) Order 2001 (EWS exhibit 33) is a reasonably standard protective provision for the benefit of Network Rail (Railtrack before it) where it does not itself undertake works affecting its railway. ELL and the Docklands Light Railway are examples and similar provisions are included in orders authorising tram schemes affecting the rail network. The protective provision's purpose is to ensure that Network Rail can recoup the cost of compensation to affected operators from the body undertaking the works in a case where Competent Authority Change (G9 of the Network Code) might be invoked, or it might be argued that possessions required for the works were competent authority possessions for the purpose of Schedule 4 to the track access agreements. A protective provision such as contained in the ELL No 2 Order also has the result described by EWS: compensation is payable for non-Network Change disruption of less than 6 months duration.

1.2 Since this is a protective provision for Network Rail, it follows that this does not apply to any of its own works, large or small, and whether for maintenance, renewal or upgrading. For example the provision does not apply to the West Coast Main Line upgrading works which are greater in scale than the on-network works contained in the Crossrail Bill.

1.3 The intention is that Network Rail will undertake the on-network works contained in the Crossrail Bill. Many of these works have a general benefit such as electrification and the six works on which EWS has sought undertakings. These works will be designed in detail by Network Rail and the possessions and non-Network Change disruption planning will also be Network Rail's responsibility. Network Rail will also be paying for these works and recouping the cost through access charges.

1.4 No protective provisions for Network Rail have been included in the Crossrail Bill. However there is a Protective Provisions Agreement between Network Rail and the Secretary of State. Under this Network Rail's interests are secured primarily by having the right to undertake on network works, rather than adopting the approach used projects such as the DLR and ELL for which it is not undertaking works.

2. If the Committee decided that rail users should be afforded 100% compensation in relation to Crossrail construction works, as requested by the Petitioners, what costs would this add to the project? It is understood that it will be very difficult to give figures for this but the Committee would appreciate an estimate.

2.1 It is impossible to say what might be the additional cost of providing 100% compensation. This is because the detailed design of the works has yet to be undertaken by Network Rail and until this has been done there is no basis for an assessment of different types of disruption in relation to compensation.

2.2 The expectation is that for any major project such as Crossrail, most disruption would attract compensation because most of the works would constitute Network Change, either because of the nature of the changes to the network, or because of the aggregation of minor changes so as to exceed the 6 month minimum qualifying period for compensation.

2.3 Network Rail will treat the Crossrail works as it would any of the other works it has to undertake in determining what compensation is applicable under normal industry practice.

APPENDIX 7: NOTE FROM THE PROMOTER TO THE COMMITTEE ON THE RAIL INFRASTRUCTURE MANAGER

The Select Committee sought an explanation of how an infrastructure manager is appointed. This requires first of all setting out the legal requirements, which are complex because the requirements of the Railways Act 1993 are overlain by two sets of regulations (transposing EU Directives) that, although related, have certain differences between them. We then explain how the infrastructure manager is identified in practice in the light of those requirements.

Legal Framework

Under the Railways and Other Guided Transport Systems (Safety) Regulations 2006 ("the ROGS"), an "infrastructure manager" means the person who—

"(a) in relation to infrastructure other than a station, is responsible for developing and maintaining that infrastructure or, in relation to a station, the person who is responsible for managing and operating that station, except that it shall not include any person solely on the basis that he carries out the construction of that infrastructure or station or its maintenance, repair or alteration; and

(b) manages and uses that infrastructure or station, or permits it to be used, for the operation of a vehicle."

It follows that the infrastructure manager of, for example, the tracks in the central tunnel section for the purposes of the ROGS is the person responsible for developing and maintaining that track and managing and permitting its use by trains. Moreover, although the infrastructure manager is not formally appointed through a regulatory or statutory process, he requires a safety authorisation from the ORR. To obtain such authorisation, the infrastructure manager must demonstrate to the ORR that a satisfactory safety management system, as further defined in the ROGS (see regulation 5), is in place.

Further, the infrastructure manager under the ROGS does not necessarily own the rail asset. This is the case in respect of the Channel Tunnel Rail Link ("CTRL"), where the Secretary of State owns it and London and Continental Railways has a concession, but Network Rail is the infrastructure manager under the ROGS because it has (1) sufficient management responsibility for it by contract and (2) sufficient competence, as demonstrated by its safety authorisation.

This example shows that responsibility for safety can be separated from economic control. It is a question of fact whether a contract between, say, an owner of infrastructure and another party confers sufficient controls and rights such that the other party can properly take responsibility for safety matters.

Under the Railways Infrastructure (Access and Management) Regulations 2005 ("the 2005 Regulations") an "infrastructure manager" is to be interpreted as:

"any body or undertaking that is responsible in particular for—

(a) the establishment and maintenance of railway infrastructure; and

(b) the provision with respect to that infrastructure of network services as defined in [the Railways Act 1993],

but, … that some or all of the functions of the infrastructure manager on a network or part of a network may be allocated to different bodies or undertakings …"

The drafting approach in the 2005 Regulations is very different from that in the Railways Act 1993. This is at least in part because the Regulations are a faithful transposition of a

EU Directive (2001/14/EC). Hence the meaning of infrastructure manager as set out in regulation 2 of the 2005 Regulations is neither absolute nor prescriptive: different functions can be undertaken by different people. The term "infrastructure manager" needs to be understood by considering what it is that the 2005 Regulations (and the relevant Directive) stipulate about the economic management and use of railways.

The purpose of that EU Directive is to liberalise the provision of rail services across countries with markedly different rail ownership and management structures. Since the Directive is concerned with outcomes more than structures, the 2005 Regulations should be understood in the same way.

The infrastructure manager may be, variously, the body allocating capacity (such as a person granting an access option), the body which develops a statement showing the terms on which train paths will be granted, or the body which charges fees to train operators. On the mainline network all these functions are carried out by Network Rail which is therefore the sole infrastructure manager under the 2005 Regulations, in addition to being the infrastructure manager under the ROGS.

Although the point is academic as regards Network Rail's current network, the infrastructure manager for the purposes of the 2005 Regulations is determined by how, if at all, roles have been divided up on a given network. Again, it is a question of fact, not of appointment, as to who is the infrastructure manager, determined by assessing the rights (under contract or arising from ownership) which are vested in any particular person.

It follows that a body meeting the definition of "infrastructure manager" under the ROGS is not necessarily an "infrastructure manager" under the 2005 Regulations. Taking again the example of CTRL, whilst Network Rail is its infrastructure manager under the ROGS, it is not its infrastructure manager (for at least some of the 2005 Regulations) since it neither owns the link nor has the right to grant access contracts in respect of the link.

Organisational explanation

Where Network Rail does not own the facility, as in CTRL and the central tunnel section of Crossrail, the identity of the infrastructure manger(s) is integral to developing the organisational structure of the whole project.

The owner of the Crossrail central tunnel section is intended to be TfL. The infrastructure manager for the purposes of the ROGS is intended to be Network Rail and this would be established contractually with TfL. That contract needs to enable Network Rail to undertake the functions of an infrastructure manager under the ROGS and it needs to be finalised before the design of the tunnel fit-out so that Network Rail can seek the necessary safety authorisation from the ORR. Network Rail's role in relation to the infrastructure manager under the 2005 Regulations needs to be decided, taking account in particular that the Crossrail service needs to operate seamlessly over three networks. Again this needs to be decided early since defining the access charging arrangements will be important for project funding.

The three delivery partners (Secretary of State, TfL and Network Rail) need to reach agreement voluntarily on the identity of infrastructure manager(s) within the framework of the legal and related safety requirements. Network Rail is under no obligation to accept arrangements that it considers would (1) prevent it from performing its role as infrastructure manager under the ROGS in relation to the central tunnel section; (2) prevent it from obtaining safety authorisation from the ORR; or (3) impair the delivery of access to the main network as approved in the Crossrail Access Option.

APPENDIX 8: NOTE FROM THE PROMOTER TO THE COMMITTEE ON CLAUSES 40 AND 41 OF THE BILL

On Tuesday 29 April the Committee asked for a note from the Promoter explaining clauses 40 and 41 of the Bill.

Clause 40 is based on a provision contained in the Channel Tunnel Rail Link Act 1996, and deals with co-operation between the controllers of railway assets with which Crossrail construction, maintenance or operation interact and the Nominated Undertaker. Either party can require the other party to enter into an agreement. The object is to ensure that neither the Nominated Undertaker nor the controller can act unreasonably in dealing with a problem relating to the interaction of the Crossrail works with overland or underground railway assets.

If the parties cannot reach agreement under clause 40, the matter is referred to arbitration. The Secretary of State may then, under clause 41(3), specify the results to be achieved by arbitration, and then the arbitrator determines the fair terms—such as compensation—by which those results are achieved. This is to avoid the possibility that the result of the arbitration frustrates the ability of the Nominated Undertaker to deliver essential Crossrail works, which have been authorised by Parliament.

The asset controllers in question include London Underground and the Public Private Partnerships, BAA, and Network Rail. Clauses 40 and 41 are only intended to be used in circumstances where the matter is not within the Office of Rail Regulation's normal jurisdiction, or a solution cannot be reached by normal agreement.

It follows, therefore, that the Promoter does not intend that clauses 40 and 41 will apply to railway operators on the Network Rail network, as clause 40 should not supplant or override the allocation of access rights under the Railways Act 1993, the taking of possessions under the Network Code as overseen by the ORR, nor, indeed, the Department's stated intention to work within normal industry processes as far as possible in connection with the Crossrail project. If clause 40 is not applied in circumstances where the matter may be referred to the ORR for determination in accordance with its statutory duties or functions, then clause 41 does not apply in these circumstances either.

Indeed, it is unclear how these clauses could be used to supplant or override the ORR's decisions under the Railways Act 1993 with regard to access rights, as the provisions that would have allowed intervention in the allocation of access rights are intended to be removed in accordance with the Minister's recent statements (made on 11 and 18 April) and clauses 40 and 41 do not directly empower the Secretary of State in making a direction to modify any access arrangements directed by the ORR under the Railways Act 1993. It would therefore be an abuse of power, and thus judicially reviewable, for the Secretary of State to use clause 41(3) to seek to modify any decisions made by the ORR under the access regime of the Railways Act 1993.

Whilst, therefore, clause 41(3) is not to be used to direct the ORR in discharging its statutory duties or functions, there are other circumstances where clauses 40 and 41 might apply. For example, the Crossrail works at Farringdon station will involve a complex interface with other works, such as Thameslink, and non-regulated asset controllers, such as London Underground. It is therefore recognised that this complexity requires managing in order to ensure the successful delivery of the Crossrail project at this location, particularly as it may be necessary

for the Secretary of State to ensure that the terms of a London Underground or PPP contract (which is not regulated by the Railways Act 1993 or within the ORR's jurisdiction) do not unreasonably prevent something that is critical to the delivery of the Crossrail project that has been defined as part of the Bill process.

Nevertheless, clauses 40 and 41 remain fall-back provisions in these circumstances, as it is also recognised that, in this example, London Underground, as a key delivery partner to the project, will have a direct interest in integrating Crossrail works successfully with its own existing assets.

The Promoter is considering whether it is appropriate to, during later stages of the Bill process, make it explicit that clauses 40 or 41 should not be invoked by either party where the matter may be referred to the ORR for determination in accordance with its statutory duties or functions—in effect, where a solution can be reached under the aegis of the normal regulatory processes.

Notwithstanding that, the Promoter is clear that it does not intend that clauses 40 and 41 will apply to railway operators on the Network Rail network. The provisions would instead remain in reserve to deal with such complex circumstances as outlined above, although the Promoter will specifically review clause 41(3) following comments that the Select Committee has made.

APPENDIX 9: COMMITTEE RULINGS GIVEN DURING PROCEEDINGS

Ruling given in relation to the Petition of the Spitalfields Society—Thursday 13 March 2008 (paragraphs 4443–4446 of the transcript)

Evidence which Mr Schabas may seek to advance, or might have sought to advance, on behalf of the Spitalfields Society relates to a realignment of the railway's route between Liverpool Street and Whitechapel Station. The proposed route would follow a curve to the south of the route in the Bill. Other Petitioners have sought to persuade the Committee to accept evidence and submissions on this realignment and we have declined to do so. The reason is that such a proposition traverses the principle of the Bill. What is the principle of the Bill? What does it mean? Although it is still a Bill and not an Act, the Committee can obtain much assistance from the rules of statutory construction. These can guide the Committee, as they would a court of law, if the issue were raised before it, and I would refer to *Halsbury's Laws*, Volume 44(1), paragraph 1399. The most important rule in this context is that the words of the Bill, both clauses and Schedules, explain what the Bill is going to permit and in this case it is quite specific. Clause 1 allows the nominated undertaker to construct and maintain the works specified in Schedule 1. This includes in subsection (1)(b) railways in the London Borough of Tower Hamlets. Clause 1(2) says, "Subject to subsections (3) to (5), the scheduled works shall be constructed (a) in the lines or situations shown on the deposited plans, (b) in accordance with the levels shown on the deposited sections".

Clause 1(3) to (5) allows for deviations to any extent within the limits of deviation, horizontal or vertical, shown on the deposited plans or sections. Subsection (5) is very particular as to the permitted deviation in three of the works by relation to the deposited sections. The route which might be proposed south of Spitalfields does not fall within the lines or limits of deviation in the deposited plans and sections. It could not thus be carried out under the powers of the Bill, but these lines and sections are central to what the Bill would allow is re-enforced by other provisions of the Bill, for instance clause 61 which provides machinery to correct mistakes in the deposited plans or sections by means of an application by the Secretary of State after giving due notice to two magistrates. If they find there is a mistake, they may certify accordingly and say what is the error. Their certificate goes to the Clerk of both Houses and the local authority concerned. Thereafter, matters may proceed on the corrected basis.

Clause 64 says what are the deposited plans and sections. They are those deposited on given dates with replacements and a consolidated replacement sheet. These at the end of the day will go to the Victoria Tower with the signed copy of what might very well be an act and they are all available to the public and you go up the Victoria Tower and get out deposited plans for any railway scheme going back since railways began, and I have done it. The various schedules in addition to that relate particularly to specified works, identified by reference to the deposited plans. For instance, Schedule 3 deals with highway stopping up and also use of subsoil for works even outside the limits of deviation on land set out on a table on pages 92 and 93 of the Bill but basically by relation to the deposited plans. Schedule 6 confines that position of land to sites specified by reference to the deposited plans. This is a large list with different categories of acquisition.

Reading the Bill as a whole, clauses and schedules, is the correct way to interpret a statute, and so we hold is the way in which the Committee ought to interpret the

Bill. There is an intimate connection between the powers conferred and the places where they may be exercised, and it does not include Route B. In that case, why can the Committee not recommend an amendment to the Bill to provide for this more southerly route at Spitalfields? There is a very simple reason. The realignment of that route would require the introduction of additional provisions and a further petitioning hearing. This House, as the second House, has no power to obtain additional provisions. Standing Order 73(2) relating to House of Lords private business says that petitions for additional provisions cannot be received in the case of a bill brought from the House of Commons. Standing order 73 reads like this: "(1) a petition for additional provision in a private bill (a) shall be signed by the Petitioner and shall have annexed thereto a printed copy of the provisions proposed to be added and (b) shall require the sanction of the Chairman of Committees before it is deposited in the office of the Clerk of the Parliaments… (2) No such Petition shall be received in the case of a bill brought from the House of Commons". In accordance with this Standing Order, in *Erskine May* there is a passage which says: "The power of a Committee to admit clauses or amendments, has already been described. It should be noted, however, that additional provisions may not be obtained in the second House. Similarly, and as a consequence of this, it is a well established rule that a clause conferring powers upon the Promoter struck out in one House should not be re-inserted in the other and restricted amendments imposed by one House on the Promoters shall not be reversed by the other". This Committee does not have the power to recommend the Promoters to realign the route between Liverpool Street and Whitechapel Station in so far as that has been requested by various members of the Spitalfields community. I am afraid I think that is definitive.

Ruling given in relation to the Petition of the Spitalfields Small Business Society—Tuesday 18 March 2008 (paragraphs 5552–5565 of the transcript)

However, before that, I promised that I would produce a ruling on the Select Committee's behalf on compliance with the Environmental Impact Directive 85/337/EEC, as amended, and that I will now do.

In the case of the decision-makers for most large projects in England which fall within the scope of the Directive, the process is governed by Regulations which transpose the Directive into domestic law. In the present case, the decision is to be made by Parliament so that it is the terms of the Directive itself which have to be construed. Article 5(1) of the Directive requires developers to provide information covering the matters in Annex IV and then Article 6(2) provides that: "Member States shall ensure that any request for development consent and any information gathered pursuant to Article 5 are made available to the public within a reasonable time in order to give the public concerned the opportunity to express an opinion before development consent is granted". Article 5 requires the developer's Environmental Statement to include an "outline of the main alternatives studied by the developer and an indication of the main reasons for his choice". This means that the developer must set out in the Environmental Statement the main alternatives which he has studied.

Crossrail is a linear project, but, although an integral scheme, it has been, for convenience, divided into three parts. The central section includes the tunnel which would take the tracks from Liverpool Street Station to Whitechapel Station; on the alignment in the Bill, this section passes underneath the Spitalfields area.

It has long been the ambition of the Petitioners from this area to divert the alignment so that it goes somewhere else. Whilst such a diversion might have been

achieved in the House of Commons by way of an Additional Provision (although it was not), in this House, for reasons set out in the Committee's ruling last week, Standing Orders preclude any such suggestion. What the Spitalfields Petitioners want is the adoption of what is called 'Route B' which runs to the south of their properties. The proposition put forward by Mr Horton is that this Committee should rule that Route B should have been a 'main alternative' and should treat it as such, opening it up to comment by the public and study by the House of Lords. Mr Horton argues that a failure to do this would render the Environmental Statement deficient and the process non-compliant with the Directive and thus unlawful.

It would not be feasible to challenge the matter at this stage, but, when and if the Bill receives Royal Assent, a domestic court or the European Court of Justice could address the matter. It is not inconceivable that a domestic court might be prepared to adjudicate on the validity of primary legislation where an EIA was required but was not provided for; the Court of Appeal in *Regina v Durham County Council ex parte Huddleston*, and I give the reference (2000/WLR 1484), held that the provisions in the Planning and Compensation Act 1991, which allowed the revival of an ancient planning permission for mineral workings in circumstances which fell within the requirements of the Regulations implementing the EIA Directive, but made no statutory provision for such an appraisal, was ineffectual. Whether a domestic court would be so robust as to strike down the entire Crossrail Act on the grounds now in issue is a matter for speculation, but the European Court of Justice could do so.

Many of the issues now raised by the Petitioners were considered in the House of Commons. It is not for this House to comment on proceedings there, but it should be noted that under Private Business Standing Order 27A (and there is a 27A for both Houses), when a Bill authorising the carrying out of works is submitted for approval, it shall be accompanied by an Environmental Statement containing the information referred to in Part II of Schedule 4 to the EIA Regulations, which is Statutory Instrument 1999/293, and so much of the information referred to in Part I of that Schedule as is reasonably required to assess the environmental effect of the works and as the Promoters can be reasonably expected to compile. It must be assumed that this Standing Order was complied with in the House of Commons, and we see no evidence to suggest that it was not.

The Woodseer and Hanbury Street Residents' Association (sic) say in a submission that the Select Committee in the House of Commons did not, during the consideration of Additional Provision 3, address Route B. There may have been reasons concerning the principle of the Bill and the Committee may have declined to hear argument on Route B because they did not consider that it was covered by Additional Provision 3. Anyway, the matter must now be confronted afresh in this Committee.

If Route B is a legitimate matter for the House of Lords at a later stage of the Bill, and for this Committee it is not on the grounds mentioned above, one thing should be said: that the Directive requires Member States to ensure that information about the proposed project is made available to the public so that they may have an opportunity to express an opinion before development consent has been granted, and that is Article 6(2) which I have already referred to.

This committee hearing is not a meeting in a public hall, but part of a parliamentary procedure. To be heard, a person or group have to present a Petition and they must have *locus standi* (the right to be heard) to present a Petition. The Promoters have raised no objection on these grounds and the

Committee have been anxious to allow the presentation of relevant evidence and submissions.

Much discussion of Route B has been available for a substantial period. It is common ground that London Underground Limited produced a report in 2001 concerning the Crossrail Eastern Portal. Three alignments had been considered, including Route B. Even at that stage, Route B was not thought to be a viable option because of the proposed development east of Liverpool Street. The Promoters abandoned further consideration of Route B[37].

Undoubtedly, Route B has never been presented as a main alternative and has never been considered as such by the Promoters. There is, therefore, no requirement on them under the Directive to write it up in the Environmental Statement, as such.

We are satisfied that the Promoters have fulfilled the requirement in House of Lords Standing Order 27A, including the provisions of an Environmental Statement which did contain an outline of the main alternatives studied and an indication of the main reasons for the choice of route set out in the Bill before us now. There is no indication that Route B was ever a main alternative and it certainly is not considered a main alternative now.

We are further satisfied that the Promoters have complied with Statutory Instrument 1999/293 and there is nothing in the amending Statutory Instrument 2000/2867 which requires any attention in accordance with Standing Order 27A(6) since the amendments are not material to the Promoters' Bill. I should just add that the only reference in the Regulations to main alternatives is in exactly the same terms as it is in the Directive.

So, in conclusion, we have decided that there is no flaw in the Promoters' compliance with the requirements of the EIA Directive which would lead us to recommend to the House that there are faults in the procedural requirements concerning this sort of legislation or that the House should postpone further consideration of the Bill.

---

[37] A factual correction was made to this paragraph by the Chairman—see the transcript from 20 March 2008, paragraph 6543.

APPENDIX 10: STATEMENTS RELATING TO THE PETITION OF THE LONDON BOROUGH OF CAMDEN

Statement from the London Borough of Camden (paragraphs 7726–7750 in the transcript)

The London Borough of Camden is the lead authority on the issue of groundborne noise from the operation of Crossrail trains in tunnels, supported on this matter by Westminster City Council, London Borough of Islington, City of London and London Borough of Tower Hamlets. I am sure that the Committee is now very familiar with what the groundborne noise is. It can be described as the rumbling sound that is heard inside buildings during the passage of trains in tunnels.

The basic point of dispute between the collective local authorities and the Promoter is a simple difference in the numerical standard that is to be applied in the case of residential dwellings affected by groundborne noise. The Promoter is relying on a design standard which permits levels of up to 40dB$L_{Amax,S}$ whereas the local authorities are looking for a standard not to exceed 35dB$L_{Amax,S}$. The issue was brought forward by London Borough of Camden in the Commons Select Committee proceedings and the ongoing discussions have resulted in agreement of the wording of an Information Paper. However, this basic point of difference has always been, and remains, a point of dispute between the parties. So I now need to explain to the Committee how this remaining and key point of dispute can have led to any kind of agreement whatsoever.

The Information Paper of interest to this matter is D10, and its scope covers groundborne noise and vibration during both construction and operation of the railway. London Borough of Camden's primary concern relates to the standard that has been adopted for the permanent railway, although many of the points that have been discussed also apply to the operation of the temporary construction railway that will service the tunnels during their construction.

Three of the local authorities affected by the scheme have specific policies on train groundborne noise inside dwellings, whilst others apply relevant planning conditions on groundborne noise, and all are consistent in that they are set at a maximum level of 35dB$L_{Amax,S}$ in each case. There are no UK standards which relate to acceptable levels of groundborne noise within dwellings, although design standards and guidance published outside of the United Kingdom only supports the local authorities' position that 35dB$L_{Amax,S}$ is a more appropriate design aim.

We say that the Promoter's position is based largely on precedent, with the 40dB$L_{Amax,S}$ policy devised and supported through formal proceedings by Mr Thornely-Taylor on behalf of the Promoters of schemes including DLR, Thameslink, JLE and CTRL. During the presentation of evidence to the House of Commons Select Committee on this generic issue, London Borough of Camden sought to guide the Committee through the history of the adoption of 40dB$L_{Amax,S}$ as a design standard and to demonstrate that in its opinion the scientific evidence to support its application was poor, speculative and inconclusive, and that for those reasons alone a more precautionary approach was justified. Mr Thornely-Taylor has explained during these proceedings that in the case of JLE and the London section of the CTRL there have been no complaints to his knowledge, but more importantly that actual noise levels are much lower than the design standard of 40dB$L_{Amax,S}$. These relatively recent flagship projects do not therefore shed any

light at all on whether 40dB$L_{Amax,S}$ is an acceptable level because they evidently do not generate noise levels as high as this.

On the basis of evidence put before the House of Commons Select Committee by Petitioners on the need for more stringent groundborne noise commitments the Promoter was instructed to provide floating slab track or a similar technology at certain locations along the route. This has resulted in the Promoter reporting to London Borough of Camden in its letter dated 21 December 2007 that no residential properties along the tunnelled sections of the route are predicted to experience groundborne noise levels at or above 35dB$L_{Amax,S}$ at any location with the caveat that the final track specification will not be determined until the design of the tunnels is complete and their precise position fixed. We have heard during these proceedings that possible permitted changes to the tunnel alignment that could still occur would, in the majority of cases, lead to less than a single decibel of difference. On the face of it, therefore, the main objective of the collective local authorities appears to have been indirectly met.

The Promoter does not alter its design aim as presented in Table 1 of IP D10—and that is the third version, for information—to reflect this, even though it would not appear to impose any direct costs for it to do so.

Camden remains concerned that the 40dB$L_{Amax,S}$ standard does not withstand scientific scrutiny, but in the interests of achieving an acceptable outcome for the affected residents, and recognising the risk of attempting to force changes to what appears to be an immovable policy for reasons unknown by further representation in front of your Lordships, London Borough of Camden has sought to secure its objectives by other means.

The design aim criteria are of course based upon predicted noise levels, and there was debate in the other House about how the actual noise levels when the railway is operational (the so-called "outturn" noise levels) will relate to those predicted values, and what comfort any of the Petitioners and other affected parties can take away from these proceedings that they will actually be realised.

However, the Promoter has rejected our request to demonstrate compliance with its design aims by measuring noise levels once the railway becomes operational.

So that is the background to the agreed approach.

Our agreement to IP D10 version 3 is therefore based on securing wording which can be summarised as follows. The prediction model which is to be used for the detailed design of the track system will conform to best practice and be in accordance with the relevant International Standard on groundborne noise prediction issued in 2005, showing full compliance with its guidance on development, calibration, validation and verification. That recites D10 paragraphs 4.1 and 5.1.

That evidence of the model's accuracy is provided to the local authorities for their comment—D10 paragraph 5.1.

That the nominated undertaker will engage in continued technical discussions relating to track design and will take into account the local authorities' comments—D10 paragraph 4.2.

That the rails of the new railway will be ground smooth prior to the opening of the railway—D10–2.11.

That the gradual deterioration in rail and wheel condition will be limited to control any consequent worsening of groundborne noise and vibration—D10 paragraphs 2.10 and 2.11.

That the key input assumption of the combined condition (or "roughness") of the wheels and rails will not exceed that which has been, and will continue to be, assumed in the modelling, by way of imposing a specification on the operator of the railway—D10, 2.10.

To include recognition that the local authorities apply different policies to those proposed by the Promoter—D10, 2.13.

That the nominated undertaker will use "reasonable endeavours" to adopt mitigation measures that will further reduce any adverse environmental impacts caused by Crossrail insofar as these mitigation measures do not add unreasonable costs to the project or unreasonable delays to the construction programme—D10, 2.14.

On completion of the track design, where the nominated undertaker predicts that it would exceed the local authorities' preferred standard of $35dBL_{Amax,S}$ at any dwelling, then the nominated undertaker will provide additional information to the local authorities explaining its position, and will take into account the local authorities' comments—D10, 2.13 and 4.2.

The definition of an adverse groundborne noise impact is specific in the context of this project. According to the Promoter's assessment criteria an adverse impact will not occur if the groundborne noise levels are below $35dBL_{Amax,S}$. The Promoter has declared that following the incorporation of the additional mitigation as instructed by the House of Commons Select Committee, there are no adverse groundborne noise impacts expected at residential dwellings across the tunnelled section of the route.

The contents of the Environmental Minimum Requirements: General Principles paper, which have been agreed by the Promoter and the Local Planning Authorities, has assisted us greatly in achieving agreement to IP D10 Version 3. The relevant passage from the EMRs General Principles paper can be found at paragraph 1.5 and requires the nominated undertaker to use reasonable endeavours to adopt mitigation measures that will further reduce any adverse environmental impacts caused by Crossrail, insofar as these mitigation measures do not add unreasonable costs to the project or unreasonable delays to the construction programme.

Of note is that the commitment in paragraph 1.5 stands "apart" from the controls and obligations in the EMRs that specifically require that impacts which have been assessed in the 2005 Environmental Statement will not be exceeded. In our view the provisions of paragraph 1.5 should be seen in the context of the most recent predictions undertaken by the Promoter (i.e. post-Environmental Statement), the results of which conclude the existence of no adverse impacts. By this the Petitioners seek to put on public record that with no adverse impacts currently envisaged by the Promoter the local authorities are expecting that the application of reasonable endeavours would ensure that groundborne noise levels inside dwellings fall below $35dBL_{Amax,S}$.

This series of commitments and observations has enabled agreement on the principles of IP D10 Version 3, but as explained previously not to the maximum permissible limit for residential dwellings which remains presented in Table 1 of that document, and which the Promoter does not alter despite no cost burden apparent to the project in doing so. This is a fundamental point for local authorities to put on record as it should not be regarded as any precedent for future railway schemes or other development where groundborne noise is a

concern and where local authority policies need to remain intact to prevent challenge to their saved policies on groundborne noise.

I hope that your Lordships can appreciate the major obstacles around which Camden has had to negotiate in reaching an agreement on this matter.

Statement by the Promoter in response to the Statement by the London Borough of Camden

We had understood that an agreed position in relation to groundborne noise and vibration had been reached with the London Borough of Camden and it was not until yesterday that we found that Camden would be continuing to make points to you this morning regarding the appropriateness of $35dBL_{Amax,S}$ as a design noise criteria, and it is only right that I make clear the Promoter's position in relation to that issue.

This statement is to make it clear for the record that the Promoter continues to consider that a design noise criterion of $40dBL_{Amax,S}$ affords an appropriate level of protection to the amenity within residential properties from noise from underground railways. Nothing in Information Paper D10 should be taken as indicating that the Promoter has changed its position in relation to that matter. IPD10 retains $40dBL_{Amax,S}$ as the design noise criterion for the protection of residential properties in the design of the Crossrail project. The Promoter relies upon the fact that $40dBL_{Amax,S}$ has been successfully used in the past as a design noise criterion in relation to a large number of underground railway schemes, including, for example, the Jubilee Line Extension. The Promoter is not aware of any complaints regarding groundborne noise associated with the Jubilee Line Extension from those occupying residential properties above it. The use, therefore, of 40dB as a design criterion has in fact protected the amenity of residential occupiers in that particular case.

The Promoter believes that the use of a $40dBL_{Amax,S}$ criterion corresponds to a level of noise that is lower than the relevant thresholds in the guidelines for community noise published by the WHO. The Promoter does not believe that there is any published scientific evidence to suggest that the adoption of a $35dBL_{Amax,S}$ criterion would produce any material improvement to the amenity of residential occupiers compared to the adoption of a $40dBL_{Amax,S}$ criterion, and that is a point that was accepted by Mr Methold, who is the noise expert for the London Borough of Camden, in cross-examination before the House of Commons Select Committee, and you can see that in volume 2 of the Special Report at page Ev302, paragraph 3061. The adoption of a design criterion of $35dBL_{Amax,S}$ would, therefore, potentially impose additional cost on an underground railway project whilst not bringing about any material benefit to the living conditions of those living above it. In short, the Promoter considers that $40dBL_{Amax,S}$ provides a design noise criterion that works and a design noise criterion that is cost-effective.

Notwithstanding this continuing disagreement between the Promoter and the London Borough of Camden regarding the appropriate design noise criterion to adopt, the content of IPD10 is now agreed and, given that, there is no need for the Committee to resolve the issue between the parties. If, however, the Committee feels that it has to resolve that issue, we would ask the Committee to decide now whether it wants to take that course because, if it does, the Promoter will wish to call further evidence from Mr Thornely-Taylor to assist you in your deliberations, so we would ask you please, if you would be kind enough, to decide now whether you wish to determine the issue about 35dB or 40dB, and we say you do not need to, but, if you do, we will call evidence before you.

APPENDIX 11: LIST OF UNPRINTED EVIDENCE

The following memoranda have been reported to the House, but to save printing costs they have not been printed. Copies are in the Parliamentary Archives, and are available to the public for inspection. Requests for inspection should be addressed to The Parliamentary Archives, Houses of Parliament, London SW1A 0PW (tel. 020 7219 3074). Opening hours are from 9.30 am to 5.00 pm on Mondays to Fridays.

Crossrail Outline of Opening Submissions	P1
Controlling Noise and Vibration	P4
Land Compensation/Ground settlement and its effects	P6
Promoter's response documents for the London Borough of Newham; and the Cyclists Touring Club (CTC)	P7
Promoters presentation on People with Restricted Mobility (PRM) and exhibits for the London Borough of Newham	P8
Petitioner's exhibits for London Borough of Newham	A2
Proposed details for the provision of PRM lifts, etc at Maryland and Manor Park stations	A3
Mobility Component of Disability Living Allowance	A4
Location of Football Stadia relative to Stations in the London Borough of Newham	P11
Promoter's note Passengers with Restricted Mobility	P12
Promoter's exhibits for Cyclists Touring Club (CTC)	P13
Promoter's response documents for Iver Parish Council, the Ramblers Association and the Open Spaces Society; the London Borough of Tower Hamlets; Mr James Middleton; and Mr David Saunderson	P14
Promoter's exhibits for Iver Parish Council, the Ramblers Association and the Open Spaces Society	P15
Petitioner's exhibits for Iver Parish Council, the Ramblers Association and the Open Spaces Society	A11
Proof of Evidence—Mrs Glenda Collins	A12
Proof of Evidence—Mr Paul Graham	A13
Aerial view of Thornley Road Bridge, Iver	P16
View of railway fence, Iver	P17
Promoter's exhibits for London Borough of Tower Hamlets	P19
View of Fulbourne Street, Whitechapel	A14
Petitioner's exhibits for Mr James Middleton	A15
Statement from Mr James Middleton	A16
Promoter's exhibits for Mr David Saunderson	P20
Petitioner's exhibits for Mr David Saunderson	A17
Closing submission for Mr David Saunderson	A18
Promoter's response documents for the Spitalfields area	P22
Promoter's exhibit folder for the Spitalfields area	P23
Promoter's Opening Remarks—Spitalfields Petitions	P25

APPENDIX 12: AMENDMENTS ACCEPTED BY THE SELECT COMMITTEE

Clause 16

Page 11, line 28, at end insert—

'(2) The Secretary of State may by order make any provision specified in subsection (3) in relation to any work constructed in exercise of the powers conferred by this Act.

(3) The provision referred to in subsection (2) is—

(a) provision that paragraphs 1(1)(a) and 2(1)(a) of Schedule 9 shall not apply in relation to any relevant works;

(b) provision that paragraphs 1(1)(b) to (d) and 2(1)(b) to (d) of that Schedule shall not apply in relation to any proposed relevant works;

(c) provision that paragraph 1(4) of that Schedule shall not apply in relation to any demolition of a building undertaken in connection with any relevant works;

(d) provision that paragraph 3 of that Schedule shall not apply in relation to any relevant works;

(e) provision that paragraph 4(2) of that Schedule shall not apply in relation to any relevant works;

(f) provision that paragraph 4(3) of that Schedule shall not apply in relation to any land used for or in connection with the carrying out of any relevant works;

(g) provision that paragraph 4(8)(a) and (b) of that Schedule shall not apply in relation to any relevant works;

(h) provision that paragraph 4(10) and (11) of that Schedule shall not apply in relation to any operations carried out in exercise of the powers conferred by this Act which are, or are carried out in connection with, relevant works;

(i) provision that paragraph 4(12) of that Schedule shall not apply in relation to any use of a metal detector for the purposes of or in connection with any relevant works;

(j) provision that paragraph 4(13) of that Schedule shall not apply in relation to any removal of objects discovered by any such use;

(k) provision that paragraph 5(1) of that Schedule shall not apply in relation to any land used, or intended for use, for or in connection with the carrying out of any relevant works;

(l) provision that paragraph 5(3) of that Schedule shall not apply in relation to any land on which relevant works are being carried out.

(4) In this section—

"relevant works" means works which are—

(a) carried out in exercise of the powers conferred by this Act for the maintenance or alteration of the work referred to in subsection (2), and

(b) begun on or after the relevant day;

"relevant day" means such day as may be specified in an order under subsection (2).

(5) Orders under subsection (2) may make different provision for different cases.

(6) The power conferred by subsection (2) shall be exercisable by statutory instrument.

(7) A statutory instrument containing an order under subsection (2) shall be laid before Parliament after being made.'.

Schedule 1

Page 40, line 10, leave out '1/2 at its termination' and insert ' 1/8D at a point 42 metres west of the western face of Lord's Hill Bridge over the Reading Railway'.

Page 40, line14, leave out '1/2 at its termination' and insert ' 1/8E at a point 42 metres west of the western face of Lord's Hill Bridge over the Reading Railway'.

Page 41, line 37, leave out '44' and insert '20'.

Page 41 line 46, after 'Railway' Insert 'at'.

Schedule 3

Page 70, line 20, column 1, insert ' London Borough of Tower Hamlets'.

Page 70, line 30, column 1, leave out 'London Borough of Tower Hamlets'.

Page 76, line 15, column 3, after first 'T5' insert 'on Sheet No. 8 of the deposited Plans'

Page 76, line 16, column 3, after 'T6' insert 'on Sheet No. 42 of the deposited Plans'

Page 83, leave out lines 25 to 30.

Schedule 5

Page 93, line 4, column 2, leave out ',253a and 258' and insert and '253a'.

Schedule 6

Page 102, line 13, column 2, leave out '9 and 13 to 16' and insert 'and 9'.

Page 106, line 24, column 2, leave out '714,'.

Page 116, leave out lines 31 to 37.

Page 126, line 28, column 2, leave out '325,'.

APPENDIX 13: EXPLANATION OF AMENDMENTS TO CLAUSE 16

The works which would be authorised by the Crossrail Bill if enacted include works affecting listed buildings, and works requiring the demolition of a few buildings in conservation areas. Leaving aside the authority which would be created by the Bill as enacted, these works would normally require listed building consent by virtue of Section 7 of the Planning (Listed Buildings and Conservation Areas) Act 1990, or conservation area consent under Section 74 of that Act, before they could lawfully be carried out. In addition, Crossrail affects some scheduled monuments (principally parts of the former roman and mediaeval wall of the City of London) for which consent would, but for the Bill, be required under Section 2 of the Ancient Monuments and Archaeological Areas Act 1979.

In order to ensure that Crossrail can be constructed and not be frustrated by the need for further consents such as listed building consent or scheduled monument consent, clause 16 of and Schedule 9 to the Bill remove the need for these with respect to the works authorised by the Bill, subject to certain qualifications (for example, in column (3) of the table in paragraph 1 of Schedule 9 there are some limitations to the extent of the disapplication of the requirement for listed building consent).

It is intended that these disapplications from the normal statutory regime will apply to the construction phase of Crossrail. However, the Bill also authorises the nominated undertaker to maintain and alter the Crossrail works from time to time. The purpose of new clause 16(2) to (7) is to enable the Secretary of State, by order made by statutory instrument, to "switch off" the disapplications made by Schedule 9, in cases where any of the Crossrail works previously constructed under the Bill are subsequently maintained or altered after a date specified in the order. For things done after the "switch-off" date, normal listed building consent or scheduled monument consent would be required where relevant.

This is similar to the provision made for the planning permission deemed to be granted by clause 10 of the Bill. Under clause 13, once the construction phase is over the Secretary of State may by order made by statutory instrument "switch off" clause 10 for works of maintenance or alteration carried out after the specified date, in order that the ordinary regime applying to planning permissions and permitted development will apply.