



Phase 2b Western Leg Information Paper

C14: Ground settlement

This paper outlines the policy on ground settlement proposed for the Proposed Scheme.

It will be of particular interest to those potentially affected by the Government's proposals for high speed rail.

This paper was prepared in relation to the promotion of the High Speed Rail (Crewe - Manchester) Bill. Content will be maintained and updated as considered appropriate during the passage of the Bill.

If you have any queries about this paper or about how it might apply to you, please contact the HS2 Helpdesk in the first instance.

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1 Introduction

- 1.1 High Speed Two (HS2) is the Government's scheme for a new, high speed north-south railway, which is being taken forward in a number of phases. Phase One will connect London with Birmingham and the West Midlands. Phase 2a will extend the route from the West Midlands to Crewe. The Phase 2b Western Leg will connect Crewe to Manchester. As set out in the Integrated Rail Plan, published in November 2021, HS2 East is proposed to deliver a new high speed line from the West Midlands to East Midlands Parkway.
- 1.2 HS2 Ltd is the non-departmental public body responsible for developing and promoting these proposals. The company works under the terms of a Development Agreement entered into with the Secretary of State for Transport.
- 1.3 The construction and operation of Phase One of HS2 is authorised by the High Speed Rail (London – West Midlands) Act 2017 and Phase 2a by the High Speed Rail (West Midlands – Crewe) Act 2021.
- 1.4 In January 2022, the Government introduced a hybrid Bill to Parliament (hereafter referred to as 'the Bill'), to seek powers for the construction and operation of the Phase 2b Western Leg (the Proposed Scheme), which is called the High Speed Rail (Crewe – Manchester) Bill. The Proposed Scheme comprises the Phase 2b Western Leg from Crewe to Manchester a connection onto the West Coast Main Line (WCML), and several off-route works. It also facilitates the delivery of Northern Powerhouse Rail by providing the Crewe Northern Connection and junctions and other infrastructure to be used in future schemes.
- 1.5 The work to produce the Bill includes an Equalities Impact Assessment and an Environmental Impact Assessment (EIA), the results of which are reported in an Environmental Statement (ES) submitted alongside the Bill. The Secretary of State has also published draft Environmental Minimum Requirements (EMRs), which set out the environmental and sustainability commitments that will be observed in the construction of the Proposed

Scheme. For more information on the EMRs please see Information Paper E1: Control of environmental impacts.

1.6 The Secretary of State for Transport is the Promoter of the Bill through Parliament. The Promoter will also appoint a body responsible for delivering the Proposed Scheme under the powers granted by the Bill. This body is known as the 'nominated undertaker'. There may be more than one nominated undertaker. However, any and all nominated undertakers will be bound by the obligations contained in the Bill, the policies established in the EMRs and any commitments provided in the information papers.

1.7 These information papers have been produced to explain the commitments made in the Bill and the EMRs and how they will be applied to the design and construction of the Proposed Scheme. They also provide information about the Proposed Scheme itself, the powers contained in the Bill and how particular decisions about the Proposed Scheme have been reached.

2 Overview

2.1 Construction of the Proposed Scheme will require a range of underground works including tunnelling. This information paper sets out HS2 Ltd's approach to assessing and reducing, as far as reasonably practicable, any ground settlement that could result from underground works. Refer to <https://www.hs2.org.uk/ground-settlement/> for more information.

2.2 There are two short tunnels in the Proposed Scheme, namely Crewe tunnel and Manchester tunnel. For more information on the tunnels included as part of the Proposed Scheme, please see Information Paper D13: Tunnels.

3 Tunnelling

- 3.1 In September 2013, HS2 Ltd published a report - Impacts of Tunnels in the UK - on the likely effects on people and property from tunnel construction and from trains running in tunnels.
- 3.2 The construction of the Proposed Scheme's tunnels will lead to settlement of the ground at the surface. The amount of settlement (ground movements) will depend on a number of factors including the depth and volume of the works below ground, soil and groundwater conditions and the presence and nature of building foundations. The amount of settlement will vary across the area affected, and for some buildings, the magnitude of settlement varies across the building. This is known as differential settlement.
- 3.3 If there is no differential settlement and all of a building settles the same amount then the building is very unlikely to be damaged, whereas differential settlement has the potential to damage buildings and other infrastructure, including utilities. If damage were to occur, it could range from small internal cracks in plaster to effects on the structural integrity of the building, although in most cases there is no discernible effect on the structure itself. An assessment has already begun to identify potential settlement along the route of the railway. It will assess the risk of damage to all buildings within the zone affected by settlement. Depending on the level of risk, no action may be required, buildings will be monitored during construction, or special protective measures will be implemented to protect the buildings.
- 3.4 This paper covers the following issues:
- method of assessing settlement;
 - monitoring;
 - protective works;
 - defects surveys;
 - repairs;
 - listed buildings; and

- settlement deed.

4 Settlement Assessments

4.1 Buildings which may be affected by structural excavations carried out by the nominated undertaker are assessed using a three phase process similar to that developed on other projects including the Jubilee Line extension, Channel Tunnel Rail Link and Crossrail and this assessment consists of one, two or three phases as described below.

Phase 1 Assessment

4.2 The Phase 1 assessment is based on “green-field” site conditions. This means that the effect of building foundations on the pattern of settlement is ignored.

4.3 For bored tunnels the settlement predictions for “green-field” site conditions are produced based on empirical methods such as those described by O’Reilly and New (1982) and Attewell and Woodman (1982) using parameters for ground loss determined from case histories and taking into account the method of tunnelling and ground conditions.

4.4 For excavations comprising shafts, boxes and retained cuttings, a conservative methodology for predicting settlements has been developed.

4.5 Where the predicted settlement from bored tunnels and from the excavations referred to above is less than 10mm and the predicted ground slope is less than 1/500 (equivalent to damage risk/damage category 1 as defined by Rankin, 1988) buildings are not subject to further assessment. 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.

Phase 2 Assessment

4.6 In Phase 2 the settlement calculated for “green-field” conditions is imposed on buildings, i.e. it is assumed that buildings behave completely

flexibly and their own stiffness has no influence on the settlement behaviour. In addition, the deformation due to horizontal ground movement is taken into account. This is a conservative assumption as, in reality, a building's structure and foundations will modify the settlement effects and limit the development of horizontal strain, reducing the potential for damage.

- 4.7 A generic area-wide assessment of settlement identifies zones in which buildings might be at risk of sustaining damage at levels which require individual investigation (that is, in which they may be in risk/damage category 3 or above) based on correlation with the calculated maximum tensile strain values (see Harris and Franzius,2005). For the buildings within these zones, an individual assessment is required in Phase 3 of the assessment process (see paragraph 4.11).
- 4.8 The potential for damage in this area-wide assessment is defined using the procedure described by Burland (1995) and Mair et al (1996). Each building is categorised into one of six risk/damage categories by reference to maximum tensile strain as described in column 2 of Table 1 in Appendix A. This classification is conservative as it assumes a simple brick masonry construction, whereas other forms of construction, such as framed buildings, are more robust.
- 4.9 This generic assessment is only sufficiently informative for buildings with relatively shallow foundations. Buildings with a foundation level deeper than 4m, or (in the case of a bored tunnel) greater than 20% of the depth to tunnel axis, automatically qualify for a Phase 3 assessment after the Phase 2 process.
- 4.10 Subject to paragraph 4.9 above and 4.12 below, buildings assessed to be in risk/damage category 0, 1 or 2 after the Phase 2 assessment are not subject to further assessment.
- 4.11 All buildings which are placed in risk/damage category 3 or above in the Phase 2 assessment are subject to a Phase 3 assessment.

4.12 Any building which has been subject to a Phase 2 assessment, but which does not qualify for further assessment under paragraph 4.11 above is nonetheless subject to a Phase 3 assessment if:

- it is on shallow foundations and is within a distance from a retained cutting, shaft or box equal to the excavated depth of superficial deposits or 50% of the total excavation depth (whichever is the greater). In this context, superficial deposits are taken to be soils such as Made Ground, Alluvium or Glacial Till;
- it has a foundation level deeper than 4m, or (in the case of a bored tunnel) greater than 20% of the depth to tunnel axis;
- it is a listed building; or
- the nominated undertaker considers that for some other reason the determination of whether protective works for the building are required, or the form that such protective works should take, requires further assessment in Phase 3 to be undertaken.

Phase 3 Assessment

4.13 In Phase 3 of the assessment procedure, each building is considered individually in contrast to the first 2 phases where the area of interest is analysed generically.

4.14 The Phase 3 assessment consists of several sub-steps (referred to as "Iterations"), each refining the building and tunnel model to a higher degree. In this phase both the strain developing within the building and the applicability of the standard risk/damage categories (which are based on masonry structures) is reappraised. In the first Iteration the same model is used as in the Phase 2 assessment. This model is then successively refined in the following Iterations. If necessary, the tunnel-excavation-soil-building interaction problem is modelled numerically. The approach is to use simplified assumptions in the first instance and refine the analysis to see if a more accurate approach results in the risk of damage reducing to an acceptable level.

- 4.15 A structural survey will be undertaken to determine the structural form and condition of the building where reasonably necessary for the assessment. In every case where a building is subject to a Phase 3 assessment, a desktop structural appraisal by a qualified structural engineer will be carried out for the purpose of confirming the likely structural behaviour and determining whether such a structural survey is so necessary.
- 4.16 As a result of the Phase 3 assessment, the risk/damage 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. These matters are stated in the settlement assessment report for the building.

Other matters

- 4.17 Phase 1 settlement assessments have already been completed for the Proposed Scheme. The Phase 2 and 3 assessments will take place as part of the on-going detailed design process as the precise construction programme and methodology develops.

5 Monitoring

- 5.1 Requirements for monitoring will be confirmed by the settlement report during detailed design. Selected buildings in risk/damage category 3 or above will be monitored during tunnel construction. Monitoring for category 2 and below will be covered by the general background surface monitoring undertaken to confirm ground movements are within predictions. If unexpected movements occur they will be fully investigated and, if necessary, modifications made to the tunnelling method and/or protective works taken to safeguard the building. In addition to this, general settlement monitoring will be carried out over the whole area affected by settlement.
- 5.2 Where practicable, it is proposed to carry out a full year of area background monitoring to establish seasonal trends, with building specific monitoring commencing at least one month prior to

commencement of the works. Monitoring will continue until all potentially damaging settlement due to the HS2 works has ceased. This is defined as when the rate of settlement is less than or equal to 2mm/annum.

- 5.3 Generally, construction phase monitoring will consist of precise surveying of studs or targets installed on the outside of the building or inside subsurface structures. Occasionally, dependent on structure size and extent of settlement, precise levelling will take place inside structures. Other forms of monitoring may also be employed, which will be determined on a case by case basis.

6 Protective measures

- 6.1 It is intended that the primary form of mitigation will be to use good tunnelling practice, including continuous working, erecting linings immediately after excavation and providing tight control of the tunnelling process to reduce the magnitude of settlement. Where these are considered insufficient to mitigate the risk of damage to buildings as forecast in the Phase 3 assessment, intrusive mitigation measures will be considered. These may include direct works on the building, as well as ground treatment around and beneath the building. These three categories are described in more detail below:

- at-source measures. These include all actions taken from within the tunnel, shaft or box excavation during its construction to reduce the magnitude of ground movements generated at source;
- ground treatment measures. These comprise methods of reducing or modifying the ground movements generated by tunnelling/shaft/box excavation by improving or changing the engineering response of the ground. Categories of ground treatment include: compensation grouting, which involves injecting grout into the ground above the tunnel to compensate for the ground loss at the tunnel face; permeation or jet grouting which involves the creation of stiffer ground to reduce settlement; and control of ground water to avoid changes which could potentially cause ground movement; and

- structural measures. These methods reduce the impact of ground movements by increasing the capacity of a building or structure to resist, modify or accommodate those movements. Typical measures would include underpinning or jacking. Underpinning involves the introduction of a new strengthened foundation system to a building or structure potentially affected by settlement. Jacking is a technique whereby a system is introduced between the structure and its existing foundations to compensate for the settlement.

6.2 These mitigation measures are tried and tested. They have proven effective in mitigating potential settlement effects on other major projects involving a similar scale and complexity of tunnelling and excavation (see Mair (2001)).

7 Survey

- 7.1 Defect surveys will be undertaken on all properties assessed to experience 10mm or more of settlement in the assessment carried out under section 4 above with respect to the nominated undertaker's structural excavations. These will capture the condition of the properties immediately prior to tunnel construction commencing in an area. They are a written and photographic record of existing cracking and the state of the finishes and structures. They will be carried out by a chartered building surveyor commissioned by the nominated undertaker at the nominated undertaker's cost but in joint names with the building owner and any other persons as the nominated undertaker may determine. Owners are free to commission their own survey but this will be at their own cost since the nominated undertaker's survey is an objective survey/record of pre-existing defects and is not intended to draw any conclusions as to the cause.
- 7.2 An electronic copy of the report will be available to the owner on request.
- 7.3 If, following the construction of the Proposed Scheme's tunnels or other sub-surface works in the vicinity of the building, the owner responsible for repairing a building reasonably believes damage has occurred then he

should notify the nominated undertaker in writing before the end of the period of two years from the date of opening for public traffic of the railway comprised in the authorised works in the vicinity of the building, or if later, the end of the period of three months from the day on which any monitoring specific to the building ceased. A second survey will then be undertaken by the nominated undertaker's surveyor to record changes from the first survey. The owner may request his own surveyor to attend when the second survey is undertaken and to comment on the draft survey report produced by the nominated undertaker. Reasonable professional fees (agreed in advance) incurred by the owner in making a successful claim will be reimbursed by the nominated undertaker.

7.4 A comparison of the two surveys may form the basis of any claim. The nominated undertaker may appoint a loss adjuster to assess the extent to which the damage has been caused by construction of the Proposed Scheme and agree the remedial works to be undertaken at the expense of the nominated undertaker.

8 Repairs

8.1 The Promoter will require the nominated undertaker to reimburse property owners for the reasonable cost they incur in remedying material physical damage arising from ground settlement caused by the authorised works, provided:

- the damage is caused by the nominated undertaker's works;
- the owner gives not less than 28 days' notice in writing to the nominated undertaker of the proposal to carry out the repair work;
- the owner takes reasonable steps to obtain three competitive quotes for the repairs beforehand where required by the nominated undertaker; and
- any claim is made before the end of the period of two years from the date of opening for public traffic of the railway comprised in the authorised works in the vicinity of the building, or if later, the end of

the period of three months from the day on which any monitoring specific to the building ceased (see paragraph 5.2 above).

- 8.2 The nominated undertaker may, on receiving the advanced notice of the proposal to carry out the repair work, elect to undertake the repair work itself.
- 8.3 If there are any pre-existing defects which have worsened as a result of the Proposed Scheme then the recoverable loss will be limited to the additional cost of repair over and above that which would have been required to deal with existing defects.
- 8.4 If it can be demonstrated that the undertaking to assess the compensation claim based on the reasonable cost of repairs does not compensate the claimant fully for the reduction in value of his interest in the property then this does not prejudice a further claim for compensation in accordance with the Bill and the Compensation Code within the normal limitation period applying to such claims.

9 Listed buildings

- 9.1 All listed buildings are subject to the provisions of this paper as set out in Sections 3 to 8 above. In particular, as stated in paragraph 4.12, all listed buildings (with settlement of 10mm or more) automatically qualify for a detailed assessment at Phase 3.
- 9.2 In the first iteration of the Phase 3 assessment, the heritage value of a listed building is considered by reviewing the sensitivity of the building structure and of any particular features against the risk/damage category assigned in Phase 2. The heritage assessment examines the following:
- the sensitivity of the building/structure to ground movements and its ability to tolerate movement without significant distress. The potential for interaction with adjacent buildings/structures is also considered. A score within the range of 0-2 will be allocated to the building/structure in accordance with the criteria set out in Table 2 in Appendix A;

- the sensitivity to movement of particular features within the building/structure and how they might respond to ground movements. A score within the range of 0-2 will be allocated to the building in accordance with the criteria set out in Table 2 in Appendix A; and
- in addition, a score corresponding to the Phase 2 settlement assessment risk/damage category within the range of 0-5 is allocated to the building.

9.3 The scores for each of the three categories (paragraph 9.2) are added together to inform the decision-making process. In general, listed buildings which score a total of three or higher are subject to further assessment as part of the Phase 3 iterative process. Buildings which score a total of two or less are predicted to suffer a degree of damage which will be easily repairable using standard conservation-based techniques and hence no protective measures for the building's particular features are required. However, ultimately the professional judgement of engineering and historic building specialists will be used to determine whether additional analysis is required. Upon conclusion of the Phase 3 iterations, a final composite score will be arrived at, comprising the risk/damage category of the building (ignoring the fact that it is a listed building) assessed in accordance with the normal principles of Phase 3 assessment, to which will be added final scores for each of the two additional sensitivities referred to in paragraph 9.2 bullet points one and two in accordance with Table 2 in Appendix A, and this final composite score will constitute the risk/damage category of the listed building for the purposes of paragraph 4.16 above.

9.4 The relevant local authority will be consulted on the results of the listed building assessment reports for listed buildings subject to Phase 3 assessment and the proposals for protective measures, if any are required. Historic England will also be consulted in relation to listed buildings subject to Phase 3 assessment where they would normally be notified or consulted on planning applications or listed building consent applications (as set out in DETR and DCMS Circular 1/01).

- 9.5 When considering the need and type of protective measures, due regard will be given to the sensitivity of the particular features of the building which are of architectural or historic interest and the sensitivity of the structure of the building to ground movement. Where the assessment highlights potential damage to the features of the building which it will be difficult or impossible to repair and/or if that damage will have a significant effect on its heritage value, the assessment may recommend appropriate measures to safeguard those features either in-situ or by temporary removal and storage off-site if those with relevant interest(s) in the building consent.
- 9.6 The form of monitoring of listed buildings will be determined based on the results of the assessment process.
- 9.7 If repair works are necessary, the arrangements for their carrying out or for reimbursement referred to in section 8 above will apply. Reimbursable costs will include the costs of any necessary expert advice from a person suitably qualified to advise on heritage issues. The carrying out of the relevant works will however require the consent of those with relevant interest(s) in the building.

10 Settlement deed

- 10.1 The Promoter has developed a Deed which the owner of a building may request. This is a formal legal undertaking concerning settlement, giving effect to the matters set out in this paper. The qualifying criteria for the Deed are attached as Annex A and the Deed itself, the terms of which are subject to change whilst the Bill is in Parliament, as Annex B. Subject to paragraph 11.1 below, and to paragraph 4.1 of the qualifying criteria, the Secretary of State will require the nominated undertaker concerned to enter into a deed in substantially the form of the final version of those terms, in accordance with the procedures set out in the qualifying criteria, with eligible owners complying with those procedures. It is not necessary to enter into the deed in order to benefit from the process set out in this paper.

11 New buildings

- 11.1 The requirements set out in this paper (including the requirement for the nominated undertaker to enter into a settlement deed) do not apply to a new building, for the construction of which planning permission was granted after 24 January 2022. They also do not apply to any new buildings which are not substantially completed by the date for giving notice referred to in paragraph 1.2 of the qualifying criteria for the settlement deed in Annex A. References to a building in the qualifying criteria are to be construed accordingly.

12 More Information

- 12.1 More detail on the Bill and related documents can be found at www.gov.uk/hs2-phase2b-crewe-manchester.

Appendix A:

Table 1: Building Damage Classification

Risk/Damage Category	Max Tensile Strain %	Description of Degree of Damage	Description of Typical Damage and Likely Form of Repair for Typical Masonry buildings	Approximate Crack Width (mm)
0	0.05 or less	Negligible	Hairline cracks.	
1	More than 0.05 and not exceeding 0.075	Very Slight	Fine cracks easily treated during normal redecorations. Perhaps isolated slight fracture in building. Cracks in exterior brickwork visible upon close inspection.	0.1 to 1
2	More than 0.075 and not exceeding 0.15	Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible; some repointing may be required for weather-tightness. Doors and windows may stick slightly.	1 to 5
3	More than 0.15 and not exceeding 0.3	Moderate	Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Repointing and possibly replacement of a small amount of exterior brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired.	5 to 15 or a number of cracks greater than 3
4	More than 0.3	Severe	Extensive repair involving removal and replacement of sections of walls, especially over doors and windows required. Windows and door frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably, some loss of bearing in beams. Utility services disrupted.	15 to 25 but also depends on number of cracks

Risk/Damage Category	Max Tensile Strain %	Description of Degree of Damage	Description of Typical Damage and Likely Form of Repair for Typical Masonry buildings	Approximate Crack Width (mm)
5		Very Severe	Major repair required involving partial or complete reconstruction. Beams lose bearing, walls lean badly and require shoring. Windows broken by distortion. Danger of instability.	Usually greater than 25 but depends on number of cracks

Notes

1. Table 1 is based on the work of Burland et al (1977) and includes typical maximum tensile strains for the various damage categories (column 2) used in Phase Two settlement analysis.
2. Crack width is only one aspect of damage and should not be used on its own as a direct measure of it.

Table 2: Scoring for the Sensitivity Assessment of Listed Buildings

Score	Criteria	Sensitivity of the structure to ground movements and interaction with adjacent buildings
0	Masonry building with lime mortar not surrounded by other buildings. Uniform facades with no particular large openings.	No particular sensitive features
1	Buildings of delicate structural form or buildings sandwiched between modern framed buildings which are much stiffer, perhaps with one or more significant openings.	Brittle finishes, e.g. faience or tight-jointed stonework, which are susceptible to small movements and difficult to repair.
2	Buildings which, by their structural form, will tend to concentrate all their movements in one location.	Finishes which if damaged will have a significant effect on the heritage of the building, e.g. cracks through frescos.

Appendix B:

Qualifying criteria for deed concerning settlement

1. Criteria for Eligibility

- 1.1. The person must have a legal estate in all or part of a building (which where relevant is treated as including any bridge, tunnel or major service media in which the person has a legal estate or interest and which is connected to the building) 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 by the nominated undertaker concerned, as finally designed by the nominated undertaker. The legal estate he holds must be sufficient for him to comprise an “owner” within the meaning of the Acquisition of Land Act 1981.
- 1.2. The person must give notice to the nominated undertaker concerned at least ten months before construction of the part of the tunnel, retained cutting, shaft or box concerned is intended to be begun by the nominated undertaker. After delivery to him of the unexecuted deed, he must within 21 days return both parts of the deed to the nominated undertaker duly executed by him whereupon the nominated undertaker will execute and complete the deed and return to him one part. This is to give sufficient time after completion of the deed for the nominated undertaker to prepare a settlement report and for its discussion where required under the deed.
- 1.3. To ease administration, any person whose building falls within the limits of deviation for a part of a railway work which is shown on the deposited plans and sections as intended to be in tunnel, retained cutting, shaft or box, or which is within 30 metres of those limits, is to be able to give notice to the nominated undertaker in advance of final design of the works concerned by the nominated undertaker (or in the period before his appointment, to the Secretary of State). The nominated undertaker would then be under a duty to deliver the deed if, on final design within the relevant limits of deviation, it is found that the building is within 30 metres of a tunnel, retained cutting, shaft, or box.

- 1.4. To give notice to the nominated undertaker in advance of final design (pre-register for a settlement deed), you will need to provide:
- the name and address of applicant;
 - an email address and/or telephone number for future communication; and
 - the address of the building or part of the building for which the Settlement Deed is required
- 1.5. Pre-registration will be brought forward in due course, with details of where to apply published here.
- 1.6. Pre-registration is optional – you do not have to pre-register to be considered for a Settlement Deed. Eligibility checks will not be undertaken at pre-registration, but will be completed at a time consistent with the construction schedule.
- 1.7. In the deed, the expression “the Building” in clause 1(1) will be defined to be the whole building to which any assessment to be carried out under clause 2 of the deed relates, and “the Protected Property” as the particular part of the Building in which the person holds a legal estate or has repairing obligations.

2. Multiple owners of a building

- 2.1. If any particular building has more than one person who is an “owner” (within the meaning of the Acquisition of Land Act 1981), each of them is to be entitled to a deed. However, the deed makes provision (amongst other matters) in clause 2(14) for the appointment of a single engineer for the building, and in clause 9(12) for a single consolidated dispute resolution proceeding in cases where clause 2(8) to (15) apply.

3. Other Matters

- 3.1. Where there is more than one person responsible for repair of the building concerned the nominated undertaker is to be able to insert provision in clause 6 of the draft deed limiting the application of that

clause in relation to any particular owner to the damage for which the owner has a repairing responsibility.

- 3.2. The notice mentioned in paragraph 1.2 above must give sufficient information to enable the nominated undertaker to prepare the relevant deed, and in particular must identify the building concerned, the nature of the interest in it of the person giving the notice and of his repairing obligations, and whether there are other owners within the meaning of the Acquisition of Land Act 1981 of the building or occupiers.

References

Impacts of tunnels in the UK

<https://webarchive.nationalarchives.gov.uk/20131203120858/http://assets.hs2.org.uk/sites/default/files/inserts/Impacts%20of%20tunnels%20in%20the%20UK.pdf>

Tunnelling report Non-technical summary

https://webarchive.nationalarchives.gov.uk/20131203120902/http://assets.hs2.org.uk/sites/default/files/inserts/PR28_Tunnelling%20Report%20NTS_0813update.pdf

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