EXHIBIT LIST

Reference No: HOL/00186

Petitioner: Potter Row Neighbourhood Watch Scheme Published to Collaboration Area: Thursday 10-Nov-2016

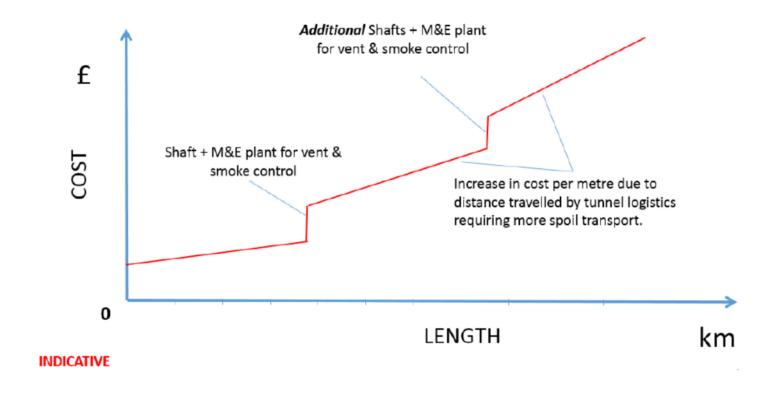
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Slide from presentation by Tim Smart on 27 June 2016 to House of Lords HS2 Select Committee

Cost vs. Length



P1509 (38)



Leader of the Council

Buckinghamshire County Council

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18 October 2016

Hilary Wharf Potter Row NeighbourHood Watch Scheme and Siblevs Rise Residents Group

Dear Hilary,

Chilterns Tunnel Extension to Liberty Lane

I support your proposal for a tunnel extension to Liberty Lane, especially as it has not been possible to bring the longer tunnel to the House of Lords HS2 Committee. I understand it protects more residents, saves another 1km of the AONB and you will be demonstrating that there is no net cost or impact on the programme schedule.

Buckinghamshire County Council is familiar with the Transport and Works Act Order (TWAO) process and in my view the necessary amendments could be done via a TWAO (not requiring an AP) which has precedent in both this project (at Calvert) and for many other railway projects.

A liberty Lane portal position is also better than south heath in that the gradient is only 1% compared to 2.5%. It avoids Jenkins Wood and potential dewatering issues of the slopes so near the wood, the topography is slightly better and there are huge community benefits in moving it away from South Heath and much of Potter Row, where many homes exceed the noise LAMax LOAEL (60db at façade) at present; some 150. It reduces blight from 330 homes to 30 (within 1km of the portal).

I also understand the proposals are not dependant on the outcome of the Great Missenden haul road possible relocation.

Yours sincerely,

Martin Tett

Martin Tett Leader

CC Chilterns Conservation Board, Right Hon Cheryl Gillan MP









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Chairman: lan Reay **Chief Officer** Sue Holden

Date 8th November 2016

By email to: Marianne Bowtell HS2 Ltd

Dear Marianne,

House of Lords Select Committee Petitions numbered 186 and 655: Potter Row Neighbourhood Watch Scheme and Sibleys Rise Residents Group

Hilary Wharf has informed the Conservation Board that the groups she represents will be petitioning the House of Lords Select Committee, asking for a further extension of the bored Chiltern Tunnel from South Heath to Liberty Lane to be fully reviewed. We understand that Hilary will argue that this tunnel extension could be achieved:

- 1. at no extra cost compared to the current proposals and,
- 2. with no delay to the construction programme (I understand that work would not require an Additional Provision but could be achieved by means of an order under the Transport and Works Act).

In addition, in comparison to the proposed scheme, we understand the tunnel extension will:

- provide significantly better mitigation for noise impacts to the local community:
- avoid potential impacts on Jenkin's Wood an area of ancient woodland containing the remains of an historic settlement that, under current proposals, sits on the edge of the deep north portal cutting with risks to hydrology and air quality;
- reduce impacts on habitat connectivity particularly between Jenkins Wood and Stockings Wood, another ancient woodland;
- avoid 2 footpath diversions and a highly visible new footbridge, and,
- avoid the installation of a new national grid pylon, 11m higher than existing pylons and visible across the Misbourne Valley.

The Chilterns Conservation Board is therefore fully supportive of the petitioners' request for a tunnel extension to Liberty Lane to be fully reviewed. We urge HS2 Ltd to give serious consideration to this proposal, implementation of which would go some way towards fulfilling the duty of public bodies under s85 of the Countryside and Rights of Way Act (2000) to:

"have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty."

Yours sincerely

Kath Daly

Countryside Officer

Chilterns Conservation Board

CC by email to Rt Hon Mrs Cheryll Gillan, MP Martin Tett, Buckinghamshire County Council, Hilary Wharf, Malcolm Griffiths, Alistair Davie, HS2

Extract from E-mail from Neil Cowie on disposal costs and excavated material and landfill: 14 January 2016

From: Neil Cowie [mailto:neil.cowie@hs2.org.uk]

Sent: 14 January 2016 15:46 **To:** Hilary Wharf; Marianne Bowtell

Cc: beverley eades manton; 'Malcolm Griffiths'; caulfieldn@parliament.uk; 'GILLAN, Cheryl'

Subject: RE: REPA: excavated quantities and tunnel costs

Hilary

Thank you for your e-mail of 4 January 2016 regarding excavated materials and tunnel costs. We have the following response to your comments.

REPA Option C5 – claimed saving in disposal costs.

You have referred to route wide overall disposal figures from tables in SES3/AP4 documents. The overall figures in the tables are not directly applicable to the assessment of local mass haul movements associated with the Chiltern Tunnel Extension in AP4, as we explain below.

Additional Provision (AP)2 removed the sustainable placement area at Hunts Green Farm and revised the mass haul movements for this area of the Chilterns so that surplus excavation from the South Heath area of approx. 650,000m3 has to be moved northwards for use along the route to provide material for embankments up to Aylesbury.

The Chiltern Tunnel extension in AP4 maintains the same volume of material that needs to be moved northwards towards Aylesbury. Both the AP2 and AP4 earthwork movements are based on providing for beneficial re-use of excavated material from the South Heath area for use within this area and towards Aylesbury, all of which is within an economic haul distance, thereby seeking to limit the use of public highways and without the need for disposal of this material offsite. None of this material would 'end up at landfill' as claimed in your letter.

The REPA tunnel proposal (Option C5 to Leather Lane) would alter these mass haul assumptions. Firstly, it would increase the amount of tunnel spoil generated at the southern portal – by approx. 230,000m3 to a total of 611,000m3. This would require off-site disposal as it cannot be placed at the southern portal area without causing further additional environmental impacts. Secondly, by adopting a change in rail levels between the northern portal at Leather Lane and Small Dean, it would be feasible to achieve a balance of cut and fill within the CFA10 area. The costing for Option C5 assumed this adjustment could occur as part of the cost comparison with Option C6. However, unlike Option C6, the REPA Option C5 would not provide the needed additional fill material for use immediately northwards along the trace and for the Aylesbury embankments in the near locality.

Accordingly, for REPA Option C5, additional material would need to be imported for these railway embankments by Aylesbury of approx. 650,000m3. This would need to be provided from material that is otherwise destined for off-site disposal. Whilst this would reduce the overall amount of material for disposal (as suggested by REPA) importing this material to Aylesbury would in fact come at a net additional cost to the project, which we have estimated as potentially over £10m. This would further increase the present cost differential of REPA Option C5 compared to Option C6.

This additional cost estimate is based on the following:

- Material for use at Aylesbury would probably have to be sourced from the Ruislip railhead. This would mean no off-site disposal by rail of that material (costed at £15/m3); however, this would be more than off-set as
- There will be new costs associated with the transport of an equivalent 650,000m3 of material to the Aylesbury embankments. It is assumed that this material would be brought

Extract from E-mail from Neil Cowie on disposal costs and excavated material and landfill: 14 January 2016

by rail from the Ruislip railhead to a Calvert railhead, transferred to road lorries for haul to the A418 roadhead and then transferred to site vehicles for local placement (ie as assumed in the original hybrid Bill). Associated costs for the transport and placement of this material are approximately £31/m3.

The above figures assume that the disposal of material off-site could be for beneficial re-use and thus would not incur additional costs associated with gate fees at landfill disposal sites. If gate fees were added to disposal costs, this would reduce, but not wholly remove, the above cost differential.

This option would also re-introduce significant additional mass haul traffic (around 153,000 2-way lorry movements) onto local roads from Calvert and along the A41 through Waddesdon with associated adverse environmental impacts.

SES3 and AP4 ES Volume 5, Appendix WM-001-000 Annex 1 - Table 1d balance of excavated material

The balance table (Table 1d) only gives an indication of the excess of excavated material within each CFA. The lines in this table take no account of the mass-haul movements, and the values within each CFA give no indication of whether the material will ultimately be considered as surplus to use within the scheme. The ES does not say that the balance of material stated within each CFA will require off-site disposal. The only significant number in this table is the total value, which takes account of the route-wide balance of material generated, against fill required.

SES3 and AP4 ES Volume 3 – Route-wide effects, Paragraph 19.6.10, states that the majority of the reduction in on-site re-use affecting the quantity of fill material required by the AP4 revised scheme results from the extension of tunnelling in CFA9 (the Chiltern tunnel extension). This is due to additional tunnel excavated material being generated at the south portal (in CFA7) and less being generated in CFA9 due to removal of the deep cuttings by Mantles Wood.

Excavation from the AP4 scheme thus includes two main elements:

- Arising from the tunnel extension, additional material generated at the tunnel south portal
 of approx. 380,000m3 (0.75million tonnes). This is additional material not required for reuse on the project; and
- Excavation from the revised South Heath cutting, north of the Extended Chiltern Tunnel, which can be beneficially re-used in fill requirements in CFAs 10 and 11 and which substantially avoids the need for disposal off-site of excavated material from the South Heath area.

Fill material is required within an economic haul distance northwards to meet fill requirements in CFA10 and CFA11. This will come from the cuttings in CFA9 and CFA10. The transfer of material further north from this area becomes less economic due to the greater travel distances required and the mass haul thus provides for shorter material hauls to balance cut and fill needs along the route.

With respect to your query regarding the discrepancy between Table 1d and other tables for CL4 material in CFA10, please note that there is a transcription error in Table 1b. The forecast quantities of CL4 required in CFA 10 should read 3,741,868 not 3,088,024. However, the balances given in Table 1d are correct.

Landfill in Bucks and Surrey

The REPA assertion that the southeast region does not have the landfill capacity to support the expected surplus inert excavated material seems to be based on an assumption that the full 12.1million tonnes would require disposal in a single year (2025). This is not the case as was

Extract from E-mail from Neil Cowie on disposal costs and excavated material and landfill: 14 January 2016

explained in SES3/AP4 ES Volume 3 paragraph 19.6.56. This paragraph states that the excavated material generation has been assumed to take place at a constant rate over a five year earthworks period. Based on this assumption, the total quantity of inert waste forecast to require offsite disposal in each of the five years in the southeast region is just over 2.4million tonnes.

Forecast of landfill capacity in the southeast region in each of these years has also been assessed, taking account of the fact that additional capacity is created each year, but at a rate which has shown over recent years to be approximately 6% below the quantity requiring disposal each year. On this basis, it is considered that there would be sufficient inert waste landfill capacity available to accept the forecast quantity of inert surplus excavated material for off-site disposal to landfill.

In addition, opportunities for the beneficial off-site reuse of surplus excavated material are being investigated and so it is likely that the quantity requiring off-site disposal to landfill will decrease.

REPA are concerned that no specific landfill sites have been identified. A list of potential landfill sites has been identified in Surrey and Buckinghamshire and initial meetings were held with both Surrey County Council and with Buckinghamshire County Council in early 2013. In addition, further information was obtained from both these Local Authorities in follow-up contact in 2014.

Homes in excess of LAmax LOAEL, and impact of AP4 on South Heath and Potter Row

| | | | | Analysis of operational noise impacts and of | | | | | | | | | | | | | of AP4 mitigation compared with original ES proposal and LAmax LOAEL. | | | | | | | | | | | | |
|------------------|-----------------------------|--|-----------------|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|--------|----------|---|-----------------|--|---|-----------------|-----------------------------|-----------------|-----------------|----------|------------|----------------------|------|---------------|----------------|----------|--|
| | HOUSE | LOCATION | | | OPERATIONAL NOISE - FROM ES | | | | | | | | | | | NOISE - WITH 3 m BARRIER etc after AP4 | | | | | | | | | | IMPACT OF AP4 | | | |
| ID | NAME | | HS2 | | | | | | Do Something | | CHANGE - increase | | | HS2 AP4 with 3m barriers Proposed scheme- yr 15 traffic Day Night Max HS2 Max TSI | | | | AP4 peak noise | BASELINE + HS2 Do Something | | dB increase | | | dB Reduction in nois | | | e Homes | | |
| | (eg of location |) | | | | | | | | | | | | | | | | Max TSI over | | | | | | 1 5 | | | | | |
| 700358 | 3 hears | off Aylesbury rd, GM | Day | Night | viax HS. | iviax 15i | Day 52 | Night 49 | Max 57 | Day | Night | Day | Night | Max TS | Day 57 | 48 | 71 | 73 | peak LOAEL 15 | Day 59 | Night 51 | Day 6 | Night 3 | 16 | Day | night | Max | 1 | |
| | | Frith Hill, South Heath | 50 | 42 | 67 | 70 | 57 | 50 | 50 | 58 | 51 | 1 | 0 | 20 | 46 | 38 | 67 | 70 | 12 | 57 | 50 | 0 | 0 | 20 | 1 | 0 | 0 | 1 | |
| | | Frith Hill, GM | | | | | 57 | 50 | 50 | | | | | | 51 | 32 | 65 | 68 | 10 | 58 | 50 | 1 | 0 | 18 | _ | | | 1 | |
| 375485 | Brambles | Potter Row, G M | 54 | 44 | 67 | 70 | 50 | 45 | 51 | 55 | 48 | 5 | 3 | 19 | 51 | 42 | 65 | 67 | 9 | 54 | 47 | 4 | 2 | 16 | 1 | 1 | 3 | 3 | |
| | Bocken | Frith Hill, South Heath | 47 | 38 | 66 | 69 | 47 | 41 | 50 | 50 | 43 | 3 | 2 | 19 | 45 | 36 | 64 | 67 | 9 | 49 | 42 | 2 | 1 | 17 | 1 | 1 | 2 | 3 | |
| | North lodge | Potter Row, G M | 51 | 42 | 64 | 66 | 46 | 43 | 68 | 52 | 45 | 6 | 2 | -2 | 49 | 40 | 64 | 67 | 9 | 51 | 45 | 5 | 2 | -1 | 1 | 0 | -1 | 1 | |
| 374914 | | Sibleys Rise, South He | 43 | 35 | 65 | 68 | 47 | 40 | 47 | 48 | 40 | 1 | 1 | 21 | 41 | 33 | 63 | 66 | 8 | 47 | 40 | 0 | 0 | 19 | 1 | 1 | 2 | 25 | |
| 374849 | Hammondh | Bayleys Hatch, South F Potter Row, G M | 47 53 | 39 44 | 66 63 | 69 66 | 50 46 | 41 39 | 63 68 | 51 54 | 42 45 | 1 8 | 6 | -2 | 46 51 | 38 42 | 64 63 | 66 66 | 8 8 | 50 52 | 41 44 | 6 | 0 4 | -2 | 2 | 2 | 3 0 | 2 | |
| | | Potter Row, G M | 51 | 41 | 64 | 67 | 44 | 39 | 46 | 52 | 43 | 7 | 4 | 21 | 48 | 39 | 62 | 65 | 7 | 50 | 42 | 6 | 3 | 19 | 1 | 1 | 2 | 1 | |
| | | Potter Row, G M | 53 | 44 | 65 | 67 | 44 | 39 | 46 | 53 | 45 | 9 | 6 | 21 | 51 | 42 | 63 | 65 | 7 | 52 | 44 | 8 | 5 | 19 | 1 | 1 | 2 | 1 | |
| 700359 | Cottage farm | off Aylesbury Road, GM | 49 | 40 | 61 | 64 | 52 | 46 | 90 | 54 | 47 | 2 | 1 | -26 | 49 | 40 | 61 | 64 | 6 | 54 | 47 | 2 | 1 | -26 | 0 | 0 | 0 | 1 | |
| | | Potter Row, G M | 49 | 39 | 61 | 64 | 51 | 50 | 50 | 53 | 51 | 2 | 0 | 14 | 47 | 38 | 61 | 64 | 6 | 52 | 51 | 2 | 0 | 14 | 0 | 0 | 0 | 5 | |
| 375495 374775 | Firs | Potter Row, G M | 51 44 | 42 37 | 64 63 | 66 66 | 44 47 | 39 40 | 46 47 | 52 47 | 44 | 8 1 | 5 0 | 20 | 49 42 | 40 35 | 61 | 64 63 | 6 | 50 46 | 42 | 6 0 | 0 | 18 16 | 2 | 0 | 2 | 1 19 | |
| | Old lamb | Sibleys Rise, South He Potter Row, G M | 50 | 40 | 62 | 65 | 46 | 36 | 47 | 51 | 42 | 5 | 6 | 19 18 | 48 | 38 | 61 59 | 62 | 4 | 50 | 40 | 4 | 4 | 15 | 1 | 2 | 3 | 4 | |
| | | Potter Row, G M | 49 | 40 | 64 | 66 | 46 | 36 | 47 | 51 | 41 | 5 | 5 | 19 | 47 | 37 | 59 | 62 | 4 | 49 | 40 | 3 | 4 | 15 | 2 | 1 | 4 | 3 | |
| | | Ayles bury Road, GM | 47 | 37 | 59 | 62 | 53 | 47 | 90 | 54 | 47 | 1 | 0 | -28 | 47 | 37 | 60 | 62 | 4 | 54 | 47 | 1 | 0 | -28 | 0 | 0 | 0 | 2 | |
| | | Ayesbury Road, GM, (Offi | 47 | 37 | 59 | 62 | 53 | 47 | 90 | 54 | 47 | 1 | 0 | -28 | 47 | 37 | 60 | 62 | 4 | 54 | 47 | 1 | 0 | -28 | 0 | 0 | 0 | 1 | |
| | Bury farm | Potter Row, G M | 49 | 40 | 67 | 69 | 44 | 39 | 46 | 50 | 42 | 6 | 3 | 23 | 43 | 35 | 59 | 61 | 3 | 46 | 40 | 2 | 1 | 15 | 4 | 2 | 8 | 5 | |
| 375214 | Greenacros | Bayleys Hatch, South F Frith Hill, South Heath | 45 40 | 37 31 | 66 59 | 69 62 | 48 51 | 44 45 | 44 52 | 49 51 | 44 45 | 0 | 0 | 25 10 | 41 39 | 33 | 59 59 | 61 61 | 3 | 48 51 | 44 | 0 | 0 | 17 9 | 0 | 1 0 | 8 | 10 | |
| | | Frith Hill, G M | 40 | 31 | 58 | 60 | 51 | 45 | 52 | 51 | 45 | 0 | 0 | 8 | 39 | 30 | 58 | 61 | 3 | 51 | 45 | 0 | 0 | 9 | 0 | 0 | -1 | 3 | |
| 375619 | | Potter Row, G M | 47 | 38 | 59 | 62 | 44 | 39 | 46 | 49 | 41 | 5 | 2 | 16 | 44 | 35 | 57 | 60 | 2 | 47 | 40 | 3 | 1 | 14 | 2 | 1 | 2 | 2 | |
| | Warren | Potter Row, G M | 47 | 38 | 60 | 62 | 46 | 36 | 47 | 50 | 40 | 4 | 4 | 15 | 45 | 36 | 58 | 60 | 2 | 48 | 39 | 2 | 3 | 13 | 2 | 1 | 2 | 1 | |
| 375134 | | Kings Lane, South Heath | 42 | 34 | 61 | 64 | 47 | 41 | 40 | 48 | 41 | 1 | 0 | 24 | 40 | 33 | 57 | 59 | 1 | 47 | 41 | 0 | 0 | 19 | 1 | 0 | 5 | 10 | |
| 374806 | | Kings Lane, South Heath | 44 | 36 | 60 | 62 | 47 | 41 | 40 | 48 | 41 | 1 | 0 | 22 | 43 | 36 | 56 | 59 | 1 | 47 | 41 | 0 | 0 | 19 | 1 | 0 | 3 | 8 | |
| 351452 375417 | | Aylesbury Road, G Potter Row, G M | 41 43 | 31 34 | 56 64 | 59 67 | 62 48 | 50 41 | 62 49 | 62 49 | 50 42 | 0 1 | 1 | -3 18 | 41 38 | 31 30 | 56 56 | 59 58 | 0 | 62 48 | 50 41 | 0 | 0 | -3 9 | 0 | 0 | 0 9 | 2 6 | |
| 375025 | westnorpe | Kings Lane, South Heath | 41 | 33 | 62 | 65 | 48 | 41 | 49 | 48 | 41 | 1 | 0 | 16 | 37 | 30 | 55 | 58 | 0 | 48 | 41 | 0 | 0 | 9 | 1 | 0 | 7 | 8 | |
| 355252 | Havenfields | Ayles bury Road, GM | 41 | 31 | 56 | 59 | 51 | 40 | 62 | 51 | 40 | 0 | 1 | -3 | 40 | 31 | 55 | 58 | 0 | 51 | 40 | 0 | 1 | -4 | 0 | 0 | 1 | 1 | |
| OTAL | over 60 PE | AK LOAEL (at faça | ide) i | e 57.5d | dB free | -field, | after 3 | 3m bar | riers, a | nd ext | ra de | pth c | of cutti | ing | | | | | | | | | | | | | | 141 | |
| 376704 | | Kings Lane, South Heath | 45 | 38 | 56 | 58 | 47 | 41 | 40 | 47 | 40 | 0 | 0 | 18 | <35 | <25 | 54 | 57 | | 47 | 41 | 0 | 0 | 17 | 0 | 0 | 1 | 10 | |
| 374515 | Mill hse | Frith Hill, G M | 37 | 28 | 55 | 58 | 51 | 45 | 52 | 51 | 45 | 0 | 0 | 6 | 35 | 26 | 54 | 57 | | 51 | 45 | 0 | 0 | 5 | 0 | 0 | 1 | 3 | |
| | Road farm | Ayles bury Road, GM | 39 | 29 | 54 | 57 | 52 | 40 | 62 | 52 | 40 | 0 | 0 | -5 | 38 | 29 | 54 | 57 | | 52 | 40 | 0 | 0 | -5 | 0 | 0 | 0 | 2 | |
| 376750 | | Kings Lane, South Heath | 40 | 33 | 55 | 58 | 48 | 41 | 49 | 48 | 41 | 0 | 0 | 9 | <35 | <25 | 53 | 56 | | 48 | 41 | 0 | 0 | 7 | 0 | 0 | 2 | 9 | |
| | Hillcroft Hillcroft cott | Potter Row, G M Potter Row, G M | 44 43 | 35 34 | 58 58 | 60 61 | 46 46 | 36 36 | 47 47 | 48 48 | 38 38 | 2 | 2 | 13 14 | 41 40 | 32 31 | 54 53 | 56 55 | | 47 47 | 37 37 | 1 | 1 | . 9 | 1 | 1 | 4 6 | 1 | |
| | Westview | Aylesbury Road, GM | 37 | 28 | 52 | 55 | 62 | 50 | 62 | 62 | 50 | 0 | 0 | -7 | 37 | 27 | 52 | 55 | | 62 | 50 | 0 | 0 | -7 | 0 | 0 | 0 | 4 | |
| | | Frith Hill, GM | 36 | 27 | 53 | 56 | 51 | 45 | 52 | 51 | 45 | 0 | 0 | 4 | 35 | 26 | 52 | 55 | | 51 | 45 | 0 | 0 | 3 | 0 | 0 | 1 | 2 | |
| | F H Stables | Frith Hill, G M, (Stables) | 36 | 27 | 53 | 56 | 51 | 45 | 52 | 51 | 45 | 0 | 0 | 4 | 35 | 26 | 52 | 55 | | 51 | 45 | 0 | 0 | 3 | 0 | 0 | 1 | 1 | |
| 377405 | | Wood Lane, South Heath | 46 | 40 | 56 | 59 | 46 | 41 | 51 | 46 | 40 | 0 | 0 | 8 | <35 | <25 | 51 | 54 | | 46 | 41 | 0 | 0 | 3 | 0 | 0 | 5 | 16 | |
| 374188 377084 | | Ballinger Road, South He Lappetts Lane, South Hear | 37 38 | 28 30 | 54 56 | 57 59 | 51 47 | 41 40 | 46 47 | 52 47 | 41 40 | 0 | 0 | 11 12 | <35 <35 | 26 <25 | 51 51 | 54 53 | | 51 47 | 41 | 0 | 0 | . 8 6 | 0 | 0 | 3 6 | 13 20 | |
| 374262 | | Meadow Lane, South Hea | 38 | 29 | 56 | 59 | 47 | 40 | 47 | 47 | 40 | 0 | 0 | 11 | <35 | 27 | 50 | 53 | | 46 | 40 | 0 | 0 | 6 | 0 | 0 | 5 | 6 | |
| 377770 | | Post Office, Ballinger Roa | 34 | 26 | 50 | 52 | 51 | 41 | 46 | 51 | 41 | 0 | 0 | 6 | <35 | 26 | 50 | 52 | | 51 | 41 | 0 | 0 | 6 | o | 0 | 0 | 1 | |
| 375067 | | Lappetts Lane, South Hear | 37 | 30 | 53 | 56 | 48 | 41 | 49 | 48 | 41 | 0 | 0 | 7 | 36 | 29 | 50 | 52 | | 48 | 41 | 0 | 0 | 3 | 0 | 0 | 4 | 5 | |
| 377793 | | Marriotts Avenue, South | 36 | 28 | 53 | 55 | 46 | 39 | 47 | 46 | 39 | 0 | 0 | 8 | <35 | <25 | 47 | 50 | | 46 | 39 | 0 | 0 | 3 | 0 | 0 | 5 | 17 | |
| 377718 | | Ballinger Road, South He | 36 | 28 | 53 | 56 | 51 | 41 | 46 | 51 | 41 | 0 | 0 | 10 | <35 | <25 | 57 | 50 | | 51 | 41 | 0 | 0 | 4 | 0 | 0 | 6 | 14 | |
| 354579 377835 | | Elmtree Green, GM Marriotts Avenue, South | 33 35 | 24 | 47 52 | 50 55 | 53 46 | 41 39 | 62 47 | 53 46 | 41 39 | 0 | 0 | -12 8 | <35 <35 | <25 <25 | 46 44 | 48 47 | | 53 46 | 41 39 | 0 | 0 | -14 0 | 0 | 0 | 2 8 | 18 18 | |
| 377770 | | Ballinger Road, South He | 34 | 26 | 50 | 52 | 51 | 41 | 46 | 51 | 41 | 0 | 0 | 6 | <35 | <25 | 44 | 47 | | 51 | 41 | 0 | 0 | 1 | o | 0 | 5 | 15 | |
| 377005 | | Wood Lane, South Heath | 42 | 35 | 51 | 54 | 47 | 40 | 47 | 46 | 39 | -1 | -1 | 7 | <35 | <25 | 44 | 47 | | 47 | 40 | 0 | 0 | 0 | -1 | -1 | 7 | 9 | |
| | Cudsdens | Chesham Road, GM | 45 | 38 | 56 | 58 | 55 | 48 | 76 | 55 | 48 | 0 | 0 | -18 | <35 | <25 | 44 | 47 | | 55 | 48 | 0 | 0 | -29 | 0 | 0 | 11 | 1 | |
| 353672 | | Church Street, GM | 31 | 22 | 44 | 47 | 62 | 50 | 62 | 62 | 50 | 0 | 0 | -15 | <35 | <25 | 44 | 47 | | 62 | 50 | 0 | 0 | -15 | 0 | 0 | 0 | 1 | |
| 353672 378065 | | c of e school, GM Ballinger Road, South He | ວາ | 24 | 48 | 50 | 62 51 | 50 41 | 62 46 | 51 | 41 | 0 | 0 | 4 | <35 | <25 <25 | 44 | 47 45 | 1 | 62 51 | 50 41 | 0 | 0 | -15 -1 | 0 | 0 | 5 | 1 22 | |
| 376681 | | Kings Lane, South Heath | 32 41 | 36 | 57 | 59 | 51 51 | 46 | 51 | 51 41 | 36 | -10 | -10 | 8 | <35 <35 | <25 | <40 | 45 | | 51 | 41 | 0 | 0 | >-1 | -10 | -10 | >-19 | 1 | |
| 374552 | | Cudsdens Court, GM | 56 | 49 | 61 | 64 | 56 | 50 | 76 | 56 | 49 | 0 | 0 | -12 | <35 | <25 | <40 | 40 | | 56 | 49 | 0 | 0 | >-36 | 0 | 0 | >-24 | 6 | |
| | | essed for AP4 | | | | | | | | | | | | | | | | | | | | | | | | | | 358 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | ,,,,, | |
| * 60dBn | nax at façade | equivalent to 57.5dB when expressed in free-field dB LA max peak noise (Tsi). Sources: AP4: CFA9: SV-004-009 (Vol. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | y and night noise dBleq dB max INCREASE in peak noise from HS2 , compared to baseline Nov 2013 ES: CFA 9: SV-004-009 (Vol5 Tech A | | | | | | | | | | | | 5 Tech App | | | | | | | | | | | | |
| | | | | HS2 peak noise dBMax dB increase in AP4 peak noise (TSI) over and above peak LOAEL (both measures in free-field) | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Query | aata | | | | | | dB imp | orover | nent (ie | noise | reduct | ion) with | n 3m barri | ers comp | ared to ES | | | | J | | Nove | emeber | 2016 | | |