

The HS2 Environmental Statement

A response to the HS2 Environmental Statement, prepared by
The Chesham Society



Leather Lane – Junction with A413

Disclaimer

The society is strongly opposed to the construction of HS2, principally because

- The original choice of route was ill-informed and misguided, the subsequent implementation has been very badly managed by the DfT and its creation (HS2 Ltd), and the claimed economic benefits have been shown to be greatly exaggerated by many financial commentators.
- The route through the AONB was originally chosen to maximise speed, while DfT now say the line is needed 'to increase capacity'. Less than half the line is in a tunnel, and the mitigation measures proposed for the remainder appear completely ineffectual. The degradation of the Missenden valley will have a long term impact on the attractiveness of the area as a destination for walkers and cyclists, which will lead to a decline in demand for local businesses .

We wish to place on record our objection to the HS2 scheme as a whole, on the grounds that

- No convincing business case has been made for it
- None of the various justifications for the scheme (speed, carbon emission reduction, capacity, rebalancing the economy, reducing London house prices ...) have survived independent scrutiny.
- It is of no conceivable benefit to residents of Buckinghamshire, whereas the 51m alternative¹ (to upgrade existing railways, so enhancing the overall connectivity) would be of some benefit.

As taxpayers, we consider ourselves to be directly and specifically affected by all aspects of the scheme, and so reserve the right to petition against any such aspects as may be discovered subsequent to the insultingly short period which has been granted for consultation on this document.

¹ <http://www.51m.co.uk/wp-content/uploads/2013/08/ch1.pdf>

1. Table of Contents

Disclaimer	2
References	4
1. Traffic in the AONB	5
1.1. Chilterns Tunnels	5
CRAG tunnel	5
REPA tunnel	6
2. Traffic Assessment in the ES	6
3. Road Users	7
Bus Passengers	7
School Busses	8
3.1. Other road users	8
Cyclists	8
Equestrian	10
Walkers	10
Summary	11
4. The A413	11
4.1. Traffic Flows	11
4.2. Junction Capacity	12
5. Site Access	13
6. AONB Lanes	14
6.1. Rocky Lane	14
ES Comments (Vol 2 CFA10)	15
ES Comments (Vol5 TA)	15
Displaced Traffic	15
6.2. Dunsmore Lane	16
6.3. Bowood Lane	16
6.4. Leather Lane (CFA9, 2.3.68-72)	16
6.5. Potter Row / Kings Lane CFA10, 2.3.21-26	17
7. B485 and Frith Hill	18
Frith Hill	18
The B485	19
7.1. Mantles wood portal	19
Deep Mill Bridge	20
7.2. Little Missenden	20
8. Tunnel Vent Shafts	20

8.1.	Little Missenden	20
8.2.	Amersham Vent Shaft.....	20
8.3.	Amersham Bypass.....	21
9.	Conclusions.....	21
9.1.	Workforce transport	22
9.2.	Spoil by Rail	22
Appendix 1.	The Transport Assessment; Major adverse	23
1.1.	Peak traffic flows.....	23
1.2.	Road Capacity Assessment	24
1.3.	Junction Assessment	25
1.4.	Summary	26
1.5.	Figure A1 Peak Traffic flow	28
1.6.	Figure A2 Traffic flow as percentage of road capacity	33
Appendix 2.	Mantles Wood access track	34

References

Paragraph references from this document are to Volume 2 of the ES, areas CFA 8,9 & 10, unless otherwise stated

Photography – www.chartridgephotographic.co.uk

1. Traffic in the AONB

1.1 Our main response to the HS2 Environmental Statement covers the issue of Traffic and Transport during the construction phase. We anticipate that this aspect of the scheme would have a seriously adverse affect on Chesham, for several reasons –

- Around one half of the surrounding countryside would be off-limits for recreational use, for both residents and visitors
- Transport links across the A413 would be effectively severed, separating Chesham businesses from potential customers to the west of the A413, and Chesham customers from High Wycombe
- Transport congestion on the A413 will cause major delays to commuters proceeding north towards Aylesbury or south via Amersham to the M25 or M40. More significantly, it will also affect the ambulance service serving our nearest A&E department in Stoke Mandeville
- Traffic avoiding the A413 is likely to take alternative, less suitable routes. Two of these (Rocky Lane – Chartridge Lane; B485 via South Heath) will (when not also obstructed by HS2 construction) lead to increased traffic congestion in Chesham.

1.2 Due to the extended duration of the construction phase (5 to 7 years), these effects cannot be dismissed as 'temporary'.

1.3 As the largest town in close proximity to the proposed line², Chesham will be affected by transport problems throughout the AONB, which form the subject of this report. We are also naturally concerned with obtaining adequate mitigation for all the other adverse effects anticipated throughout the AONB. These are covered elsewhere by collective submissions from groups in CFAs 8, 9 and 10. The society participated in community forums 9 and 10, and has assisted in the preparation of these documents. We fully endorse all the measures which they suggest.

1.1. Chilterns Tunnels

1.4 By selecting the chosen route option through the widest point of the Chilterns AONB, and without conducting a full environmental assessment, the government is in breach of its obligations under the Countryside and Rights of Way Act 2000, and under the Aarhus Convention³. These breaches would best be resolved by carrying out the required assessment and reconsidering the choice of route, since the scale of devastation to be inflicted on the AONB is now apparent.

Full tunnel

1.5 In the context of the current consultation, the only effective mitigation measure would be an extension of the (half) Chilterns Tunnel to a full tunnel, extending for the full width of the AONB and emerging beyond Wendover. The

² Chesham Old Town is 2.5 miles from the tunnel portal

³ http://en.wikipedia.org/wiki/Aarhus_Convention

Chiltern Ridges Action Group have produced a viable scheme to construct such a tunnel, which HS2 Ltd have refused to accept on cost grounds, while refusing to enter into any meaningful discussion of these costs.

1.6 Any additional costs, and increased construction times, are clearly the result of an initial choice of an inappropriate route. The HS2 project should suffer the consequences, not the Chilterns AONB.

1.7 The society fully supports the proposal for a full Chilterns Tunnel.

REPA tunnel

1.8 The initial route proposed for HS2 (and consulted on between June 2011-January 2012) was tunnelled from the M25 to Mantles Green, just beyond Amersham, and proceeded in a series of cut and cover tunnels and deep cuttings through the remainder of the Chilterns. This route was abandoned, since it threatened the chalk aquifer, and would have generated more spoil than the Channel tunnel (a fact initially unnoticed due to arithmetical errors on the part of HS2). The route announced by Justine Greening (after the consultation which overwhelmingly rejected the construction of HS2) extended the full bored tunnel to Mantles Wood. The selection of Mantles Wood was never justified⁴, although it was compared with various full tunnels, which were rejected on cost grounds.

1.9 When the initial construction plans were published in November 2011, the scale of the works proposed between Mantles Wood and Frith Hill became apparent. In our response to these plans we pointed out that it appeared likely that the incremental cost of extending the bored tunnel to the other side of Frith Hill would be less than the cost of the South Heath cut and cover tunnel, and its associated works.

1.10 This proposition was developed by REPA, who have now costed the South Heath Tunnel and HS2 proposals.⁵ The latest analysis indicates a saving of £11 million, for engineering alone or £21 million if property compensation costs etc are included. HS2 on the other hand maintain that the extended bored tunnel will cost an additional £59 million (engineering). In either case, the savings from reductions to compensation payments, and reduced impact on the wider local economy will far outweigh any small increase in construction costs.

1.11 The society strongly endorses the REPA proposals, and will support the REPA petition, should the full tunnel proposals fail to be adopted.

2. Traffic Assessment in the ES

2.1 HS2 failed to place Traffic and Transport on the agenda for any meeting of CFAs 9 or 10, since the Transport Studies were incomplete. Like many other things, all was to be revealed in the Environmental Statement. The documents which have now been presented are unsatisfactory on several grounds – these are discussed in some detail in Appendix 1 below.

2.2 As a consequence of these deficiencies, we regard the Transport assessment in the ES as unreliable and still incomplete – a fact which severely compromises

⁴ Other than that it sounds similar to Mantles Green

⁵ Residents Environmental Protection Association response to the Draft ES - <http://www.cheshamsociety.org.uk/HS2/REPA/REPA%2010%20July%202013.pdf>

the ES consultation as a whole, since traffic congestion is at the root of most problems during the construction phase. We take it to indicate that congestion will increase considerably, but that HS2 Ltd are unable or unwilling to provide any more specific information about the severity of the effect in different locations.

2.3 We request that a full, comprehensive and reliable Traffic Assessment be performed before the Hybrid Bill is debated.

3. Road Users

3.1 This inadequate Transport Assessment results in only derisory mitigation being recommended for the benefit of motorised users. Other users are almost completely ignored.

Bus Passengers

12.4.20 (CFA9) No significant impact on bus services during the construction of the Proposed Scheme has been identified in this area.

12.4.21 (CFAs 8,10) Apart from general congestions, there will be no effect on bus services, or disruption at stations or interchanges that will result from construction of the Proposed Scheme.

3.2 It is not clear what effects, "apart from general congestions", might have been anticipated, but are excluded by 12.4.21. As discussed in appendix 1, the Traffic Assessment does not allow any useful (quantitative) predictions to be made regarding future congestion. Reducing road use by HS2 contractors and HGVs would appear to offer the only possibility of effective mitigation.

3.3 Routes which appear particularly at risk are shown in the table below

Route		Disruption
55	Chesham - Amersham - Wendover - Stoke Mandeville Hospital - Aylesbury	A413, Amersham - Wendover
177	Great Missenden/Chartridge - Chesham	A413 Amersham- Gt Missenden; A4128, B485, Kings Lane
1	High Wycombe - Hazlemere - Amersham - Chesham	A404, Whielden Street, A413, A404
73	Chesham - Chesham Bois - Amersham - Penn	A355 Gore Hill
336	High Wycombe - Beaconsfield - Amersham - Rickmansworth - Watford	A355 Gore Hill
353	Slough - Gerrards Cross - Chesham - Hemel Hempstead	A413, Whielden Street
A30	Chesham - Gerrards Cross - Uxbridge - Heathrow	A413 (to Chalfonts

Clearly the positioning of the Vent Shaft next to the Hospital has maximised the disruption to bus services. All the 'at risk' routes will be affected by congestion on the Amersham Bypass and surrounding area.

School Busses

3.4 HS2 have identified many schools in the area, and many bus routes, but the combination of schools and busses has escaped their attentions. Our enquiries suggest that 15 school bus routes utilise or cross the A413 on their journeys, and are likely to be delayed by peak hour congestion. For children starting secondary school in 2017, the adverse effects will last for most of their school career, which must have a cumulative "major adverse effect" on academic achievement.

3.1. Other road users.

Cyclists

3.5 The Chilterns AONB is an important facility for cyclists – both on and off road. 44 cycle clubs are listed within 20 miles (a short cycle ride) from Chesham⁶. Three major cycle routes cross the proposed line, in four different locations. Only one crossing has been noted; no measures to reduce the risk to cyclists have been proposed.

Chilterns Cycleway⁷

3.6 The Chilterns Cycleway is a 170 mile circular cycle route through the Chilterns Area of Outstanding Natural Beauty, taking in the best of the Chilterns scenery. The route is mainly on-road and is signposted throughout. The cycleway crosses the A413 at two points –

Keepers Lane – Little Missenden Junction. Crosses a fast dual carriageway section, with a broad (car length) central reservation. Mitigation in the form of pedestrian controlled traffic lights, or a pedestrian & cycle bridge should be installed.

London Road-Small Dean Lane-Wendover Bypass Roundabout. The cycleway is listed in CFA10 2.1.12 (as a PRow) – but otherwise completely ignored. The route will be affected by construction of the Small Dean Viaduct, and the temporary closure of Small Dean Lane (with a diversion onto the A413, not a cycle friendly route). This requires a proper assessment.

Chiltern Heritage Trail⁸

3.7 The Chiltern Heritage Cycling Trail is the District Councils Millennium project. The 25 mile trail (divided into three loops) links the Districts two towns and fourteen parishes and visits many of the areas picturesque villages and places of historic interest.

3.8 The trail is mentioned in CFA8 (2.1.7). The route joins the A404 near Winchmore Hill, and then passes the Vent Shaft compound at the end of

⁶ <http://www.britishcycling.org.uk/clubfinder>

⁷ <http://www.chilternsAONB.org/cycleway.html>

⁸ <http://www.chiltern.gov.uk/CHttpHandler.ashx?id=715&p=0>

Whielden Street. This will require measures to separate cyclists and HGVs, which do not mix.

National Cycle Network Route 57⁹

3.9 Sustrans long distance cycle route along quiet lanes. In the Chilterns the route goes from Thame to Chesham and is signposted throughout. Part of the route is traffic-free and ideal for family cycling.

3.10 The route from Great Missenden passes under the A413 via the pedestrian underpass from The Square, and follows the footpath up Frith Hill to South Heath.

5.4.20 During construction of a section of the South Heath green tunnel it will be necessary to close Frith Hill to traffic for a period of up to two years, which has the potential to cause an isolation effect. During this time, traffic using this route will be diverted via Kings Lane and the B485 Chesham Road, with an approximate additional distance of 700m (the total length of the route is 2.6km). Frith Hill also forms part of **National Cycle Route 57**; cyclists using this route, therefore, will be subject to the same diversion. There will also be a need to accommodate pedestrian users of this road during the construction period. Frith Hill, which has a narrow footpath, links with a subway (underneath the A413) which surfaces in Great Missenden next to Great Missenden Church of England Combined School. During the closure of Frith Hill, there will be a temporary footpath diversion

3.11 which sounds all very well, except for the projected 310 HGVs / day which will be using Frith Hill (South Leg) / B485 during the construction phase. Cycling slowly uphill in heavy traffic is a dangerous pastime. This diversion requires a risk assessment, and additional mitigation.

CoCP - Traffic management- generic measures

14.2.2 Generic measures will be discussed with the appropriate authorities and **may** include:

- procedures for driver training (e.g. to protect pedestrians and non-motorised traffic) and appropriate use of technology to remove blind spots;¹⁰
- retaining access for cyclists and pedestrians, **where safe and appropriate**;

3.12 For may read must ; strike out "where safe and appropriate" (who decides ?)

⁹ <http://www.chilternsAONB.org/ccbmaps/161/137/national-cycle-network-route-57.html>

¹⁰ See <http://www.britishcycling.org.uk/campaigning/roadsafety/article/cam20121012-road-safety-feature-Road-Safety---Heavy-Goods-Vehicles--HGV--0>

Equestrian

3.1.1 (CFA 8,9,10) ...Consideration is also given to diversification associated with the primary land uses, and to related land-based enterprises, notably equestrian activities.

3.13 This amounts to extensive references to Chalfont Valley Equestrian (in CFA8) – see the section on Bottom House Lane in the CFA 8 response. There are 7 other livery stables within a few miles of the A413 between Gerards Cross and Wendover, and in addition most farms have a paddock for horses. Horse riders make extensive use of roads and bridleways between South Heath and Kings Ash.

12.4.22 There will be minor adverse effects on non-motorised users due to increased travel distance from eight PRoW and two road diversions for a period of up to two years at GMI/79/1 & 2, GMI/12/1 (footpath), Frith Hill, GMI/80/1 (footpath), GMI/23/6, GMI/28/1 & 2 (footpath), GMI/33/3 (footpath) and Hyde Lane.

12.5.8 There will be minor adverse effects on non-motorised users due to increased travel distance resulting from the permanent realignment of eight PRoW and two roads at GMI/2/1 (footpath), GMI/13/3 (footpath), King's Lane, GMI/33/4 (footpath), GMI/33/2, GMI/33/3 (footpath), B485 Chesham Road, GMI/27/1 (footpath), GMI/23/7 (footpath), LMI/21/1 (footpath). The majority of realignments are less than 400m in length, apart from GMI/2/1 (footpath) at 550m, LMI/21/1 (footpath) and GMI/23/7 (footpath) at 700m and GMI/13/3 (footpath) at 750m.

3.14 CFA 9 made clear that diversions of footpaths or bridleways to run alongside the line would be unacceptable, due to excessive (train) noise. Whether bridges over the route are practical for horse riders remains to be seen.

Walkers

3.15

There are 34 walking groups in Buckinghamshire¹¹, including 4 ramblers association groups. Chesham is associated with "Walkers are Welcome" – "a nationwide initiative launched in 2007 to encourage towns and villages to be 'welcoming to walkers'".¹² This will

- contribute to local tourism plans and regeneration strategies
- promote the health benefits of walking and increase participation
- encourage the use of public transport

Chesham (Metropolitan Line), Amersham, Great Missenden and Wendover (Chiltern Line) provide access to the AONB via public transport, but face extensive disruption during HS2 construction.

¹¹ <http://www.walkinginbucks.co.uk/groups.php>

¹² <http://www.walkersarewelcome.org.uk/>

3.16 Walkers will be affected by the same footpath diversions as horse riders, but without the added excitement of startled horses.

Summary

3.17 The ES shows little regard for the needs of non-motorised road users. There is one reference in the CoCP –

5.3.1 To reduce the likelihood of either an environmental incident or nuisance occurring the following measures will be used, where relevant:

- where reasonably practicable, maintenance of public rights of way (PRoW) (including diversions) for pedestrians, cyclists and equestrians affected by the Proposed Scheme, including reasonable adjustments to maintain or achieve inclusive access;

which sums up the low priority attached to any recreational use of the AONB by HS2 Ltd.

4. The A413

4.1 The impact of HS2 construction on the A413 is a major concern to the society. The A413 northbound provides access to Aylesbury, Wendover and Stoke Mandeville (the nearest A&E department), and southbound to the Chalfonts, the M25 & the M40. It links the network of lanes, providing access to the AONB for visitors. During peak hours it also forms a barrier to traffic flows crossing the road, mainly due to commuter traffic between London & the Vale of Aylesbury. (Peak hours in this region are between 7am and 9am, 3:30pm to 6:30pm, not 8-9am, 5-6pm as suggested in the ES)

4.2 The road is mostly single carriageway, except for short sections of dual carriageway near Gerrards Cross, and north of Amersham (beside Shardeloes Lake). The section between Great Missenden and the Wendover bypass is significantly narrower than the southern section. Additional construction traffic proposed for the A413 is likely to cause congestion throughout the Misbourne valley, and displace commuter traffic from the A413 to less suitable alternative roads. One alternative would be Rocky Lane – Chesham Lane which would provide a diversion via Chartridge & Chesham to Amersham. This would exacerbate the existing peak hour congestion in Chesham and on the A416 Chesham-Amersham road.

4.1. Traffic Flows

4.3 Table A1 lists the projected traffic flows in 2021 including HS2 construction traffic, on sections of the A413 and some significant roads which join it, for the main commuter flows (Southbound AM and Northbound PM). All figures are taken from Vol 5 TR part 6, and reordered sequentially from Nash Lee road to Gerrards Cross. As presented in the ES, it is not clear what the likely impact of these flows will be, but by comparing the projected flows with the capacity defined in the (DfT) Design Manual for Roads and Bridges (a function of road width and traffic mix) we find the road to be operating at 95% of capacity or more between the southern end of the Wendover bypass and the dual carriageway section North West of Amersham (with the exception of the Great Missenden Bypass) (See figure A2 below)

4.2. Junction Capacity

4.4 As noted in Appendix 1, the queues predicted by junction capacity assessments are far below those currently observed. We can only conclude that increased traffic on the A413 will lead to increased congestion, affecting traffic crossing or joining it.

5. Site Access

Table 1

	A	B	C	D	E	F	G	H	I	J	Table 1									
			Traffic		A404 (Whiel den La)	A355 - A40 - M40 J2	A413(S) - A40 - M40J1	A413 (Am B/pass)	Cheshm - Denham- Joiners	Bottom House Farm La										
	Para	Compound	LGV	HGV																
1	8:2.2.7	Ch St Peter VS	95	15	15				15											
2	8:2.3.34	Ch St Giles VS	90	30	30				30											
3	8:2.3.42	Amersham VS	90	95	95	95		95												
4									15	30	K	L	M	N	O	P	Q	R	S	
									A413 (N)	B4009	B485	M.Wood - Deep Mill	Hyde Heath Road	Frith Hill	Potter Row	Leath er Lane	Rocky Lane	Small Dean Lane	Nash Lee	
5	9:2.3.27	Little Missenden VS	85	55	55				55											
6	9:2.3.34	Ch Tunnel N Portal	100	35	35				35		35	35	35	35						
7	9:2.3.36	Sth Hth Gn Tnl S / Ch Tnl Main	170	55	55				55		55	55								
8	9:2.3.59	Sth Hth Gn Tnl (N)	85	35	35				35		35	35								
9	10:2.3.20	Small Dean main	135	15					15		15	15								
10	10:2.3.21	Leather Lane	115	5	5				5		5	5				5	5			
11	10:2.3.27	Bowood Lane	115	25	25				25		25	25				25	25			
12	10:2.3.30	Wendover Dean	45	25					25		25	25								
13	10:2.3.36	Rocky Lane	55	5					5		5	5								
14	10:2.3.49	Wendover Gn Tnl, S	90	45					45		45	45								
15		Wendover Gn Tnl, N	80	45					45		45	45								
16	10:2.3.62	Nash Lee	80	65					65		65	65								
17	Total HGV / day		550		95	305	45	305	200	200	65	90	0	65	30	30	30	105	65	
18	Without M. Wood - Deep Mill										155	0	35	100						

5.1 The figure on the previous page shows the construction compounds in CFAs 8,9 & 10, with the number of HGV movements/day (in a single direction – double these numbers for total HGV flow). The route descriptions in the ES do not divide the traffic between the available routes (A413 S, A413 N & A355), so the assumptions made are

- Compounds North of Wendover Dean use the A413 – B4009 route
- Compounds between Bowood Lane & the Amersham Vent shaft use the A413-A355 route
- The Chalfonts Vent shafts use the A413-A40 route

The society will petition for this scheme to be adopted, as it would reduce HGV traffic on the narrower section of the A413 between Great Missenden and the Wendover bypass

5.2 The proposed access arrangements for HS2 compounds in the AONB are, by and large, abysmal. HS2 Ltd have chosen to make use of whatever existing roads they imagine can be of use, without the slightest regard for their suitability. Issues of road width and junction safety have been ignored, and the disruption to local communities during the extended construction period appears to be of no consequence.

5.3 Such discussions as took place at the community forums were hampered by the absence of traffic flow information, and many suggestions made in the light of local knowledge have been ignored.

5.4 This society believes that all access to HS2 compounds should be routed directly from the A413, and should make no use of other existing roads. Accordingly we will petition against all the proposed access arrangements for any non-compliant compounds between Mantles Wood and Smalldean.

6. AONB Lanes

6.1 The AONB is characterised by narrow, sunken lanes and footpaths running between ancient hedgerows, which are an essential part of its appeal to walkers and cyclists. Much irreparable damage will be inflicted by the construction of new overbridges, rendered far more obtrusive by the 2012 decision to reduce the cutting depth. The access arrangements proposed by HS2 Ltd generally result in more extensive and unnecessary destruction.

6.1. Rocky Lane

6.2 Rocky Lane is a single carriageway road, of adequate width at the junction with the A413, but above Hartley Farm (just East of the HS2 crossing point) it becomes significantly narrower, a sunken lane with sharp bends and a steep gradient. It is signed as Unsuitable for HGVs, and in places it is too narrow for a car and HGV to pass.

6.3 Despite the constriction on the hill between Kings Ash and Hartley farm, this road is the preferred route for northbound traffic from Chartridge and The Lee, and also provides an alternative route from Wendover to Chesham, avoiding the A413 (in part) and B485. Northbound traffic is obliged to turn right onto the A413 – a time consuming process during peak hours. Even a short queue on

Rocky Lane results in a considerable delay, due to the near continuous flow of traffic (in both directions) on the A413.

ES Comments (Vol 2 CFA10)

2.2.10 "an underbridge east of the A413, the finished road level of which is approximately 3m below existing ground level, providing a replacement of Rocky Lane"

6.4 The society previously queried the necessity of this realignment.¹³ It is unclear what the bridge height would be if the existing road was retained. Since the road above the bridge is unsuitable for HGVs, it may be that a lower road clearance would be acceptable. HS2 did not respond to this point.

2.3.38 "The Rocky Lane underbridge satellite compound/Wendover auto-transformer station satellite compound will:
.. be accessed via Rocky Lane, A413, B4009, ..

6.5 It is unclear why this compound (a few hundred yards from the Small Dean main compound, and on the opposite side of Rocky Lane from the proposed new underbridge) is required. It is even less clear why the Small Dean compound, which is adjacent to the A413, should be accessed via Rocky Lane (2.3.39), which already has problems at peak hours. Small Dean should be accessed directly from the A413, and Rocky Lane (if required) via the haul road from Small Dean.

12.4.13 "These changes in traffic flows will lead to significant increases in delays to vehicle users and congestion at the following junctions:
A413 London Road with Rocky Lane (also known as Chesham Lane)
(major adverse effect);"

6.6 As discussed under 2.3.38, the proposed access via Rocky Lane is unnecessary and unacceptable.

ES Comments (Vol5 TA)

7.6.84 The assessment indicates that increased traffic during the most intensive periods of construction may potentially cause additional intermittent traffic congestion and delay at the junction of A413 London Road with Rocky Lane during construction of the Proposed Scheme. This may be mitigated through the measures detailed in the draft CoCP, as outlined previously.

6.7 Since the junction was *not* found to be operating below its theoretical capacity (7.6.83), why was it not assessed further, when Small Dean Lane (which carries around half the joining traffic and benefits from a roundabout at the junction with the A413) has been assessed?

Displaced Traffic

6.8 The 2021 projected morning peak traffic on the A413 (Southbound) is 1450/hr at the junction with Rocky Lane. 1% leaving the A413 due to congestion

¹³ Response to November 2012 forum -
http://www.cheshamsociety.org.uk/HS2/AONB%20Roads_V1.pdf

increases the southbound traffic on Rocky Lane by 12% of the projected value (118/hr). It is likely that the Rocky Lane traffic will increase to a point where the congestion level is equal to that on the A413.

6.9 An HGV ban between Hartley Farm and Kings Ash might help prevent gridlock, or at least increase the capacity slightly.

6.2. Dunsmore Lane

6.10 Dunsmore Lane is not listed as an access route to any compounds, so its appearance in tables 7-66, 7.67 (Vol 5 part 6; AM, PM peak traffic flows) is somewhat anomalous. The Lane forms part of a diversion while Small Dean Lane is closed, but it is unclear whether Small Dean compound traffic will also be diverted. The predicted HGV traffic appears low, given that a Drainage and Tankering business operates from Lower Little London farm, and a car body shop from Upper Little London Farm.

6.11 The junction of Dunsmore Lane with the A413 is notorious for long delays during peak hours. Due to the difficulty in turning right out of Dunsmore Lane, southbound traffic frequently turn left, then double back at the roundabout at the southern end of the Wendover bypass. This demonstrates that a junction assessment is required.

6.3. Bowood Lane

6.12 Bowood Lane provides access to Wendover Dean, Upper Wendover Dean and (for the time being) Durham Farm. Above Wendover Dean farm, the road is not much used by motorised traffic, although it is frequented by walkers and cyclists. It might usefully be redesignated as a bridleway, and provided with an appropriately designed bridge

6.4. Leather Lane (CFA9, 2.3.68-72)

2.3.72 Leather Lane will be permanently realigned, 50m to the south of its current location, across the new Leather Lane overbridge.

6.13 This is discussed further in **2.6.41-44**; an option to reinstate Leather Lane to the north of its current alignment is rejected because

2.6.43 While Option B would avoid the impact on the trees to the south of the existing Leather Lane it would introduce new impacts to the north of the road. In particular, Option B would require an increased embankment height due to the difference in ground level at this point and this would increase visual impact. In addition, it would also result in the loss of a small copse of trees to the north of the current alignment of Leather Lane.

6.14 However, 2.6.41-44 is identical to 2.6.34-37 of the **Draft** ES, which was issued without reference to the Waste Materials Dump ('sustainable placement area') now proposed for the fields immediately to the North of Leather Lane. The realignment should be reconsidered in the light of this development -

- The belt of trees to the South of Leather Lane will act as a valuable screen to the Dump on the North side

- An increase in the embankment height is no longer a significant consideration, since the bridge will be adjacent to a 5m high spoil dump
- The Copse (actually some trees surrounding an old chalk pit) is 25m from the existing road, which would permit a realignment to the North side while still preserving the copse. (See picture below)
- The proposed works (Map CT-05-034b) extend for approx. 350m to the west of the realigned bridge. It is unclear (without a profile transverse to the line) why this should be necessary, but presumably if the realigned road was steeper, more of the old road could be retained.

The society will support option B for the Leather Lane bridge.



Leather Lane, showing the belt of trees to the south, and copse/chalk pit to the North

6.15 As minuted at several meetings of CFA9, the embankment and elevated overbridge are only necessary because of the reduction in cutting depth which took place between the initial consultation and the announcement of the preferred route. The current bridge proposal is one more example of an adverse effect which would be mitigated by a bored tunnel.

6.16 No discussion of the necessity of the proposed realignment took place at either CFA 9 or 10; it may well be that a diversion via Rocky Lane (while a bridge was constructed on the existing alignment) would be acceptable, but since HS2 failed to present their transport proposals at any CF, this option was never explored.

6.5. Potter Row / Kings Lane

(CFA10, 2.3.21-26)

2.3.21 The compound [Leather Lane] will:

- *be accessed via Leather Lane, Potter Row, Frith Hill, B485 Chesham Road*

6.17 Potter Row is quite unsuitable as an access road for 230 LGV & 30 HGV movements / day . Access to Bowood Lane is via the trace from Leather Lane, and there is an access road from Frith Hill to the trace at the South Heath Tunnel North Portal / ATS, so clearly it would be possible to access the Leather Lane compound via the trace as well.

6.18 We oppose the use of Potter Row and Kings Lane as access routes to the construction works.

7. B485 and Frith Hill¹⁴

7.1 The B485 is a major route between Chesham and Prestwood - Great Missenden, and for Chesham traffic accessing the A413 northbound (towards Wendover, Aylesbury, Princes Risborough). The Chesham end is constricted by buildings in the Old Town, making the route unsuitable for HGVs; a campaign to introduce a HGV ban is ongoing.

7.2 The B485 also serves Hyde Heath (via Hyde Heath Road), and South Heath, Ballinger and The Lee (via Potter Row, Frith Hill and Kings Lane).

7.3 The construction of the proposed Cut and Cover tunnel at South Heath will cause extensive disruption to this road network for 4.5 years (2017 Q4 to 2022 Q1 – ref CFA9 Figure 5). The economics of the scheme are strongly disputed by REPA, who have costed an extension of the Chilterns Tunnel to Liberty Lane (beyond Frith Hill) – as previously discussed.

Frith Hill

2.3.59 South Heath green tunnel (north) satellite compound

This compound will be used for civil engineering works north of Frith Hill to Leather Lane. The construction compound will:

- be accessed via Frith Hill, B485 Chesham Road, A413 ...

7.4 Turning right onto the B485 from Frith Hill (Chalkdell Wood junction) involves a sharp right turn from a steep and narrow road. There are numerous gouges in the surface of Frith Hill caused by HGVs grounding while negotiating the sharp change in gradient. The road up to South Heath is steep and narrow, with one further sharp bend, and passes several residential properties – quite unsuitable for the proposed use.

2.3.50 Realignment of two roads will be required:

- temporary closure of Frith Hill and 2.6km diversion of traffic via B485 Chesham Road and King's Lane, for a period of one year and six months to two years, with permanent reinstatement on the existing alignment.

¹⁴ Note that Frith Hill is the name of a section of the B485 between the A413 roundabout and the junction near Chalkdell Wood, and also of the road from Chalkdell Wood towards South Heath and Ballinger. The B485 beyond the junction at Chalkdell Wood to the top of the hill is known as 'Frith Hill South Leg'. It is not clear that the authors of the ES are aware of this ambiguity

- a) It is not stated whether access to the South Heath North Tunnel compounds will continue to use Frith Hill during the closure
- b) This closure will impose additional traffic on Kings Lane for an unacceptably long time; this would include HS2 construction traffic for compounds between South Heath and Bowood Lane (30 HGV/day), if the HS2 proposals were accepted

The B485

7.5 Provides access to South Heath tunnel (S), Chilterns main compound (Rail) – **2.3.46**, as well as the Mantles Wood portal (see next section).

2.3.50 Realignment of two roads will be required:

- permanent realignment of B485 Chesham Road, 120m to the north, across the green tunnel, including the associated realignment of King's Lane and provision of a roundabout junction with Chesham Road...

7.6 Realignment options are discussed in **2.6.64**. We accept (with some reluctance) the assurance that the roundabout as adopted will reduce severance of land for Middle Grove Farm.

7.7 We would ask that HS2 Ltd consult Bucks CC before installing lighting on the roundabout, since such lighting is frequently unused (as an economy measure) at junctions with a higher traffic flows. This would of course reduce light pollution.

7.8 It is unclear how quickly traffic can be switched between the existing and realigned B485; at the point where they cross the cut and cover tunnel, the separation is approximately 60m, with the new road being built over the tunnel, and the old road not. A discussion of this point at CFA9 might have been illuminating, had the plans been made available.

7.9 We do not consider the engineering difficulties to be our problem, but will petition for a legally enforceable clause to prevent use of Kings Lane & Frith Hill as a diversion of the B485 during any part of any working day, or for more than one 24hr period during the course of construction works.

7.1. Mantles wood portal

7.10 The alternatives for accessing the Mantles Wood portal (of the Chilterns Tunnel; **2.6.57-63**) are considered in some detail in Appendix 2 below. The broader picture is that HS2 Ltd propose routing 100 LGVs and 35 HGVs/day along 4.3 miles of country lanes, and passing through two congested junctions, to access a site only 1000m from the A413. This is entirely typical of the lack of thought, and lack of concern for the AONB and its inhabitants which characterises this project. The society (with others) will petition in favour of option B, either in the original form or the variant which crosses the Chiltern Line by the Chalk Lane underbridge. The location of access points to the A413 should be made having regard to the need to maintain access for Little Missenden residents, in the face of increased congestion.

7.11 Table 1 row 17 shows HGV traffic with Chiltern Tunnel Portal and South Heath (South) traffic routed directly to Deep Mill, while row 18 shows the HS2

Ltd proposal (Option A). Option B reduces HGV traffic on Frith Hill by one third, and on the B485 by two thirds.

Deep Mill Bridge

7.12 The Chiltern railway crosses the A413 at an oblique angle at Deep Mill, necessitating a narrow 'dog leg' in the main carriageway, between the junctions with Hyde Lane and Deep Mill Lane. This is well known locally as a dangerous bend, with frequent accidents. Construction HGVs should not use this stretch of road during peak hours (as defined locally). Note that option B access to Mantles Wood would remove 35 HGVs from this stretch of road, and 90 if the South Heath(South) compound traffic was routed along the trace to the Mantles Wood portal.

7.13 We anticipate an early call on the contingency fund to widen this bridge, presumably shortly after the first fatality.

7.2. Little Missenden

7.14 When the A413 is heavily congested (following an accident, for example), the old road through Little Missenden ("Highmore Cottages") is used by traffic avoiding the main road – even though this makes little sense, since the two roads rejoin again after a mile or so. With increased traffic on the A413, congestion is likely to be a frequent occurrence. The society will support any mitigation measures proposed by the Little Missenden residents to prevent this.

8. Tunnel Vent Shafts

8.1. Little Missenden

8.1 Since this shaft is adjacent to the A413, it would have been comparatively easy for HS2 Ltd to produce an unobjectionable scheme. However, they have chosen to route the access road through the belt of trees separating the site from the A413. We request that the access road be moved further East to pass through a gap (nearer Mop End Lane), and that robust measures be taken to preserve all the existing trees beside the A413, which serve to screen the site. (An old road runs behind the trees to our suggested access point, and appears to be in better condition than several access roads that HS2 propose to use).

8.2 This might also enable a single crossing point between the two carriageways of the A413 to serve the vent shaft, Mop End & Weedon Hill Lane.

8.2. Amersham Vent Shaft

8.3 The site can be accessed directly from 'major' roads, which is good, but is also surrounded by roads and constricted - a problem for the contractor ?

8.4 The projected number of HGV movements (95/day) is over twice that of the next busiest Vent Shaft (Little Missenden, 45/day) . Why is this ?

Map Book 8 – CT-05-028

8.5 The 'Roadhead' is on the wrong side of A404 – construction traffic from the Vent Shaft compound to the roadhead will have to cross A404

8.3. Amersham Bypass

8.6 The Amersham Bypass is the intersection point for traffic from Aylesbury to the M40 at Uxbridge (A413), M40 at High Wycombe to M25 at Chorleywood (A404), M40 Beaconsfield to Amersham (A355). This results in serious peak hour congestion. HS2 construction will add traffic from the Misbourne valley compounds, and the vent shafts (Little Missenden & Amersham) to the mix, leading to the highest predicted HGV flow on the A413, between the A404 & A355 junctions.

8.7 Despite the clear potential for extreme congestion, there are no junction assessments for this area (for what they are worth), and also a gap in the peak Hours traffic predictions between Gore Hill and Stanley Avenue. 60 HGVs are unaccounted for at the Whielden Lane roundabout, and of the 101 Eastbound HGVs, only 37 continue via the A355 (towards Beaconsfield) or A413 (towards the Chalfonts) leaving 63 taking one of the routes through Amersham, or delivering to Tesco's.

8.8 This presents an incomplete and incoherent picture of the (AM) peak traffic flow, and is inadequate to identify particular congestion black spots, while still suggesting that HS2 construction will cause far worse congestion than is currently experienced. We request that an adequate assessment of traffic in the AONB be performed.

9. Conclusions

9.1 On the basis of this rushed and inadequate Transport Assessment, HS2 have concluded there is no problem :-

12.4.27 The implementation of the draft CoCP (See Volume 5: Appendix CT-003-000) in combination with the framework travel plan and the construction workforce travel plan will, to some degree, mitigate the transport related effects during construction of the Proposed Scheme. The reductions in effects arising from the travel plan measures have not been included in the assessment, which will mean that the adverse effects may be over-stated.

12.4.28 *No further traffic and transport mitigation measures during construction of the Proposed Scheme are considered necessary, based on the outcome of this assessment.*

(CFA 9; cf 12.4.25,26 CFA8; 12.4.27,29 CFA10)

14.1.2 (CoCP) Construction workforce travel plans will be prepared by the lead contractors with the aim of *encouraging* the use of sustainable modes of transport to reduce the impact of workforce travel on local residents and businesses. The plans will include:

- travel mitigation measures that will be introduced to reduce the impact of construction workforce on the transport network;
- target to reduce individual car journeys by the for (sic) construction workforce;

- methods for surveying workforce travel patterns

9.2 At least, *nothing that a car share scheme cannot fix*. This is outrageous. We will petition for the following –

9.1. Workforce transport

9.3 In CoCP, 14.1.2 – substitute “with the purpose of enforcing” for “with the aim of encouraging”. Measures to achieve this to include –

- A park and ride scheme, routed along the trace, with suitable vehicles
- Limited and expensive parking (for contractors) at all compounds

9.2. Spoil by Rail

2.3.79 (CFA10) Sustainable placement of inert surplus excavated material will be used ... where it cannot be removed by either rail or along the construction corridor.

9.4 The movement of spoil has a significant influence on transport requirements – but despite this, the draft ES figures for HGV movement excluded spoil transport. The proposed solution – a waste dump at Hunts Green – was announced 15 minutes before the end of the last CFA9 forum, although the location was not revealed, and so no constructive discussion took place.

9.5 One alternative solution would be to remove spoil by running special trains overnight on the Chiltern Line. This could be done by building sidings where spoil could be transferred to goods wagons during the day. *This solution must be considered.*

2.6.5 (CFA10) Three options were considered for the management of this surplus excavated material:

- Option A: remove surplus excavated material by road to Calvert, 35km away, for onward transfer via the rail network;
- Option B: the Proposed Scheme, using the construction route to avoid local roads, sustainably place surplus excavated material on over four fields between Hunt's Green Farm, King's Lane and the South Heath cutting/route;

and

- Option C: removal of surplus excavated material by road directly to the nearest suitable landfills.

9.6 *If the present scheme proceeds, it is clear that no matter what mitigation is attempted, the Chilterns will suffer immense disruption for 7 to 10 years, and that this is of little or no concern to HS2 Ltd.*

We therefore reiterate our demand for a full bored tunnel extending the full breadth of the Chilterns AONB

Appendix 1. The Transport Assessment; Major adverse

A1.1 No useful discussion of traffic congestion (or its mitigation) took place at the Community Forums (in the AONB areas), since the traffic assessment had not been completed. Like many other things, 'it will be in the Environmental Statement'. Unfortunately the information now made available is inadequate on several counts.

1.1. Peak traffic flows

A1.2 Figure A1 gives an overview of traffic flow in the Chilterns AONB; figures are from the '2021 with HS2 construction traffic' column, tables T7-31 – 34, T7-45 – 47, T7-64 – 67 (for CFAs 8,9 & 10) all in Vol 5 TA part 6.

A1.3 The intention was to show the flows of traffic and HGVs through the area, and identify points where significant congestion appears likely. However, there are two major difficulties in drawing any useful conclusions from the data presented in the ES –

1. Data is available only for those roads used by HS2 construction traffic
2. For junctions where all roads have been assessed, the figures are internally inconsistent; for example at the A413-A404 junction, 62 more HGVs are shown entering the junction than leaving. As this amounts to 30% of HGV traffic at the junction, this casts considerable doubt on the reliability of the figures presented.

A1.4 If the figures which are available were consistent, then it could be assumed that the traffic flows on the roads without data were reasonable, and (in some cases) predict the traffic from the figures which are available. Unfortunately, the data as presented appears unreliable, and does no more than indicate that traffic congestion during the construction phase will be much worse.

A1.5 Some specific problems are described below. Several relate to the lack of information regarding roads not directly (or officially ?) used for construction traffic. Their omission suggests either a belief that greatly increased congestion on the A413 will not change the routes chosen by commuters, or a complete lack of concern for any effects of these choices.

A1.6 **Wendover** – No figures for the A413 towards Wendover or Aylesbury at the northern end of the Wendover bypass, or for London Road at the southern end. Traffic through Wendover may increase if the bypass becomes congested.

A1.7 **Small Dean Lane** - carries traffic from Small Dean and the Wendover 'cut and cover' tunnel compounds – 105 HGVs/day. This appears inconsistent with the prediction of 1 HGV (in each direction) during the morning peak

A1.8 **Great Missenden Traffic** – no figures for Aylesbury Road, Link Road (A4128) or London Road, all connecting Great Missenden to the A413.

A1.9 Traffic re-routing through Great Missenden to avoid incidents on the A413 generally results in gridlock, due to traffic calming measures on the old road through the town

A1.10 Little Missenden Vent Shaft There is a single entry "A413 Amersham Road (Little Missenden)" in the tables for CFAs 8 and 9. This section passes the Little Missenden Vent Shaft compound; is traffic from this compound included in the totals? In any event, the traffic flows at the Missenden and Amersham ends of this stretch will differ.

A1.11 Amersham Bypass Again there are no figures for traffic leaving or joining the A413 from Amersham. The Amersham bypass appears to be the busiest part of the A413, but there are no figures for the section between A355 Gore Hill and A404 Stanley Hill. This is unfortunate, since of the 101 HGVs Eastbound (AM peak), only 37 continue on the A355 or A413 to the Chalfonts, leaving 64 to continue through Amersham. This seems unlikely, but if true would constitute a serious traffic problem for the town.

A1.12 Beaconsfield There is no further analysis of traffic flows beyond the A355 Gore Hill, although the junction with the A40 in Beaconsfield is notoriously congested during traffic peaks.

1.2. Road Capacity Assessment

A1.13 "If you live near the proposed route and want to know more about how HS2 may affect your area, please consider reading your local CFA report."¹⁵

A1.14 Unfortunately, while this contains plenty of tables, the only comment on likely effects of increased traffic is the ubiquitous "Major Adverse", "Moderate Adverse"¹⁶. When assessing junctions, there is reference to junction capacity, but for the roads between junctions, just the (incomplete and inconsistent) figures discussed in the previous section.

A1.15 If the southbound morning peak traffic on the A413, Dunsmore to Great Missenden, increases from 1156 to 1407 vehicles, what is the likely effect on the journey of a commuter from Wendover?

A1.16 Increased congestion at junctions (12.4.13), and increased traffic flows leading to 'traffic related severance' (12.4.15) are noted for most junctions, and some roads, then followed by -

12.4.16 These traffic flow increases will not result in increases in congestion and significant delays except for those locations identified above.

A1.17 - but there is no attempt to quantify the delays to vehicles which may result from the increase in traffic. This is an unnecessary omission, since the DfT

¹⁵ "Understanding the Environmental Statement" – ES website

¹⁶ "In assessing significant effects of traffic changes on congestion and delays, a **major adverse** effect occurs where traffic flows at a junction will be beyond or very close to capacity with the Proposed Scheme and the increases in traffic due to the Proposed Scheme will be such as to substantially increase queues and delays on a routine basis at peak times.

A **moderate adverse** effect will occur when traffic flows at a junction will be approaching or at capacity with the Proposed Scheme and modest increases in traffic will increase the frequency of queues and more substantial delays.

A minor adverse effect occurs when traffic flows at a junction are not generally exceeding capacity with the Proposed Scheme but the increase in flows will result in occasional queues and delays or small increases in existing delays."
(CFA9, 12.4.13 – footnote)

Design Manual for Roads & Bridges (TA 46/97)¹⁷ contains a formula for road capacity based on carriageway width and HGVs percentage of total traffic. Using the traffic figures from Vol 5 TR part 6, and carriageway widths based on local knowledge, the predicted traffic can be expressed as a percentage of calculated capacity. The results are shown in figure A2, from which it appears that the older (and narrower) sections of the A413 will be operating at or above 100% capacity during the morning and evening peak hours, leading to congestion –

A1.18 “defined as the situation when the hourly traffic demand exceeds the maximum sustainable hourly throughput of the link. At this point the effect on traffic is likely to be one or more of the following: flow breaks down with speeds varying considerably, average speeds drop significantly, the sustainable throughput is reduced and queues are likely to form.” (DfT TA46/97).

A1.19 Clearly it is not in the interest of HS2 to publicise this situation, which is presumably why they omitted any such calculations from the ES.

1.3. Junction Assessment

A1.20 A small (and arbitrary) selection of junctions in the AONB have been assessed (see Vol 5 TR part 6), although the account of the methodology is rather vague.

7.2.20 Junction modelling was generally undertaken using off-the-shelf traffic modelling software packages and data collected in specially commissioned surveys. However, this was not always possible and a 'rule of thumb' approach based upon professional judgment was used with junctions assessed quantitatively taking main road flow, side road flows and standard assumptions concerning, geometry, visibility, turning proportions and theoretical capacities into account. In practice, this involved relating main road flow, side road flow and 85 per cent saturation.

A1.21 No junctions were assessed in CFA8, despite the heaviest peak traffic loads occurring on the Amersham Bypass. In CFA10, the A413-Small Dean Lane junction is assessed, while the Rocky Lane Junction (also assessed as a 'major adverse effect' – Vol 2 12.4.13), with twice the traffic, is not.

A1.22 In CFA9 the A4128 (Link Road) & B485 / Frith Hill junctions have been assessed (7.5.81). The maximum (AM peak) queue on the B485 increases from 1 to 2 vehicles, while the A4128 queue remains unchanged at 1 vehicle [Tables 7-52, 7-50] Clearly there is nothing to worry about here – in fact, there is a good deal to celebrate, since the queues currently observed will evidently disappear by 2021-

¹⁷ <http://www.dft.gov.uk/ha/standards/dmrb/vol5/section1/ta4697.pdf>



Morning peak congestion on the B485, approaching junction with A413



Morning peak congestion on the A4128 – Gt Missenden Link Road

A1.23 The ES concludes

7.5.83 The modelling results indicate that the A413 with B485 Frith Hill/Chesham Road junction is predicted to operate *well within capacity* during construction of the Proposed Scheme, with the highest percentage of flow to capacity predicted as 56% on the B485 Frith Hill arm in the AM Peak. As this is well below 85%, (considered to represent theoretical capacity), the impact of the Proposed Scheme is not considered to have a substantial impact on capacity at this junction.

A1.24 This is so far removed from the situation currently observed as to throw serious doubt on the methodology adopted for these assessments. To make any comments regarding the likely effects of construction based on such an obviously flawed analysis would merely waste the time of all concerned

1.4. Summary

A1.25 The Traffic Assessment is deficient because

- It has been restricted to roads used for HS2 construction traffic, and ignores any consequential effects on other parts of the network.
- The description of the effects of congestion (moderate or major adverse) is inadequate.
- The predicted peak traffic figures are found to be inconsistent, where checks are possible.

- The choice of junctions chosen for detailed assessment appears arbitrary
- The results obtained from junction assessments bear no relation to reality.

A1.26 We can conclude that traffic congestion during the construction phase will be much worse than at present, but the traffic assessment is inadequate to make any predictions regarding how much worse it will be, or what might be done to mitigate the adverse effects.

1.5. Figure A1 Peak Traffic flow

Key to Diagrams

A413 section		The 'Junction Discrepancy' is the total inbound traffic flow, minus the total outbound flow, and in an ideal case would be zero		
All Traffic Northbound HGVs Northbound ^	All Traffic Southbound HGVs Southbound v			
Junction Discrepancy - All Traffic	Junction Discrepancy - HGVs	< HGVs Towards Junction	All Traffic towards Junction	Side Road
		> HGVs away from Junction	All Traffic away from Junction	
^ v HGVs Northbound HGVs Southbound				
All Traffic Northbound All Traffic Southbound				
A413 section				
^ v				
Junction Discrepancy - All Traffic	Junction Discrepancy - HGVs	< ?	?	Side Road - no data
		> ?	?	

Where some data is unavailable, the same calculation is performed with available data., but the results are formatted without colour or shading

A413 (N) Traffic Flow Analysis - AM peak

NB SB

B4009	1056 46	>			< ? ?	A413 Wendover	
	744 41	<			> ? ?		
			^	v			
			A413 Wendover Bypass				
			924 23 ^	1450 38 v			
			114	4	< ? ?	London Road (to/from Wendover)	
					> ? ?		
Small Dean Lane	45 1	>					
	5 1	<					
					< 5 118	Rocky Lane	
					> 5 118		
Dunsmore Lane	22 20	>					
	20 16	<					
			^	v			
			23 953	38 1407			
			Dunsmore Lane - Link Road				
			994	110	< 0 56	Leather Lane	
					> 0 44		
					< 0 0	Bowood Lane	
					> 0 0		
Aylesbury Road	? ?	>					
	? ?	<					
A4128 (Link Road)	? ?	>					
	? ?	<					
			Missenden Bypass (N)				
			820 33	1245 62			

A413 (S) Traffic Flow Analysis - AM peak

			NB	SB					
			Missenden Bypass (N)						
			820	1245					
			33	62					
			^	v					
			-179	17	< 36	612	B485		
					> 19	689			
			^	v					
			40	69					
			919	1446					
			Missenden Bypass (S)						
London Road	?	?	>						
	?	?	<						
			Little Missenden						
			839	1264					
			26	43					
			^	v					
A404 Whielden Lane	1026	55	>		122	62			
	813	11	<						
			^	v					
			102	101					
			1040	1556					
			^	v					
A355 Gore Hill	961	22	>		852	5	< ?	?	A355 Gore Hill
	1033	16	<				> ?	?	
							< ?	?	London Road W
							> ?	?	
							< ?	?	A404 Stanley Hill
							> ?	?	
			^	v					
			21	21					
			900	492					
			Chalfont St Giles						
			^	v					

A413 (N) Traffic Flow Analysis - PM peak

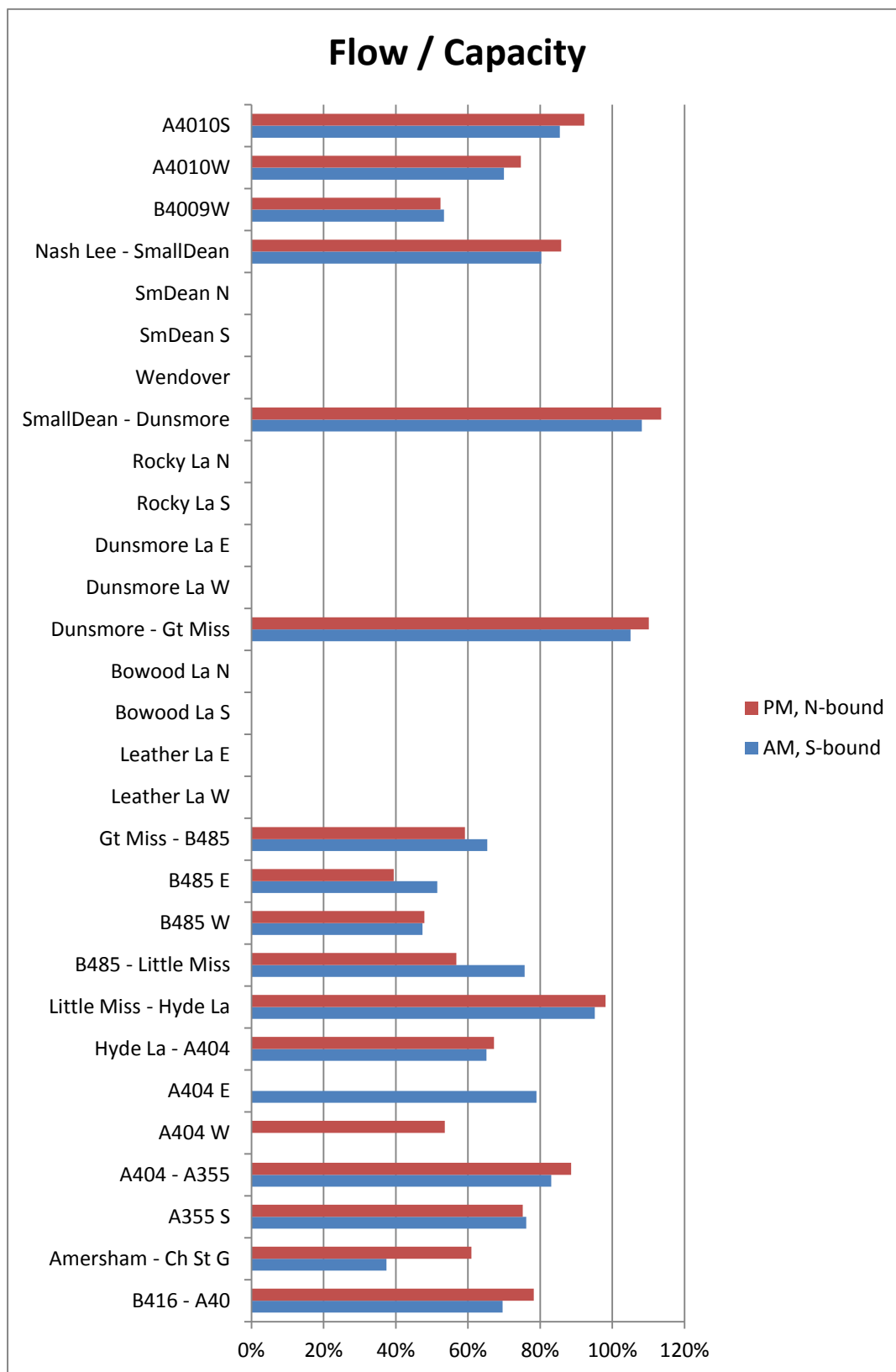
NB SB

B4009	617 11	>			< ?	?	A413 Wendover		
	706 15	<			> ?	?			
			^	v					
			A413 Wendover Bypass						
			1161 21 ^	696 24 v					
			48 6		< ?	?	London Road (to/from Wendover)		
> ?	?								
Small Dean Lane		10 0			>				
		47 0			<				
			48 6	6	< 2	117	Rocky Lane		
					> 2	81			
Dunsmore Lane		25 1			>				
		28 0			<				
			^	v					
			16 14						
			1502 985						
			Dunsmore Lane - Link Road						
			-134 11	11	< 0	44	Leather Lane		
					> 0	31			
							< 0	0	Bowood Lane
							> 0	0	
Aylesbury Road		?	?	>					
		?	?	<					
A4128 (Link Road)		?	?	>					
		?	?	<					
			Missenden Bypass (N)						
			1165 25	795 12					

A413 (S) Traffic Flow Analysis - PM peak

			NB		SB					
			Missenden Bypass (N)							
			1165	795						
			25	12						
			^	v						
			-6	-3	< 7	654	B485			
					> 7	536				
			^	v						
			24	14						
			1118	872						
			Missenden Bypass (S)							
London Road	?	?	>							
	?	?	<							
			Little Missenden							
			1321	752						
			30	18						
			^	v						
A404 Whielden Lane	669	28	>	-294	38					
	1068	10	<							
			^	v						
			77	45						
			1696	1022						
			^	v						
A355 Gore Hill	1028	9	>	39	-27	< ?	?	A355 Gore Hill		
	797	5	<			> ?	?			
			< ?			?	London Road W			
			> ?			?				
			< ?			?	A404 Stanley Hill			
			> ?			?				
			^	v						
			9	8						
			831	349						
			Chalfont St Giles							
			^	v						

1.6. Figure A2 Traffic flow as percentage of road capacity



Appendix 2. Mantles Wood access track

A2.1 The society favours a direct route from Mantles Wood to the A413, as this removes construction traffic from the B485 and Hyde Heath Lane. The overbridge option discussed below would appear to have minimal additional impact on ancient woodland, although the alternative (Chalk Lane underbridge) may have some advantages in separating construction access from the immediate area of Little Missenden.

A2.2 We include this detailed rebuttal of the arguments advanced in the ES, since it indicates the arrogant disregard for local communities which is characteristic of HS2 Ltds approach, their failure to investigate problems on the ground, and tendency to duplicity to support their chosen route at all costs.

2.6.57 The Proposed Scheme includes an upgrade to an existing farm access track that leads from Hyde Heath Road to the northern portal of the Chiltern tunnel and associated porous portal hood and buildings in Mantle's Wood. The local community proposed an alternative, to the south side of Mantle's Wood leading from the A413, giving two options (either of which would be permanent solutions, as access to the portal buildings will need to be maintained in the long term):

- **Option A:** The Proposed Scheme, the January 2012 announced route with an initial engineered access route from Hyde Heath Road; and
- **Option B:** A new access road from the A413 leading to the north portal of the Chiltern tunnel in Mantle's Wood.

2.6.58 Both options would impact on the ancient woodland of Mantle's Wood as they approach the northern portal of the Chiltern tunnel.

A2.3 While option A involves upgrading a track of 300m through the woodland from Hyde Heath Lane, option B can be constructed over fields towards the tunnel. A bridge could be constructed over the Chiltern Line cutting into the field on the North side, and reach the trace at the tunnel portal, without entering Mantles Wood at any point. Given that the tunnel portal and cutting will remove around 30,000 sq m of woodland, we also doubt the sincerity of HS2s concern for the small additional amount required to construct the access tracks.



Option B The proposed new road would run along the edge of Mantles Wood (to the left of the picture). This extensive view across the Misbourne Valley would be extinguished by the proposed planting.

2.6.59 Option B would require a new permanent access bridge to be constructed over the Marylebone to Aylesbury Line. This would have a significant permanent visual impact on the Chilterns AONB and would also sever an important area of ecological mitigation located to the south of the Proposed Scheme linking two areas of ancient woodland.

A2.4 The impact of a new bridge over the Chiltern Line, in the valley and adjacent to the Deep Mill filling station, is quite insignificant when compared to the devastation to be inflicted between Mantles Wood and Wendover. Option A is in part responsible for the upgrades which will be required to the B485 and Hyde Heath Lane, including the new roundabout at Kings Lane.

A2.5 The 'important area of ecological mitigation' links two areas of woodland which are currently separated, blocks an extensive view across the valley to Little Missenden (should anyone ever consider walking in this area following construction) & is in any case severed by the watercourse to the balance pond at the bottom of the hill.

A2.6 However, it is pleasing to see that ecological mitigation has played some part in a route assessment, if only once.

2.6.61 Option A will utilise an existing farm access track, with some localised widening, leading to the north portal of the Chiltern tunnel and only require the creation of a short extension to this track to join it with the north portal reducing the permanent impact on the Chilterns AONB.

A2.7 The farm track is unsurfaced and single track. It will need to be altered beyond recognition to be suitable for HGVs, and as a permanent access to the portal. This will not in any way reduce the impact on the AONB.

A2.8 This track passes through 300m of woodland, some 200m of which requires a wide cutting to be dug within the wood, as it descends to the portal. Some of this woodland would be preserved, and would screen the portal, if the southern approach was adopted, and the Tunnel North Portal building placed on the southern side of the railway (see V2(MB9) **CT-05-031**)



Option A : The track through Mantles Wood to be 'upgraded' (to carry HGVs)

2.6.62 In addition, the total volume of surplus excavated material to be transported along Chesham Road is limited due to the introduction of the sustainable placement area to the south-west of Hunts Green Farm as described in CFA10. Excavated material will be moved to the sustainable placement area along the route. This avoids the need for extensive movement of material off-site along the local road network.

A2.9 Option B was proposed to address the volume of HGV traffic generated by Mantles Wood portal even without spoil movement¹⁸. Moving spoil 'along the route' from the Mantles Wood to Hunts Green would involve traversing the construction sites of the South Heath tunnel. The society will petition against the use of the alternative route (via Kings Lane & Potter row) by construction traffic. A better solution would be to remove the spoil by rail as it is generated

A2.10 We note that the impact of HGV traffic on the communities of Hyde Heath and South Heath is not addressed when comparing the two options; this is entirely typical of the 'concern' shown by HS2 Ltd for the local communities.

¹⁸ Spoil movement was excluded from the HGV movement calculations reported in the Draft ES.