

Report on HS2 Ltd's Bowood Lane Mitigation site

HS2 Responses shown in Green

Please note

A non-response in relation to any particular statement or allegation in this document does not mean that we agree with such statement/allegation. We have confined our responses to the specific questions raised in this document.

1.1

This report is written by Mark Keir, of Jones' Hill Wood.

I have no formal qualifications in ecology, but I do have RHS Advanced Certificate and 25 years or more experience as a gardener/horticulturalist.

Having been central to much of HS2 Ltd's recent angst in Court, I have also spent many, many hours studying HS2's Environmental Statement, Ecology Site Management Plan, Natural England Licences and other documentation relating to HS2 works around Jones' Hill Wood and the Bowood Lane mitigation site.

2.0 Overview

2.1

HS2's proposed route cuts through the SW corner of Jones' Hill Wood, an ancient woodland in the heart of the Chilterns AONB. The Act of Parliament specified extensive mitigation adjacent to the Wood to in some degree, ameliorate the destructiveness of the construction and to adhere to the often repeated aspiration to no net loss to biodiversity.

Further to the originally planned mitigation, Fusion JV (main HS2 contractor at this point) had been forced in October 2020 through Court action to survey Jones' Hill Wood for a first time, apply for appropriate licence from Natural England (WML OR 58) and draw up considerable extra mitigation works to comply with that licence.

The issue of the Licence was called to question through the Courts and was the cause of some considerable concern to HS2 Ltd and Fusion JV, highlighting as it did HS2's much vaunted environmental ethics and their ability/inability to demonstrate their adherence to same. It might be assumed therefore that holding rigidly to the licence conditions would be a priority, and that the very best mitigation work would be put in place.

This report looks at that mitigation, it's present standard and likely success going forward, and how it measures up to compliance with that licence.

The map in Fig 1 shows the parcels of land involved.

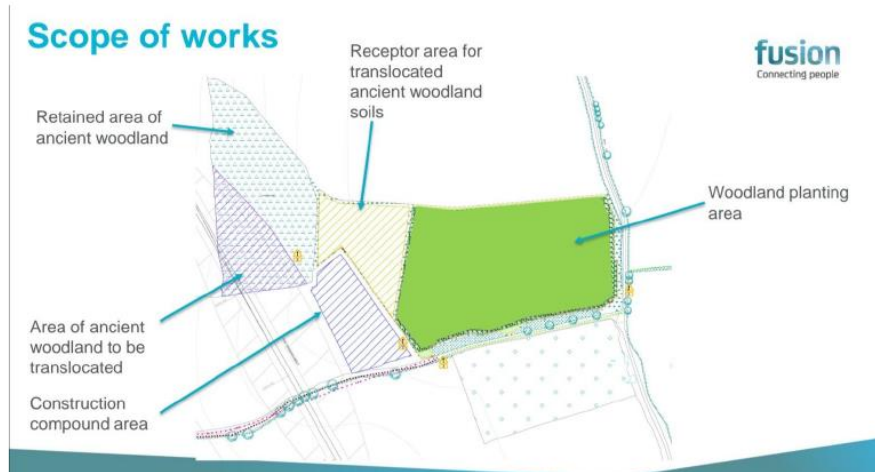


Fig 1

2.2

The areas of importance to this report are: "Receptor area for translocated ancient woodland soils", "Woodland planting area" and Jones' Hill Wood ("Area of ancient woodland to be translocated" and "Retained area of ancient woodland") itself.

What I have observed does not put HS2 Ltd in a good light. My observations have been made from the perimeter fence, with no access to the sites given to "protesters" or anyone else for that matter, but even from that sometimes distant vantage, there seems little to celebrate.

3.0 Receptor Site

3.1

The receptor site host soil was compacted (Fig 2) pretty much daily with heavy machinery over the whole of winter '20/21 and was waterlogged much of that time. This was never ameliorated.



Fig 2

Trial holes of the subsoil at the receptor site were undertaken under the supervision of a qualified soil scientist. This identified some damage to the topsoil in the receptor site location. The surveys identified no damage to the subsoils at the receptor site. All receptor site topsoil was progressively removed prior to the ancient woodland soil transfer taking place with regular inspection of soils undertaken.

3.2

Translocated soil was placed well out of acceptable season in April/May '21. The translocated ancient hedge (possibly 1500yrs old) was moved in April in dry desiccating winds. The translocated trees including those for live specimens were moved as late as late May, even into June 2021. Other whips and pot grown stock were planted May/June '21. None of these movements come even close to standards laid out in the Environmental Statement.

As works were undertaken outside the “translocation window” this was deemed a soil salvage. Aside from the seasonal window all other works were undertaken following translocation best practice. In addition to this HS2 will install additional compensation planting.

Containerised planting (pot grown stock hedgerow) can be planted all year around and were watered to aid growth following planting. This is in line with Nursery stock - British Standard BS3936-1/4

Losses of stock planting is assessed and managed in the maintenance period.

3.3

Of the translocated ancient hedge, it appears one plant is surviving, six barely surviving and unlikely to succeed. The other seventeen are quite dead including yews and hollies (Fig 3).

Existing Hedgerow was moved from the woodland edge to provide height and connectivity from the retained hedgerow and to retain soils within the root structure of existing hedgerow.



Fig 3

3.4

Few if any of the translocated trees taken for live specimens in the site have survived (Fig 4). In the receptor site there is a large empty space possibly equivalent to over a third the total area suggesting the area of mitigation falls well short of area of woodland destroyed (Fig 5) In addition to this the long new front to the ancient woodland, composed of newly exposed etiolated weak trees suggests that there will be much secondary damage unaccounted for in ecologists assessments.

All monolith and existing trees are relocated to provide vertical diversity within the site. Existing trees are translocated with the intention of survival. Should trees not survive they along with monoliths provide important standing deadwood features with ecological value.

9% (600m²) of the woodland soils were not translocated as the woodland soils were found to be substandard following previous protestor habitation, the required security operation or due to increased nutrient and intensity of weeds within the donor site. For clarity the woodland salvaged soils were placed at the same thickness and layer composition as per the donor site.

The retained woodland facing the removed woodland forms the Woodland Edge Management Zone and falls within Act limits. This zone will continue to be monitored and managed. An arboricultural survey was carried out and trees within this zone assessed to be wind firm and will continued to be monitored. Fallen trees outside of Act limits are the responsibility of the Landowner.



Fig 4



Fig 5



Fig 6

3.5

The supposed bat flightline trees within the receptor site are, as far as bats are likely concerned, lost amid a jumble of erratically placed considerably larger trees and monoliths (Fig 7).



Fig 7

The bat flight line was installed as per Licence conditions and provides a continuous line. Monoliths and larger relocated trees provide further ecological benefits in a random layout reflecting their position in the former woodland.

3.6

Bat boxes placed within the receptor site are unlikely to see any shelter from weather or light for at least 30 years. Presumably the fragmentation of habitat so ruthlessly executed will likely not be repaired any time before that.

A 2m wide strip of heavy weed infestation along the hedge line appears to have had an application of herbicide in August '21

There are many smaller whips and pot grown plants added to the hedge and throughout the translocated site. These tend to be deep in weeds so only a rough estimate of around 25 - 30% attrition can be given (Fig 8)

Bat boxes were installed as part of the Licence and are supplementary to boxes placed within the Woodland Edge Management Zone and a mature tree group along Bowood Lane that falls within Act Limits.

Herbicides have been used to control weeds to avoid impact to new planting within the planting site. The planting site is managed in line with the ecological site maintenance plan and performing in line with expectations

Trees transplanted into the ancient woodland soils are expected to supplement natural regeneration and weed growth is part of the regeneration phase and not artificially managed with herbicide.



Fig 8

3.7

The immediate impression of the site is of something reminiscent to a WW1 battlefield. The Jones' Hill community long ago referred to this area as "The Graveyard".

4.0 Bat Flight Lines

4.1

There are two main lines of nursery grown semi-mature trees planted as flight corridors for bats, planted across the receptor site and the woodland planting site. Within the receptor site, as mentioned above, it is unlikely that these trees form any legible guide to bats (Fig 7). The majority of these trees appear heading toward untimely death. (Fig 9, Fig 10)

The Bat Licence holder has continued to attend the site during construction and following completion. They are satisfied works are within the licence conditions.

Responded in Paragraph 3.5 and 4.2 (Below)



Fig 9



Fig 10

4.2

Along the contiguous northern perimeter of the receptor site and woodland planting site there are 37 of these trees, all with watering bags, but 24 are stressed to very stressed with a 10 probably dead. Many of these despite being given quite substantial supports (some months after planting) are leaning at precarious angles (Fig 11) and, furthermore, the ties to those supports are poorly executed (Fig 12) with only a small handful of trees actually benefitting from that support. Most will soon be seriously damaged by chafing at a critical height as wind rocks the trees on the hard supports. The water bags have only been seen being filled twice since planting in April.



Fig 11



Fig 12

Any failure of planted trees will be replaced in the Optimum Winter 2021/2022 planting season. Ongoing upkeep of the Bat flight line is stated as a Licence condition.

Substandard tree ties were identified and will be rectified this planting season (2021/2022).

A watering regime was established for the trees during the works. Upon demobilisation from the site watering ended.

4.3

The second line of trees runs diagonally from Jones' Hill Wood to the unnamed wood at top of Bowood La. From a standpoint behind the northern fence, only 14 are assessable. 8 of those are clearly stressed, some possibly dead. 7 are close enough for the base of the tree to be discernable, and there are no water bags to be seen (Fig 13). Supports and tying follows the same pattern as above.

Please refer to answer for 4.2.



Fig 13

4.4

I believe these trees were originally considered supplemental, it seems odd they have taken on role of compulsory compliance requirement.

I have never seen any watering beyond the two bag fillings noted above. No bowser has been seen on the site or adjacent compound.

Bat flight lines were required as part of the Bat Licensing condition. Regarding watering please refer to 4.2 above.

5.0 Woodland planting site

5.1

This area was mostly decompacted February/March '21. There was no other preparation.

Planting of whips took place March through April '21.

Overall the whips seemed well placed and in May '21 or later, sometime after planting, were provided with canes and paper rabbit guards (first time I've seen HS2 use these rather than plastic, good to see!).

According to HS2's documentation there was a proposed 22000 plants across this site, but pacing out, and looking at planting density I see scope for little more than 8 or 9000 plants

here.

Following feedback from the local authority the original planned 22,000 trees communicated during the stakeholder engagement period were reduced to 13,445 trees as it was felt the tree density at the woodland edge was too high. Subsequently 10,722 trees were planted on this site in the 2020-21 planting season, and 2,723 trees are planned to be planted in the 2021-22 planting season as well as any replanting requirement for failed trees.

5.2

Given ponds have been added to the original plans for unexpected licence compliance requirements, and that there are large unplanted areas in the centre of the area, I suspect plant numbers are markedly below original quotes, to an extent that needs to be questioned. Is this a policy followed elsewhere? How is this to be reflected in the proclaimed 7 million trees to be planted?

Plans I have seen show hedging along a serpentine edge to the fence line, but what has appeared is a straight line (Fig 14).



Fig 14

The requirement for the 3 no. waterbodies were identified through the approval of the bat licence, in discussion with Natural England. This required adaption of the planting design. Previously planted whips were removed for access and replanted within the site. Where possible waterbodies were located within maintenance areas of the planting area to reduce removal of whips.

Hedgerow planting is in accordance with the construction issued drawing and superseded by Bat Licence conditions.

HS2 commitment is to create an unprecedented 'green corridor' of new wildlife habitats and woodlands which will include planting up to 7 million new trees and shrubs between London and the West Midlands which will support delicately balanced local ecosystems running through the spine of the country.

5.3

The majority of whips seem to be progressing, though an attrition of about 25-30% looks likely.

Most of the area is under a major infestation of weeds with the majority of whips quite invisible (Fig 15).



Fig 15

HS2 have committed to replace the majority of failed trees over a five-year period during the establishment of the woodland. A natural thinning out is planned as the woodland matures so a low level of attrition is accepted. Current assessments reflect a 25% failure rate, this is as expected for an exposed hillside site.

Understory woodland Management is being carried out as per Maintenance schedule. Weeds competing with planting are treated with herbicide. Weed treatment was undertaken in the Autumn and will continue to be managed. Assessment of wildflower mix indicates performance meeting expectation.

5.4

That same weed infestation and associated seed fall will have major implications for any seeding of open "glade" at centre of this area.

There appears to have been an application of herbicide along the north and east hedge boundaries (Fig 13), possibly to reduce wind blown seed contaminating adjacent agricultural land. If this is the case it looks to be a futile underperformance. There is a very considerable seed bank here which the local farmer must wince painfully when he sees.

The grassland glades alongside controlled herbicide use and maintenance has established well and there is a diverse range of wildflowers which will colonise and in time thwart any weak annual weed growth. The threat to further grassland establishment by weed seed will be treated following the maintenance plan. The grassland rides will be cut in March and April 2022 to get rid of any prolific annual agricultural weed seed germination and arisings removed from site.

6.0 Jones' Hill Wood

6.1

Over a third of the Wood was actually felled. The expressed need for speed in Court was to facilitate constructing the urgently required haul road. As of September '21, there is little sign of any road building. Does this mean better mitigation could have been in place before felling? Does this mean more appropriate seasons for translocating and planting might have been found? Does this mean asking to waive the regulators rules for the sake of costs incurred was misleading?

Even now, the Woodland Management Zone is full of various detritus of the massive security presence posted there since October '20.

Construction of the internal haul route has progressed north from the access point off the A413 at Great Missenden compound, up to and past the Jones Hill Wood area.

If the Fusion clearance works at Jones Hill Wood were not completed until Autumn 2021, EKFB's access past Jones Hill Wood would have been severely impeded and this would have delayed internal haul route construction and Earthwork activities until Spring 2022.

6.2

Still this beleaguered strip that is now a wide open front to the Wood is floodlit every night (Fig 16), though lamp numbers have been reduced. The noisy generators now only run at night, coming on after sun down.

Due to presence of personnel onsite during hours of darkness, lighting is required to ensure their safety and wellbeing.



Fig16

6.3

The flood lights still lie under some of the bat boxes sited here in April.

As mentioned above, the Wood now has a very wide open front allowing light and weather penetrate right through the heart of the Wood and already some weaker specimens on the supposedly safe side have sadly succumbed (Fig 17).

Answered in 6.2

Answered in 3.4



Fig 17

6.4

It is worth noting too, that the three prime potential roost site standing deadwoods are now frontline to the weather (By experience I can attest to the windiness of this Woodland!) and have been seen rocking significantly in fairly gentle winds.

<https://photos.app.goo.gl/4knGxzkp8jLTGoZT7>

Additional Bat roosts, both new boxes and potential roost features have been placed within the Woodland Edge Management Zone in favourable locations as per the bat licence. Suitable roost features were identified prior to felling for reuse in this zone and have been attached to existing trees.

6.5

Numbers of glis glis in the Wood seem much reduced, possibly many of them burrowed in the soil extraction area over winter. There may be a corresponding increase in grey squirrel numbers.

Tawny owls have recently started moving back in.

The bat population seems considerably less than prior to HS2 Ltd's engagement with this iconic Chiltern wood.

Over all, Jones' Hill Wood now looks set for further serious deterioration.

7.0 Summary

7.1

The work done on behalf of HS2 Ltd in and around Jones' Hill Wood has appeared shambolic, hurried, mis-timed and mismanaged. What has resulted is far from adequate. Although some of the work has been executed with seeming care, it is unlikely that given lacklustre and/or dismal work surrounding, that this was any more than box ticking. If this is the standard that Fusion/HS2 Ltd attain in full public glare and whilst a very public legal case on this very topic was ongoing or just recently finished, it does not bode well for HS2's work elsewhere. HS2 Ltd seem a very long way off claims of no net loss to biodiversity and of a green corridor of rich nature-scapes. The failure on so many counts suggests little faith can be put in HS2 Ltd or their contractors to adhere to the Environmental Statement.