

Green Tunnel and North Cutting excavation approved by the Environment Agency

We are delighted to announce a breakthrough with HS2 following 10 years of campaigning to protect Wendover watercourses.

HS2 has acknowledged that the Wendover North Cutting would impact the flow of water from the Coombe Hill Aquifer; and has now designed a scheme that will protect the Weston Turville Reservoir nature reserve for future generations. The first phase of the works has started following approval by the Environment Agency.

History

Back in 2013 the Wendover Parish Council was concerned that the draft "Environmental Statement" did not adequately address the impact of the railway on the local watercourses and commissioned a Consultant Hydrogeologist to investigate. We discovered that groundwater flowing from the Coombe Hill Aquifer would discharge into the "Wendover North Cutting", potentially reducing the supply to the Weston Turville Reservoir Site of Special Scientific Interest and Nature Reserve.

The diverted water would flow downhill towards Stoke Mandeville and increase the existing flood risks in Aylesbury.

Presentation to the House of Commons Select Committee in 2016 resulted in HS2 disagreeing with our view that "tanking" of the cutting would be needed and saying that any issues would be sorted out at the future design stage. However, the MPs demanded provision of a series of monitoring wells from HS2. We measured the groundwater in those wells until 2020 when we had conclusive proof that the water levels had been up to 5 metres above the expected track height at the North Cutting.

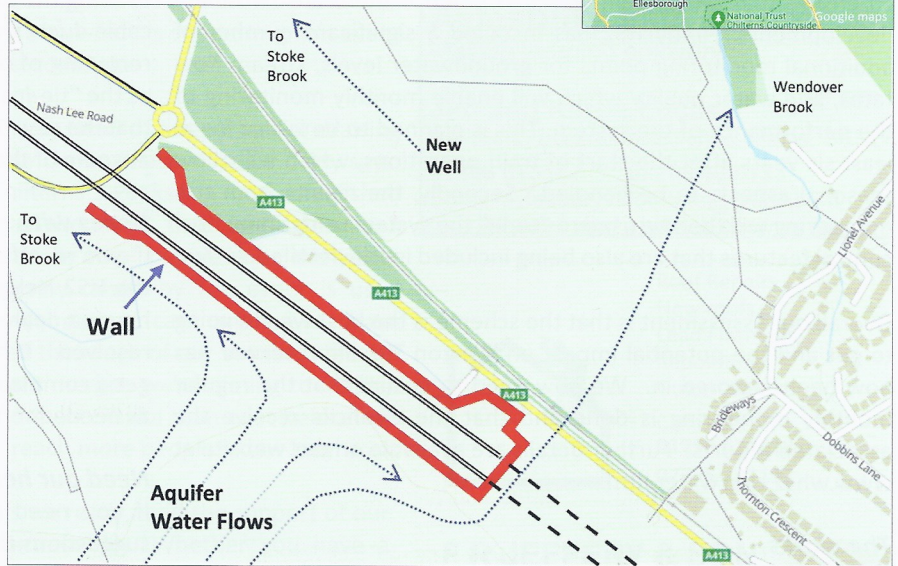
During 2021 we had several technical meetings with HS2 as its modelling of the ground conditions and water flows developed, but this appeared to be focused on the impact to the land within 1000 metres of the line; which excluded the Weston Turville Reservoir. We attempted further engagement with both HS2 and the Environment Agency during 2022 to understand the proposed design but this was blocked despite repeated escalation to the Secretary of State for Transport.

The high level design of the North Cutting was revealed in the August 2022 submission to Bucks Council, and we eventually gained access to the details in July 2023 and sought an opinion from a Consultant Hydrogeologist.

The design

A 600 metre section of the North Cutting immediately north of the Green Tunnel will be "tanked" using an underground wall going down 32 metres through the porous chalk layer and embedded into the underlying clay. Walls will be formed on east and west sides of the railway; and also underneath the track at the mouth of the Green Tunnel.

Groundwater flowing east from Coombe Hill will find new routes



to the south of the wall (flowing underneath the green tunnel in porous foundations) or heading north towards Nash Lee down a flight of ponds which will control the rate at which water will discharge into Stoke Brook.

The wall diverting some of the water to the north means that the flows heading east will be reduced, affecting Wendover Brook which feeds the Weston Turville Reservoir and some tributaries that flow into Stoke Brook.

We were pleased to see that the HS2 modelling has now included the impact on the reservoir, covering both the volume and quality

...continued on next page

M. D. MARRIOTT

Painting • Decorating
Colour Design
Interior and Exterior
01296 630576
For a free estimate



- Curtain alterations
- Custom made Roman Blinds

enquire@ingridsneedle.com
Tel: 01296 752 747
www.ingridsneedle.com

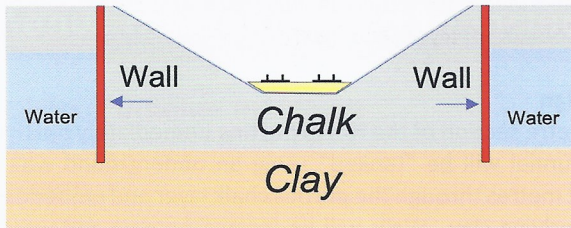
A S Landscapes

All aspects of landscape construction
Expert team in fencing and paving
Contact Andy: 07841 976262

www.aslandscape.uk

...continued from previous page.

needed to protect the downstream environmental ecosystems. The reservoir is fed from a combination of Wendover Brook (beside Halton Lane) and two brooks from the Wendover Arm Canal. HS2's analysis shows that there will be sufficient flows from the canal to cover the shortfall in Wendover Brook; and maintain the current situation where the reservoir perpetually outflows to the north. While the chemical composition of the flows are slightly different, the resulting levels of nitrates and phosphates will be very similar and not adversely affect the ecology.



Cross-section of North Cutting

Maintaining the Stoke Brook tributaries to the east of the cutting will require topping-up of the water volume, which will be achieved by creation of a new well in Rushey Meadow, one of the fields between Dobbins Lane and the King's Farm Shop.

To ensure that the system works in practice there are two main developments. Firstly HS2 has installed a significant number of additional monitoring points for groundwater levels, stream flow rates, and water quality which will enable monthly monitoring of the performance of the system. This is planned to be in use for at least six years after the start of train operations, which will allow seasonal aspects to be handled. Secondly, the results from this monitoring will then be used to "tune" the system using some flow control features that are also being included in the detailed design.

Overall our assessment is that the scheme is the best we are going to get and the potential impact on Weston Turville reservoir has now been factored in. We now need to ensure that the regular monthly monitoring is done and that the Councils receive the associated reports. Further details are available on our website at www.whs2.org/water.htm

The works

Between Ellesborough Road and Folly Bridge approval has been given to excavate down to 3m above the ground water level. Removing 40,000 cubic metres of 'dry chalk' started in August, and will involve about 3,000 dump truck return trips. North of Nash Lee Road excavation of the exposed clay has also started. Between Folly Bridge and Nash Lee Road the tanking of the cutting

is expected to start in November, and a second concrete works is being established to make the massive volume of concrete slurry needed for the underground walls.



Artist's impression of the second concrete plant to be constructed near Nash Lee Road

A413 Small Dean closures

During August there were closures of the A413 to enable piling work next to the railway line for "Pier 5" of the Small Dean viaduct. This month we're expecting more overnight road closures preparing for "east" realignment of the carriageways expected in the autumn. This is to enable the piling for "Pier 3", being part of the complex multi-year plan to build the viaduct. HS2's animation of what's coming is at <https://tinyurl.com/sdv2023video>.

Ellesborough Road issues

Three more weeks of full closure of Ellesborough Road are expected to bring the diversion over the temporary bridge into use. Various cable ducts were installed during the July closures, but there's still rerouting of other underground utility services to be done as well as the "tie-ins" to the existing carriageways. HS2 is now estimating that the new road will open in November, but this could well change as some of the contractors are outside of HS2's direct control.

Issues with HS2?

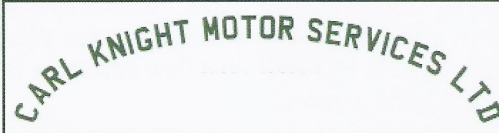
If you're affected by the construction activity, please contact the HS2 Helpdesk team on 08081 434 434 (which is available 24 hours a day) or email hs2enquiries@hs2.org.uk to get your issues resolved. It helps if you have photographic evidence and please get a complaint reference number so that we can follow up issues as needed.

Need our help?

If you need further help, want to join us, or have ideas and suggestions that would mitigate the community impact, then get in touch at enquiries@whs2.org.

Doing what's right for Wendover

See whs2.org



Full range of diagnostics on all vehicles
Complimentary valet with every service
Air conditioning on all makes
Vehicle collection service
Servicing/MOT/repairs
Courtesy car
Tyres

01296 620096

carl@ckmotorservices.com

Nash Lee End Wendover HP22 6BH

Find us on Facebook

Carl Knight Motor Services <- <https://www.facebook.com/Carl-Knight-Motor-Services-LTD-102199368607225/>

