

14 May 2023

To Rt Hon Boris Johnson MP, Reply to letter Ref: BJ151689

Public concern about HS2 impacts to natural environment and water supply.

Dear Sir,

I am puzzled by your letter dated 6th May as you have not answered my questions and have forwarded a letter from HS2 Ltd (Mr J. Sykes) which also does not answer the questions or provide any data supporting HS2 claims. My original questions need urgent answers:

1. What are HS2 contractors doing with their cement to create (cancer causing) chromium 6 (Cr6)? They have identified that the chromium in the cement is the root cause of generating chromium 6 in the curing or drying process. Is the cement in date and are the conditions below the water level in the aquifer suitable for concrete construction without creating ever increasing pollution? Is HS2 monitoring the release of Cr6 in the aquifer around the tunnel construction and Viaduct pillars and if so what happens to this data?

Action is needed to stop increasing input of concrete into the chalk aquifer without risking input of hazardous chemicals to groundwater i.e. chromium 6



Fig 1. 14 May 2023

A large sink hole at least 8m wide and 5m deep opened up above Chiltern Tunnel Boring Machine in the Misbourne Valley.

The HS2 fix is again to throw more concrete at it. The new sink hole is in the Mid Chilterns Chalk aquifer upstream of the Colne Valley and our drinking water sources. This is the same aquifer that filters our drinking water and runs under the Colne Valley then under Ruislip

The public urgently need the release of monthly water quality data. Please can you back my call to HS2 Ltd to release their monthly water quality assessment reports for the Colne Valley from May 2022 to April 2023?

2. Due to HS2 works in the Drinking Water Protected Areas (DrWPA) your constituents in Uxbridge and South Ruislip are receiving mixed tap water. This has changed from pure naturally filtered aquifer water, to processed surface from Thames Water Ltd mixed with water from some Colne Valley sources which are needing additional purification before input to public supply. We need our local Member of Parliament to represent local interests and long term protection of local groundwater and drinking water sources.

HS2 would have you believe they are further along with piling and concrete works than they actually are. Fig 2. below shows HS2 piling works at Harvil Road, photograph taken on **11 May 2023**.



Fig 2. Harvil Road site of Colne Valley Viaduct Southern Embankment is within the inner source protection zone (SPZ1) for the TH147 public water source (PWS). The sheet metal piling is in preparation for large scale, concrete works using chalk and cement mix which is stored on Harefield Moor and is one of the sites identified with cancer causing, Chromium 6 pollution.

The Ickenham water source TH147 is licenced to produce 12 Million litres per day but is currently in poor chemical quality and cannot be used. UK Government has a commitment to improve the chemical quality of Ickenham PWS by 2027 but this is not happening and HS2 works are not helping.

Please ask the **Environment agency**: Have HS2 works in the TH147 (Ickenham water source) protection zone been assessed against failure to achieve good chemical quality by 2027 and if so can these assessments be released? Are Affinity Water supplying water quality data for TH147 (Ickenham Source) and if not who is monitoring this source?

From Harvil Road, the HS2 route continues in the same Drinking Water Protection Area (DrWPA) to the south east along the Cophall cutting and into the Ruislip Tunnel. Under the Ruislip rugby fields the tunnelling machines have cut into the top of the top of the chalk aquifer and are planned to continue in the aquifer under South Ruislip. Please see Fig 3 on following page (in landscape) below. We also know that a wide range of Earth Pressure Balance chemicals have been permitted by the Environment Agency for the Ruislip/Northolt tunnels.

Please ask the **Environment Agency**: Are the EA sure that life and property in Ruislip are safe from ground collapse such as happened in the Misbourne Valley over an HS2 tunnelling machine last weekend? What Environmental Impact Assessments have been made for Earth Pressure Balance tunnelling and EPB chemicals on groundwater movement and groundwater quality in the chalk aquifer?

As you know Sustainable Developments must not cause harm to life, harm drinking water sources or prevent environmental objectives being met.

This is an urgent matter.

Thank you for your continued interest,

Sarah Green

This letter and your answer will be published on Hillingdon Green Party website.

Fig 3. Tunnel boring machines using Earth Pressure Balance (EPB) chemical techniques have cut into the chalk aquifer under the Metropolitan Line and under the Ruislip rugby fields where chemicals have escaped. The bottom sections of the tunnels are planned to continue in the aquifer and will undermine residential properties towards South Ruislip.

