

**HIGH SPEED 2 BRIEFING NOTE**  
**Water Resources and Flood Risk**  
Report by

The 51m response to the EIA Draft Scope and Methodology Report said that the baseline for this area is highly important as a starting point for subsequent assessment.

Environmental baseline information indicates that there will be significant effects on the water environment. The proposed scheme:

- Crosses 24 major rivers (having an upstream catchment greater than 50 km<sup>2</sup>)
- 88 minor rivers (8 may require a diversion)
- 12 navigable canals
- 11 lakes or reservoirs
- 16.2km in Flood Zone 3 (land having a greater than 1% (1 in 100) chance of flooding each year) and 19.1km in Flood Zone 2 (land having a probability of a flood between 1% (1 in 100) and 0.1% (1 in 1000) each year)
- Crosses lengths of aquifer (an underground layer of water bearing rock)

In responding to the consultation 51m drew attention to the approach to:

- Identifying existing water quality conditions.
- Depths of groundwater.
- Flows of aquifer.
- Qualities of aquifers and geological layers.
- Floodplain extent, depth, velocity and hazard.
- Surface water flood depth.
- Groundwater quality and quantity.
- Any increase in risk to people and property due to alterations in flood zones.

County and Unitary authorities are now defined as Lead Local Flood Authorities under the Flood and Water Management Act. Lead Local Flood Authorities have taken on responsibility for managing and investigating surface water flooding. It was therefore highlighted that these authorities need consulting regarding surface water implications.

No information has been provided about the likely water consumption use in the construction and maintenance of HS2. Normal planning policies would require developments to demonstrate sustainable water collection and reuse.

The following list highlights examples of operational effects which should be assessed:

- Effects on water quality due to the contamination of groundwater or surface waters from both routine discharges from the railway or associated infrastructure and from accidental spillages
- Effects on river or stream quality, habitats and flows caused by the permanent discharge to or diversion of water courses
- Effects on aquifers, such as changes to groundwater flows, recharge rates and quality, resulting from the permanent works: typically tunnels and cuttings, including dewatering of these structures
- Effects on flood defence schemes
- Effects on licensed users
- Effects on flood risk due to loss of flood plain storage, uncontrolled runoff, accumulation of silt, sediment in drains or ditches, the diversion of rivers, drains, sewers or ditches and new infrastructure affecting natural drainage paths

The route announced in January 2012 has a length of 230km with approximately 36km of tunnels and 90km of cuttings. The route was altered to reduce the length of tunnel passing through the chalk aquifer in the Chilterns. Nevertheless the Proposed Scheme requires cut or tunnel through principal and secondary aquifers and close to licensed abstractors with protected rights, particularly through the Chilterns.