

The connectivity Pitt, and how to avoid it

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UK government's newly announced intention to reconstitute its railway industry offers a chance to revisit an issue of hydrological connectivity. Following increased flooding nationally documented by the Pitt Review 2008, major industries have sought to improve resilience: this is especially relevant to the railway where a single company holds an infrastructure portfolio with major flood plain embankments and consequent drainage implications.

At Oxford, following repeated railway flooding it was proposed in 2015 to raise a section of track. The flooding occurred at a location where the rail embankment intersects with a road embankment. The proposed mitigation flow matches the sectional area of track-raising measured in the plane of the road embankment, yet the applicant proposed its mitigation culvert in the plane of the rail embankment which already had original (I K Brunel, 1840s) culverts four times the Environment Agency's target flow for the entire flood plain.

In terms of impact on neighbouring properties the company's Flood Risk Assessment (FRA) could be read in two ways, one being relatively benign (10-20mm rise), the other being an order of magnitude larger in locations where it was possible to relate proposed water level to individual properties, with implications in one case for an estate of 180 houses built to a nominal 100-year return flood standard.

Assessment of impact was made harder by confidentiality. This might have been transparent to the regulating authorities, but in the event the local press attributed the award of planning permission to the company's claim that it had a fall-back position, i.e. it could raise its track without offering flood mitigation.

Was this true? When the company proposed a local engineering operation in 2010 it published four pages from its Act of Parliament of 1843, one of which included a drainage term not relevant in that operation. Drainage duly became relevant five years later with the track raising discussed here, but the drainage term in this case was not disclosed in the proposal documentation. Correspondence with company officers at the highest level has at time of writing not elucidated this position, which on a wider scale might tend to transfer historic drainage obligations to the state, thus potentially relevant to the newly announced reorganisation of the industry.

This presentation looks at the wording of the 1843 Act relative to: bye-laws administered by leet and baron courts; drainage boards; and modern case law (<http://www.6pumpcourt.co.uk/wp-content/uploads/2014/11/common-law-liabilities-for-flooding-WU.pdf>)