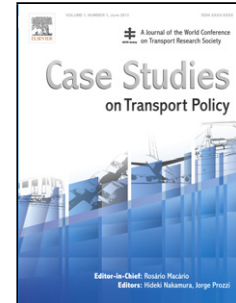


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High Speed Rail: Implications for carbon emissions and biodiversity

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Highlights

- Carbon and biodiversity impact assessments do not necessarily move in same direction
- Tunnelling reduces impact on local habitats but increases embedded carbon emissions
- HS2 will contribute negatively to the UK carbon budgets reductions until 2050
- The longer term (30-50 year) effects are not well understood and accounted for
- The environmental effects of HS2 are seen as part of remediation, rather than being central to the decision on whether to construct the new high speed rail link
- Complexity and uncertainties exacerbate the tendency for short-term pragmatism, with major infrastructure decisions being taken for political reasons

Abstract

Rail has traditionally been seen as ‘good’ for the environment, as it is fast and efficient with a low carbon footprint. With respect to HS2 in the UK, new environmental debates have arisen over the competing global objectives of reducing the carbon footprint of HSR and the need to maintain and enhance local biodiversity and habitat. This paper identifies, measures and comments on the longer term environmental consequences of major infrastructure decisions that have to be made today. Short term pragmatism is seen as the means by which these decisions are made, and this results in issues relating to the complexity and uncertainty in assessing future impacts being relegated to a secondary level of importance. Mitigation measures (and not alternative routes) are discussed, and the legacy value of HSR to future generations is based on notions of short term mobility and economic growth, and not on the lower levels of carbon emissions and biodiversity loss.

Acronyms

AONB	Area of Outstanding Natural Beauty
AoS	Appraisal of Sustainability
ASNW	Ancient and Semi-Natural Woodland
BAP	Biodiversity Action Plan
BCR	Benefit-Cost Ratio
CBA	Cost-Benefit Analysis
CFA	Community Forum Area
DEFRA	Department for Environment, Food & Rural Affairs

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