

High Speed Rail (Crewe – Manchester) Environmental Statement

Volume 5: Appendix HA-001-0MA05

Health

MA05: Risley to Bamfurlong
Health assessment matrix

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Department
for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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1 Introduction

- 1.1.1 This report presents assessment matrices that have been used to identify the health effects relating to the Risley to Bamfurlong area (MA05).
- 1.1.2 This appendix should be read in conjunction with:
- Volume 2, Community Area reports;
 - Volume 3, Route-wide effects; and
 - Volume 5, Appendices.
- 1.1.3 The matrices in this appendix list the impacts on health determinants identified along the route of the Proposed Scheme and apply assessment criteria as set out in the Environmental Impact Assessment (EIA) Scope and Methodology Report (SMR) (see Volume 5: Appendix CT-001-00001) to evaluate the likely health effects arising from these impacts. The assessment matrices for the construction and operational phases of the Proposed Scheme are set out in Table 1 and Table 2 respectively.
- 1.1.4 Impacts that are categorised as having low intensity and a low extent of exposure are not considered to affect the health of the population. For such impacts, no health effects are reported. The last column of the tables indicates whether or not a health effect is reported, and in which volume of the Environmental Statement (ES) is discussed.
- 1.1.5 Commentary on the scientific evidence base used in the health assessment is presented in Volume 5, Appendix HA-002-00000.

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Table 1: Risley to Bamfurlong (MA05) – Construction health assessment matrix

MA05 Risley to Bamfurlong – Health effects during construction											
Communities	Impact description	Impact pathway	Temporary / permanent	Beneficial / adverse	Health determinant	Intensity of impact (low / moderate / high)	Extent of exposure (low / moderate / high)	Vulnerable groups	Health effects at population level	Mitigation	Reporting
Risley, Culcheth and surrounds	Construction of the A574 Warrington Road realignment. The A574 Warrington Road is a designated construction traffic route. Views of construction from the A574 Warrington Road, Risley. Noticeable change in noise environment at residential properties and along Public Rights of Way (PRoW) during construction. An increase in heavy goods vehicle (HGV) traffic along the A574 Warrington Road between Cross Lane and New Hall Lane.	Visual intrusion and changes to the noise environment as a result of construction works, and an increase in HGV traffic, leading to reduced levels of satisfaction with the local environment.	Temporary (approximately four months)	Adverse	Neighbourhood quality	Low	Moderate	None identified	Adverse effects on physical and/or mental wellbeing, such as increased stress and reduced satisfaction with quality of life.	Incorporated mitigation as reported in the ES.	Volume 2
Risley, Culcheth and surrounds	Construction of Culcheth cutting. Views of construction from Wigshaw Lane and Robins Lane, Wigshaw. Noticeable change in noise environment at residential properties in Wigshaw.	Visual intrusion and changes to the noise environment as a result of construction works leading to reduced levels of satisfaction with the local environment.	Temporary (approximately eleven months)	Adverse	Neighbourhood quality	Low	Moderate	None identified	Adverse effects on physical and/or mental wellbeing, such as increased stress and reduced satisfaction with quality of life.	Incorporated mitigation as reported in the ES.	Volume 2
Risley, Culcheth and surrounds	Presence of construction workforce on	Presence of workers in local communities	Temporary (up to eight years)	Adverse	Social capital	Low	Moderate	None identified	Adverse effects on wellbeing associated with	Incorporated mitigation as reported in the ES.	Volume 2

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Communities	Impact description	Impact pathway	Temporary / permanent	Beneficial / adverse	Health determinant	Intensity of impact (low / moderate / high)	Extent of exposure (low / moderate / high)	Vulnerable groups	Health effects at population level	Mitigation	Reporting
	worksites and at satellite compounds (M62 West viaduct south satellite compound, M62 West viaduct north satellite compound, A574 Warrington Road satellite compound, Manchester to Liverpool Railway south satellite compound, Manchester to Liverpool Railway north satellite compound, B5207 Wilton Lane satellite compound, A580 East Lancashire Road satellite compound).	including in local shops, restaurants and other facilities, leading to changes in levels of community cohesion and trust.							negative feelings about community cohesion and trust.		
Risley, Culcheth and surrounds	The construction of the Culcheth cutting will require the demolition of four residential properties in Wigshaw, which is approximately 350m west of Culcheth. There are only 20 residential properties in Wigshaw.	Demolition of residential properties potentially reducing the beneficial health effects gained through social contact.	Permanent	Adverse	Social capital	Moderate	Moderate	None identified	Adverse effects on the erosion of social networks resulting from demolitions.	None identified	Volume 2
Risley, Culcheth and surrounds	The construction of the Culcheth cutting will require the demolition of English Karate Academy at Warehouse Studios.	Demolition of recreational facility affecting ability to participate in specific physical activity.	Permanent	Adverse	Access to green space, recreation and physical activity	Moderate	Moderate	Children and adolescents	Reductions in wellbeing benefits associated with physical activity.	None identified	Volume 2

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Lowton, Golborne and surrounds	Construction of the Lowton cutting. Views of construction from Lowton (Wash End, St Mary's and Lowton Common). Noticeable change in noise environment at residential properties, Lowton Junior and Infant School, open spaces and along PRoW during construction.	Visual intrusion and changes to the noise environment as a result of construction works leading to reduced levels of satisfaction with the local environment.	Temporary (up to one year and eight months)	Adverse	Neighbourhood quality	Low	Moderate	None identified	Adverse effects on physical and/or mental wellbeing, such as increased stress and reduced satisfaction with quality of life.	Incorporated mitigation as reported in the ES.	Volume 2
Lowton, Golborne and surrounds	Construction of the Slag Lane viaduct and Slag Lane realignment. Presence of a designated construction traffic route along Slag Lane. Views of construction from Saddle Tree Fold and Slag Lane, Little Byrom. Noticeable change in noise environment at residential properties, Byrom Wood and along PRoW during construction. An increase in HGV traffic along Slag Lane between Manor Avenue and Byrom Lane.	Visual intrusion and changes to the noise environment as a result of construction works, and an increase in HGV traffic, leading to reduced levels of satisfaction with the local environment.	Temporary (up to one year and five months)	Adverse	Neighbourhood quality	Low	Moderate	None identified	Adverse effects on physical and/or mental wellbeing, such as increased stress and reduced satisfaction with quality of life.	Incorporated mitigation as reported in the ES.	Volume 2
Lowton, Golborne and surrounds	The A573 Church Street in Golborne is a designated	Increase in HGV traffic along the road and changes	Temporary (during peak months of construction)	Adverse	Neighbourhood quality	Low	Moderate	None identified	Adverse effects on physical and/or mental wellbeing,	Incorporated mitigation as reported in the ES.	Volume 2.

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	construction traffic route. An increase in HGV traffic along Church Street. Noticeable change in noise environment from the increase in construction traffic at residential properties along Church Street.	to the noise environment leading to reduced levels of satisfaction with the local environment.							such as increased stress and reduced satisfaction with quality of life.		
Lowton, Golborne and surrounds	Construction of the Lowton cutting will result in the loss of Hesketh Meadows Playing Fields.	Reduction in the area of open space may discourage people from participating in recreational activity.	Permanent	Adverse	Access to green space and physical activity	Moderate	High	Children (under 10 years)	Reductions in wellbeing benefits associated with physical activity.	Incorporated mitigation as reported in the ES. Replacement land provided at Cheetham Fold Farm.	Volume 2
Lowton, Golborne and surrounds	Construction of the Lowton north embankment and accommodation underbridges for Footpaths Golborne 31 and 33 will permanently bisect Byrom Wood, reducing the appeal of the area for recreation.	Impacts on amenity value of recreational infrastructure, discouraging their use for recreational activity and active travel.	Permanent	Adverse	Access to green space and physical activity	Low	Moderate	None identified	Reductions in wellbeing benefits associated with physical activity.	Incorporated mitigation as reported in the ES. Creation of additional circular walking routes.	Volume 2
Lowton, Golborne and surrounds	Construction of the Carr Brook aqueduct and drainage infrastructure will temporarily require land from the playing fields at Lowton Junior and Infant School.	Reduction in the area of school playing fields for formal and informal use.	Temporary (three years and three months)	Adverse	Education	Low	Low	Children (<10 years)	Reduction in the beneficial wellbeing effects associated with educational attainment.	None identified	Not reported
Lowton, Golborne and surrounds	Construction of the A572 Newton Road Overbridge highway works	Visual intrusion and changes to the noise environment as a result of	Temporary (up to three years and three months)	Adverse	Education	Moderate	Moderate	Children (<10 years)	Reduction in the beneficial wellbeing effects associated with	Incorporated mitigation as reported in the ES.	Volume 2

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Communities	Impact description	Impact pathway	Temporary / permanent	Beneficial / adverse	Health determinant	Intensity of impact (low / moderate / high)	Extent of exposure (low / moderate / high)	Vulnerable groups	Health effects at population level	Mitigation	Reporting
	and Lowton cutting will result in temporary effects on Lowton Junior and Infant School. The A580 East Lancashire Road main compound will be located adjacent to the school. The A572 Newton Road is the sole access to the school and will be used as a construction traffic route, enabling access to A572 Newton Road satellite compound.	construction works leading to reduced levels of satisfaction with the school environment.							educational attainment.		
Lowton, Golborne and surrounds	Presence of construction workforce on worksites and at satellite compounds (A580 East Lancashire Road main compound, A527 Newton Road satellite compound, Slag Lane satellite compound).	Presence of workers in local communities including in local shops, restaurants and other facilities, leading to changes in levels of community cohesion and trust.	Temporary (up to four years and nine months)	Adverse	Social capital	Low	Moderate	None identified	Adverse effects on wellbeing associated with negative feelings about community cohesion and trust.	Incorporated mitigation as reported in the ES.	Volume 2
Abram, Bamfurlong and surrounds	Presence of construction workforce on worksites and at satellite compounds (A573 Wigan Road satellite compound, and Bamfurlong satellite compound).	Presence of workers in local communities including in local shops, restaurants and other facilities, leading to changes in levels of community cohesion and trust.	Temporary (up to eight years)	Adverse	Social capital	Low	Moderate	None identified	Adverse effects on wellbeing associated with negative feelings about community cohesion and trust.	Incorporated mitigation as reported in the ES.	Volume 2

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All areas	Construction of the Proposed Scheme intersecting PRow.	Changes in the amenity value of PRow, increased distance due to diversions, and introduction of features such as footbridges and underpasses, deterring the use of PRow for active travel and recreation.	Temporary and permanent	Adverse	Access to green space, recreation and physical activity	Low	Low	People on low incomes	No health effects at population level.	Incorporated mitigation as reported in the ES.	Commentary in Volume 2
All areas	Presence of construction traffic, including HGV, on local roads.	Amenity impacts and safety concerns, deterring the use of local roads by non-motorised users.	Temporary	Adverse	Access to green space, recreation and physical activity	Low	Low	None identified	No health effects at population level.	Incorporated mitigation as reported in the ES.	Commentary in Volume 2
Route-wide	Demolition of a total 19 residential properties in Wigshaw and Lowton.	Residents required to relocate involuntarily, leading to disruption and uncertainty. Changes in connectivity to social networks, schools, employment, services and facilities.	Permanent	Adverse	Housing	Low to high (depends on individual circumstances)	High (route-wide)	Older people, young families, children, people with specific housing needs, people with mental health conditions.	Effects on mental wellbeing including reduced life satisfaction and increased stress.	Incorporated mitigation as reported in the ES.	Volume 3
Route-wide	Presence of construction activities close to residential properties at Culcheth, Wigshaw, Lowton and Golborne.	Concern and uncertainty about impacts of construction on local environment and property values.	Temporary (throughout planning and construction)	Adverse	Planning blight and uncertainty	Low to high	High (route-wide)	None identified	Effects on mental wellbeing including reduced life satisfaction and increased stress.	Incorporated mitigation as reported in the ES.	Volume 3
Route-wide	Direct effects on businesses affecting business activities and employment.	Loss of employment and earnings for some business owners and employees.	Permanent	Adverse	Employment and income	Moderate to high	Moderate (route-wide)	People on low incomes, people with disabilities.	Effects on mental and physical wellbeing associated with loss of employment and earnings.	Incorporated mitigation as reported in the ES.	Volume 3

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Route-wide	Presence of the construction works providing employment opportunities and demand for local goods and services.	Direct construction employment and training, employment within the supply chain, and benefits to local businesses through increased expenditure.	Temporary (throughout construction)	Beneficial	Employment and income	Moderate to high	High (route-wide)	Unemployed people and people on low incomes.	Beneficial effects on wellbeing associated with improved skills, employment status and income.	None identified	Volume 3
Route-wide	Increase in traffic flows and proportion of HGV on local road network.	Increased risk of road traffic accidents and fear of accidents.	Temporary	Adverse	Transport	Low to high	Moderate (route-wide)	Older people, children, people with disabilities.	Adverse effects on mental and physical wellbeing including stress and behavioural changes such as reductions in walking.	Incorporated mitigation as reported in the ES.	Volume 3
Route-wide	Presence of construction sites, vehicles and plant resulting in increased air emissions.	Increase in exposure of the population to dust, nitrogen oxides and particulates.	Temporary	Adverse	Air quality	Low	Low	Children, older people, people with existing respiratory health conditions.	No health effects at population level.	Incorporated mitigation as reported in the ES.	Not reported

Table 2: Risley to Bamfurlong (MA05) – Operational health assessment matrix

MA05 Risley to Bamfurlong – Health effects during operation											
Communities	Impact description	Impact pathway	Temporary / permanent	Beneficial / adverse	Health determinant	Intensity of impact (low / moderate / high)	Extent of exposure (low / moderate / high)	Vulnerable groups	Health effects at population level	Mitigation	Reporting
Route-wide	Operation of high-speed trains close to the population at Culcheth, Wigshaw, Lowton and Golborne.	Increased exposure to noise from operational trains.	Permanent	Adverse	Airborne noise	Low to high (route-wide)	High (route-wide)	Children, older people, people with existing health conditions.	Adverse effects on mental and physical wellbeing including annoyance, sleep disturbance and physiological effects.	Incorporated mitigation as reported in the ES.	Volume 3