

Diversity Impact Assessment (DIA)

# Project: Barthomley Level Crossing Renewal

<b>Document No.</b>	158184-NRD-1711-KCS1-REP-EHF-000001
<b>Route/Function</b>	Infrastructure Projects, Network Rail
<b>Issue Date</b>	13/03/2020
<b>Suitability Code (IP Only)</b>	S3 – Suitable for Review and Comment
<b>Security Classification</b>	Public



## Document History

Version No.	Date	Reason for Issue
001	14/01/2019	Internal during project development
002	13/03/2020	Update to GRIP 3 level crossing design and update to current DIA template

## Document Approval and Sign-off

	Name and position	Signed	Date
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## Project-related Documents

Document No.	Document Title	Relevant Section(s)
19-NW-9007-LX	Level Crossing Ground Plan	Plan layout
158184-NRD- 1711-KCS1-F01- EHW-000001	Crewe Hub - Barthomley Level Crossing Renewal – Proposed Turning Head Form 001	Part 1

# Overview: what's in this document

Document History .....	1
Document Approval and Sign-off .....	2
<b>Diversity Impact Assessment (DIA) Types .....</b>	<b>5</b>
<b>Step 1: Clarifying Aims .....</b>	<b>6</b>
Q1. What are the aims of this project/piece of work? .....	6
Q2. Could this work impact on people? .....	7
Q3. Decide if a DIA is required .....	12
<b>Step 2: The Evidence Base .....</b>	<b>13</b>
Q4. Record the data you have gathered about the diversity of the people potentially impacted by this work .....	13
<b>Step 3: Impact .....</b>	<b>19</b>
Q5. Given the evidence listed at 'Step 2: The Evidence Base', what potentially negative impacts could this work have on people with protected characteristics? .....	19
Q5a. Please select all the protected characteristics your work could potentially have a negative impact on .....	19
Q5b. Explain the potential negative impact .....	19
Q6. What could you do to ensure your work has a positive impact on diversity and inclusion including supporting delivery of the Diversity and Inclusion strategy? .....	21
<b>Step 4: Consultation .....</b>	<b>22</b>
Q7. How has consultation with those who share a protected characteristic informed your work? .....	22
Q8. Record any consultation you have had with Network Rail teams who are delivering work that might overlap with yours. ....	23
<b>Step 5: Informed Decision-Making .....</b>	<b>24</b>
Q9. After completing Steps 1–4, what is your decision? .....	24
<b>Step 6: Action Planning .....</b>	<b>25</b>
Q10. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at 'Step 3: Impact' or through consultation? .....	25
<b>Step 7: Publication .....</b>	<b>26</b>
<b>Appendix: continuation sheets .....</b>	<b>27</b>

## Diversity Impact Assessment (DIA) Types

- 1 The Built Environment**, or the procurement of works e.g. crossings & bridges, including maintenance, stations, offices/depots and other staffed buildings

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  - 2 Events**, including conferences, training courses and public consultations

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  - 3 Policies & Standards**, development, revision and withdrawal of standards, policies and associated guidance including for design.

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  - 4 Information Technology (IT)**, IT design, development and enhancement projects

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  - 5 Change Programmes** – Better Everyday

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  - 6 Procurement of goods and/or services**
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# Step 1: Clarifying Aims

## Q1. What are the aims of this project/piece of work?

Barthomley Level Crossing renewal is part of the Crewe Hub programme of works which will generate significant opportunities – not only for Crewe itself but also for the surrounding sub-region. The Northern Gateway Partnership – a collaboration between seven local authorities and two Local Enterprise Partnerships (LEPs) – positions Crewe at the heart of a locally driven programme of investment to bring jobs, housing, growth and regeneration to Cheshire and North Staffordshire. Network Rail are working closely with Cheshire East Council, HS2 Ltd. and the Department for Transport to develop a proposal which aims to provide more capacity, better connectivity, more resilience, improved access and improved facilities in the Crewe area. The benefit could be felt far beyond Crewe to all the connecting routes and locations served. This will facilitate future passenger growth by enabling more national and regional rail services at Crewe.

Barthomley Level Crossing is located between Crewe and Alsager, within Cheshire East Council constituency. The crossing lies on Mill Lane, a narrow public road linking the villages of Oakhanger and Barthomley. Mill Lane has a 7.5 tonne weight restriction and the national speed limit for single carriageways applies, i.e. 60mph for cars. Mill Lane is also part of Route 70 of the National Cycle Network. There is a single bi-directional railway line at the crossing. The railway line is electrified with overhead lines.

Barthomley Level Crossing has a history of misuse, with the most common act being motorists failing to close the gates behind them. Despite the presence of the camera, mis-use has continued with over 75 mis-use incidents recorded since the beginning of 2012.

The primary project objective is to reduce the risk at the Barthomley Level Crossing, whilst providing a safe route for people to cross the railway. The project aims to achieve a solution through collaborative relationships with community-based groups and key local stakeholders so that Network Rail is better able to meet their needs.

The selected option for the crossing is to downgrade the crossing to bridleway gates only, with Miniature stop lights. This will close the crossing to vehicles, while keeping access for pedestrians. In addition, a turning head will be provided to the north to facilitate the turning around of refuse vehicles.

**Q2. Could this work impact on people?**

No (Please go to Q3)

Yes

**If yes, briefly explain how this work could affect people (considering our duty to promote equality, tackle discrimination and foster good relations between groups)**

Under the proposed option, the level crossing will be closed to vehicular users. A location map and photographs of the crossing are shown in Figures 1 to 4.

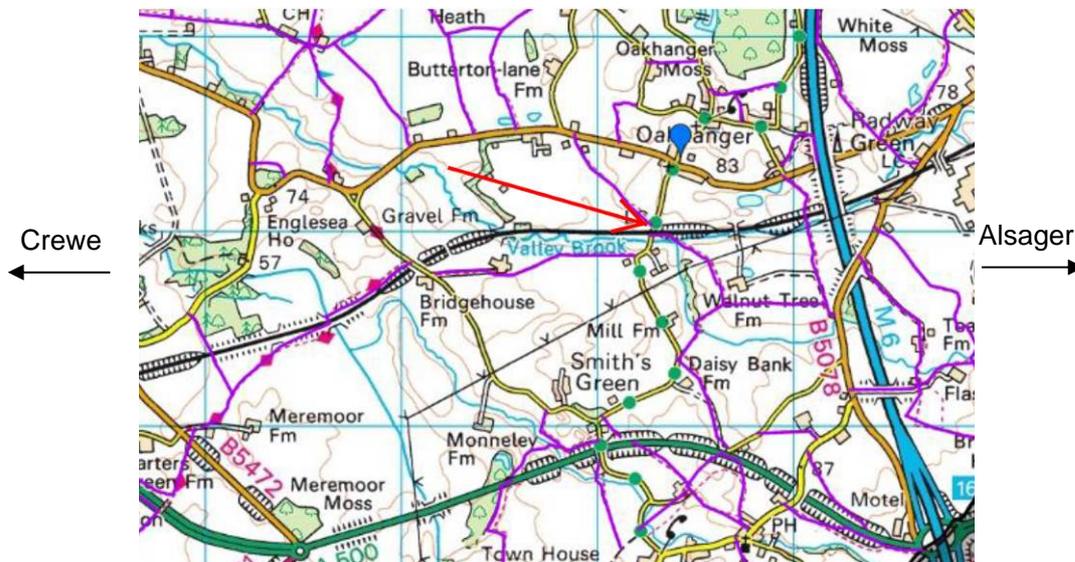


Figure 1 - Cheshire East Council road and footpath map with arrow to level crossing



Figure 2 – Aerial photograph of the crossing (1)



Figure 3 – Aerial photograph of the crossing (2)



*Figure 4 – View of the crossing from the road looking north*

The map shown in Figure 1 indicates that Mill Lane is not the principal link between the road network, with several roads providing direct access and connectivity to Crewe and Alsager. The B5077 and A500, located to the north and south of the crossing, run approximately parallel to the railway line and Motorway 6 (M6) junction 16 is located to the west. To the east of Mill Lane is Barthomley Road, and to the west is Radway Green Road which both join onto the B5077 and A500.

Land surrounding the level crossing is predominately agricultural land, with approximately seven farms in the wider area. To the south of the crossing, there are approximately six residential properties and farms located along Mill Lane; to the north there is a cottage located directly adjacent to the crossing and there are approximately ten residential properties located at the intersection between Mill Lane and the B5077. It is believed that most of the vehicular crossing users are 'cut through' users and irregular in nature and that local residents tend to use the vehicular crossing infrequently. This is based on observation during both site visits and local knowledge provided by the level crossing manager.

The cycle route over the level crossing is a part of the National Cycle Network (Regional route 70) and actively promoted by Sustrans.

The footpath network is well connected to the east of the level crossing, however there is little in terms of connectivity to the west. The public footpaths that run in the vicinity of Barthomley level crossing are over agricultural land and are not currently suitable for cyclists or some users with limited mobility. There are no footpaths present on Mill Lane to the north or south of the crossing.

The selected option will not cut off parts of the community such as housing, hospitals, schools or bus routes. The need for farm owners to find alternative routes to their land was investigated and resolved during the selection of the proposed option.

Connectivity for pedestrian, cycle and equestrian users will remain as per the existing arrangement.

The following modifications are proposed to the level crossing which may affect pedestrian, cycle and equestrian users:

- Yellow surfacing will be provided over the crossing
- Bridleway access gates will be re-positioned to the centre of the road
- New sprung gates will be provided
- Equestrian mounting blocks and hitching posts will be provided to the north and south of the crossing
- An audible warning device will be provided
- Whistle boards will be removed
- Signs will direct users in charge of animals to telephone the signaller before crossing
- New/amended signage provided at the entrances to Mill Lane

The following items will remain as per the existing arrangement:

- Users are to observe miniature stop lights to identify when it is safe to cross
- Gradient over the crossing and at the crossing-road interface will remain as per existing
- Public emergency telephone will remain to be used to contact the signaller in an emergency
- Equestrian and bicycle users are instructed to dismount
- The crossing will be closed to vehicles. Figure 5 shows the diversionary route vehicular users will be required to follow. The route is 5.4km long, with an average travel time of 8 minutes (from the level crossing gate to gate). There are no weight restrictions along the route and the route is wider than the existing route along Mill Lane.



Figure 5 – Vehicular diversionary route

### Q3. Decide if a DIA is required

After completing questions Q1 and Q2, decide if you need to complete the rest of this DIA.

If there are no impacts on people (employees, contractors, lineside neighbours or passengers) the remainder of the DIA is not required.

Decision	Author	Superuser	Date
<input type="checkbox"/> <b>No, DIA not required (End here)</b> N.B. Retain in Project file			
<input checked="" type="checkbox"/> <b>Yes, DIA required</b> Proceed to Step 2: The Evidence Base	Rebecca Howe, Design Engineer, Network Rail Design Delivery	Richard Brindley, Senior Design Engineer, Network Rail Design Delivery	05/02/2020

## Step 2: The Evidence Base

**Q4. Record the data you have gathered about the diversity of the people potentially impacted by this work**  
e.g. from the 2011 national census or from HR Shared Service.

You should also include any research on the issues affecting inclusion in relation to your work.

**Consider the following protected characteristics:**

- **Disability** (including those with physical, mental and hidden impairments as well as **carers** who provide unpaid care for a friend or family member who due to illness, disability, or a mental health issue cannot cope without their support)
- **Age**
- **Pregnancy/maternity**
- **Race**
- **Religion or belief**
- **Gender**
- **Sexual orientation**
- **Marriage/Civil Partnership**
- **Gender reassignment**

**Q4. Data you have gathered about the diversity of the people potentially impacted by this work**

**Evidence has been considered from the following sources:**

1. Level Crossing Traffic Census
2. Census data (2011) <https://www.nomisweb.co.uk/reports/localarea?compare=1170220014>
3. Cheshire East Council Local Plan 2010 – 2030  
<https://www.cheshireeast.gov.uk/pdf/planning/local-plan/local-plan-strategy-web-version-1.pdf>
4. National Travel Survey (2014)
5. Acts and Figures (2014)
6. Cheshire East Council Equality Impact Assessment (EqIA) for Adult Services Transport Policy
7. European Railways Association Mental Health Statistics
8. Network Rail's Diversity and Inclusion Strategy (2014)
9. Spaces and Places for Everyone (Inclusive Design Strategy (2015-2019))

### Level Crossing Traffic Census

A 9-day census was carried out in accordance with NR specification GRD 007 in 2016 and updated in 2018 to ensure the data reflects recent trends. The 2018 census recorded that a total of 99 vehicles, 82 pedestrians, 235 cyclists and 4 equestrians used the crossing in this period, of which two were elderly and three were pushchair users. The table below summarises the average level crossing usage.

User Type	October 2016 9-day census daily average	June 2018 9-Day census daily average
Vehicles	24	11
Pedestrians	29	9
Cyclists	Not separated from pedestrians	26
Horses	2	1
Trains	63	60

### **Summary of Incidents/Near misses over last 5 years**

YEAR	INCIDENT	QUANTITY
2012	Gates open	5
2013	Gates open	9
	Telephone fault	3
	Trespasser	1
2014	Gates open	17
	Near Miss	1
	Not phoning clear	5
2015	Gates open	16
	Not phoning clear	4
2016	Gates open	15
	Not phoning clear	3

### Direction of travel for users of the crossing within a 9-day period

		Direction 1 - Northbound											
		P/C	UNMOUNTED CYCLES	Total P/C	M/C	Cars	LGV	MGV/HGV	Bus/Coach	Equestrians	Herded Animals	Tractors Farm Vehicles	Total Motorised Vehicles
Saturday	23/06/2018	3	7	10	0	3	0	0	0	2	0	0	5
Sunday	24/06/2018	1	15	16	0	3	1	0	0	0	0	0	4
Monday	25/06/2018	0	7	7	0	3	3	0	0	0	0	0	6
Tuesday	26/06/2018	1	7	8	0	1	4	0	0	0	0	0	5
Wednesday	27/06/2018	4	10	14	0	4	3	0	0	0	0	0	7
Thursday	28/06/2018	0	11	11	0	2	0	0	0	0	0	1	3
Friday	29/06/2018	2	4	6	0	4	2	0	0	0	0	7	13
Saturday	30/06/2018	3	5	8	0	7	1	0	0	0	0	0	8
Sunday	01/07/2018	3	18	21	0	3	1	0	0	0	0	0	4
		17	84	101	0	30	15	0	0	2	0	8	55

		Direction 2 - Southbound											
		P/C	UNMOUNTED CYCLES	Total P/C	M/C	Cars	LGV	MGV/HGV	Bus/Coach	Equestrians	Herded Animals	Tractors Farm Vehicles	Total Motorised Vehicles
Saturday	23/06/2018	4	0	4	0	1	4	0	0	2	0	0	7
Sunday	24/06/2018	4	14	18	0	4	0	0	0	0	0	0	4
Monday	25/06/2018	0	5	5	0	2	0	1	0	0	0	0	3
Tuesday	26/06/2018	1	7	8	0	2	4	0	0	0	0	0	6
Wednesday	27/06/2018	3	8	11	1	3	2	0	0	0	0	0	6
Thursday	28/06/2018	1	14	15	0	1	1	0	0	0	0	0	2
Friday	29/06/2018	4	6	10	0	4	5	0	0	0	0	1	10
Saturday	30/06/2018	7	3	10	0	3	1	0	0	0	0	0	4
Sunday	01/07/2018	8	25	33	0	5	1	0	0	0	0	0	6
		38	96	134	1	25	18	1	0	2	0	1	48

The data above shows that the vehicular use is low with 55 movements by cars, and that not all users are using the crossing to go back the way that they came. Of the 8 farm vehicles that used the level crossing, only 1 went back using the crossing. This shows that the road link is not vital to the network because users are going back using alternative routes.

## Census information for Barthomley Parish



Figure 3 - Barthomley parish area

### Usual resident population

	Persons	
	Barthomley Parish	
	count	%
All usual residents	202	100.0
Males	104	51.5
Females	98	48.5
Lives in a household	202	100.0
Lives in a communal establishment	0	0.0
Schoolchild or full-time student aged 4 and over at their non term-time address	4	-
Area (Hectares)	791.85	-
Density (number of persons per hectare)	0.3	-

- These figures are missing.

Source: ONS - 2011 Census (KS101EW)

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies

### Adults not in employment and dependent children and persons with long-term health problems or disability for all households

	Households	
	Barthomley Parish	
	count	%
All households	82	100.0
No adults in employment in household	14	17.1
With dependent children	1	1.2
No dependent children	13	15.9
Dependent children in household: All ages	25	30.5
Age 0 to 4	5	6.1
One person in household with a long-term health problem or disability	17	20.7
With dependent children	4	4.9
No dependent children	13	15.9

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies

Source: ONS - 2011 Census (KS106EW)

### Car or van availability

	Households	
	Barthomley Parish	
	count	%
All households	82	100.0
No cars or vans in household	3	3.7
1 car or van in household	22	26.8
2 cars or vans in household	39	47.6
3 cars or vans in household	9	11.0
4 or more cars or vans in household	9	11.0
sum of all cars or vans in the area	167	-

- These figures are missing.

Source: ONS - 2011 Census (KS404EW)

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies

### Age structure

	Persons	
	Barthomley Parish	
	count	%
All usual residents	202	100.0
Age 0 to 4	7	3.5
Age 5 to 7	6	3.0
Age 8 to 9	4	2.0
Age 10 to 14	13	6.4
Age 15	1	0.5
Age 16 to 17	8	4.0
Age 18 to 19	5	2.5
Age 20 to 24	4	2.0
Age 25 to 29	9	4.5
Age 30 to 44	41	20.3
Age 45 to 59	50	24.8
Age 60 to 64	20	9.9
Age 65 to 74	25	12.4
Age 75 to 84	8	4.0
Age 85 to 89	0	0.0
Age 90 and over	1	0.5
Mean Age	42.4	-
Median Age	45	-

- These figures are missing. Source: ONS - 2011 Census (KS102EW)

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies

### Data Analysis

The census data has revealed that the total amount of people resident in Barthomley Parish is low with approx. 202 people, of which approximately half are aged 30 – 59. There are 82 households in Barthomley of which 17 have one person with a long-term health problem or disability. All households have access to a car, with almost half owning two cars.

### Cheshire East Council (CEC) Local Plan 2010 – 2030

This plan sets out the overall vision and planning strategy for development in the borough and contains planning policies to ensure that new development addresses the economic, environmental and social needs of the area. It also identifies strategic sites and locations that will accommodate most of the new development needed.

The plan details the issues surrounding the wider population in the Crewe area with an increasingly ageing population as young people leave and an absolute reduction in the number of people of working age. This is one of the reasons that CEC are planning a number of new developments on green belt areas. The plan confirmed that there is a development planned (LPS 20 Land at and adjacent to, White Moss Quarry, Butterton Lane, Barthomley, Crewe) with 350 units which have outline consent. However, this is not close enough to be impacted if the level crossing were to be changed or closed. There are no other facilities planned for development near to Barthomley Level Crossing.

## Step 3: Impact

**Q5. Given the evidence listed at ‘Step 2: The Evidence Base’, what potentially negative impacts could this work have on people with protected characteristics?**

**Q5a. Please select all the protected characteristics your work could potentially have a negative impact on**

Disability

Age

Pregnancy/maternity

Race

Religion or belief

Gender

Sexual orientation

Marriage/civil partnership

Gender reassignment

### **Q5b. Explain the potential negative impact**

**Please state the characteristic and give an explanation**

#### Closure of the crossing to vehicles

The existing user-worked-gates arrangement at the crossing requires vehicle users to traverse the crossing five times (of which, four are on foot) to open the gates, drive across the crossing and re-close the gates. This is likely to be challenging for users with limited mobility.

Closure of the crossing to vehicles is not deemed to have an adverse effect on any of the groups with protected characteristics. The existing road network around Mill Lane is considered more accessible with better lighting and less prone to flooding. The provision of a turning head to the north of the existing crossing is not deemed to have any adverse effect on any of the groups with protected characteristics.

#### Impact on hearing impaired users

Under the new level crossing arrangement, users in charge of animals will be required to telephone the signaller before crossing. Equestrian users/other users in charge of animals who are hearing impaired may find it difficult to communicate by telephone with the signaller to confirm it is safe to cross. Therefore, they will not be able to use the crossing safely. Although there is a riding school in the vicinity of the crossing, the 9-day census indicates low use of the crossing by equestrian users, with a total of four equestrian users recorded. It is not known if any of these were hearing impaired.

As per the existing arrangement, all users will be required to telephone the signaller in an emergency or if the miniature stop lights are not working/in dark mode. Users who are hearing impaired may find it difficult to communicate by telephone with the signaller. Therefore, in emergency conditions they may not be able to use the crossing safely.

**Q6. What could you do to ensure your work has a positive impact on diversity and inclusion including supporting delivery of the Diversity and Inclusion strategy?**

New crossing will be surfaced with yellow anti-slip material. This will improve underfoot conditions which may benefit pedestrian users with limited mobility and improve visibility which may benefit visually impaired users.

Mounting and dismounting blocks provided for equestrian users.

Investigate the possibility of implementing a solution for communicating with the signaller that will be suitable for hearing impaired users.

## Step 4: Consultation

**Q7. How has consultation with those who share a protected characteristic informed your work?**

**Groups consulted**

List the groups you have consulted or reference previous relevant consultation (This could include our staff networks, the Built Environment Access Panel, local faith leaders etc)

**What issues were raised in relation to one or many of the protected characteristics (Q5)?**

Consultation to be undertaken at subsequent design stages

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**Q8. Record any consultation you have had with Network Rail teams who are delivering work that might overlap with yours.**

**This will ensure that our solutions are joined up.**

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Level Crossing Manager, Level Crossing RAM, Alsager Re-signalling, Fords Overbridge Project Team, Crewe Hub project team and local maintenance teams have been consulted.

## Step 5: Informed Decision-Making

**Q9. After completing Steps 1–4, what is your decision?**

Please select one of the following (for most DIAs this will be option 1) and provide a rationale.

- 1 Change the work** to mitigate against potential negative impacts found
- 2 Continue the work** because no potential negative impacts found
- 3 Justify and continue the work** despite negative impacts (please provide justification)
- 4 Stop the work** because discrimination is unjustifiable and there are no obvious ways to mitigate

### Q9b. Rationale for decision

Under certain conditions (in an emergency, if the miniature stop lights are not working or if an equestrian user wishes to cross) signage will direct users to contact the signaller. Hearing impaired users may struggle to communicate with the signaller by telephone and therefore may not be able to use the crossing safely.

Consider the practicability of a solution which enables hearing impaired users to contact the signaller during future design development, e.g. inclusion of hearing induction loop, text telephone.

## Step 6: Action Planning

**Q10. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at 'Step 3: Impact' or through consultation?**

Action	By when?	By whom?
Consider need for and practicality of providing solution for hearing impaired user to contact signaller, eg inclusion of a hearing induction loop or text telephone	GRIP 5	Project team
Review this DIA	GRIP 4	Project team

## Step 7: Publication

- Please retain copies of this and all completed DIAs in a suitable shared repository.
  - This DIA will be retained on eB.
- Customer-related DIAs may be published on our website.

# Appendix: continuation sheets

Question number:

Additional/continued response

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