

## Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** E15 - Parsonage Lane - Anglia Level Crossing Reduction Strategy

### Step 1: Clarifying aims

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



#### Anglia Level Crossing Reduction Strategy (Strategy)

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings within the counties of Suffolk, Cambridgeshire, Essex, Hertfordshire, and the unitary authorities of Thurrock,

Havering, and Southend-on-Sea. Closing or modifying level crossings can help to bring about a number of benefits:

- Improve the safety of level crossing users;
- Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy;
- Reduce the ongoing operating and maintenance cost of the railway;
- Reduce delays to trains, pedestrians and other highway users; and
- Improve journey time reliability for railway, highway and other rights of way users.

### **E15 – Parsonage Lane**

Parsonage Lane (also known as Margaretting) is a public footpath level crossing located in Margaretting Parish, Essex. The crossing spans the two track Great Eastern Main Line. The crossing has miniature stop lights (with audible warning) for pedestrians, and a private user worked crossing with a telephone for vehicles. Essex County Council is of the view that the level crossing carries a public road, but the only onward rights for the public only have an onward right of way on foot, beyond the residential properties.

The crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C4. The individual risk rating for this crossing is 'C' (where 'A' is the highest risk and 'M' is lowest) and the collective risk rating is '4' (where '1' is the highest risk and '13' is the lowest), making Parsonage Lane Margaretting a high risk crossing. Key safety issues at the site relate to sun glare, frequent trains, deliberate misuse, user error, and short sighting time. No accidents were reported at the level crossing between 2011 and 2015, however there were 10 incidents of misuse and 2 near misses. Approximately 294 trains use this part of the network daily at a line speed of 90mph.

Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

### **Project location**

Parsonage Lane level crossing is located 500m south of Margaretting, Essex. A small cluster of dwellings are located immediately north and south of the crossing, however the crossing is predominantly surrounded by agricultural land. Ingatestone station is approximately 3km south west of the Parsonage Lane level crossing.

**Appendix A** contains site photographs and the below map shows the location of the level crossing.



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### Proposals for the project

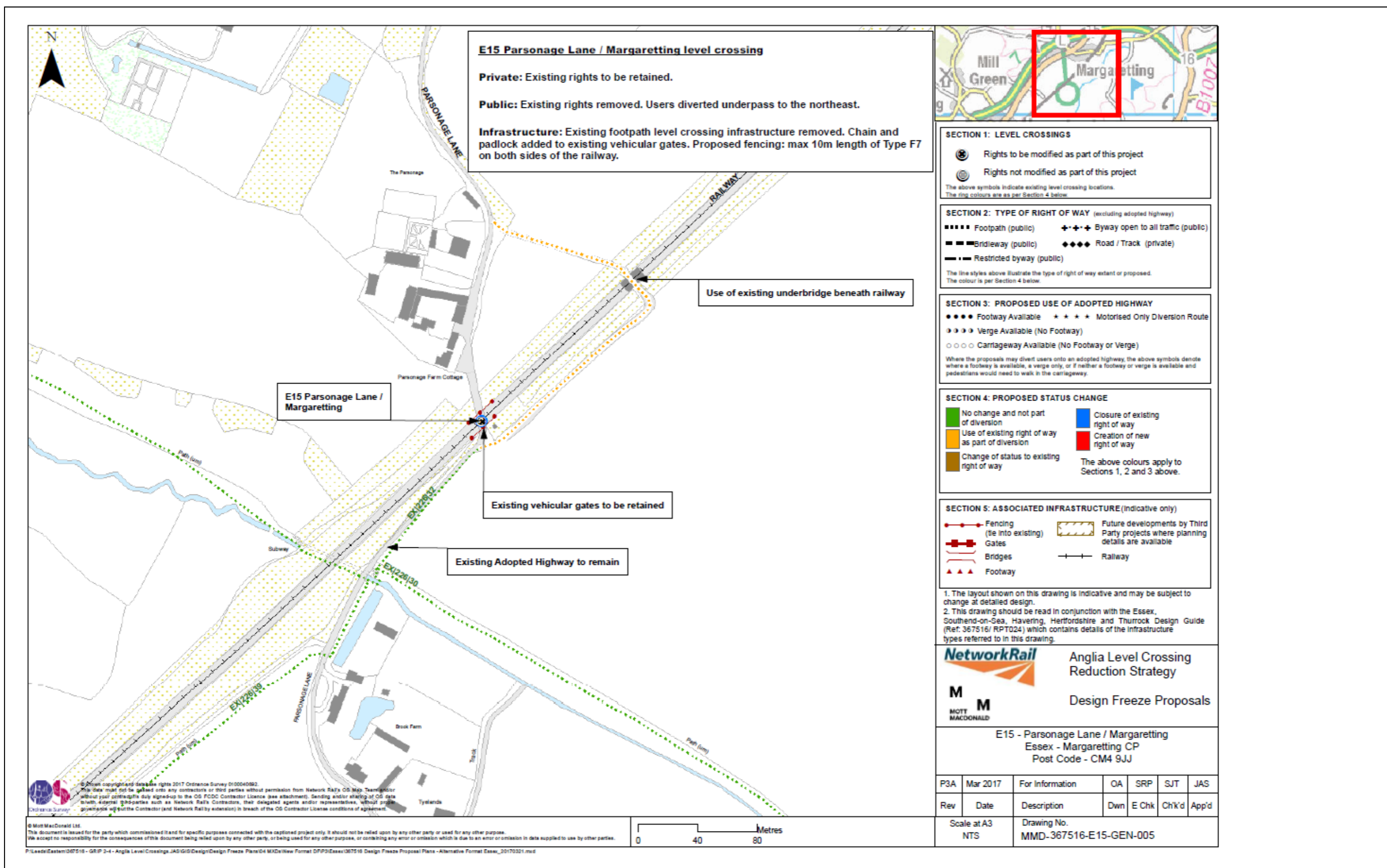
Network Rail has conducted two rounds of public consultation regarding Parsonage Lane level crossing - the first was to obtain feedback on initial options for level crossings in the programme (in June 2016), and the second was to obtain feedback on the preferred options (in October 2016). Following the receipt of this feedback, consideration was given to how the proposed closure of the level crossing and implementation of an alternative route might best be progressed and managed.

Following feedback on the round two of public consultation, the proposal is to close the crossing to the public, but retain private access rights. The preferred proposal is to divert all public users to the existing underbridge 140m to the north east of the crossing (as detailed in the figure below).

On the southern side of the railway, the underbridge would be accessed via an existing footpath which follows the route of the railway line. On the northern side, the underbridge would be accessed via an existing footpath leading off Parsonage Lane.

Users travelling from the village of Margaretting, wishing to access footpath EX|226|32 to the south of the level crossing, would have 120m added to their route as a result of the level crossing closure.

The figure below shows the preferred diversion route following feedback at Round 2 of public consultation. This is also available in **Appendix B**, along with initial options for diversions, taken to Round 1 and 2 public consultations.



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Parsonage Lane level crossing to the public, there is a risk of a future incident at this location. The closure of the crossing will separate people from the railway line, thereby improving the safety of local residents and other users.

The proposals for Parsonage Lane level crossing will impact accessibility, walking distances, and journey times for members of the public using the crossing.

The implementation of a permanent diversion via the underbridge to the north east of the crossing may disproportionately affect certain sections of the population who find walking long distances and / or along uneven surfaces difficult.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- Disability including carers<sup>1</sup>
- Pregnancy/maternity
- Religion or belief
- Sexual orientation
- Gender reassignment
- Age
- Race
- Gender
- Marriage/Civil Partnership

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on people with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User profile

A nine-day census carried out in July 2016 identified a total of 70 people using the crossing over the survey period – an average of approximately 8 people per day. 67 of the 70 users recorded were adults. The remaining three users were children: two were accompanied by an adult and one was unaccompanied.

A summary of the survey data can be found in **Appendix C**.

### Population profile

To gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as the Chelmsford district.<sup>2</sup> These are as follows:

- Children (under 16 years of age) make up 19% of the Chelmsford population, which is equivalent to the national average.
- The proportion of older people (here described as people of retirement age – 65 and over) in Chelmsford is 17%, which is in line with the national figure of 16%.
- 14% of the Chelmsford population is living with long-term illness or disability that limits their daily activities. This is slightly lower than the national average of 18%.

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimates taken from nomis. Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157214/report.aspx>

- 10% of the population of Chelmsford is from Black, Asian or minority ethnic (BAME<sup>3</sup>) groups. This is half the national figure of 20%.
- The figure for people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Chelmsford is 3%, which is lower than the national average of 9%.

The above demographic analysis suggests that the majority of populations of the protected characteristics (for which there is demographic data) are broadly in line with national proportions. There are two exceptions: Chelmsford has a lower proportion of people from BAME and minority faith groups.

### **Local amenities**

According to a review of local authority planning applications in May 2017, there are no plans for future development in the local area.<sup>4</sup>

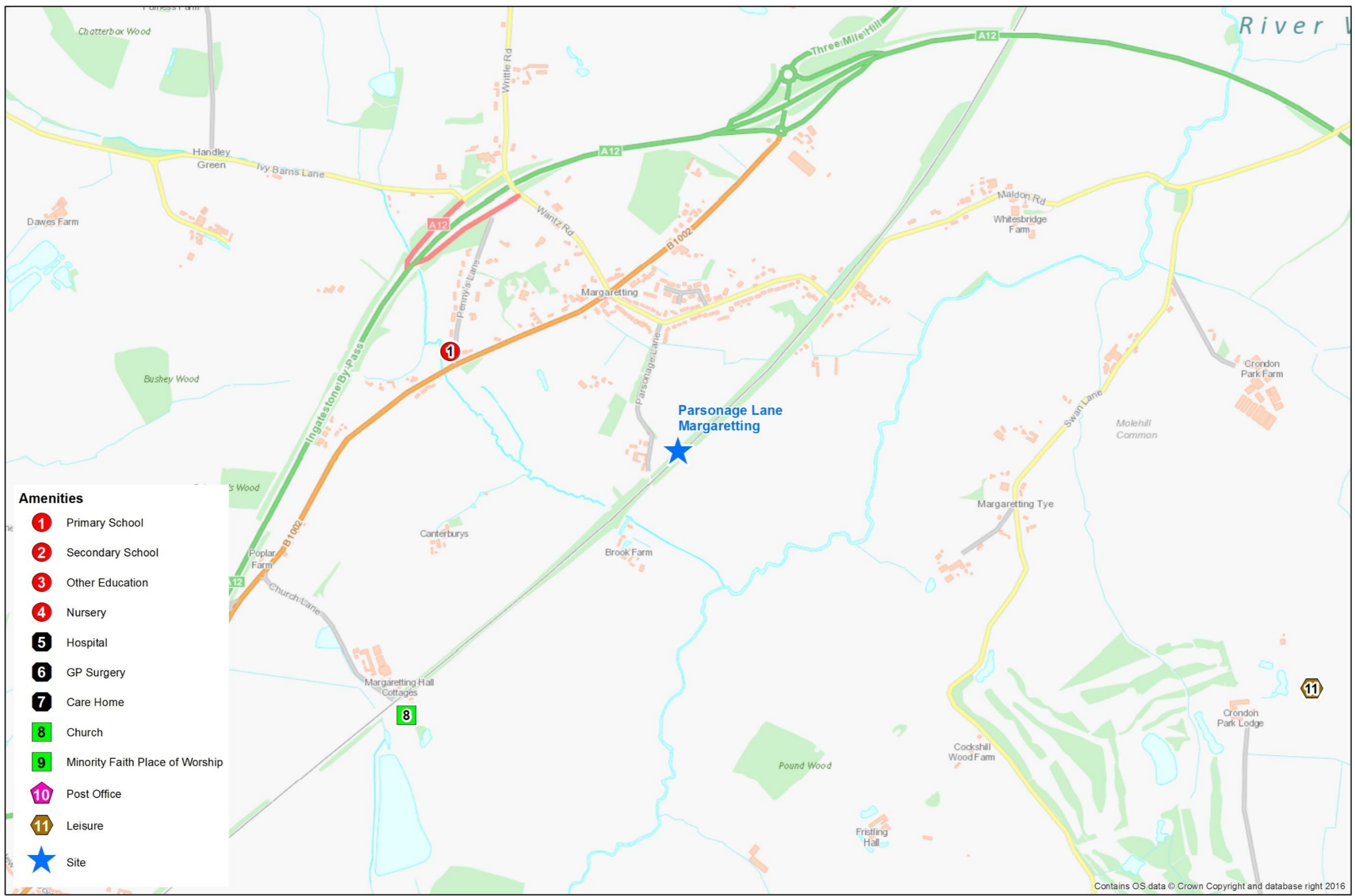
An analysis of local amenities shows that there is one primary school, a church and a leisure facility located within 2km of the crossing.

The map below shows local amenities.

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<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Chelmsford City Council: <https://publicaccess.chelmsford.gov.uk/online-applications/search.do>



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## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impacts of the proposed work at Parsonage Lane level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic	Impact	Explain the potential negative impact
Disability	Y	<p>The permanent closure of Parsonage Lane level crossing will remove public access at this point, potentially having a disproportionate impact on disabled pedestrians (including people with mobility, sensory and respiratory conditions) compared to non-disabled people.</p> <p>As no disabled people were documented using the crossing over the survey period, the impacts described below should not be overstated.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>The closure of the level crossing would add 120m in walking distances as a result of the proposed permanent diversion route via the underbridge. While this is a relatively small increase in walking distance, this could disproportionately impact upon people with mobility impairments who are more likely to have difficulties walking long distances and many experience pain and discomfort in doing so.</p> <p>Of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p><b>Permanent reduced pedestrian accessibility due to suitability of the diversion route</b></p> <p>The proposed diversion route diverts people away from a currently paved level crossing to an underbridge with a dirt road. As mentioned by stakeholders, the existing footpath in the underbridge can become wet and muddy (see Appendix A). This could prove restrict access for disabled people (and, in particular, for wheelchair users).</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

		<p>slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may also be less able to cross safely because of these factors. People with visual or hearing impairments can also have difficulties crossing safely due to not being able to pick up on the variety of visual and audible warning messages available.<sup>6</sup> Reduced interaction with the railway at this point may potentially result in a reduced crossing risk for this group. The proposed diversion, does take people away from a controlled and segregated level crossing to an underbridge which has no pedestrian footway and can be used by vehicles. While the volume and speed of vehicular traffic through the underbridge is likely to be low, the shared use of the underbridge will partially reduce the safety benefits associated with the level crossing closure. However, it should also be noted that, aside from the level crossing, Parsonage Lane does not have footways, so walkers must already share space with motorists.</p>
Age	Y	<p>The permanent closure of Parsonage Lane level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on particular age groups – particularly children and older people.</p> <p><b><u>Children</u></b></p> <p>The nine-day census recorded three children using the crossing over the survey period (two accompanied and one unaccompanied by an adult). As such, impacts on this group are likely to be limited.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings are disproportionately likely to impact children. This is due to their potentially slower walking speeds and because children and younger people can have difficulties correctly processing the speed of oncoming vehicles.<sup>7</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safe diversion as an alternative) is likely to lead to a significantly reduced crossing risk for this group.</p> <p>As noted above, the proposed diversion takes people away from a controlled crossing to a vehicle underbridge with no footway. This potentially reduces the safety benefits associated with the level crossing closure.</p> <p><b><u>Older people</u></b></p>

<sup>6</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>7</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

		<p>The user census did not document any older people using the crossing over the nine-day survey period. As such, the impacts identified below should not be overstated.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the permanent diversion route, are likely to disproportionately impact upon older people.</p> <p>Older people are more likely to have difficulties walking long distances and experience pain or discomfort in doing so.<sup>8</sup> They are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk more slowly, tire more easily, and are more likely to struggle to climb stairs.<sup>9</sup></p> <p>The proposed diversion route will increase walking distances by 120m. While this is a relatively small increase in walking distance, for reasons stated above, there is potential for it to disproportionately adversely affect older people.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact older people, largely due to their potentially slower walking speeds and the way that older peoples' field of vision tends to decline over time. Studies have shown that this can be at a rate of 1° and 3° per decade.<sup>10</sup> Older pedestrians (those aged 65 or over) walk more slowly than other pedestrian users (the mean walking speed achieved by over-65s in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to the mean for the population as a whole of 1.2m/s<sup>11</sup>), placing older people at greater risk.</p> <p>Level crossing closures, therefore, can improve safety for older users by reducing interaction with the railway.</p> <p>As noted above, the proposed diversion takes people away from a controlled crossing to a vehicle underbridge with no footway. This potentially reduces the safety benefits associated with the level crossing closure for this group. However, it should also be noted that, aside from the level crossing, Parsonage Lane does not have footways, so walkers must already share space with motorists.</p>
<b>Pregnancy / maternity</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

<sup>8</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>9</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway'

<sup>10</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>11</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	Although there is a church in relatively close proximity to the crossing, it is not anticipated that any disproportionate impacts for this protected characteristic will arise due to the availability of alternative routes.
<b>Gender</b>	Y	<p><b>Improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings they are associated with 70% of all train strikes. Given that males represent approximately 50% of the population as a whole, this would suggest male pedestrians are more at risk at level crossings than female pedestrians.<sup>12</sup></p> <p>Reduced interaction with the railway (due to the diversion to the underbridge) could, therefore, deliver disproportionate benefits for this group. Though the proposed diversion takes people away from a controlled crossing to a vehicle underbridge with no footway which potentially reduces the safety benefits associated with closure.</p>
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- Commitment 1: Get everyone home safe every day.  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- Commitment 2: Deliver reliable infrastructure.  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- Commitment 6: Being a customer focused organisation.  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- Commitment 9: A railway fit for the future.

<sup>12</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

## Step 4: Consultation

### Q6. How has consultation with those who share a protected characteristic informed your work?

The below are views received through public consultation events. As such, views are not necessarily received from or relevant to those who share a protected characteristic.

List the groups you have consulted or reference previous relevant consultation? <sup>13</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation Round 1 (June 2016)	<p>As part of Round 1 of public consultation, 4 questionnaire responses were received. 2 respondents were neutral towards the proposals, whilst 2 respondents disagreed with the proposals.</p> <ul style="list-style-type: none"> <li>For one respondent's property, the level crossing is the only suitable access for any vehicle larger than a car.</li> <li>Concerns were raised about the underbridge being dark and damp and the diversion route was considered noisy and unpleasant.</li> <li>Concerns were also raised regarding the sharp blind corner on the south-eastern side of the underbridge.</li> <li>It was highlighted that a public footpath has already been created as an extension to Margaretting 226/32 along the private track labelled on the proposal plan.</li> <li>Closure of the crossing would potentially deter people loitering in the area causing disturbances (including physical assault) to local residents. Network Rail and the Land Sherriff have erected cameras to track any possible further problems.</li> </ul>
Public consultation Round 2 (September 2016)	Responses received identified the following comments / issues (outlined below) regarding the proposals for Parsonage Lane level crossing:
Member of the Open Spaces Society / Ramblers response:	<ul style="list-style-type: none"> <li>The road onto which walkers, equestrians, and cyclists would be diverted is very wet in winter and narrow - especially under the railway bridge. It also includes a dangerous bend which would not improve safety for users.</li> </ul>

<sup>13</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

Member of the Friends Group of the Ramblers/Member of the Essex Area Ramblers response:	<ul style="list-style-type: none"> <li>Concerns were raised about the intention to allow some users to cross but not others. This has been part of the footpath network for a long period so may lead to confusion. If walkers see the other users in front of them go across, they are likely to follow.</li> <li>The crossing will be on walkers' paper maps which cannot be updated until Ordnance Survey next update both the 1:25,000 and 1: 50,000 copies of the map that covers this area. Updating a full set of walking maps can be costly. People may not be able to afford to update a map that is otherwise useable (NB: It should be noted that Parsonage Lane level crossing does not appear on the Definitive Map of Public Rights of Way).</li> <li>The underbridge that is proposed to be used in the diversion route is wet and slippery. This will get worse with increased usage.</li> </ul>
Public response:	<ul style="list-style-type: none"> <li>A resident living in one of two properties on the southern side of the level crossing states that the crossing is their only access over the railway for any vehicle larger than a car. A car can use the underbridge but all other vehicles (listed below) have to use the level crossing, some on a weekly basis: refuse collection, recycling collection, gas and oil deliveries, septic tank waste collection, caravans, trucks, mini diggers, large parcel delivery vans and all 3 types of emergency service vehicles. It was highlighted that as the residents are in their 70s it would be inconvenient to come out in all weathers at all times to unlock gates for the above vehicles. It would also mean they would have to wait in for any deliveries etc.</li> <li>The proposal is a sensible option with no obvious drawbacks.</li> <li>The current proposal will be supported only if there is a new Right of Way created along the existing track to use the underbridge; the crossing should not be closed until this is in place.</li> </ul>
Margaretting Parish Council (Councillor Savill)	<ul style="list-style-type: none"> <li>Concerns regarding the convenience of the diversion route.</li> <li>If closed, it will close off the only suitable access for the residents living on the other side of the underbridge.</li> </ul>
Landowner	<ul style="list-style-type: none"> <li>You would never get waggons to run safely with that footpath (St Peters Way). Closure would greatly increase vehicle movements required to feed stock.</li> </ul>

**Q7. Where relevant, 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.**

N/A

## Step 5: Informed decision-making

### Q8. In light of the assessment above, what is your decision?

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>A private vehicular access for landowners will be maintained at the level crossing. Improvements to the existing diversionary route, via the underbridge, should be considered to ensure accessibility.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action planning

### Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?

Action	By when	By who
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.	Ongoing	Network Rail project team
At detailed design, measures should be considered to improve pedestrian safety in the underbridge, so that standards and DfT guidelines can be met wherever possible and practicable.  Within the underbridge, consideration should be given for the provision of handrails set at 1000mm above the walking surface on both sides. There	Detailed design	Network Rail project team

should be a clear view from one end to the other. <sup>14</sup>  Stakeholders have claimed that CCTV has been installed at the level crossing due to the occurrence of vandalism. If this is the case such CCTV cameras could also be considered in the underbridge to improve security. Notices to the effect that CCTV is in operation should deter vandals and provide a measure of comfort to pedestrians.		
The arrangements for access to the private user crossing that will remain in operation should also be developed. This should include information about who will retain access – including residents, emergency services, and providers of other services such as refuse collection and postal services.	Detailed design	Network Rail project team
Review the DIA at every GRIP stage to ensure equality of access is maintained for all.	Ongoing	Network Rail project team

## Step 7: Sign off

Name	Position	Signed	Date
Superuser <sup>15</sup>	Scheme Project Manager	Liability Negotiations Manager	20/07/2017
Senior Manager <sup>16</sup>	Head of Route Health, Safety & Environment	R. Lewis	8/9/17.

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

## Step 8: Publication

<sup>14</sup> Department for Transport (2005): 'Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'.

<sup>15</sup> Quality assurance check.

<sup>16</sup> Sign-off should be by someone who can approve policy, programme or budget changes.

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

## Appendix A: Site photographs

### Existing level crossing

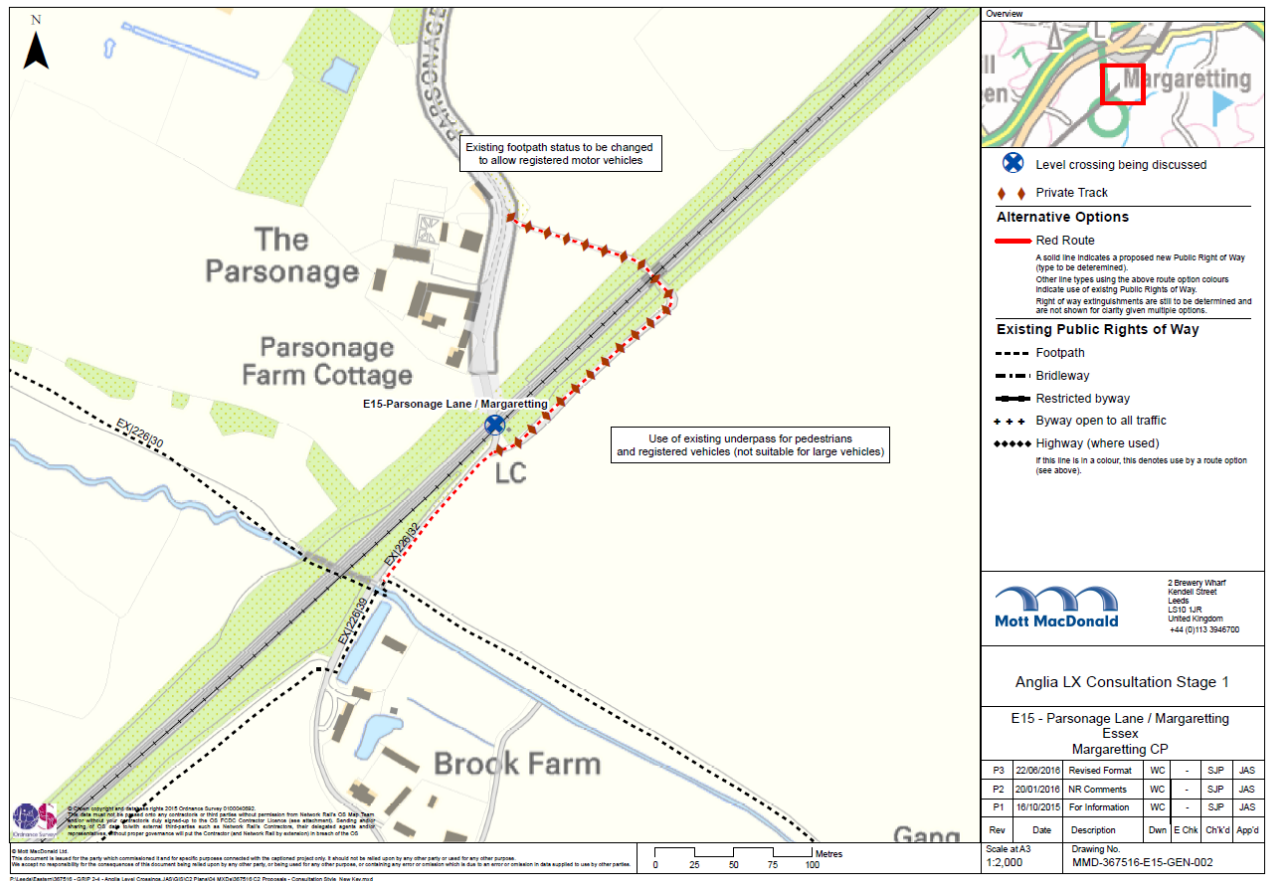


### Alternative railway crossing – existing underbridge

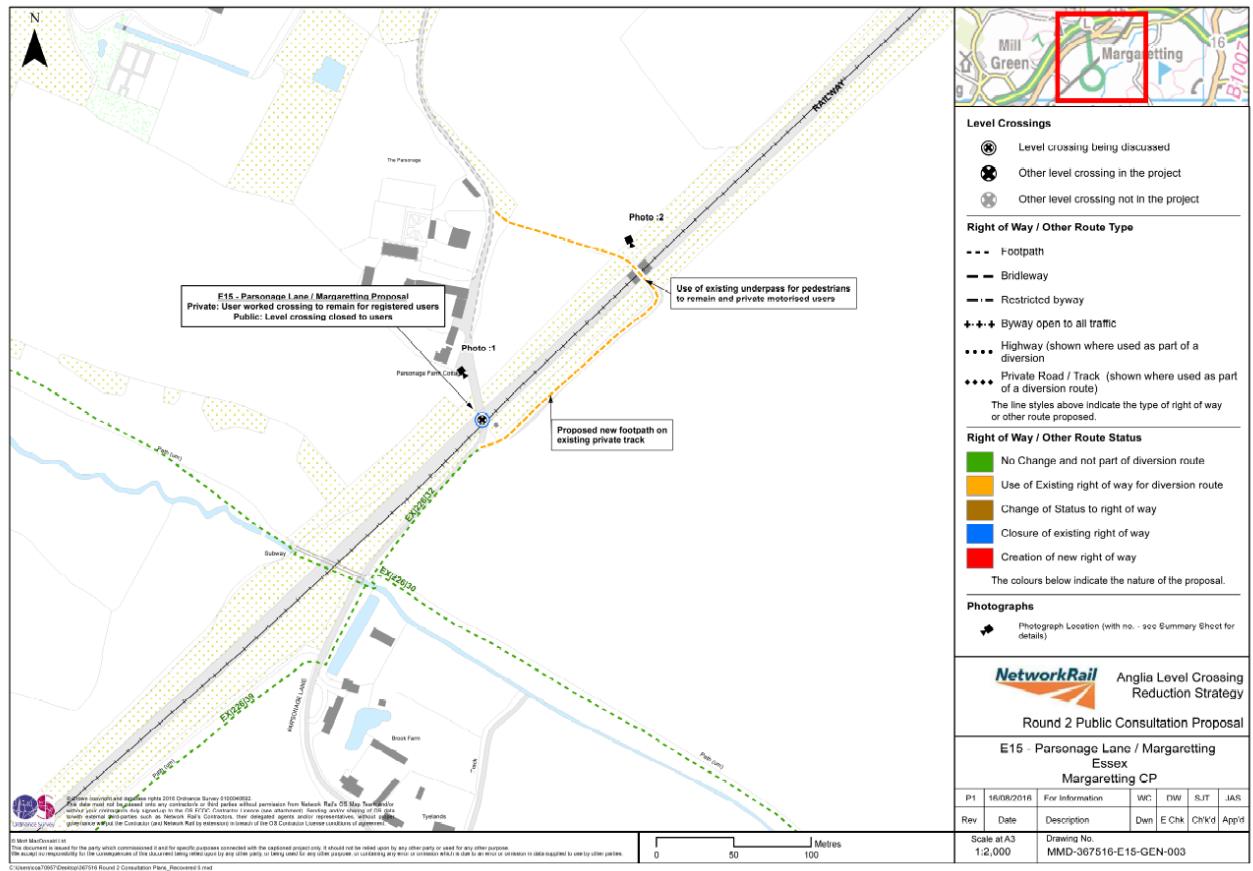


## Appendix B: Scheme drawings

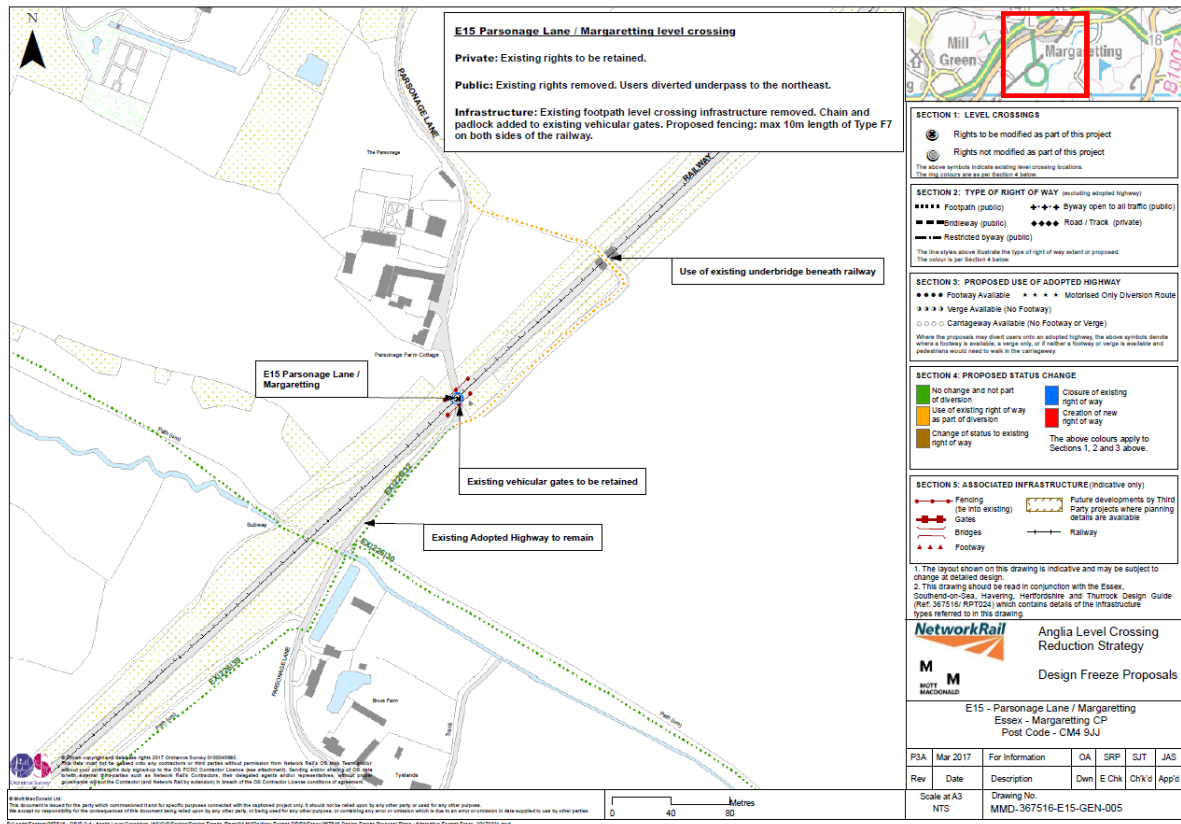
### B.1: Round 1 consultation – proposed diversion (June 2016)



## B.2: Round 2 consultations – preferred option (September 2016):



### B3. Following Round 2 consultations – preferred option (March 2017)



## Appendix C: Census summary

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

#### **Pedestrians**

		Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair / Pram	Mobility Scooter	Railway Personnel	Total
Saturday	09/07/2016	37	0	1	0	0	0	0	0	0	38
Sunday	10/07/2016	6	0	0	0	0	0	0	0	0	6
Monday	11/07/2016	8	2	0	0	0	0	0	0	0	10
Tuesday	12/07/2016	7	0	0	0	0	0	0	0	0	7
Wednesday	13/07/2016	5	0	0	0	0	0	0	0	0	5
Thursday	14/07/2016	4	0	0	0	0	0	0	0	0	4
Friday	15/07/2016	0	0	0	0	0	0	0	0	0	0
Saturday	16/07/2016	0	0	0	0	0	0	0	0	0	0
Sunday	17/07/2016	0	0	0	0	0	0	0	0	0	0
		67	2	1	0	0	0	0	0	0	70

## Equestrians and cyclists

Eques- trian, mounted	Eques- trian, walking	Bicycle riding	Bicycle walking	Total
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Saturday 09/07/2016	0	0	0	0	0
Sunday 10/07/2016	0	0	0	2	2
Monday 11/07/2016	0	0	0	0	0
Tuesday 12/07/2016	0	0	0	0	0
Wednesday 13/07/2016	0	0	0	0	0
Thursday 14/07/2016	0	0	0	0	0
Friday 15/07/2016	0	0	0	0	0
Saturday 16/07/2016	0	0	0	0	0
Sunday 17/07/2016	0	0	0	0	0
	0	0	0	2	2

## Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** E13 Littlebury Gate House - Anglia Level Crossing Reduction Strategy

### Step 1: Clarifying aims

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



#### **Anglia Level Crossing Reduction Strategy (Strategy)**

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

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- Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy;
- Reduce the ongoing operating and maintenance cost of the railway;
- Reduce delays to trains, pedestrians and other highway users; and
- Improve journey time reliability for railway, highway and other rights of way users.

### **E13 – Littlebury Gate House**

Littlebury Gate House level crossing is a public footpath (EX|31|3) crossing located in the county of Essex. The level crossing spans the two track West Anglia Main Line.

The level crossing is a 'Stop, Look and Listen' crossing, where the user determines whether it is safe to cross. The approach to the level crossing from the west is via a narrow path surrounded by high overgrown vegetation. From the east, the level crossing is accessed via Peggy's Walk, a small tarmac road within a residential area.

The level crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C5. The individual risk rating for crossings is 'C' (where 'A' is the highest risk and 'M' is lowest) and collective risk rating for this crossing is '5' (where '1' is the highest risk and '13' is the lowest). Between 2011 and 2015, there were no incidents, near misses or accidents at the level crossing. Approximately 152 trains use this part of the network daily, at a speed of 70mph. Key issues at the site relate to low sighting time and frequent trains.

Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

### **Project location**

Littlebury Gate House level crossing is located in Uttlesford district, in the county of Essex. It is located to the west of the village of Littlebury and is bordered by residential properties to the east and agricultural land to the west. Residential properties are also located 200m north-west of the crossing, beyond the adjacent fields.

Appendix A contains site photographs and the below map shows the location of the level crossing.



**Anglia level crossing reduction strategy**

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### **Proposals for the project**

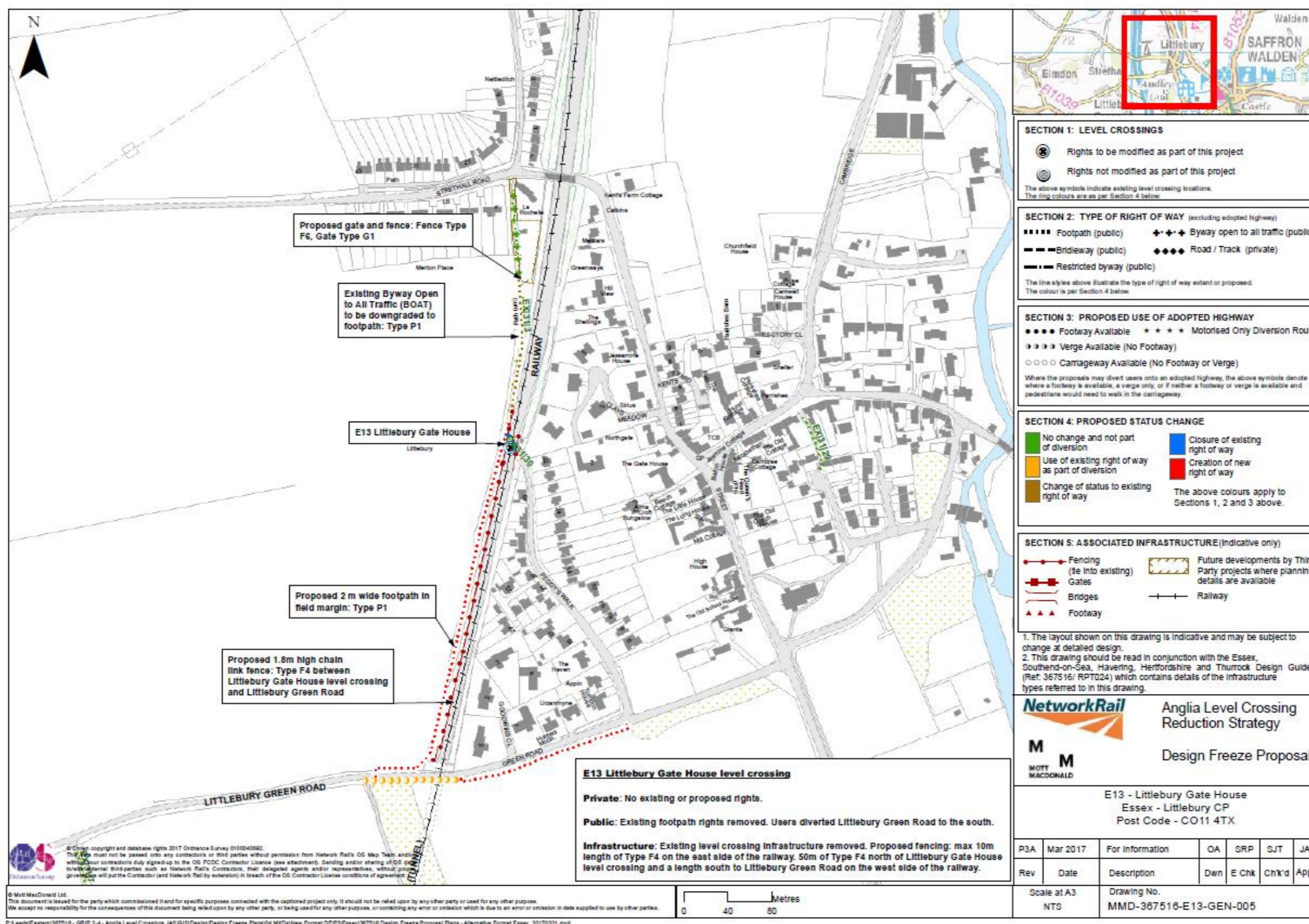
Network Rail has conducted two rounds of public consultation regarding Littlebury Gate House level crossing. The first consultation obtained feedback on its initial options for the level crossings in the programme (in June 2016), and the second obtained feedback on its preferred options (September 2016).

Following feedback received during the first and second round of consultation, the preferred proposal for Littlebury Gate House is to close the level crossing to all users and remove the crossing infrastructure. Under the preferred proposal (detailed in the figure below), a new 2m wide footpath will be provided parallel to the railway on the western side of the crossing. Users on the western side of the track will be diverted 300m south, along the new footpath, to the vehicular bridge on Littlebury Green Road. Users would then walk within the carriageway or grass verge along Littlebury Green Road linking to Peggy's Walk. To access Littlebury Green Road from the eastern side of the track, users would travel south along existing roads and walk along a new right of way within the adjacent field boundary south of Littlebury Green Road. This new right of way will be unsurfaced.

In addition to the above, it is further proposed to downgrade part of Byway EX|31|3 to a footpath – this would be the 150m section from the level crossing toward Strethall Road. A wooden gate with fencing would be erected where the existing Byway EX|31|3 and new footpath link.

Walking from east to west, the diversion route results in a 300m increase in walking distances for those walking from the southern end of Peggy's Walk. Additional walking distances increase to 830m for those starting their journey from the northern end of Peggy's Walk.

The figure overleaf shows the preferred diversion route following public consultation Round 2. This is also available in Appendix B, along with initial options for diversions taken to Round 1 and 2 of public consultation.



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Littlebury Gate House level crossing, there is a risk of a future incident at this location. The closure of the level crossing will separate people from the railway line at this location, thereby improving the safety of local residents and other users.

The proposals for Littlebury Gate House will impact accessibility and walking distances for people using the crossing.

The implementation of a permanent diversion route via Littlebury Green Road and the creation of new footpaths may disproportionately affect certain sections of the population who find walking longer distances difficult and may struggle to negotiate the new terrain.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- |  |                              |
|--|------------------------------|
| - Disability including carers <sup>1</sup> | - Age                        |
| - Pregnancy/maternity                      | - Race                       |
| - Religion or belief                       | - Gender                     |
| - Sexual orientation                       | - Marriage/Civil Partnership |
| - Gender reassignment                      |                              |

This DIA is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on those with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User profile

A nine-day, census carried out in July 2016 identified a total of 135 people using the crossing over the survey period – an average of 15 people per day. 84% (114/135) of those recorded using the crossing were adults. 21 children (16% of all crossing users) were documented using the crossing, seven of whom were accompanied by an adult and 14 unaccompanied. There were no recorded uses by older people, impaired people, wheelchair or mobility scooter users, or people with a pushchair or pram.

A summary of the survey data can be found in Appendix C.

### Population profile

In order to gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as Uttlesford District.<sup>2</sup> These are as follows:

- Children (under 16 years of age) make up 20% of the Uttlesford population, which is in line with the national average of 19%.
- The proportion of older people (here described as people of retirement age – 65 and over) in Uttlesford is 17%, which is in line with the national figure of 16%.
- 14% of the Uttlesford population has a long-term illness or disability that limits their daily activities. This is lower than the national average of 18%.

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimate taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157213/report.aspx?town=uttlesford>.

- 8% of the population of Uttlesford district is from Black, Asian or minority ethnic (BAME<sup>3</sup>) groups. This is considerably lower than the national figure of 20%.
- The proportion of people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Uttlesford is 2%, which is lower than the national average of 9%.

The above demographic analysis suggests that the population proportions from many of the groups with protected characteristics (for which there is demographic data) are broadly in line with national proportions. There are two exceptions: Uttlesford district has a much lower level of people from BAME and minority faith groups.

### **Local amenities**

There is currently a planning application for the construction of two new residential properties to the northwest of the crossing adjacent to the line.<sup>4</sup> Stakeholder comments noted that these properties are potentially going to be served by Byway EX|31|3 which is to be downgraded to a footpath. Network Rail should consult with the local council regarding this proposal.

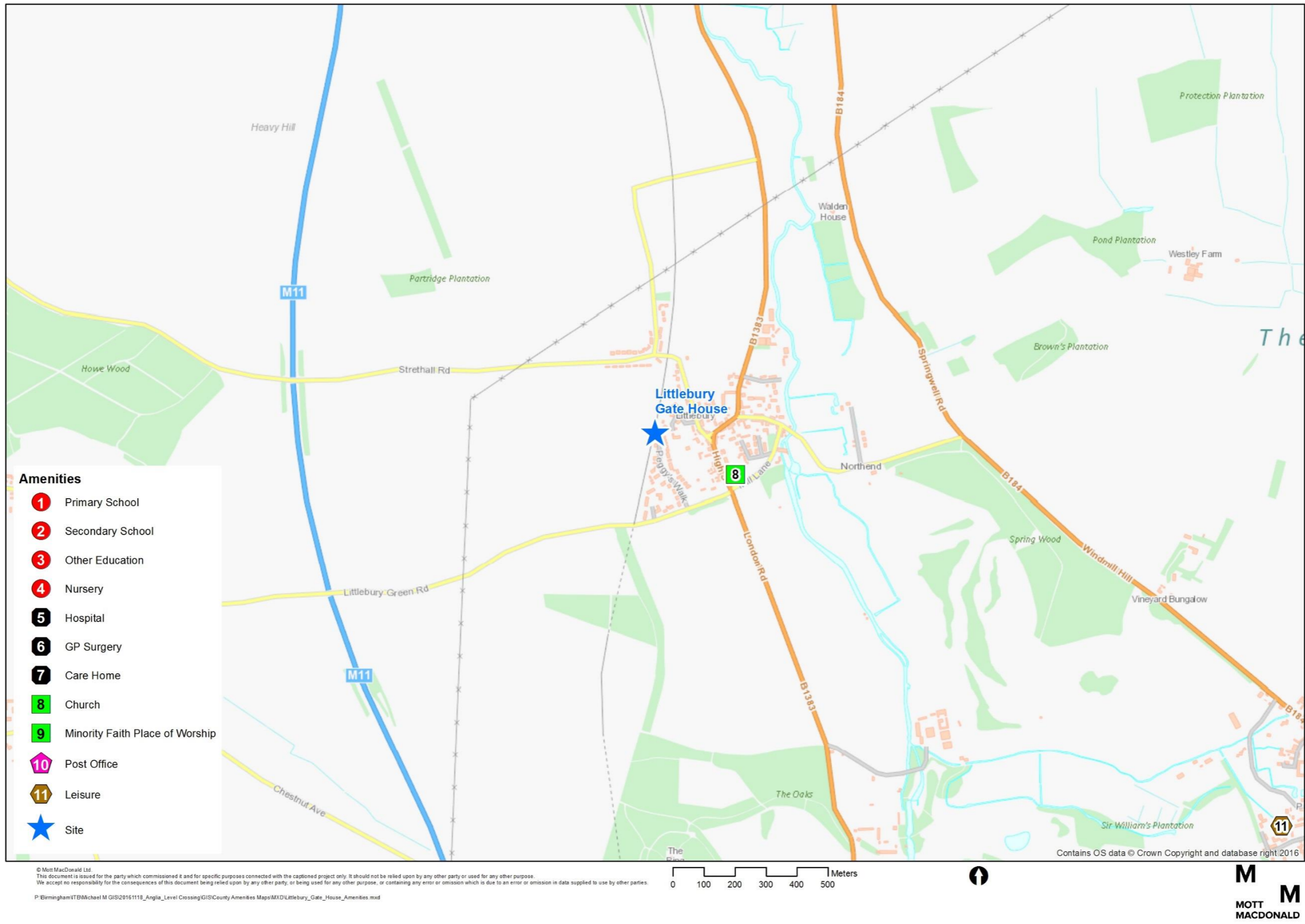
An analysis of local amenities indicates that there is only one amenity of importance to protected characteristic groups within 2km of Littlebury Gate House level crossing – a church located 280m south east. Stakeholders did however mention that the crossing was important for the local community, providing a link to bus stops and facilities in the local area.

The map below shows amenities located in the local area.

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<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Uttlesford District Council (2017): 'Planning application: UTT/16/2402/OP'. See: <http://publicaccess.uttlesford.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=OCB84YQN01O00>



## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impact of the proposed work at Littlebury Gate House level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic	Impact	Explain the potential negative impact
Disability	Y	<p>The permanent closure of Littlebury Gate House level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on disabled people compared to non-disabled people.</p> <p>There were no recorded uses of the crossing by mobility impaired users, people in wheelchairs, or mobility scooters. This could potentially be due to the existing challenges in accessing the current crossing, particularly the grass path and overgrown vegetation on the western side of the line. As such, the closure of the level crossing is likely to have a limited impact on disabled people and impacts described below should not be overstated.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the permanent diversion routes proposed, could disproportionately impact upon some disabled people (such as people with mobility impairments). Disabled people are more likely to have difficulties walking long distances and many experience pain and discomfort in doing so. A 2005 Department for Transport (DfT) study has shown that, of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p>The proposed diversion routes would add between 300m and 830m to the route, potentially adversely impacting some disabled people.</p> <p><b>Permanent reduced pedestrian accessibility due to suitability of the diversion route</b></p> <p>The diversion route makes use of new footpaths in field margins and along Littlebury Green Road, requiring users to walk for a longer distance in field tracks and grass verges than the existing route. This may restrict access, potentially discouraging disabled people, particularly those with visual</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

		<p>impairments, mobility difficulties and people in wheelchairs from using the new route. The verges along Littlebury Green Road were also noted by stakeholders to be prone to become muddy, which could restrict accessibility further.</p> <p>While it is noted that current users of the crossing would be required to manage the grass terrain of the existing byway, the proposed diversion is longer and would require greater physical effort. This could disproportionately affect disabled users who may already struggle with the existing shorter route.</p> <p><b>Permanent improvements to user safety due to reduced interaction with the railway</b></p> <p>Safety risks related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may be less able to cross safely because of these factors.<sup>6</sup> People with visual or hearing impairments can also have difficulties crossing safely due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>7</sup></p> <p>Reduced interaction with the railway at this point may potentially result in a reduced crossing risk for this group.</p> <p>Safety benefits for this group may, however, be reduced due to the need for users to walk in the carriageway and/or grass verges of a 60mph rural road for part of the proposed diversion route. Stakeholders raised concerns about the danger posed to pedestrians along this part of the diversion route, citing the lack of footpaths and speed of vehicles as key concerns.</p>
Age	Y	<p>The permanent closure of Littlebury Gate House level crossing will potentially have a disproportionate impact on children and older people – when compared to other sections of the population.</p> <p><b><u>Children</u></b></p> <p>The nine-day census recorded 21 children (7 accompanied and 14 unaccompanied) using the crossing over the full survey period.</p> <p><b>Permanent improvements to user safety due to reduced interaction with the railway</b></p> <p>Safety risks related to level crossings can disproportionately affect children. This is due to their potentially slower walking speeds and because children and younger people can have</p>

<sup>6</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>7</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

	<p>difficulties correctly processing the speed of oncoming vehicles. Research suggests that children perceived vehicles moving towards them at more than 20 mph as stationary.<sup>8</sup> Reduced interaction with the railway due to the use of a safe diversion could potentially reduce the crossing risk for this group.</p> <p>However, safety benefits are likely to be reduced by the need for children to cross over and walk along a 60mph road which has no designated footpath as part of the diversion route.</p> <p><b><u>Older people</u></b></p> <p>The nine-day census did not record any older people using the crossing, suggesting that any impacts of permanent closure will be limited. This could potentially be due to the existing challenges in access the level crossing, particularly the grass path and overgrown vegetation on the western side of the line. As such, the closure of the level crossing is likely to have a limited impact on older people, particularly those with mobility difficulties.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the permanent diversion route, are likely to disproportionately impact upon older people.</p> <p>Older people are more likely to have difficulties walking long distances and experience pain or discomfort in doing so.<sup>9</sup> They are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk more slowly, tire more easily, and are more likely to struggle to climb stairs.<sup>10</sup></p> <p>The proposed diversion route will increase walking distances by between 300m and 830m. The route therefore has the potential to disproportionately adversely affect older people.</p> <p><b>Permanent improvements to user safety due to reduced interaction with the railway</b></p> <p>Level crossing closures can improve the safety of older users by reducing interaction with the railway. Safety issues related to level crossings disproportionately impact older people, largely due to their potentially slower walking speeds and the way that older peoples' field of vision tends to decline over</p>
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<sup>8</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>9</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>10</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway' Diversity and inclusion 31032015

		<p>time. Studies have shown that this can be at a rate of 1° and 3° per decade.<sup>11</sup></p> <p>Research<sup>12</sup> has shown that older pedestrians (aged 65 or over) also walk more slowly than other pedestrian users (the mean walking speed achieved by over-65s in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to the mean for the population as a whole of 1.2m/s<sup>13</sup>), placing older people at greater risk.</p> <p>Safety benefits, though, may be limited by the need for users to walk in the carriageway of a 60mph rural road for part of the diversion route. Consideration should therefore be given to improving the safety of the route for all users.</p>
<b>Pregnancy / maternity</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	Although there is a church in relatively close proximity to the crossing, it is not anticipated that any disproportionate impacts for this protected characteristic will arise due to the availability of alternative routes. Stakeholder responses did however highlight that accessing the church is one of the main reasons people use the level crossing.
<b>Gender</b>	Y	<p><b>Permanent improvement to user safety due to reduced interaction with the railway</b></p> <p>Safety risks related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings and are associated with 70% of all train strikes. Reduced interaction with the railway (due to the diversion onto the bridge) would, therefore, deliver disproportionate benefits for this group.</p> <p>Safety benefits, though, may be limited by the need for users to walk in the carriageway of a 60mph rural road for part of the diversion route.</p>
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

<sup>11</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>12</sup> Asher, L., et al. (2012): 'Most older pedestrians are unable to cross the road in time: a cross-sectional study', *Age and Ageing* 41.

<sup>13</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- **Commitment 1: Get everyone home safe every day**  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- **Commitment 2: Deliver reliable infrastructure**  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- **Commitment 6: Being a customer focused organisation**  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- **Commitment 9: A railway fit for the future**  
The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

## Step 4: Consultation

**Q6. How has consultation with those who share a protected characteristic informed your work?**

List the groups you have consulted or reference previous relevant consultation? <sup>14</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation Round 1 (June 2016)	<p>As part of Round 1 of public consultation seven people preferred the red route (see Appendix B.1), three people preferred another route and two people did not state a preference. Four respondents were positive about the proposals, whilst eight disagreed.</p> <p>Questionnaire responses received during the first round of public consultation identified the following comments / issues regarding the proposals for Littlebury Gate House level crossing:</p>
Public responses	<ul style="list-style-type: none"> <li>• Concerns were raised about placing pedestrians in greater danger by using Littlebury Green Road, as there are no footpaths and vehicles speed down the hill.</li> </ul>

<sup>14</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

	<ul style="list-style-type: none"> <li>• Several respondents suggested that the proposals were a very good idea, as it would offer a more pleasant route.</li> <li>• Concerns were raised about using the new right of way with a bicycle or pushchair.</li> <li>• No accidents are known to have occurred at the crossing and therefore there is no reason to close the crossing.</li> <li>• The crossing is well-used by residents of Merton Place and Nettleditch.</li> <li>• Some respondents supported closure of the crossing as it is currently dangerous due to two blind spots for both train drivers and pedestrians. The first from the London-bound line is a tunnel, and the second from trains travelling from the Cambridge-bound line which emerge into view at speed from a sharp bend in the tracks relatively close to the crossing. The trains travel at high speed so it is dangerous. The new development of 16 houses on Peggy's Walk houses families with young children so they are at risk. The path is mainly used for dog walking purposes anyway.</li> <li>• Respondents felt that the crossing's purpose has been misunderstood. The main use is within the village of Littlebury by villagers accessing local bus services and the church.</li> <li>• One respondent stated that they were a resident of Peggy's Walk which is a dead end road, so the crossing is very important to them.</li> </ul>
Littlebury Parish Council	<p>The council are opposed to the proposals as:</p> <ul style="list-style-type: none"> <li>• It provides access to the church for residents of Strethall Road and Merton Place.</li> <li>• Access to bus services in Strethall Road for Peggy's Walk and Littlebury Green Road residents will also be reduced.</li> <li>• Access to a very pleasant public footpath for walkers will be reduced.</li> </ul>
Audley End Estate	<ul style="list-style-type: none"> <li>• The alternative red route for a new public right of way is not agreed and would be strenuously resisted by the landowner. The new footpath should be created within Network Rail land.</li> <li>• They are unaware of any safety incidents at this location. If the closure was to go ahead then the public right of way would become a dead end. This track has already been used by fly tippers and illegal drug taking and if it became a dead end such unauthorised use is only likely to increase to the detriment of the adjoining landowner and adjacent residential property.</li> </ul>

Public consultation Round 2 (September 2016)	<p>Round 2 of public consultation received 11 responses, with five respondents agreeing with the proposals and six disagreeing.</p> <p>Questionnaire responses received during the second round of public consultation identified the following comments / issues (outlined below) regarding the proposals (Appendix B.2) for Littlebury Gate House level crossing:</p>
Landowner agent for Audley End Estate	<ul style="list-style-type: none"> <li>• The route affected by the proposed level crossing closure provides a byway linking to the village centre, not the wider open countryside. The alternative route provides a link out of the village to other footpaths i.e. the proposal appears to be a footpath improvement plan not a re-routing of existing rights.</li> <li>• The byway is already attractive to fly-tipping and litter and misuse of drugs, and if the crossing is to close, we would suggest consideration be given to stopping the route up altogether and pedestrians re-routed via Strethall Road into Littlebury village centre.</li> <li>• The point where the proposed route reaches Littlebury Green Road is opposite the northern extension of Henry Seymour Plantation. Regardless of the lack of existence of rights of way, this will encourage trespass and the existing entrance will need to be substantially secured. Henry Seymour Plantation forms part of the Audley End Shoot and any encouragement of trespass could result in significant financial loss to the landowner.</li> <li>• The proposed path, where routed through our land will affect our cross compliance obligations under the Basic Payment Scheme and prevent normal agricultural operations, effectively taking a two metre wide width out of production and will require substantial fencing to prevent otherwise inevitable trespass. If you insist on this route then it could be established within the Network Rail boundary.</li> <li>• The orange route heading west from Peggy's Walk junction with Littlebury Green Road is existing and the provision of a new footpath in the adjoining field is not justified. The scheme is to reduce level crossings and is not a footpath network improvement scheme.</li> <li>• If the preferred route is forced upon us then we reserve our position in all respects with regards to disturbance, injurious affection and other losses flowing from the scheme.</li> </ul>
Landowner	<ul style="list-style-type: none"> <li>• Closure of the crossing without the assurance of a 2m wide footpath to Littlebury Green Road would effectively cut the village of Littlebury in half and be detrimental to access between part of the community. Consideration must be given to the lack of footpath</li> </ul>

	down Littlebury Green Road to the B1385 (High Street) from the footpath exit.
Members of Essex Ramblers Executive Committee	<ul style="list-style-type: none"> <li>This is a community path much used by local people. The proposal removes this. Peggy's is used to walk up to the crossing alongside the railway to Strethall. That will no longer be possible. Transferring the route on to the busy Green Road makes it unsafe for families. It is unacceptable that this community asset should be removed. Many crossings are being retained which are less safe than this one.</li> </ul>
Chairman of the Local Footpath Group	<ul style="list-style-type: none"> <li>If Network Rail can provide a footpath both beside the railway and on the southern side of the road between tunnel and Peggy's Walk, then the route would be acceptable. This village does not feature on long distance rambling routes as it is isolated in the footpath network. However, the current right of way and rail crossing do provide a pleasant and convenient means of local residents to walk about the village – often with dogs. The section from Peggy's Lane to the main road is a bit of a risk as no path is present, but if a path were provided from the tunnel as proposed, then this closure would not add to the existing risk. In practice, very few people use the road to reach footpath EX/31/7. That footpath only exits on another road at the other end (isolated path) and it is very risky facing traffic speeding downhill with blind corners and nowhere for pedestrians to hide.</li> </ul>
Public response	<ul style="list-style-type: none"> <li>The crossing is safe with good visibility. There is little justification to close it.</li> <li>One respondent regularly walk their dogs across the railway line to connect with the byway or turn right and walk along the field to connect with Littlebury Green Road to then walk towards the public footpath on the left up the hill. Littlebury Green Road is more dangerous as there will be no footpaths, most verges are not walkable and the cars race along the road, together with a blind bend. On balance it is more dangerous to walk on the road than to cross the railway line. What is the point of the byway if it cannot be accessed? Apparently there is an application by a house to use the by way to serve 2 new dwellings (UTT/16/2402/OP)</li> <li>Network Rail's proposal seems to be the best solution for the majority of the village.</li> <li>"Closing this level crossing will have a major impact on my family as we use it regularly. There is a considerable degree of distress at the prospect of the crossing being closed. For my grandchildren it is safer than negotiating the bend on the bridge on Strethall Road. Children from Peggy's Walk also use the crossing to access the school bus at Merton Place as a</li> </ul>

	<p>safer alternative to the busy High Street or the bend/bridge on Strethall Road. Walking down the by way and across the railway line is a key leisure activity for us. The crossing is on a straight stretch of line with excellent visibility for crossing users and train drivers. The crossing is on the approach to both Audley End and Great Chesterford stations, which require drivers to start slowly so the presence of the crossing should not adversely affect the train journey times.”</p> <ul style="list-style-type: none"> <li>• The route involves a lot of road walking and there is no footway. The verge can get muddy.</li> </ul>
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**Q7. Where relevant, 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.**

N/A

## Step 5: Informed decision-making

**Q8. In light of the assessment above, what is your decision?**

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>Due to the availability of alternatives routes in the local area, closure and redirection along the proposed diversion route is considered an appropriate solution.</p> <p>However, Network Rail should consider route improvement measures along the proposed diversion route (as outlined below in the Action Plan) to ensure that the route is fully accessible for all users.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action planning

**Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?**

Action	By when	By who
Develop a detailed community and stakeholder communication strategy to ensure that all local residents are kept fully abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.	Ongoing	Network Rail project team
Network Rail should consider appropriate route improvement measures along the proposed diversion, including consideration of establishing a footpath or footway along Littlebury Green Road and surfacing the proposed new paths.	Detailed design	Network Rail project team
Network Rail should consult with the local council and property developers regarding the use of the existing byway to access two new residential properties.	Detailed design	Network Rail project team
<b>Review this DIA at every GRIP stage</b>	<b>Ongoing</b>	<b>Network Rail project team</b>

## Step 7: Sign off

Name	Position	Signed	Date
Superuser <sup>15</sup>	Liability Negotiation Manager		20/07/2017
Senior Manager <sup>16</sup>	HORSHE		8/9/2017

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

<sup>15</sup> Quality assurance check.

<sup>16</sup> Sign-off should be by someone who can approve policy, programme or budget changes.  
Diversity and inclusion 31032015

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

## Appendix A: Site photographs

### Existing level crossing

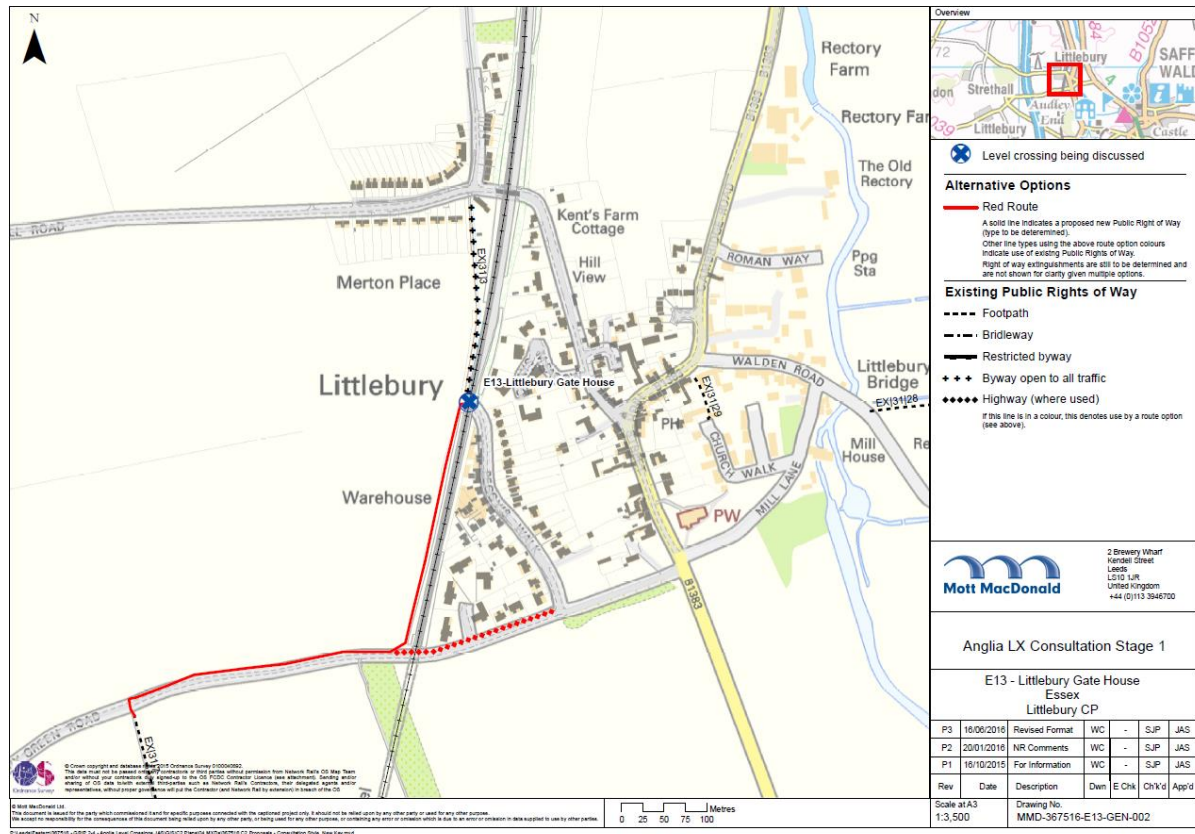


### Alternative railway crossing (using grass verge)

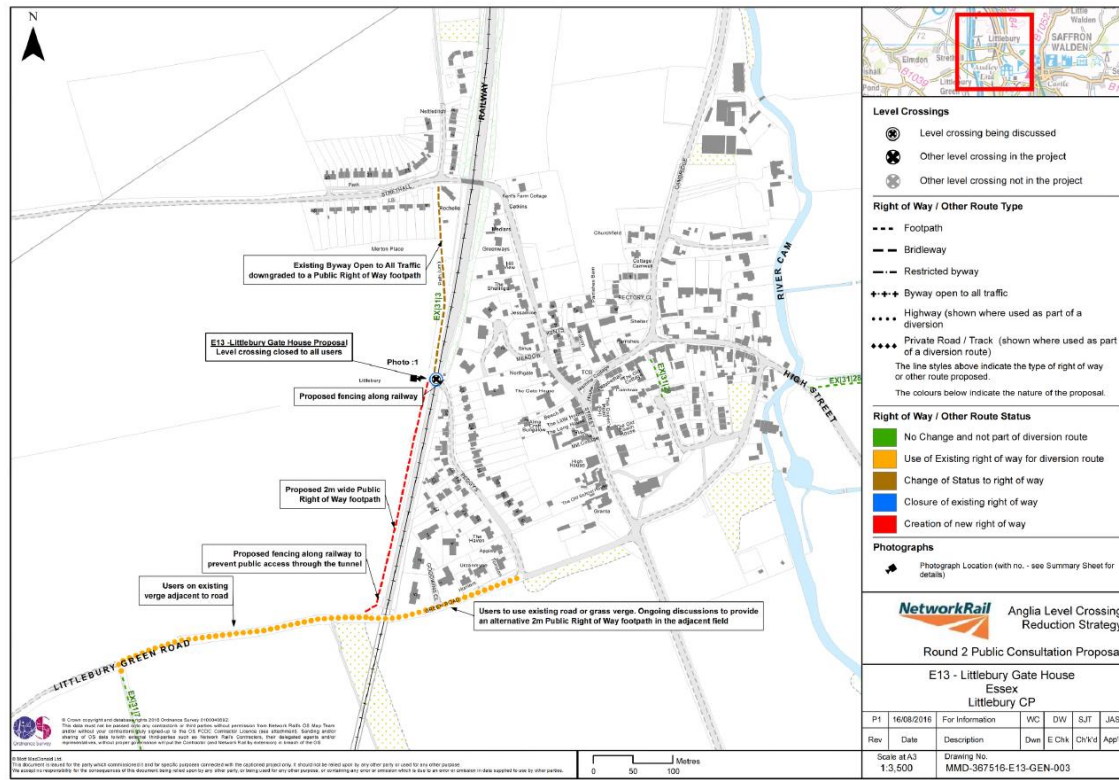


## Appendix B: Scheme drawings

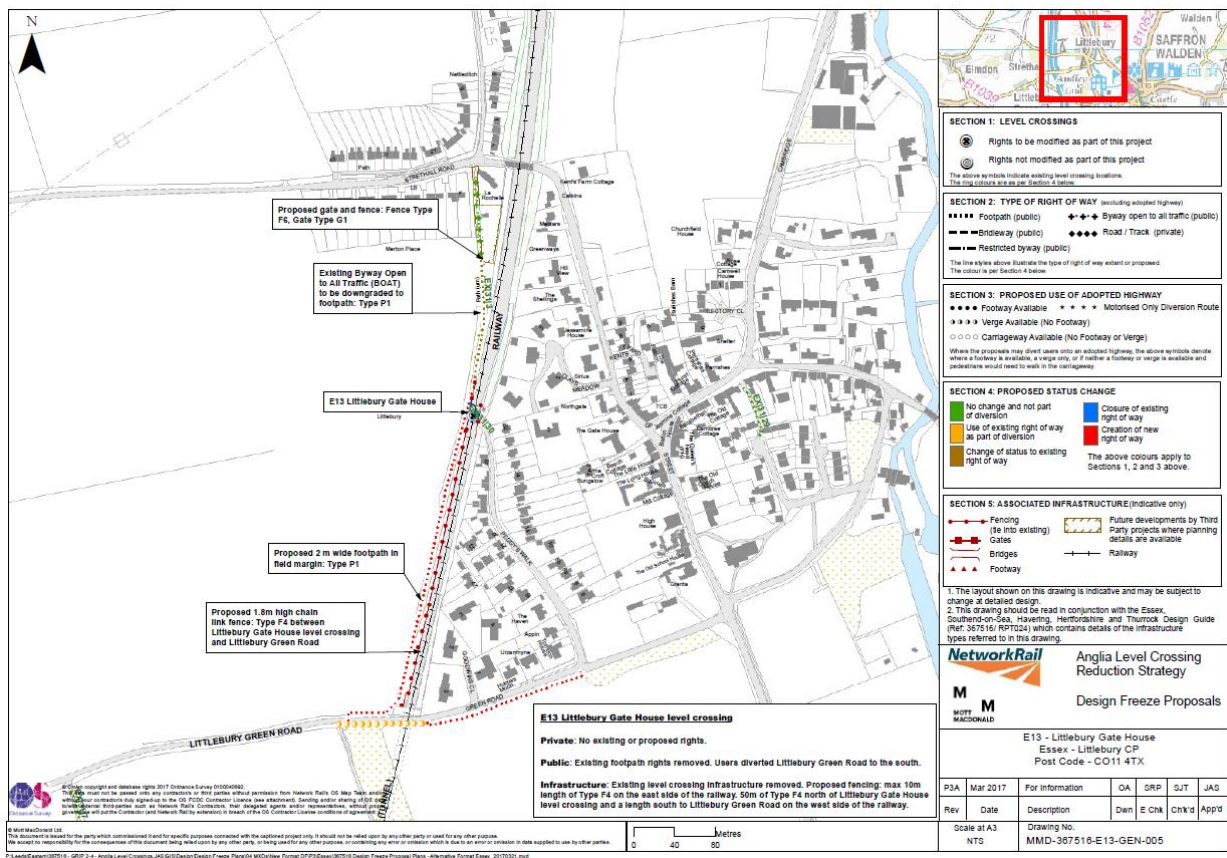
### B.1: Round 1 consultation – proposed diversion (initial option)



## B.2: Round 2 consultations – preferred option (September 2016):



### B.3: Following Round 2 consultations – preferred option (March 2017):



## Appendix C: Census summary

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

Direction : <b>Combined</b>										
Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair/ Pram	Scooter	Railway Personnel	Total	
9	0	0	0	0	0	0	0	0	9	9
21	2	0	0	0	0	0	0	0	23	23
12	0	0	0	0	0	0	0	0	12	12
5	0	1	0	0	0	0	0	0	6	6
11	0	3	0	0	0	0	0	0	14	14
10	0	4	0	0	0	0	0	0	14	14
7	0	6	0	0	0	0	0	0	13	13
20	4	0	0	0	0	0	0	0	24	24
19	1	0	0	0	0	0	0	0	20	20
114	7	14	0	0	0	0	0	0	135	135

# Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** E32 Woodgrange Close – Anglia Level Crossing Reduction Strategy

## Step 1: Clarifying aims

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



### Anglia Level Crossing Reduction Strategy

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings within the counties of Suffolk, Cambridgeshire, Essex, Hertfordshire, and the unitary authorities of Thurrock, Havering, and Southend-on-Sea. This is referred to as the Anglia Level Crossing Reduction Strategy ('the Strategy'). Closing or modifying level crossings can help to bring about a number of benefits:

- Improve the safety of level crossing users

- Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy
- Reduce the ongoing operating and maintenance cost of the railway
- Reduce delays to trains, pedestrians and other highway users, and
- Improve journey time reliability for railway, highway and other rights of way users.

### **E32 – Woodgrange Close level crossing**

Woodgrange Close level crossing is a pedestrian crossing located on the one track London, Tilbury and Southend line (also known as the Essex Thameside). The crossing deck is wooden with anti-slip boards attached. The approach to the level crossing is via an uneven gravelled surface with a moderate gradient – there are also gates on either side of the crossing. **Appendix A** contains site photographs.

Woodgrange Close level crossing is a pedestrian ‘Stop, Look and Listen’ crossing, where the user determines whether it is safe to cross. The crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C4. The individual risk rating for crossing users is ‘C’ (where ‘A’ is highest risk and ‘M’ is lowest) and the collective risk rating for this crossing is ‘4’ (where ‘1’ is highest risk and ‘13’ is lowest), making Woodgrange Close a high risk crossing.

Key issues at the site relate to sun glare, large numbers of users and frequent trains. Approximately 176 trains use this part of the network daily at a line speed of 75mph. There were six incidents of misuse, seven near misses and one accident at the crossing between 2011 and 2015.

Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

#### **Project location**

Woodgrange Close level crossing is located in Southchurch-On-Sea. The level crossing is located in a highly urbanised area, 840m east of Southend East station and 1.2km west of Thorpe Bay station. Residential properties and school playing fields surround the level crossing. There is a public right of way across this crossing (reference FP189). The map below shows the location of the level crossing.

# Anglia level crossing reduction strategy



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## Proposals for the project

Network Rail has conducted two rounds of public consultation; the first was to obtain feedback on its initial options for level crossings in the programme (in June 2016), and the second to obtain feedback on its preferred options (in September / October 2016). Subsequent to the receipt of this feedback, consideration was given as to how any proposed closure of the level crossing and implementation of an alternative route might best be progressed and managed.

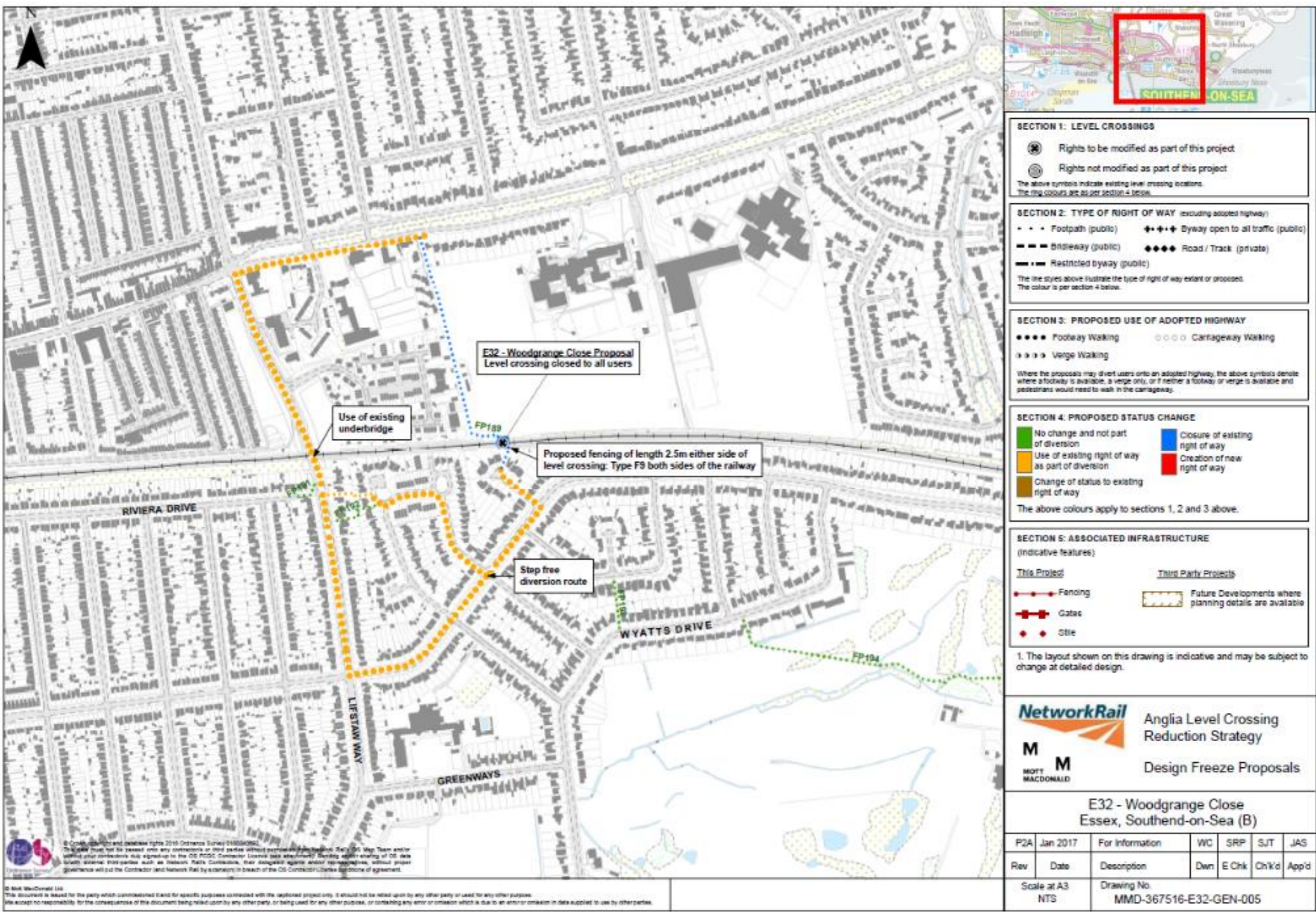
Following feedback on the option presented at Round 2 of consultation, the revised proposal is to close the level crossing to all users, remove the crossing infrastructure, extinguish Public Right of Way FP189 and provide two diversion routes (as detailed below in Figure 1).

Both routes, divert all users along existing routes to the underbridge on Lifstan Way - located 290m west of the crossing. Pedestrian footways are available along all sections of the proposed diversion route and, with the exception of the footpath linking Lifstan Way and Butterys (which has many steps), benefit from level pavements, lighting, drop kerbs and tactile paving. Diversion route option one makes use of the stepped footpath between Lifstan Way and Butterys and will add 1.1km to the route. Option two offers a fully accessible diversion via Woodgrange Drive then on to Lifstan Way. This is a longer diversion, but does not require users to negotiate steps. This is the diversion route that was presented at Round 1 of public consultation. The proposed diversion route under option two adds 1.3km to the route.

The Round 2 public consultation received six responses for this level crossing, with all respondents strongly disagreeing with the proposal.

The drawing below shows the preferred diversion route produced following Round 2 public consultation. This is also available in **Appendix B**, along with the proposed diversion taken to the Round 1 and 2 of public consultation.

Figure 1



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Woodgrange Close level crossing, there is a risk of a future incident at this location. The permanent closure of the crossing will separate people from the railway line, thereby improving the safety of local residents and other users.

The proposed diversion route for Woodgrange Close level crossing, via the Lifstan Way underbridge, would increase walking distance by a maximum of 1.3km depending on the route taken. This increase in walking distance may disproportionately affect certain sections of the population who find walking longer distances difficult.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- Disability including carers<sup>1</sup>
- Pregnancy/maternity
- Religion or belief
- Sexual orientation
- Gender reassignment
- Age
- Race
- Gender
- Marriage/Civil Partnership

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on those people with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User profile

A nine-day pedestrian census was carried out for Woodgrange Close level crossing in July 2016. The census indicated that 309 pedestrians used the level crossing during the survey period – an average of 34 people per day. The survey results show that adult pedestrians constituted 87% (268/309) of survey users, only one of whom was categorised as an older person. A total of 40 children (13% of the crossing population) were documented using the level crossing (12 were accompanied by an adult and 28 were unaccompanied). Additionally, one pram was recorded during the survey. No wheelchair or impaired users were recorded over the survey period.

While cyclists are not a protected characteristic group, it is noted that Woodgrange Close level crossing is well used by cyclists, with 44 cyclists using the crossing over the survey period.

A breakdown of census data can be found in **Appendix C**.

### Population profile

In order to gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as the district of Southend-on-Sea.<sup>2</sup> These are as follows:

- Children (under 16 years of age) make up 19% of the Southend-on-Sea population, which is the same as the national average.
- Younger people (16-24 years old) make up 10% of the Southend-on-Sea population, which is slightly lower than the national figure (12%).

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimates taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157206/report.aspx?town=littleport>.

- The proportion of older people (here described as people of retirement age – 65 and over) in Southend-on-Sea is 18%, which is slightly higher than the national average (16%).
- 18% of the Southend-on-Sea population have a long-term illness or disability that limits their daily activities. This is in line with the national average of 17%.
- 13% of the population of Southend-on-Sea is from Black, Asian or ethnic minority (BAME<sup>3</sup>) groups. This is lower than the national figure of 20%.
- The figure for people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Southend-on-Sea is 5%, compared with 9% for England.

The above demographic analysis suggests that the populations of all of the protected characteristics (for which there is demographic data) are broadly in line with national proportions. There is one exception; Southend-on-Sea has a much lower proportion of people from BAME groups than the national average.

### **Local amenities**

A review of local planning applications (in December 2016) indicates that there are plans for significant development in the local area. The local council is seeking to create a 'City by the Sea', which will involve the development of the town centre and seafront, with additional residential development planned.<sup>4</sup> Further details can be found in **Appendix D**.

An analysis of local amenities indicates that there are several community amenities in close proximity to the level crossing – including a GP surgery as well as two secondary schools immediately north of the level crossing. There are also four churches, five care homes and a primary school in the locality of the crossing. The crossing is likely to be most important for people on the south of the crossing who may need to access the greater range of amenities to the north of the line.

On the northern side of the line there is a secondary school in very close proximity (230m north) to the crossing, suggesting that the level crossing is a natural desire line for children to access the school. It is noted that 13% of level crossing users during the nine-day census were children. It is also possible that residents on the southern side of the line use the level crossing to reach churches and the GP surgery – the level crossing provides the most direct route to these amenities.

There are, however, other crossings in the local area, such as Lifstan Way (290m west of the crossing). This may provide a more direct route to amenities, particularly those on the northwest of the crossing.

These presumed desire lines are based on the identified location of residential area and community facilities within the immediate vicinity of the crossing. The development of a more substantive picture of local desire lines for the crossing and associated routes could be achieved through cordon survey interviews with users at fixed locations and times.

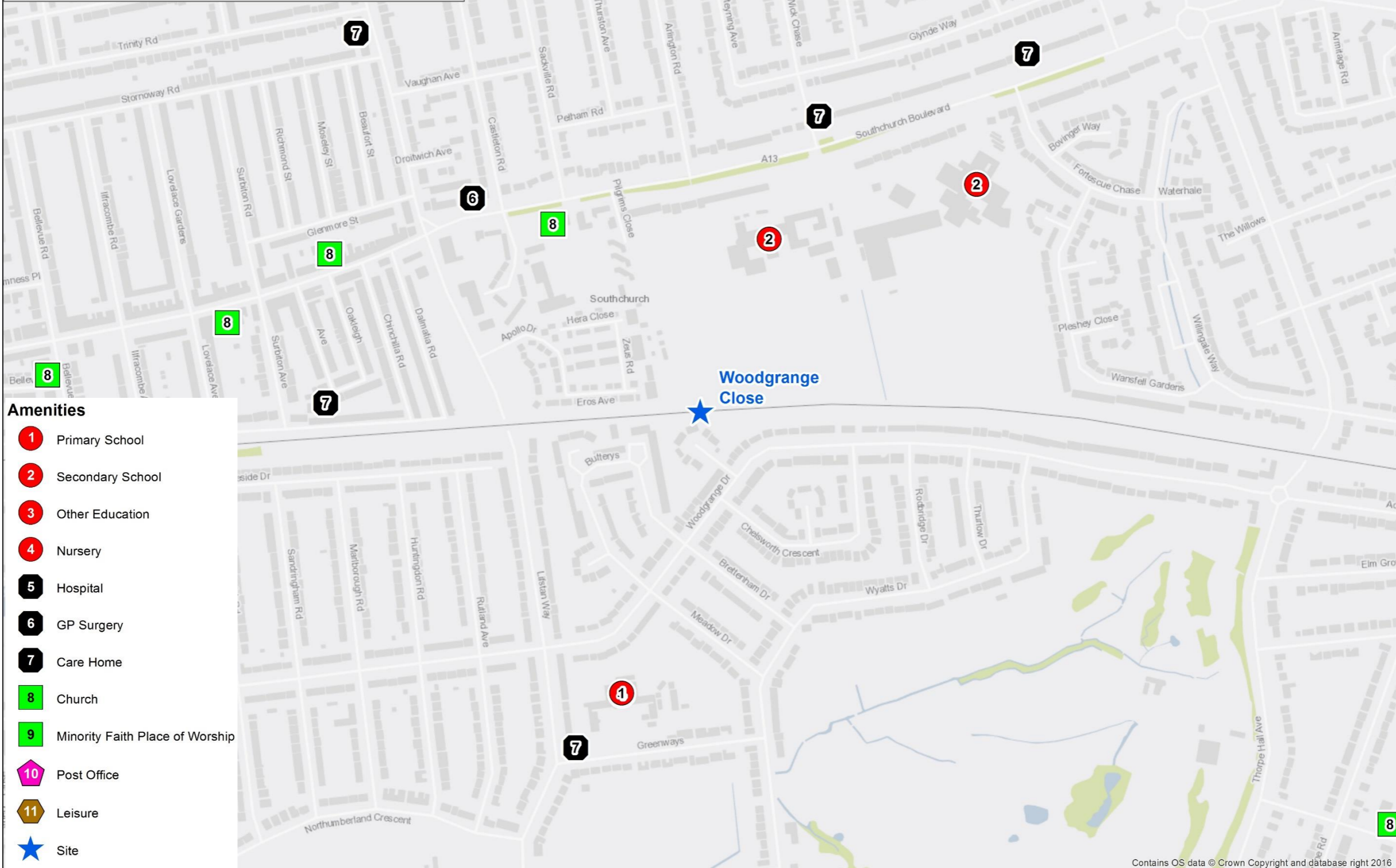
The map below shows the location of local amenities.

<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Southend-on-Sea Borough Council:

[http://www.southend.gov.uk/info/200420/development\\_plan\\_documents](http://www.southend.gov.uk/info/200420/development_plan_documents).

### Anglia level crossing reduction strategy



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## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impact of the proposed work at Woodgrange Close level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic		Explain the potential negative impact
Disability	Y	<p>The permanent closure of Woodgrange Close level crossing will remove pedestrian access at this point, potentially resulting in disproportionate impacts on disabled people (including people with mobility, sensory and respiratory conditions) compared to non-disabled people.</p> <p>During the nine-day census, no impaired or wheelchair users were documented using the level crossing. As the current approaches to Woodgrange Close level crossing incorporates a step and are at a gradient via narrow, uneven, gravel paths, it is a possibility that the existing crossing is already inaccessible to some disabled users (particularly those with mobility issues).</p> <p><b>Permanent increased walking distance due to length of diversions</b></p> <p>Increases in walking distances, as a result of the permanent diversion routes, are likely to disproportionately impact upon some disabled people, and particularly those with mobility impairments. Disabled people are more likely to have difficulties walking long distances and many experience pain in doing so.</p> <p>Studies have shown that of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p>Stakeholders additionally raised concerns about the additional length of the permanent diversion routes and their manageability for disabled people. The proposed diversion route via the Lifstan Way underbridge would add, at most, 1.3km to the route (as per option two), potentially adversely impacting some disabled people who may struggle with the increased distance.</p> <p>Implementation of route improvement measures should be considered to help mitigate against any negative implications of this increased walking distance. This could include benches and level rest areas.</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'.

		<p><b>Potential reduced accessibility due to suitability of diversion routes</b></p> <p>Inaccessible infrastructures – such as diversions involving steps - can act as a significant barrier for people in wheelchairs and individuals with sight and mobility impairments, potentially creating additional distances for these users to travel to gain access.<sup>6</sup></p> <p>One of the proposed diversion routes (option one) diverts users from a potentially restrictive route (on account of a step and unpaved, narrow paths) to a possibly more restrictive route (due to the presence of many steps between Lifstan Way and Buttery's). This will disproportionately impact some users who have difficulties using steps. Stakeholder concerns were also raised regarding the presence and nature of these steps.</p> <p>The proposed diversion route under option two however provides a step-free route with a maximum gradient of 5% (which is compliant with Equality Act 2010 requirements). This route is therefore accessible for disabled users.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may be less able to cross safely because of these factors.<sup>7</sup> People with visual or hearing impairments can also have difficulties crossing safely, due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>8</sup></p> <p>Whilst use of Woodgrange Close level crossing by disabled people may be minimal, reduced interaction with the railway will result in potentially reduced crossing risk for this group.</p>
Age	Y	<p>The permanent closure of Woodgrange Close level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on certain age groups – namely children and older people – compared to the general population.</p> <p><b><u>Children</u></b></p> <p>During the nine-day census, 40 children (13% of level crossing users) were recorded using the level crossing - 28 of whom were unaccompanied by an adult. It is noted that the survey period took place in mid-July. As this is potentially the final week of term prior to the summer holidays, child user figures may not be as high as they would otherwise be had the survey taken place during a more active</p>

<sup>6</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'.

<sup>7</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'.

<sup>8</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'.

	<p>period of the school term. As such, impacts described below may be more advanced. Stakeholder consultation also highlighted that this was a popular route for children to access the nearby schools.</p> <p><b>Potential community severance may result due to permanent closure of Woodgrange Close level crossing</b></p> <p>It was noted through stakeholder engagement and analysis of local amenities that Woodgrange Close level crossing forms part of a popular route to schools in the local area. As such, children and young people are amongst the most frequent users of the level crossing. Residents living on the opposite side of the track from their school will have restricted access to these facilities upon the closure of the level crossing.</p> <p>Permanently closing the level crossing without providing and accessible alternative at the location will require children and young people to follow the proposed permanent diversions. Increased walking distance and travel time could impact pupils (particularly pedestrians) who need to access schools – potentially leading to community severance.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact children. This is due to their potentially slower walking speeds and because children and younger people can have difficulties correctly processing the speed of oncoming vehicles. Research conducted on behalf of the House of Commons Transport Select Committee, showed that children perceived vehicles moving towards them at more than 20mph as stationary.<sup>9</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safe diversion as an alternative) is likely to lead to significantly reduced crossing risk for this group.</p> <p>Stakeholders, however, raised concerns about the suitability of the diversions as the proposed routes would see children walking alongside busy roads. However, segregated pedestrian footpaths are present along the entire length of the route, helping to enhance pedestrian safety.</p> <p><b><u>Older people</u></b></p> <p>During the nine-day census, only one older person was recorded using the crossing. As the current approaches to Woodgrange Close level crossing incorporate a step and are at a gradient via narrow, uneven, gravel paths, it is a possibility that the existing crossing is already inaccessible to some older users (particularly those with mobility issues).</p> <p><b>Permanent increased walking distance due to length of diversions</b></p>
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<sup>9</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'.

	<p>Increases in walking distances, as a result of the closure of Woodgrange Close level crossing and the permanent use of the diversion routes, are likely to disproportionately impact older people compared to the general population.</p> <p>Older people are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk slower, get tired more easily and struggle to climb stairs.<sup>10</sup> Consequently, the increased walking distance occurring as a result of the diversion could disproportionately impact older people with mobility issues, as these people are more likely to have difficulties walking long distances and experience pain or discomfort in doing so.<sup>11</sup></p> <p>The proposed diversion route via the Lifstan Way underbridge would add up to 1.3km (option two) to the route, potentially adversely impacting some older people who may struggle with the increased distance.</p> <p>Stakeholders also raised concerns about the additional length of the permanent diversion route and its manageability for older people.</p> <p>Consideration of route improvement measures, such as installing benches and level rest areas, will help mitigate against any negative implications of the increased walking distance.</p> <p><b>Permanent reduced pedestrian accessibility due to nature of diversion routes</b></p> <p>Older people are more likely than other sections of the population to have mobility impairments and therefore require accessible infrastructure.</p> <p>One of the proposed diversion routes (option one) makes use of steps between Lifstan Way and Buttery's. The proposal diverts users from a potentially restrictive route (on account of a step and unpaved and narrow paths) to a possibly more restrictive route under option one (due to the presence of steps between Lifstan Way and Buttery's). This will disproportionately impact some users who have difficulties using steps. Stakeholder concerns were also raised regarding the presence and nature of the steps.</p> <p>Like disabled people, older people are more likely to require accessible infrastructure than other sections of the general population. NHS data indicates that 62% of fatal falls in those aged 65 and over are on or from stairs or steps.<sup>12</sup> The presence of steps can act as a barrier for older people, and can create additional distance to travel or require challenging gradients to manage for those who are frail (even when designed to accessible standard specifications).</p> <p>The proposed diversion under option two however provides a step-free route. As noted above, this route has a maximum gradient of 5%,</p>
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<sup>10</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway'

<sup>11</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>12</sup> Health Promotion England: 'Older people and accidents'

		<p>which is compliant with Equality Act 2010 requirements. Therefore, it is felt that the diversion route option two is accessible for older people.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact older people, due to their potentially slower walking speeds. Research by University College London has shown that older pedestrians (aged 65 or over) walk more slowly than other pedestrian users (the mean walking speed achieved in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to mean for the population as a whole 1.2m/s<sup>13</sup>), placing them at greater risk. Older people are also particularly at risk as their field of vision declines over time, making them more vulnerable to moving vehicles. Studies have shown that this can be at a rate of 1° and 3° per decade.<sup>14</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safe diversion as an alternative) is likely to lead to significantly reduced crossing risk for this group.</p>
<b>Pregnancy / maternity</b>	Y	<p>The permanent closure of Woodgrange Close level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on people with pushchairs / prams.</p> <p>The nine-day census identified only one user with a pushchair / pram using Woodgrange Close level crossing during the survey period, suggesting that parents with pushchairs may already be using alternative routes to cross the railway line. As the current approaches to Woodgrange Close level crossing incorporates a step and are at a gradient via narrow, uneven, gravel paths, it is a possibility that the existing crossing is already inaccessible to some users with a pushchair / pram.</p> <p><b>Permanent reduced pedestrian accessibility due to the nature of the diversion routes</b></p> <p>Inaccessible infrastructure can disproportionately impact upon people with pushchairs. The presence of steps can require challenging gradients or increased walking distance for people with pushchairs / prams.</p> <p>While one of the proposed diversion routes (option one) makes use of steps between Lifstan Way and Buttery's, option two is step-free and provides a safe and fully accessible route for people with pushchairs / prams.</p>
<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	Although there are a number of churches in the local area, due to the availability of alternative route we do not anticipate any

<sup>13</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

<sup>14</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'.

		disproportionate impacts for this protected characteristic because of the project.
<b>Gender</b>	Y	<b>Improved user safety due to reduced interaction with the railway</b> Safety issues related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings, associated with 70% of all train strikes. Given that males represent approximately 50% of the population as a whole, this would suggest male pedestrians are more at risk at level crossings than female pedestrians. <sup>15</sup> Reduced interaction with the railway (due to the diversion) would lead to reduced crossing risk for men.
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- **Commitment 1: Get everyone home safe every day.**  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- **Commitment 2: Deliver reliable infrastructure.**  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- **Commitment 6: Being a customer focused organisation.**  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- **Commitment 9: A railway fit for the future.**  
The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

<sup>15</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

## Step 4: Consultation

**Q6. How has consultation with those who share a protected characteristic informed your work?**

List the groups you have consulted or reference previous relevant consultation? <sup>16</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation Round 1 (June 2016)	<p>Questionnaire responses received during the first round of public consultation identified the following comments / issues (outlined below) regarding the proposals for Woodgrange Close level crossing:</p> <ul style="list-style-type: none"> <li>Concerns were raised over the length of the diversion route, noise from the busy road, the dangers of walking along the busy road and the dangers of the shared use pavements with cyclists.</li> </ul>
Public consultation Round 2 (September 2016)	<p>Questionnaire responses received during the second round of public consultation identified the following comments / issues (outlined below) regarding the proposals for Woodgrange Close level crossing:</p>
Public responses	<ul style="list-style-type: none"> <li>The closure would encourage people to drive.</li> <li>The diversion route is too long and unusable to cyclists and the disabled due to the amount of steps from Lifstan Way to Buttery's.</li> <li>The crossing is well-used by pedestrians and is an important link for the local community.</li> <li>Respondents felt that the crossing was safe and pedestrians had good visibility of oncoming trains.</li> <li>The crossing is used by staff and children going to the school. If it were closed, these users would have to walk further, alongside busy roads.</li> <li>The local population need to be better informed about the proposals.</li> <li>Multiple concerns were raised about the length of the diversion route.</li> </ul>

**Q7. Where relevant, 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.**

N/A

<sup>16</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

## Step 5: Informed decision-making

### Q8. In light of the assessment above, what is your decision?

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>Due to the low to moderate use of the level crossing by groups with protected characteristics, closure and redirection is considered an appropriate solution. As the current approaches to Woodgrange Close level crossing incorporates a step and are at a gradient via narrow, uneven, gravel paths, it is a possibility that the existing level crossing is already inaccessible to some users from groups with a protected characteristic.</p> <p>However, based on the location of amenities in the area, it is likely that the level crossing forms a key route for users of these facilities – particularly children accessing schools.</p> <p>The proposed diversion route under option two provides a step-free, fully accessible route. However, it should be noted that this diversion adds an additional 1.3km to the route. Consideration of route improvement measures, such as benches and level rest areas, will help mitigate any negative impacts of the increased walking distance.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action planning

**Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?**

Action	By when	By who
Consideration should be given into alternative solutions to maintain access at Woodgrange Close level crossing. To ensure access for all and maximise safety benefits, consideration should be given to the feasibility of installing a ramped footbridge at the site.  Any structure should meet guidelines in the Equality Act 2010, ensuring accessibility for all groups.	Prior to submission of TWAO	Network Rail project team
Develop a route improvement strategy along the diversion routes to help mitigate any negative impacts of increased walking distances, including the incorporation of benches and flat rest points. This will enhance the user experience for all groups and increase a sense of safety.	At detailed design	Network Rail liabilities team
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and any other benefits of the scheme, particularly focussing on user safety.	Ongoing	Network Rail project team
<b>Review the DIA at every GRIP stage to ensure equality of access is maintained for all.</b>	<b>Ongoing</b>	<b>Network Rail project team</b>

See **Appendix D** for Design Team responses to the proposed actions above.

## Step 7: Sign off

Name	Position	Signed	Date
<u>Superuser</u> <sup>17</sup>	Sponsor	<i>D. Corrigan</i>	11/09/2017
Senior Manager <sup>18</sup>	<i>HORSHAM</i>	<i>R. Lewis</i>	7/12/17

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

<sup>17</sup> Quality assurance check.

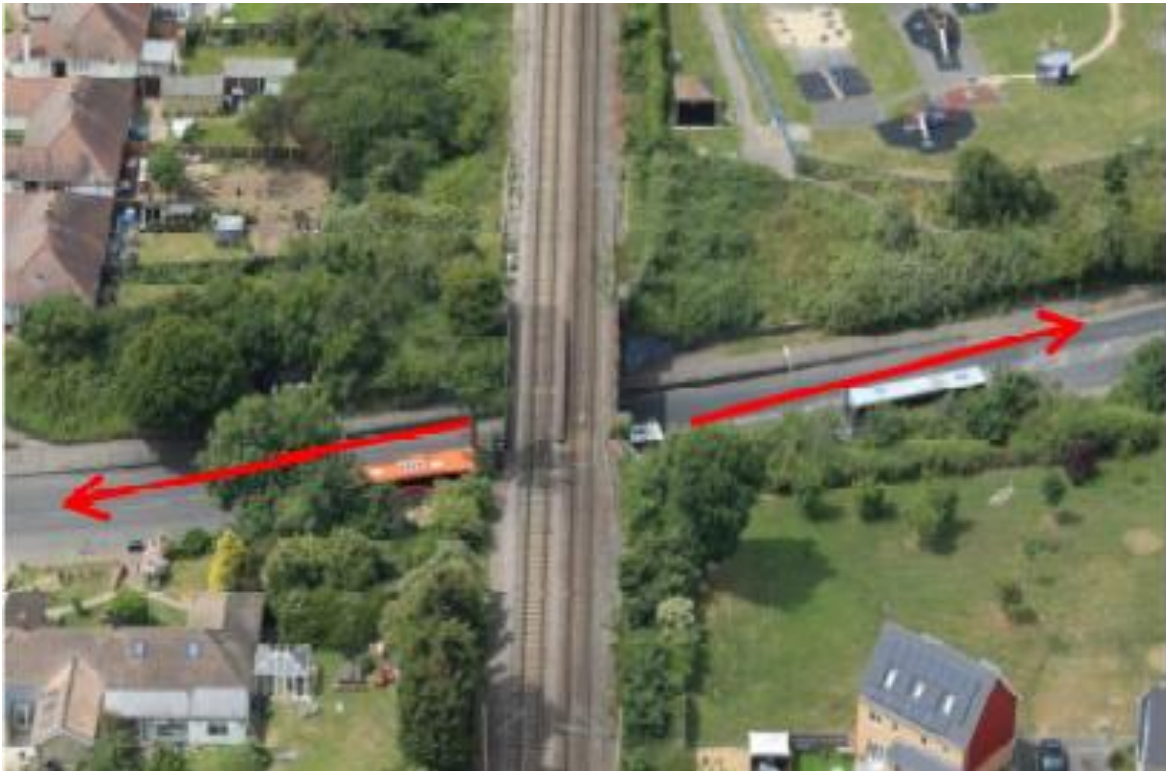
<sup>18</sup> Sign-off should be by someone who can approve policy, programme or budget changes.  
Diversity and inclusion 31032015

## Appendix A: Site photographs

### Existing level crossing

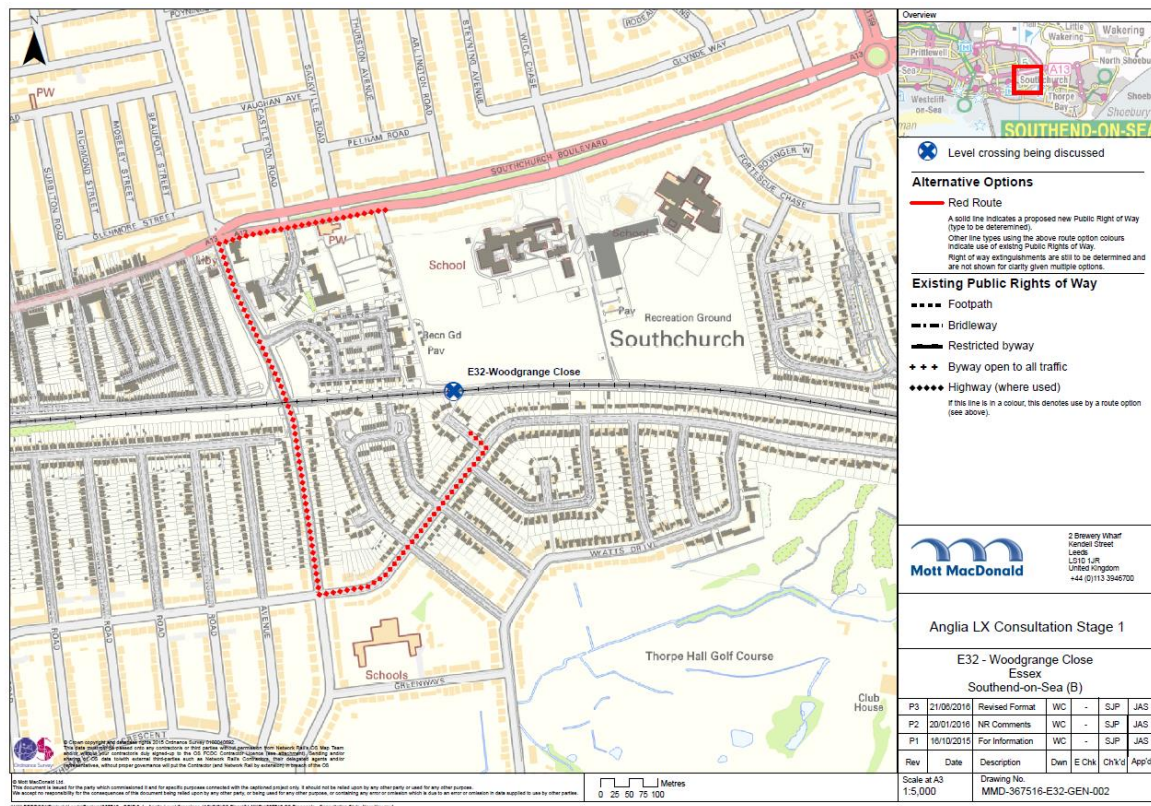


**Alternative underbridge**

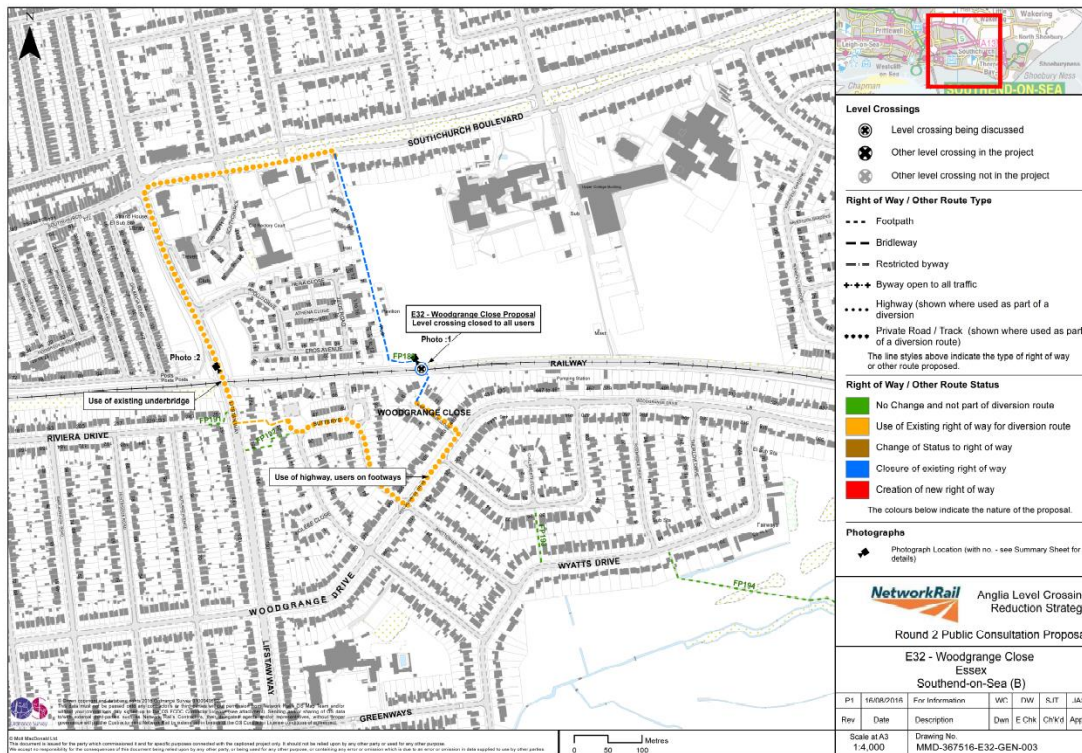


## Appendix B: Site drawings

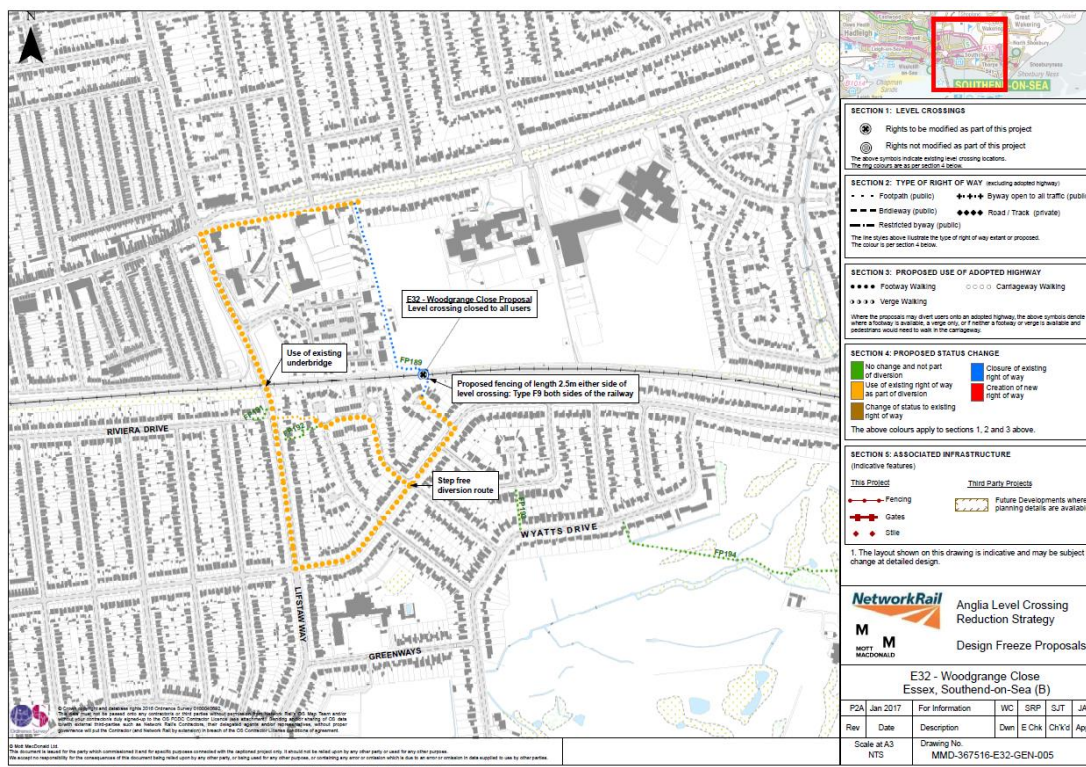
### Round 1 consultation – proposed diversion (initial option, June 2016)



## Round 2 consultations – proposed diversion (September 2016):



## Updated following Round 2 consultations – preferred diversions (January 2017):



## Appendix C: Nine-day pedestrian census report

### Summary

The survey was successfully completed in accordance with Network Rail specification. The data is summarised below:

			Combined			
			Horse riders	Riding Cycles	Walking Cycles	Total
Day 1	Saturday	09/07/2016	0	0	0	0
Day 2	Sunday	10/07/2016	0	0	0	0
Day 3	Monday	11/07/2016	0	0	0	0
Day 4	Tuesday	12/07/2016	0	0	7	7
Day 5	Wednesday	13/07/2016	0	0	11	11
Day 6	Thursday	14/07/2016	0	1	9	10
Day 7	Friday	15/07/2016	0	0	3	3
Day 8	Saturday	16/07/2016	0	0	8	8
Day 9	Sunday	17/07/2016	0	3	2	5
			0	4	40	44

Direction : Combined											
Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair/ Pram	Scooter	Railway Personnel		Total	
21	0	0	0	0	0	0	0	0	0	21	
43	0	0	0	0	0	0	0	0	0	43	
39	1	0	0	0	0	1	0	0	0	41	
21	0	9	0	0	0	0	0	0	0	30	
28	2	6	1	0	0	0	0	2	0	39	
30	1	9	0	0	0	0	0	0	0	40	
8	0	4	0	0	0	0	0	0	0	12	
26	2	0	0	0	0	0	0	0	0	28	
51	6	0	0	0	0	0	0	0	0	57	
267	12	28	1	0	0	1	0	2		311	

## Appendix D: DIA Design Team Responses to Action Planning

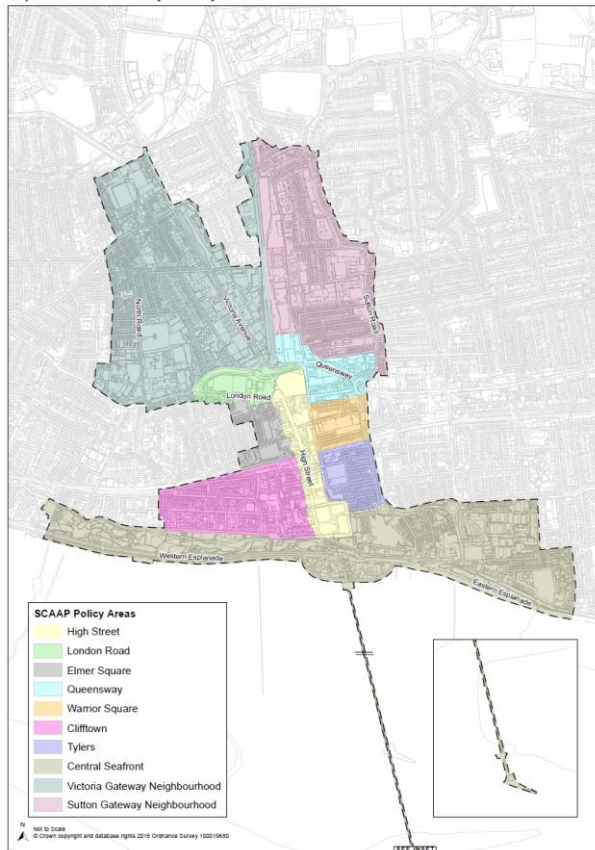
Action	By when	By who	Design Team comment	NR Response	Design Team Response
Consideration should be given into alternative solutions to maintain access at Woodgrange Close level crossing. To ensure access for all and maximise safety benefits, consideration should be given to the feasibility of installing a ramped footbridge at the site.	Prior to submission of TWAO	Network Rail project team	This has been considered by NR and there is not the space for a bridge. In addition the presence of residential dwellings within 15m of the level crossing would mean unacceptable impacts on the amenity of those households	Agreed	No action
Any structure should meet guidelines in the Equality Act 2010, ensuring accessibility for all groups.					
Develop a route improvement strategy along the diversion routes to help mitigate any negative impacts of increased walking distances, including the incorporation of benches and flat rest points. This will enhance the user experience for all groups and increase a sense of safety.	At detailed design	Network Rail liabilities team	The provision of rest points within the adopted highway should be discussed further with the Highway Authority at the detailed design stage.	These have not been requested this far, anything to be provided now must be at the discretion of the HA as we will not have the powers.	Noted
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and any other benefits of the scheme, particularly focussing on user safety.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	agreed	NR to take appropriate actions

Review the DIA at every GRIP stage to ensure equality of access is maintained for all.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	Yes, but this is not to 'ensure equality of access is maintained for all' it is to ensure that any changes to the design do not worsen the access and they improve where appropriate.	NR to take appropriate actions
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## Appendix D: Development plans

The map below shows the location of the proposed development.<sup>19</sup>

Map 2 - SCAAP Boundary & Policy Areas



<sup>19</sup> Southend-on-Sea Borough Council:  
[http://www.southend.gov.uk/info/200420/development\\_plan\\_documents](http://www.southend.gov.uk/info/200420/development_plan_documents).  
 Diversity and inclusion 31032015

## Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** HA02 Woodhall Crescent - Anglia Level Crossing Reduction Strategy

### Step 1: Clarifying aims

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



#### Anglia Level Crossing Reduction Strategy

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings within the counties of Suffolk, Cambridgeshire, Essex, Hertfordshire, and the unitary authorities of Thurrock, Havering, and Southend-on-Sea. This is referred to as the Anglia Level Crossing Reduction Strategy ('the Strategy'). Closing or modifying level crossings can help to bring about a number of benefits:

- Improve the safety of level crossing users

- Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy
- Reduce the ongoing operating and maintenance cost of the railway
- Reduce delays to trains, pedestrians and other highway users
- Improve journey time reliability for railway, highway and other rights of way users.

## **HA02 – Woodhall Crescent level crossing**

Woodhall Crescent is a public footpath (FP 172) level crossing located in the London Borough of Havering. The level crossing spans the one track Romford to Upminster Line.

Woodhall Crescent is a 'Stop, Look and Listen' crossing, where the user determines whether it is safe to cross. The approach to the crossing is via very narrow and uneven paths, that would restrict accessibility for some users – such as those with mobility impairments.

The crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C5. The individual risk rating for crossings is 'C' (where 'A' is the highest risk and 'M' is lowest) and collective risk rating for this crossing is '5' (where '1' is the highest risk and '13' is the lowest), making Woodhall Crescent a relatively high risk crossing. Key safety issues at the site relate primarily to sun glare. Approximately 56 passenger trains use this part of the line daily with a line speed of 30mph. Between 2011 and 2015, no incidents of misuse, near misses or accidents were recorded at the site.

Network Rail aims to; ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

### **Project location**

Woodhall Crescent is located approximately 950m south-east of Emerson Park station. The railway line bisects the highly urbanised, residential area of Hornchurch to the south and Emerson Park to the north.

**Appendix A** contains site photographs and the below figure shows the location of the level crossing.

Anglia level crossing reduction strategy



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### Proposals for the project

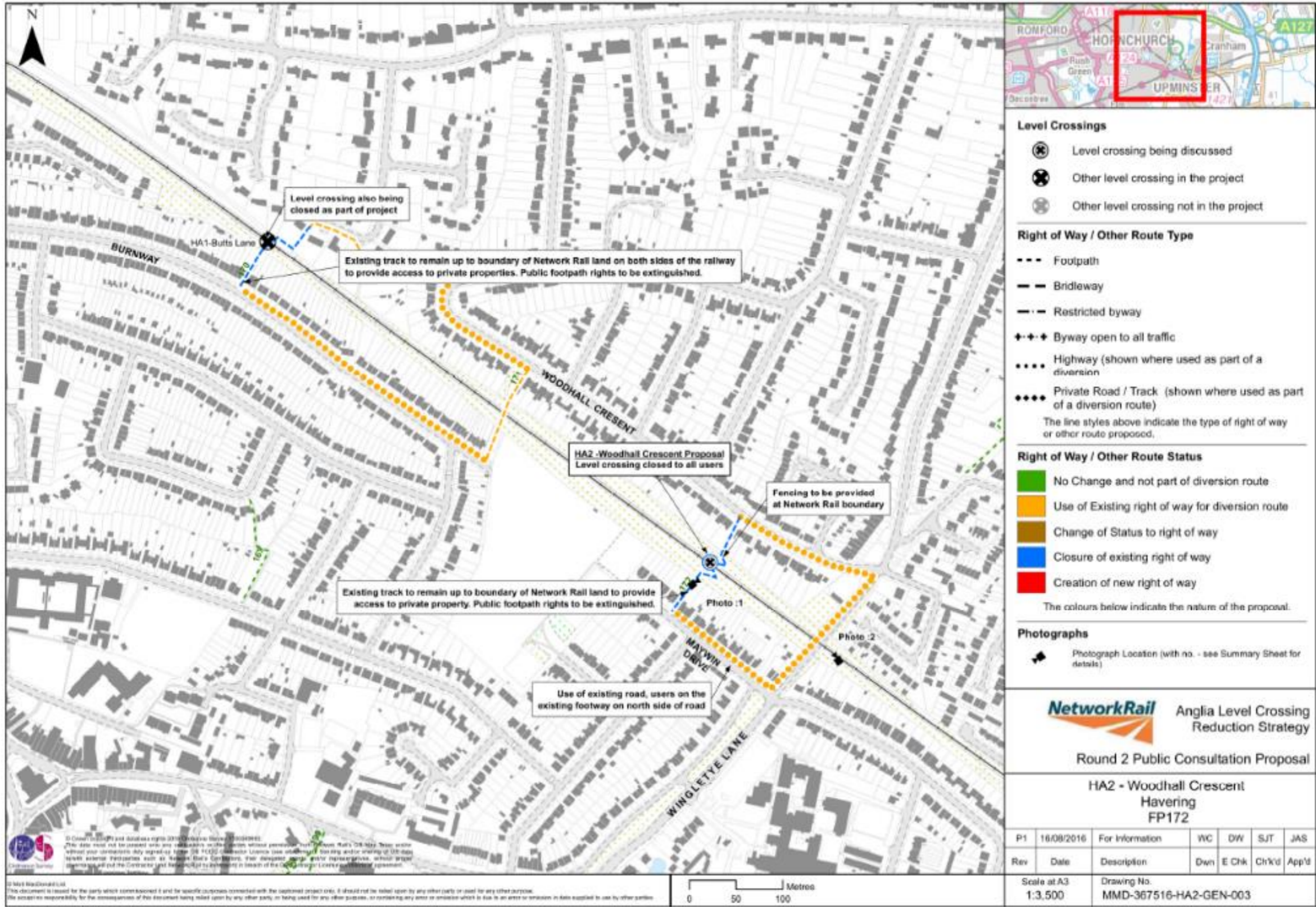
Network Rail has conducted two rounds of public consultation regarding Woodhall Crescent level crossing; the first to obtain feedback on its initial options for level crossings in the programme (in June 2016), and the second to obtain feedback on its preferred options (in September 2016). Following the receipt of this feedback, consideration was given as to how any proposed closure of the level crossing and implementation of an alternative route might best be progressed and managed.

Following feedback from the first public consultation, the proposal is to close the level crossing to all users and remove the crossing infrastructure. The preferred proposal for Woodhall Crescent level crossing is to divert all users to an existing road bridge on Wingletye Lane, 140m south east of Woodhall Crescent level crossing (as detailed below in Figure 1, and as presented at the second round of public consultation). The existing tracks which leads up to the level crossing would remain in place up to the boundary of Network Rail land, to provide access to private property, but public rights of way would be extinguished.

The road bridge has a segregated pedestrian footbridge alongside it. Assessment of LIDAR data has shown that the existing gradient on the approaches to bridge is approximately 5% (subject to confirmation at detailed design), which is consistent with the Department for Transport's preferred gradient of 5%. The footpath also has a minimum width of 1.9m. This indicates that the proposed diversion route meets all guidelines in terms of maintaining accessibility for all users.

On the northern side of the bridge, users would access the Wingletye Lane bridge via Woodhall Crescent. On the southern side of the railway, users can use the existing footway on Maywin Drive. There are paved footpaths along the full length of the proposed diversion route. The proposed diversion would add an additional 470m to the route. **Appendix A and B** provides a satellite image and plan.

The drawing below shows the preferred diversion route suggested at public consultation Round 2. This is also available in **Appendix B** along with initial options for diversions taken to the Round 1 public consultation.



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Woodhall Crescent level crossing, there is a risk of a future incident at this location. The closure of the crossing will separate people from the railway line, thereby improving the safety of local residents and other users.

The implementation of a permanent diversion via the existing road bridge to the south east of the crossing may disproportionately affect certain sections of the population who find walking long distances difficult. However, given some of the current accessibility problems with the crossing, adverse impacts resulting from the proposals are likely to be minimal.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- |  |                              |
|--|------------------------------|
| - Disability including carers <sup>1</sup> | - Age                        |
| - Pregnancy/maternity                      | - Race                       |
| - Religion or belief                       | - Gender                     |
| - Sexual orientation                       | - Marriage/Civil Partnership |
| - Gender reassignment                      |                              |

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on people with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User data

A nine-day census undertaken in July 2016 indicated that a total of 56 people used Woodhall Crescent level crossing over the survey period – an average of six people per day. Adults represented 48 of the 56 crossing users. Six children used the crossing over the nine-day survey period, five of which were unaccompanied by an adult. No older people or wheelchair / scooter users were documented using the level crossing, however the survey recorded the use of the crossing by one impaired user and one person using a pushchair/pram.

A summary of census data is available in **Appendix C**.

### Population profile

In order to gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as the Havering district.<sup>2</sup> The data is as follows:

- Children (under 16 years of age) make up 19% of the Havering population, which is equivalent to the national average.
- Younger people (16-24 years old) make up 11% of the population of Havering, which is also broadly in line with the national figure (12%).
- The proportion of older people (here described as people of retirement age – 65 and over) in Havering is 16%, which is equivalent to the national figure.

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimates taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157242/report.aspx?town=havering>

- 17% of the Havering population have a long-term illness or disability that limits their daily activities. This is consistent with the national average (also 17%).
- 17% of the population of Havering is from Black, Asian or ethnic minority (BAME<sup>3</sup>) groups. This is slightly lower than the national figure of 20%.
- The figure for people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Havering is 1%, which is lower than the national average of 9%.

The above demographic analysis suggests that the population proportions for many of the groups with protected characteristics (and for which there is demographic data) are in line with national proportions. There is one exception: the proportion of people from minority faith groups is considerably lower in Havering than nationally.

### **Local amenities**

A review of local planning applications in January 2017 indicates that there are no planned developments in the local area in the near future.<sup>4</sup>

An analysis of local amenities indicates that there is a single care home to the north of the crossing. On the southern side of the line, there are three care homes, a GP surgery and two educational establishments. There a clear desire lines, particularly in a north to south direction, for Woodhall Crescent level crossing to be used to access local amenities. The main desire line is likely to be for children living on the northern side of the line to access the schools and the parks on the southern side, although census data shows that use by children is mostly at weekends, suggesting that a local park (70m away) might be the predominant attraction for children in the local area.

However, it is understood from stakeholder comments that the crossing is not used for any specific purpose or to access any of these local amenities. It is more likely that other crossing points, such as Wingletye Lane, located in the area are used more frequently used by the local population. This is confirmed by relatively low usage of the crossing.

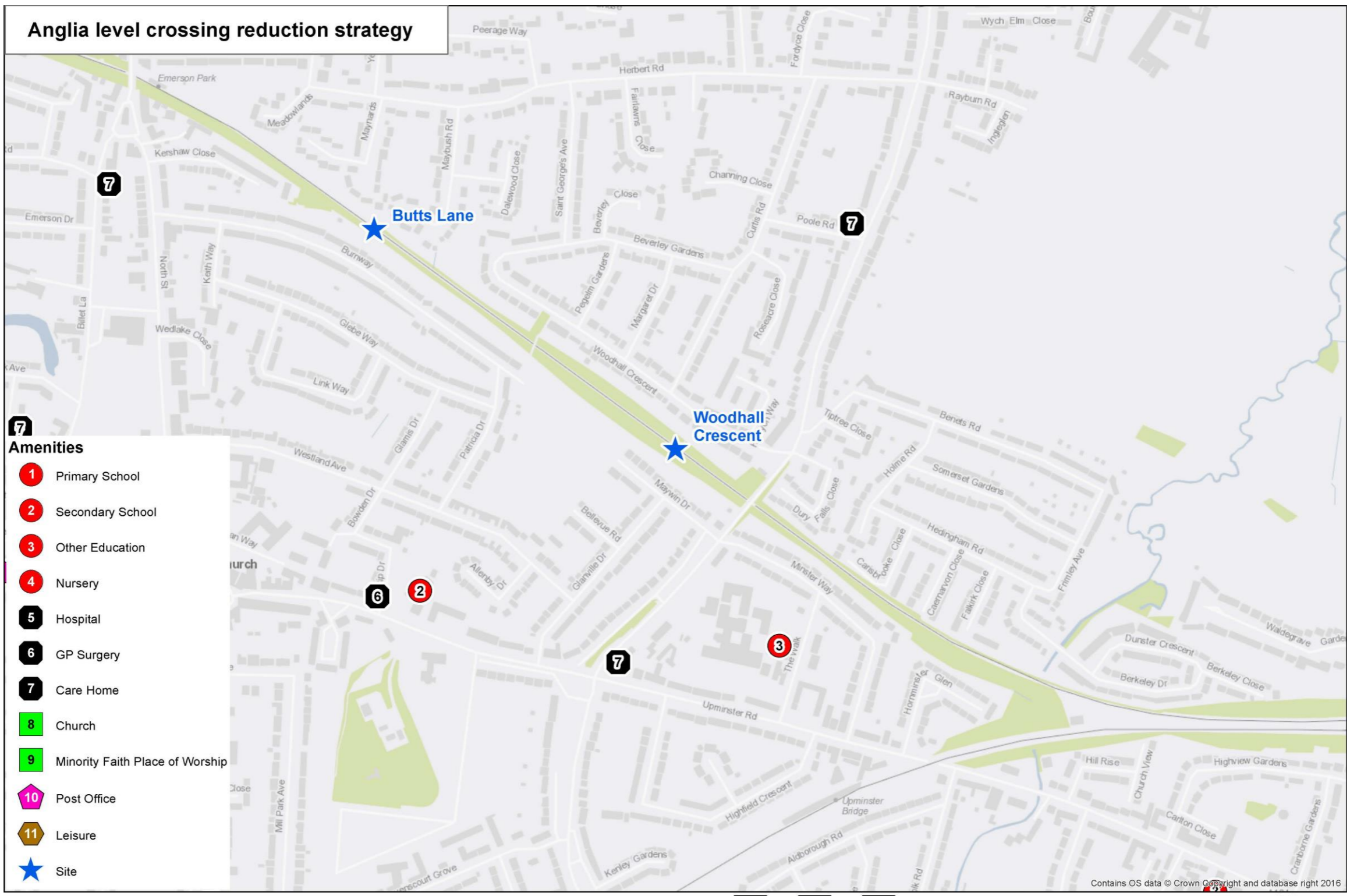
These presumed desire lines are based on the identified location of residential area and community facilities within the immediate vicinity of the crossing. The development of a more substantive picture of local desire lines for the crossing and associated routes could be achieved through cordon survey interviews with users at fixed locations and times.

The map below shows local amenities.

<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Havering Council: <http://development.havering.gov.uk/OcellaWeb/planningSearch>.

Anglia level crossing reduction strategy



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## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impacts of the proposed work at Woodhall Crescent level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic		Explain the potential negative impact
Disability	Y	<p>The permanent closure of Woodhall Crescent level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on disabled people (including people with mobility, sensory and respiratory conditions) compared to non-disabled people.</p> <p>Following the nine-day census, one impaired user, and no wheelchair / scooter users were recorded at the crossing. Due to the approaches to the current crossing, it is unlikely that the crossing forms part of any well-used route by disabled people. The below text refers to disabled people (including people with cognitive impairments, ambulant disabilities etc.) who are able to use the current crossing.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the permanent diversion routes proposed, are likely to disproportionately impact upon people with mobility impairments, who are more likely to have difficulties walking long distances and many experience pain and discomfort in doing so.</p> <p>A Department for Transport (DfT) study has shown that of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p>Walking distances will be permanently increased as a result of the level crossing closure, with the proposed diversion route adding up to 470m to the route.</p> <p><b>Permanent impacts on user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be slower for people with mobility impairments and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may be less able to cross safely because of these</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

		<p>factors.<sup>6</sup> People with visual or hearing impairments can also have difficulties crossing safely due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>7</sup></p> <p>While access to the crossing for many disabled users is likely to be limited at present (as reflected in the lack of usage by this protected characteristic group), reduced interaction with the railway means potentially reduced crossing risk for this group.</p>
<b>Age</b>	Y	<p>The permanent closure of Woodhall Crescent level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on particular age groups – particularly children and older people – when compared with other sections of the population.</p> <p><b><u>Children</u></b></p> <p>There are a number of educational establishments in the local area and the nine-day census documented six children (one accompanied and five unaccompanied by an adult) using the crossing over the full survey period.</p> <p><b>Permanent impacts on user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact children. This is due to their potentially slower walking speeds and because children and younger people can have difficulties correctly processing the speed of oncoming vehicles. Research conducted on behalf of the House of Commons Transport Select Committee, showed that children perceived vehicles moving towards them at more than 20 mph as stationary.<sup>8</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safe diversion as an alternative) is likely to lead to significantly reduced crossing risk for this group.</p> <p><b><u>Older people</u></b></p> <p>The nine-day census did not document any older people using the crossing, suggesting that any impacts of permanent closure will be minimal. The approaches to the crossing are likely to be already deterring older people from using the crossing.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>The closure of Woodhall Crescent level crossing will be accompanied by a proposed diversion route, which will increase walking distances by a maximum of 470m. Similar to the impact on disabled people identified above, increases in walking distances, as a result of the</p>

<sup>6</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>7</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>8</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

		<p>closure of the crossing and permanent use of the proposed diversion routes, are likely to disproportionately impact upon older people.</p> <p>Older people are more likely to have difficulties walking long distances and experience pain or discomfort in doing so.<sup>9</sup> They are also more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk more slowly, tire more easily, and are more likely to struggle to climb stairs.<sup>10</sup> Therefore, the implementation of the diversion could disproportionately impact older people with mobility problems.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact older people, largely due to their potentially slower walking speeds. Research by University College London has shown that older pedestrians (aged 65 or over) walk more slowly than other pedestrian users (the mean walking speed achieved by over-65s in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to the mean for the population as a whole of 1.2m/s<sup>11</sup>), placing older people at greater risk.</p> <p>Older people are also particularly at risk as their field of vision declines over time, making them more vulnerable to moving vehicles. Studies have shown that this can be at a rate of 1° and 3° per decade<sup>12</sup>, meaning that older people are particularly at risk.</p> <p>Level crossing closures, therefore, can improve the safety for older users by reducing interaction with the railway.</p>
<b>Pregnancy / maternity</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender</b>	Y	<p><b>Improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings, associated with 70% of all train strikes. Given that males represent approximately 50% of the population as a whole, this would suggest male pedestrians are more at risk at level crossings than female pedestrians.<sup>13</sup> Reduced interaction with the railway (due to the</p>

<sup>9</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>10</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway'

<sup>11</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

<sup>12</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>13</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

		diversion onto the bridge) would lead to reduced crossing risk for men.
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- Commitment 1: Get everyone home safe every day.  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- Commitment 2: Deliver reliable infrastructure.  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- Commitment 6: Being a customer focused organisation.  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- Commitment 9: A railway fit for the future.  
The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

## Step 4: Consultation

**Q6. How has consultation with those who share a protected characteristic informed your work?**

List the groups you have consulted or reference previous relevant consultation? <sup>14</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation Round 1 (June 2016)	As part of Round 1 of public consultation, four questionnaire responses were received with two people preferring the red route, one preferring another route and one respondent did not state a preference. Response to the overall proposals

<sup>14</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

	<p>was split, with two people responding positively and two negatively to the proposals.</p> <p>Questionnaire responses received during the first round of public consultation identified the following comments / issues regarding the proposals for Woodhall Crescent level crossing:</p> <ul style="list-style-type: none"> <li>• Concerns were expressed about the narrow width of the footway on the bridge.</li> <li>• One respondent suggested that there is a possibility of widening the bridge.</li> <li>• One respondent suggested that the closure of the crossing will removed the safe, controlled, access to the Site of Special Specific Interest at "Hornchurch cutting".</li> </ul>
Public consultation Round 2 (September 2016)	<p>As part of public consultation Round 2, eleven responses were received to the questionnaire, with one agreeing, one neutral and nine disagreeing with the proposals.</p> <p>Questionnaire responses received during the second round of public consultation identified the following comments / issues (outlined below) regarding the proposals for Woodhall Crescent level crossing:</p>
Brentwood Ramblers	<ul style="list-style-type: none"> <li>• There have been no incidents or issues of misuse at this crossing, so the crossing should not be closed.</li> </ul>
Public response	<ul style="list-style-type: none"> <li>• Agreement with the proposals as the crossing is not used for any specific purpose and so closure would not cause any inconvenience to anyone and would improve the local area.</li> <li>• Request was made for speed over the bridge to be restricted and signage to be implemented.</li> <li>• A larger section of the local community should be contacted regarding the proposals.</li> <li>• It is a very busy crossing with children and people walking into Hornchurch.</li> <li>• The crossing does not pose a risk to the safety of the local population.</li> </ul>

**Q7. Where relevant, 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.**

N/A

## Step 5: Informed decision-making

### Q8. In light of the assessment above, what is your decision?

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<input checked="" type="checkbox"/> Due to the current low usage and accessibility issues at the crossing, as well as the availability of fully accessible alternative routes nearby, closure and redirection along the proposed diversion route is considered an appropriate solution.
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action planning

### Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?

Action	By when	By who
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.	Ongoing	Network Rail project team
<b>Review the DIA at every GRIP stage to ensure equality of access is maintained for all.</b>	<b>Ongoing</b>	<b>Network Rail project team</b>

See **Appendix D** for Design Team responses to the proposed actions above.

## Step 7: Sign off

Name	Position	Signed	Date
Superuser <sup>15</sup>	Sponsor	<i>D. Corrigan</i>	11/09/2017
Senior Manager <sup>16</sup>	<i>HORSITE</i>	<i>[Signature]</i>	7/12/17

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention 'Name of project-Draft DIA'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

<sup>15</sup> Quality assurance check.

<sup>16</sup> Sign-off should be by someone who can approve policy, programme or budget changes.  
Diversity and inclusion 31032015

## Appendix A: Site photographs

### Existing level crossing

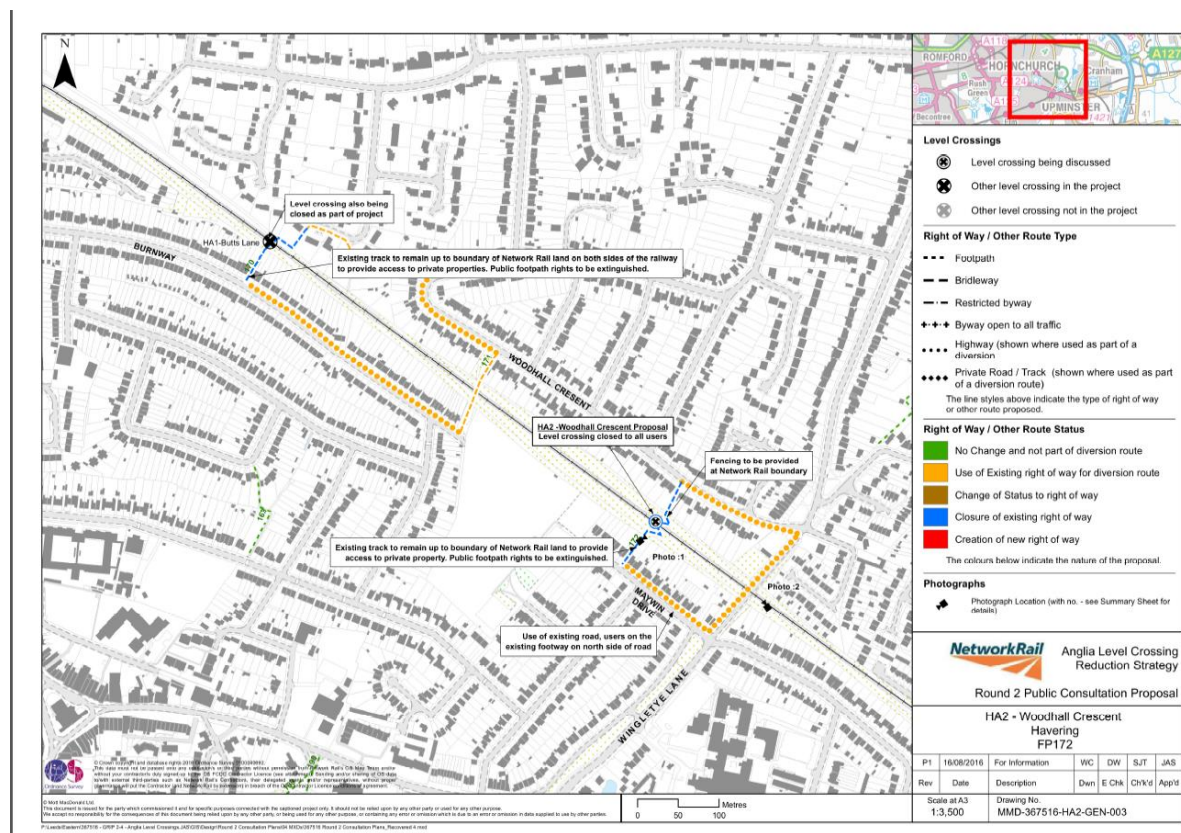


### Alternative railway crossing – using pedestrian bridge adjacent to the road bridge





## Round 2 consultations – preferred option (September 2016):



## Appendix C: Nine-day census data

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

			Combined			
			Horse riders	Riding Cycles	Walking Cycles	Total
Day 1	Saturday	09/07/2016	0	0	0	0
Day 2	Sunday	10/07/2016	0	0	0	0
Day 3	Monday	11/07/2016	0	0	0	0
Day 4	Tuesday	12/07/2016	0	0	0	0
Day 5	Wednesday	13/07/2016	0	0	3	3
Day 6	Thursday	14/07/2016	0	0	6	6
Day 7	Friday	15/07/2016	0	0	0	0
Day 8	Saturday	16/07/2016	0	0	0	0
Day 9	Sunday	17/07/2016	0	0	0	0
			0	0	9	9

Direction : Combined										
Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair/ Pram	Scooter	Railway Personnel	Total	
0	0	0	0	0	0	0	0	0	0	
6	0	0	0	0	0	0	0	0	6	
9	0	0	0	0	0	0	0	0	9	
0	0	2	0	0	0	0	0	0	2	
5	0	0	0	0	0	0	0	0	5	
6	0	0	0	0	0	0	0	0	6	
15	0	0	0	0	0	0	0	0	15	
4	1	3	0	0	0	1	0	0	9	
3	0	0	0	1	0	0	0	0	4	
48	1	5	0	1	0	1	0	0	56	

## Appendix D: DIA Design Team Responses to Action Planning

Action	By when	By who	Design Team comment	NR Response	Design Team Response
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	agreed	NR to take appropriate actions
Review the DIA at every GRIP stage to ensure equality of access is maintained for all.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	Yes, but this is not to 'ensure equality of access is maintained for all' it is to ensure that any changes to the design do not worsen the access and they improve where appropriate.	NR to take appropriate actions

## Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** HA01 Butts Lane level crossing - Anglia Level Crossing Reduction Strategy

### Step 1: Clarifying aims

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



#### Anglia Level Crossing Reduction Strategy

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings within the counties of Suffolk, Cambridgeshire, Essex, Hertfordshire, and the unitary authorities of Thurrock, Havering, and Southend-on-Sea. This is referred to as the Anglia Level Crossing Reduction Strategy ('the Strategy'). Closing or modifying level crossings can help to bring about a number of benefits. It can:

- improve the safety of level crossing users

- deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy
- reduce the ongoing operating and maintenance cost of the railway
- reduce delays to trains, pedestrians and other highway users
- improve journey time reliability for railway, highway and other rights of way users.

#### **HA01 – Butts Lane level crossing**

Butts Lane is a public footpath (FP 170) level crossing located in the London Borough of Havering. The level crossing spans the single track Romford to Upminster Line.

Butts Lane is a 'Stop, Look and Listen' crossing, where the user determines whether it is safe to cross. The approach to the level crossing is via narrow tracks and there are stiles in the railway boundary fence on either side of the crossing. The crossing itself is fully paved and marked.

The crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C6. The individual risk rating for crossings is 'C' (where 'A' is the highest risk and 'M' is lowest) and collective risk rating for this crossing is '6' (where '1' is the highest risk and '13' is the lowest), making Butts Lane a relatively high risk crossing. Key safety issues at the site are related to high levels of sun glare. Approximately 56 trains use this part of the network daily, at a line speed of 30mph. Between 2011 and 2015, no incidents of misuse, near misses or accidents were recorded at the site.

Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

#### **Project location**

Butts Lane level crossing is located in the London Borough of Havering, approximately 400m from Emerson Park station. The railway line bisects the highly urbanised areas of Hornchurch to the south and Emerson Park to the north.

**Appendix A** contains site photographs and the below map shows the location of the level crossing.

Anglia level crossing reduction strategy



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### Proposals for the project

Network Rail has conducted two rounds of public consultation regarding Butts Lane level crossing; the first was to obtain feedback on its initial options for level crossings in the programme (in June 2016), and the second to obtain feedback on its preferred options (in September 2016). Following the receipt of this feedback, consideration was given as to how any proposed closure of the level crossing and implementation of an alternative route might best be progressed and managed.

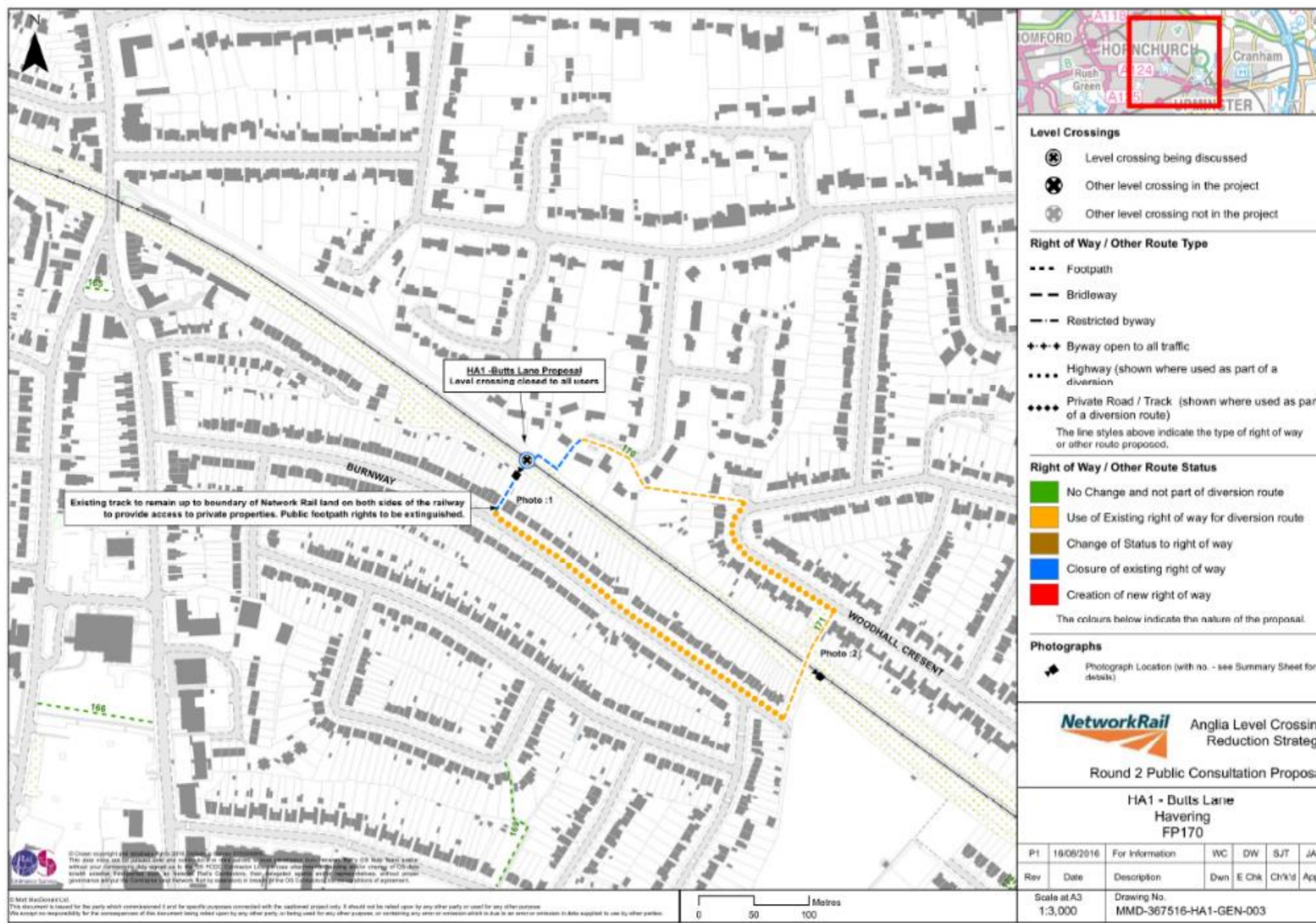
Following feedback from the first public consultation, the proposal is to close the level crossing to all users and remove the crossing infrastructure. The preferred proposal is to divert all users to an existing footbridge, 310m south east of Butts Lane level crossing (as detailed in the plan below, and as presented at the second round of public consultation). The existing track which leads up to the crossing would remain in place up to the boundary of Network Rail land, to provide access to private property. The public right of way would be extinguished.

From the southern side of the railway, users would access the footbridge via the existing footway on Burnway. On the northern side of the railway, the footbridge would be accessed via the existing footways on Woodhall Crescent, Beverley Gardens and Maybush Road. The diversion would add 750m to the route.

The full diversion route has paved, level footpaths on both sides of the road. It is noted that the footbridge on the proposed route does not require the use of steps and is 4m in width. Assessment of LIDAR (light imaging, detection, and radar) data has shown that the existing gradient of the footbridge is approximately 1 in 19 (5%) (subject to confirmation at detailed design), which is consistent with the Department for Transport's (DfT's) preferred gradient of 5% to support accessibility for all users.

**Appendix A** and **Appendix B** provides a satellite image and plan.

The figure below shows the preferred diversion route suggested at Round 2 of public consultation. This is also available in **Appendix B**, along with initial options for diversions, taken to the Round 1 public consultation.



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Butts Lane level crossing, there is a risk of a future incident at this location. The closure of the crossing will separate people from the railway line, thereby improving the safety of local residents and other users.

The proposals for Butts Lane level crossing will impact on walking distances and consequently journey time for people currently using the crossing. The implementation of a permanent diversion via existing footpaths and a footbridge south east of the current crossing may disproportionately affect certain sections of the population who find walking long distances difficult.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- Disability including carers<sup>1</sup>
- Pregnancy/maternity
- Religion or belief
- Sexual orientation
- Gender reassignment
- Age
- Race
- Gender
- Marriage/Civil Partnership

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on people with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User data

The nine-day census carried out in June/July 2015 identified a total of 247 people using the level crossing, an average of 27 people per day. 97% (239/247) of all users were adults, including seven older people. The remaining eight users were children accompanied by adults. There were no recorded uses of the crossing by the following groups: unaccompanied children, impaired or wheelchair users, or people with a pushchair/pram. Use by some of these people would not have been possible as stiles were present on the route.

A breakdown of the census data can be found in **Appendix C**.

### Population profile

In order to gain a better insight into the local community and potential users of the level crossing, existing statistical data were reviewed to establish the composition of the local population – here taken as the Havering district.<sup>2</sup> The data are as follow:

- Children (under 16 years of age) make up 19% of the Havering population, which is equivalent to the national average.
- Younger people (16-24 years old) make up 11% of the population of Havering, which is in line with the national figure (12%).
- The proportion of older people (here described as people of retirement age – 65 and over) in Havering is 16%, which is equivalent to the national figure.
- 17% of the Havering population have a long-term illness or disability that limits their daily activities. This is consistent with the national average (also 17%).

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimates taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157242/report.aspx?town=havering>

- 17% of the population of Havering is from Black, Asian or ethnic minority (BAME<sup>3</sup>) groups. This is slightly lower than the national figure of 20%.
- The figure for people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Havering is 1%, which is lower than the national average of 9%.

The above demographic analysis suggests that the population proportions for many of the groups with protected characteristics (and for which there are demographic data) are in line with national proportions. There is one exception: the proportion of people from minority faith groups is considerably lower in Havering than nationally.

### **Local amenities**

Local planning applications were reviewed in January 2017. There are no planned developments in the local area in the near future.<sup>4</sup>

An analysis of local amenities indicates that there are two churches, a care home and an educational establishment to the north of the crossing. In the south, there are two educational establishments, a church, four care homes, a GP surgery, two post offices and a leisure centre. It is understood from stakeholder comments that the crossing forms part of a route to access some of these local amenities, which are relatively popular with local residents.

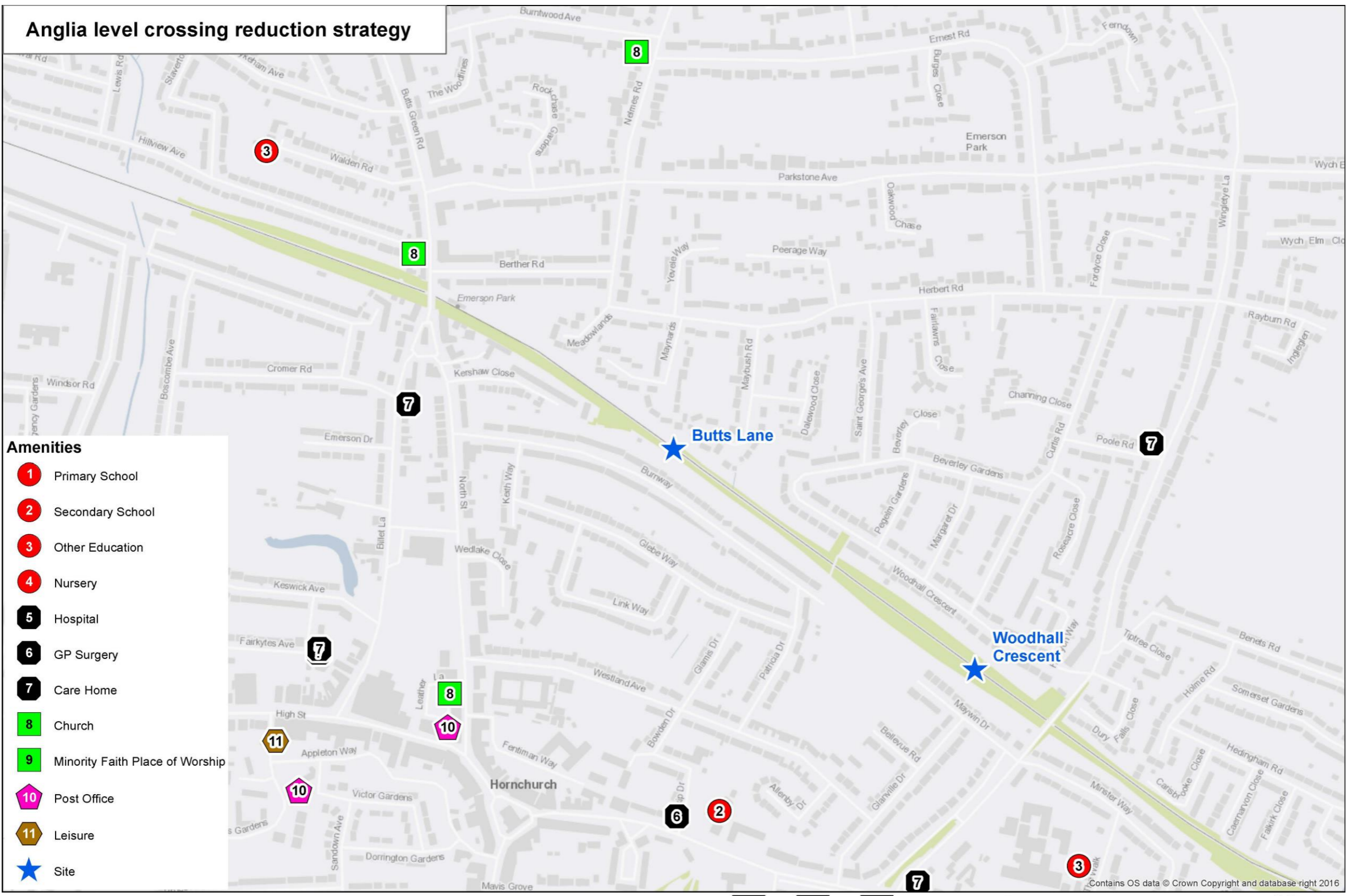
The map below shows local amenities.

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<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Havering Council: <http://development.havering.gov.uk/OcellaWeb/planningSearch>.

Anglia level crossing reduction strategy



- Amenities**
- 1 Primary School
  - 2 Secondary School
  - 3 Other Education
  - 4 Nursery
  - 5 Hospital
  - 6 GP Surgery
  - 7 Care Home
  - 8 Church
  - 9 Minority Faith Place of Worship
  - 10 Post Office
  - 11 Leisure
  - ★ Site

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## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impacts of the proposed work at Butts Lane level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic		Explain the potential negative impact
Disability	Y	<p>The permanent closure of Butts Lane level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on people with mobility, sensory and respiratory impairments.</p> <p>However, following the nine-day census, no impaired or wheelchair users were documented using the crossing – this is most likely due to the current inaccessibility of the level crossing (particularly for people with mobility impairments) because of the presence of stiles on either side of the railway. The impacts described below should, therefore, not be overstated.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the proposed permanent diversion routes, could disproportionately impact upon some people with mobility impairments. Disabled people are more likely to have difficulties walking long distances and many experience pain and discomfort in doing so.</p> <p>A Department for Transport (DfT) study has shown that of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p>Walking distances will be permanently increased as a result of the level crossing closure, with the proposed diversion route adding up to 750m to the route. However, it is likely that most mobility impaired users are unable to use the existing crossing due to the stiles, and as such impacts are likely to be minimal.</p> <p><b>Permanent impacts on user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

		<p>may be less able to cross safely because of these factors.<sup>6</sup> People with visual or hearing impairments can also have difficulties crossing safely due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>7</sup></p> <p>Reduced interaction with the railway means potentially reduced crossing risk for this group.</p>
<b>Age</b>	Y	<p>The permanent closure of Butts Lane level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on particular age groups – particularly children and older people – when compared with other sections of the population.</p> <p><b><u>Children</u></b></p> <p>There are two educational establishments located to the south of the crossing, and one to the north. It was further highlighted by stakeholders that some children do use the crossing to access local schools. The nine-day census identified eight children accompanied by adults used the crossing over the survey period.</p> <p><b>Permanent impacts on user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact children. This is due to their potentially slower walking speeds and because children and younger people can have difficulties correctly processing the speed of oncoming vehicles. Research conducted on behalf of the House of Commons Transport Select Committee, showed that children perceived vehicles moving towards them at more than 20 mph as stationary.<sup>8</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safe diversion as an alternative) is likely to lead to significantly reduced crossing risk for this group.</p> <p><b><u>Older people</u></b></p> <p>The nine-day census documented seven older people using the crossing over the survey period. As the current approaches to Butts Lane level crossing incorporate crossing stiles, it is a possibility that the existing crossing is already inaccessible to some older users (particularly those with mobility issues).</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>The closure of Butts Lane level crossing will be accompanied by a proposed diversion route, which will increase walking distances by a maximum of 750m. Similar to the impact on disabled people identified above, increases in walking distances, as a result of the</p>

<sup>6</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>7</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>8</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

		<p>closure of the crossing and permanent use of the proposed diversion routes, are likely to disproportionately impact upon older people.</p> <p>Older people are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk more slowly and tire more easily.<sup>9</sup> Therefore, the implementation of the diversion could disproportionately impact older people, especially those with mobility problems as these people are more likely to have difficulties walking long distances and experience pain or discomfort in doing so.<sup>10</sup></p> <p>However, as with disabled people, those older people with mobility impairments are unlikely to be using the crossing at present due to the presence of stiles and, as such, impacts on this group are likely to be limited.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact older people, largely due to their potentially slower walking speeds. Research by University College London has shown that older pedestrians (aged 65 or over) walk more slowly than other pedestrian users (the mean walking speed achieved by over-65s in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to the mean for the population as a whole of 1.2m/s<sup>11</sup>), placing older people at greater risk.</p> <p>Older people are also particularly at risk as their field of vision declines over time, making them more vulnerable to moving vehicles. Studies have shown that this can be at a rate of 1° and 3° per decade<sup>12</sup>, meaning that older people are particularly at risk.</p> <p>Level crossing closures, therefore, can improve the safety for older users by reducing interaction with the railway.</p>
<b>Pregnancy / maternity</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	Although there are churches both north and south of the crossing, the availability of alternative routes means that no disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender</b>	Y	<p><b>Improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings, associated with 70% of all train strikes. Given that males represent</p>

<sup>9</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway'

<sup>10</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>11</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

<sup>12</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

		<p>approximately 50% of the population as a whole, this would suggest male pedestrians are more at risk at level crossings than female pedestrians.<sup>13</sup></p> <p>Reduced interaction with the railway (due to the diversion onto the bridge) would lead to reduced crossing risk for men.</p>
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- Commitment 1: Get everyone home safe every day.  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- Commitment 2: Deliver reliable infrastructure.  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- Commitment 6: Being a customer focused organisation.  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- Commitment 9: A railway fit for the future.  
The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

<sup>13</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

## Step 4: Consultation

### Q6. How has consultation with those who share a protected characteristic informed your work?

List the groups you have consulted or reference previous relevant consultation? <sup>14</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation Round 1 (June 2016)	<p>As part of Round 1 of public consultation, five questionnaire responses were received with three preferring the red route (and two respondents not stating). Three of the respondents also strongly disagreed with the proposals, one positive and one neutral response were also received.</p> <p>Questionnaire responses received during the first round of public consultation identified the following comments / issues regarding the proposals for Butts Lane level crossing:</p> <ul style="list-style-type: none"> <li>Concerns were raised about the length of the diversion route, especially for those with disabilities.</li> <li>A request for the crossing to be enhanced, including placing train timetables at the existing crossing.</li> </ul>
Public consultation Round 2 (September 2016)	<p>As part of public consultation Round 2, 15 responses were received to the questionnaire, with no respondents agreeing with the proposals, one neutral and 14 responses disagreeing with the proposals.</p> <p>Questionnaire responses received during the second round of public consultation identified the following comments / issues (outlined below) regarding the proposals for Butts Lane level crossing:</p>
Ramblers Association	<ul style="list-style-type: none"> <li>Concerns were raised generally about the closure programme, as it will mean long diversions often along busy rural roads with no pavements. This poses great problems for walkers.</li> </ul>
Brentwood Ramblers	<ul style="list-style-type: none"> <li>Concerns were raised over the length of the diversion and its unmanageability for most users.</li> <li>The crossing has had no incidents or misuse, so it was felt that it was a safe crossing.</li> </ul>
Public response	<ul style="list-style-type: none"> <li>The crossing has had a lot of maintenance work done, e.g. on the approaches, so it would be wasted money if the crossing were closed.</li> <li>There are no safety issues at the crossing, so there should be no problems with it remaining open.</li> <li>Closing this crossing will affect far more people than have been contacted. It was felt that a larger</li> </ul>

<sup>14</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

	<p>proportion of the local population should be informed of the proposal.</p> <ul style="list-style-type: none"> <li>• The crossing between Woodhall Crescent and Burnway is poorly maintained. It is a very busy crossing with children and people walking into Hornchurch.</li> <li>• Closure of the crossing would increase walking distance for the people who use the crossing as a route to access local amenities, such as schools and GP surgeries.</li> <li>• The crossing does not pose a risk to the safety of the local population.</li> </ul>
--	--

**Q7. Where relevant, 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.**

N/A

## Step 5: Informed decision-making

**Q8. In light of the assessment above, what is your decision?**

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>Due to the current inaccessibility of Butts Lane level crossing to some users and availability of alternative routes, the level crossing closure and redirection along the proposed fully accessible diversion route is considered an appropriate solution.</p> <p>Consideration of route improvement measures, such as benches and level rest areas, will help mitigate any negative impacts of the increased walking distance.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action planning

**Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?**

Action	By when	By who
<p>Stakeholders raised concerns about the poor maintenance of the footbridge between Woodhall Crescent and Burnway.</p> <p>Network Rail should ensure that the footbridge meets guidelines outlined in the Equality Act 2010, such as consideration of handrails of an appropriate height and colour are implemented, along with a non-slip surface, lighting to a satisfactory level and/or adjustments to the bollards. This will help address stakeholder concerns and ensure that equality of access is maintained for all users. The bridge is owned and maintained by London Borough of Havering.</p>	Detailed design	Network Rail project team
<p>Develop a route improvement strategy along the diversion route to help mitigate any negative impacts of increased walking distances, including the incorporation of benches. This will enhance the user experience for all groups and increase a sense of safety.</p>	At detailed design	Network Rail liabilities team
<p>Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.</p>	Ongoing	Network Rail project team
<p><b>Review the DIA at every GRIP stage to ensure equality of access is maintained for all.</b></p>	Ongoing	Network Rail project team

## Step 7: Sign off

Name	Position	Signed	Date
<u>Superuser</u> <sup>15</sup>	Sponsor	<i>D. Corrigan</i>	08/09/2017
Senior Manager <sup>16</sup>	<i>HORSHE</i>	<i>R. Dew</i>	7/12/17

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

<sup>15</sup> Quality assurance check.

<sup>16</sup> Sign-off should be by someone who can approve policy, programme or budget changes.  
Diversity and inclusion 31032015

## Appendix A: Site photographs

### Existing level crossing

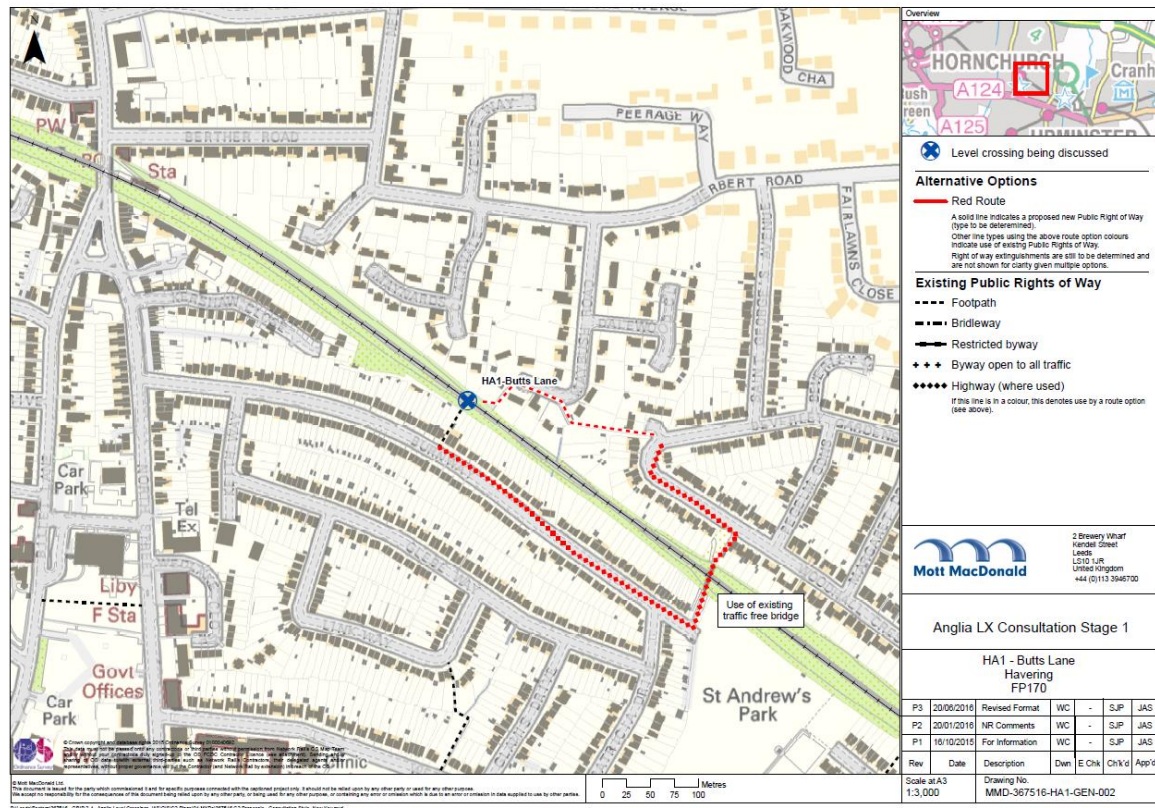


### Alternative railway crossing (using footbridge)

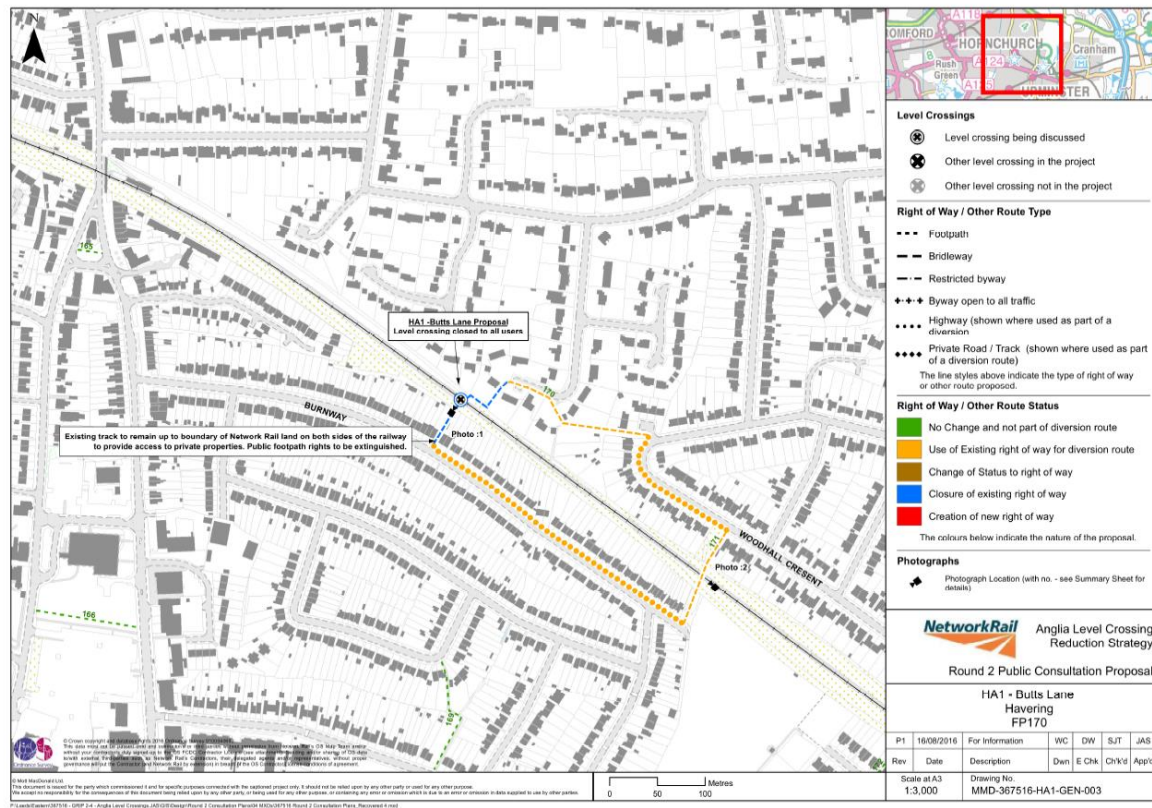


## Appendix B: Scheme drawings

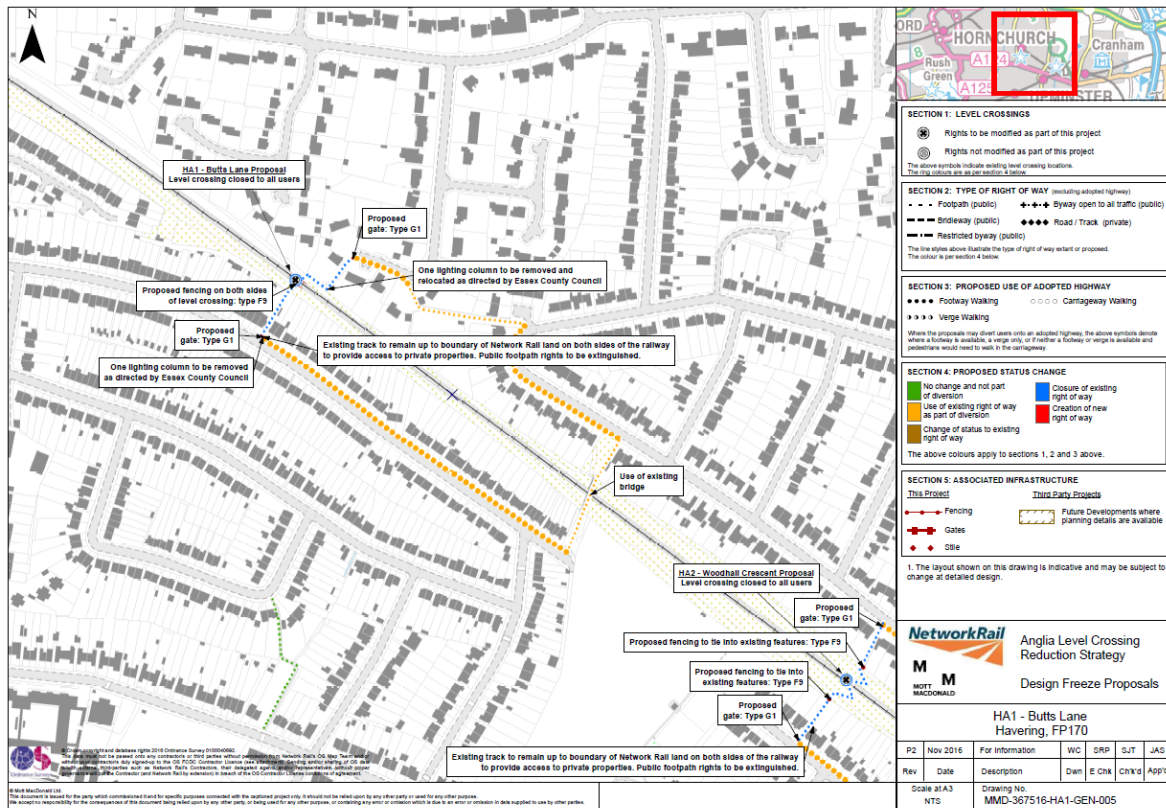
### Round 1 consultation – proposed diversion (initial option)



## Round 2 consultations – preferred option (September 2016):



## Preferred diversion route detail updates following Round 2 consultations (November 2016):



## Appendix C: Nine-day census data

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

Direction 1 Pedestrian Path	NORTHBOUND																		
	Pedestrian class												Cyclist class						
	Able Adult Peds	Prams / Pushchairs	Able Child Peds (0-16) Accompanied	Able Child Peds (0-16) Unaccompanied	Elderly (60+)	Impaired	Wheelchair	Mobility Scooter	Railway Personnel	Runners/Joggers ( in exercise clothes)	Dog Walkers	Total	Mounted Adult Cyclists	Unmounted Adult Cyclists	Mounted Child Cyclists Accompanied	Unmounted Child Cyclists Accompanied	Mounted Child Cyclists Unaccompanied	Unmounted Child Cyclists Unaccompanied	Total
27/06/2015	25	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0
Crossing. The	6	0	0	0	1	0	0	0	0	0	0	7	0	0	0	0	0	0	0
29/06/2015	14	0	0	0	0	0	0	0	0	1	0	15	0	0	0	0	0	0	0
30/06/2015	16	0	0	0	1	0	0	0	0	0	0	17	0	0	0	0	0	0	0
01/07/2015	13	0	4	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0
02/07/2015	15	0	1	0	2	0	0	0	0	0	0	18	0	0	0	0	0	0	0
03/07/2015	10	0	2	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0
04/07/2015	16	0	1	0	0	0	0	0	0	0	0	17	1	0	0	0	0	0	1
05/07/2015	7	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
<b>Grand Total</b>	<b>122</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>135</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

Direction 2 Pedestrian Path	SOUTHBOUND																			
	Pedestrian class												Cyclist class							
	Able Adult Peds	Prams / Pushchairs	Able Child Peds (0-16) Accompanied	Able Child Peds (0-16) Unaccompanied	Elderly (60+)	Impaired	Wheelchair	Mobility Scooter	Railway Personnel	Runners/Joggers ( in exercise clothes)	Dog Walkers	Total	Mounted Adult Cyclists	Unmounted Adult Cyclists	Mounted Child Cyclists Accompanied	Unmounted Child Cyclists Accompanied	Mounted Child Cyclists Unaccompanied	Unmounted Child Cyclists Unaccompanied	Total	Grand Total
27/06/2015	10	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	35
28/06/2015	5	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	12
29/06/2015	7	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	22
30/06/2015	16	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	33
01/07/2015	18	0	0	0	1	0	0	0	1	0	0	20	0	0	0	0	0	0	0	37
02/07/2015	9	0	0	0	1	0	0	0	0	0	0	10	0	0	0	0	0	0	0	28
03/07/2015	16	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	28
04/07/2015	19	0	0	0	1	0	0	0	0	0	0	20	0	0	0	0	0	0	0	38
05/07/2015	9	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	16
<b>Grand Total</b>	<b>109</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>113</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>249</b>

## Addendum to Butts Lane Diversity Impact Assessment

The proposed diversionary route is via bridge ROU/4. This is a brick bridge over the railway, a former private road that was discontinued when the area was developed for housing in the 1930s. The bridge carries a public footpath. The structure and the footpath are owned and maintained by London Borough of Havering.



Any works or attachments to the structure must be with the consent of the owner.

## Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** E49 – Maria Street Level Crossing – Anglia Level Crossing Reduction Strategy

### Step 1: Clarifying aims

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



#### Anglia Level Crossing Reduction Strategy

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings within the counties of Suffolk, Cambridgeshire, Essex, Hertfordshire, and the unitary authorities of Thurrock, Havering, and Southend-on-Sea. This is referred to as the Anglia Level Crossing Reduction Strategy ('the Strategy'). Closing or modifying level crossings can help to bring about a number of benefits:

- Improve the safety of level crossing users
- Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy
- Reduce the ongoing operating and maintenance cost of the railway
- Reduce delays to trains, pedestrians and other highway users and
- Improve journey time reliability for railway, highway and other rights of way users.

#### **E49 – Maria Street level crossing**

Maria Street level crossing is located in Harwich, Essex and is on the two track Mayflower Line from London Liverpool Street to Harwich Town (a section of the Great Eastern Main Line).

Maria Street level crossing is a 'Stop, Look and Listen' crossing with a wooden crossing deck with anti-slip boards. Access to the level crossing on both sides is via level, paved roads that lead to a ramped and fully accessible crossing. **Appendix A** contains site photographs.

The crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C3. The individual risk rating for crossing users is 'C' (where 'A' is highest risk and 'M' is lowest) and the collective risk rating for this crossing is '3' (where '1' is highest risk and '13' is lowest), making Maria Street a high risk crossing. Key issues at the crossing include a large numbers of users, sun glare and deliberate misuse or user error. Between 2011 and 2015, there were no incidents of misuse. However, there were two near misses, and no accidents recorded at this location. Approximately 62 trains use this part of the network daily at a line speed of 25mph.

Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

#### **Project location**

The Maria Street level crossing is located in a residential area in the town of Harwich, Essex, to the west of the town centre. The crossing connects two residential areas. Harwich Town Station is located approximately 175m north of the crossing.

**Appendix A** contains site photographs and the below map shows the location of the level crossing.



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### Proposals for the project

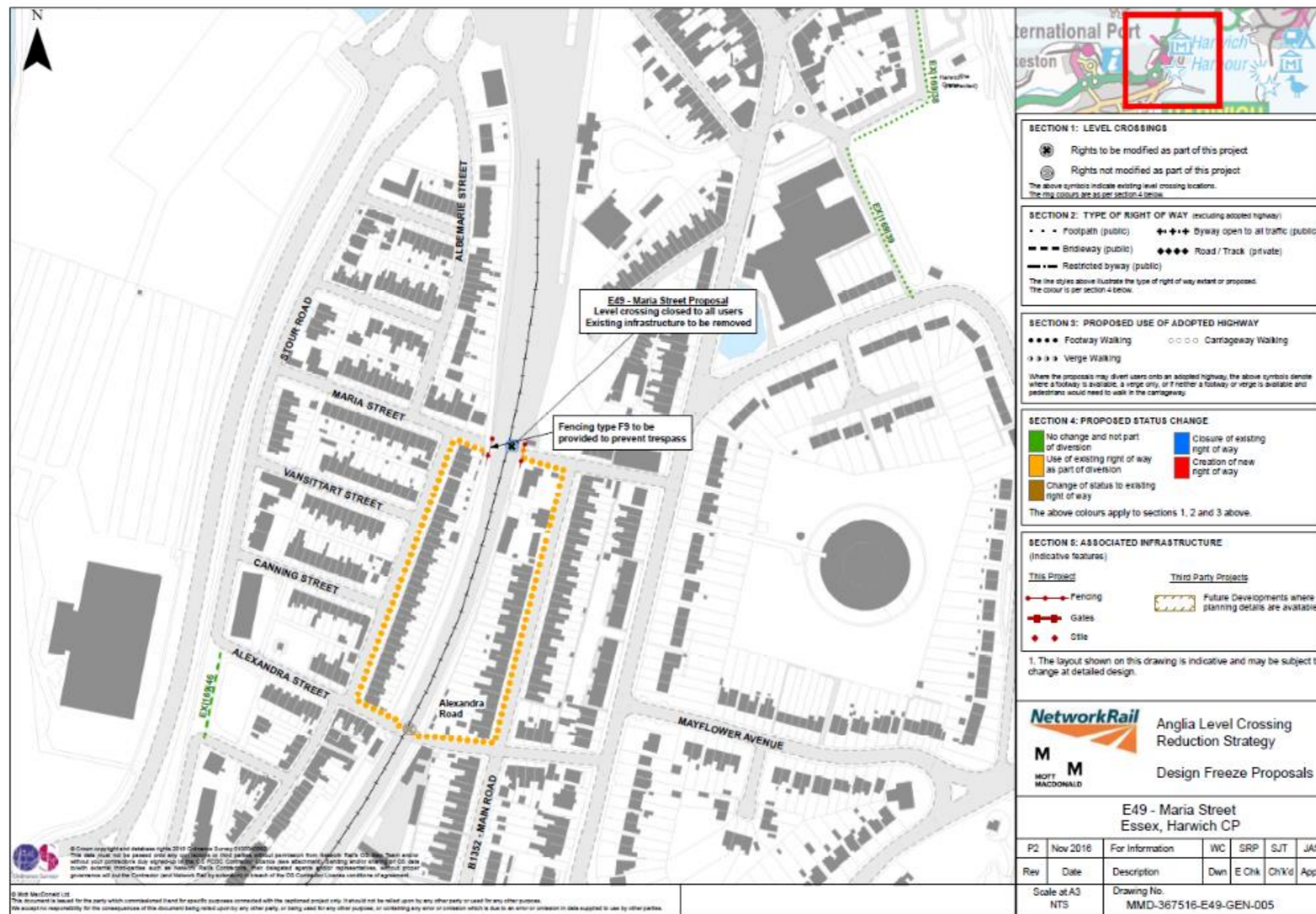
Network Rail has conducted two rounds of public consultation; the first was to obtain feedback on its initial options for level crossings in the programme (in June 2016), and the second to obtain feedback on its preferred options (in September 2016). Following the receipt of this feedback, consideration was given as to how any proposed closure of the level crossing and implementation of an alternative route might best be progressed and managed.

Following feedback on the Round two of public consultation (as shown below in Figure 1), the proposal is to close the level crossing to all users and remove the crossing infrastructure. The preferred option is to divert all users to the existing Alexandra Road vehicular and pedestrian level crossing, south of Maria Street. Alexandra Road level crossing is fully barrier controlled, and has an ALCRM score of H5 (a considerably lower risk level crossing compared to Maria Street).

On the eastern side of the railway, Alexandra Road level crossing would be accessed by Ferndale Road, Fernlea Road and Alexandra Road. On the western side, users would use Alexandra Street, Albert Street and Maria Street. The diversion route would add up to an additional 500m to the route. Practically, though, due to the availability of alternative routes, pedestrians are unlikely to have to walk the full 500m to cross the railway line. The diversion route is fully accessible with level footpaths on both sides of the road.

The drawing below shows the preferred diversion route following feedback at Round 2 of public consultation. This is also available in **Appendix B**, along with initial options for diversions, taken to Round 1 and 2 public consultations.

Figure 1



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Maria Street level crossing, there is a risk of a future incident at this location. The closure of the crossing will separate people from the railway line at an uncontrolled level crossing, thereby improving the safety of local residents and other users.

The proposals for Maria Street level crossing will impact on accessibility, walking distances, and journey times for users in the local community. The diversion route would add a maximum of 500m to the route.

The implementation of a permanent diversion via Alexandra Road may disproportionately affect certain sections of the population who find walking long distances difficult.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- Disability including carers<sup>1</sup>
- Pregnancy/maternity
- Religion or belief
- Sexual orientation
- Gender reassignment
- Age
- Race
- Gender
- Marriage/Civil Partnership

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on those with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User profile

The nine-day census carried out in June 2016 indicated that a total of 2064 people used Maria Street level crossing during the survey period – an average of 229 people per day.

The survey results showed that adult pedestrians constituted 72% (1495/2064) of level crossing users, including 14 older people. 3 wheelchair / mobility-chair users were recorded, 2 scooters and 27 impaired users were also noted as using the level crossing. Of the 417 child users, 352 were accompanied by an adult and 65 were unaccompanied. 117 pushchairs / prams were recorded using the level crossing. Altogether, children constituted 20% of the survey population.

Although cyclists are not entitled to use the level crossing and are not a protected characteristic group and so have not been considered as part of this DIA assessment, 73 cyclists used the crossing over the survey period highlighting the popularity of the route for different users.

A breakdown of the census can be found in **Appendix C**.

### Population profile

In order to gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as the District of Tendring, Essex.<sup>2</sup> These are as follows:

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimates taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157220/report.aspx?town=tendring>

- Children (under 16 years of age) make up 17% of the Tendring population, which is slightly lower than the national average (19%).
- Younger people (16-24 years old) make up 9% of the population of the Tendring population, which is lower than the national figure (12%).
- The proportion of older people (here described as people of retirement age – 65 and over) in Tendring is 27%, which is significantly higher than the national figure of 16%.
- 26% of the Tendring population have a long-term illness or disability that limits their daily activities. This is higher than the national average of 17%.
- 4% of the population of Tendring is from Black, Asian or minority ethnic (BAME<sup>3</sup>) groups. This is considerably lower than the national figure of 20%.
- The figure for people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Tendring is 1%, which is lower than the national average of 9%.

The above demographic analysis suggests that the populations of all of the protected characteristics (for which there is demographic data) are broadly in line with national proportions. There are exceptions; Tendring has a much higher proportion of older people and people with long-term illnesses / disabilities, whilst a lower proportion of people from BAME backgrounds and minority faith groups.

### Local amenities

According to a review in December 2016, there are no plans for development in the local area.<sup>4</sup>

An analysis of local amenities indicates that there are a significant number of residential properties located close to the level crossing. In Harwich, there are several places of importance to equality groups, including two churches, a primary school, a nursery and a post office.

It is likely that the main desire line is people living on the western side of the line wishing to access the two churches to the northeast of the crossing. The availability of alternative crossing points along the railway means that residents are currently using other points to cross the line to access local amenities, especially those to the southeast of the crossing.

These presumed desire lines are based on the identified location of residential area and community facilities within the immediate vicinity of the crossing. The development of a more substantive picture of local desire lines for the crossing and associated routes could be achieved through cordon survey interviews with users at fixed locations and times.

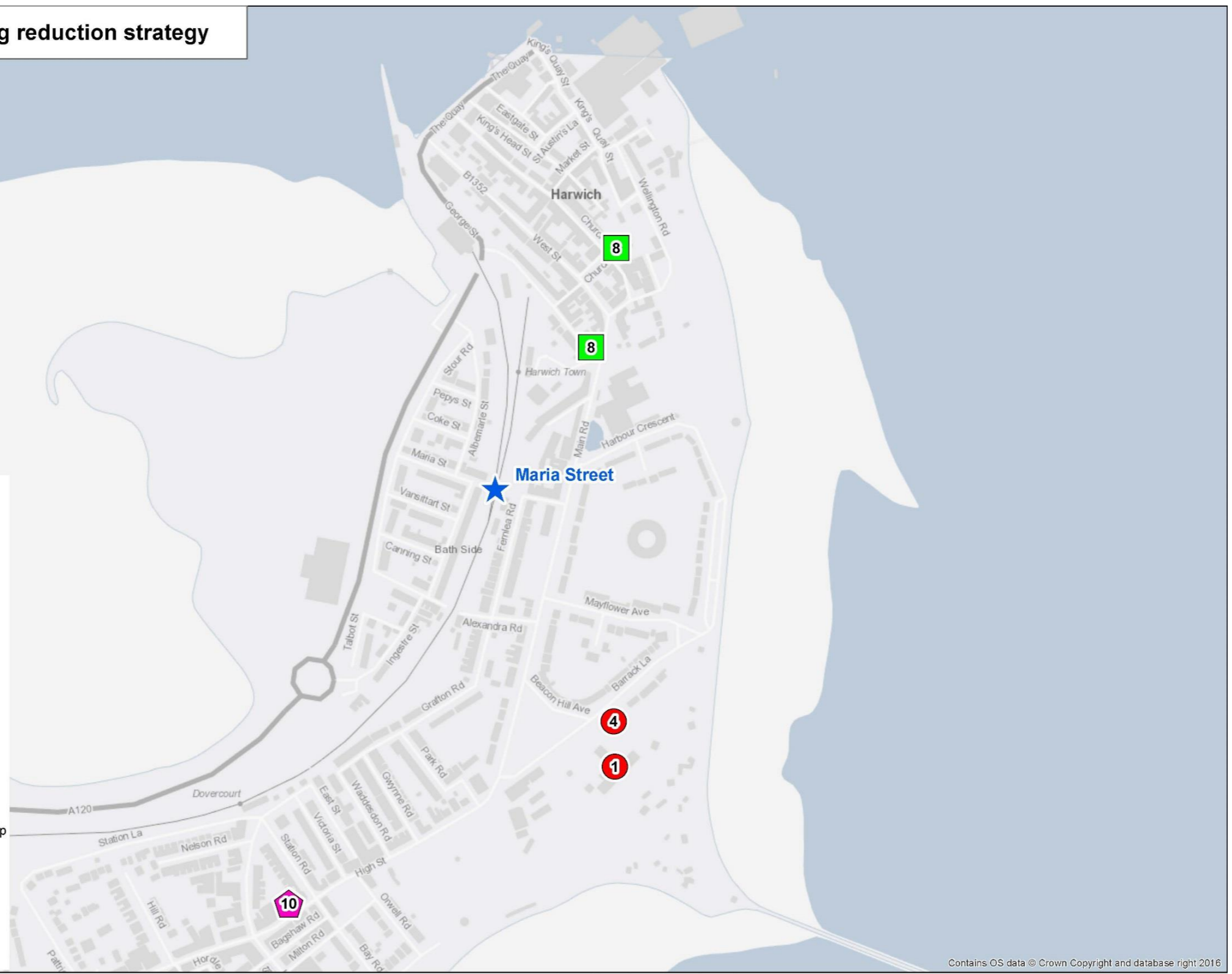
The map below shows local amenities in the area.

<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Tendring District Council: <https://idox.tendringdc.gov.uk/online-applications/simpleSearchResults.do?action=firstPage>.

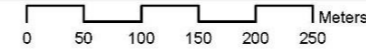
# Anglia level crossing reduction strategy

- Amenities**
- 1 Primary School
  - 2 Secondary School
  - 3 Other Education
  - 4 Nursery
  - 5 Hospital
  - 6 GP Surgery
  - 7 Care Home
  - 8 Church
  - 9 Minority Faith Place of Worship
  - 10 Post Office
  - 11 Leisure
  - ★ Site



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## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impact of the proposed work at Maria Street level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic		Explain the potential negative impact
Disability	Y	<p>The closure of the Maria Street level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on disabled people (including people with mobility, sensory and respiratory conditions) compared to non-disabled people.</p> <p>The nine-day census recorded 27 impaired people and three wheelchair users using the crossing.</p> <p><b>Permanent increased walking distance due to length of diversions</b></p> <p>Increases in walking distances, as a result of the permanent diversion route, are likely to disproportionately impact upon some disabled people. Disabled people are more likely to have difficulties walking long distances and many experience difficulty, discomfort and pain in doing so.</p> <p>Studies have shown that of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p>The proposed diversion route via Alexandra Road level crossing would add approximately 500m to the route, potentially adversely impacting some disabled people who may struggle with the increased distance. Stakeholders raised concerns about the additional length of the permanent diversion route during consultation.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway and diversion route improvements</b></p> <p>Safety issues related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may be less able to cross safely because of these factors.<sup>6</sup> People with visual or hearing impairments can also have difficulties crossing safely,</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'.

<sup>6</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'.

		<p>due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>7</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safer diversion as an alternative) is likely to lead to reduced crossing risk for this group.</p> <p>However, the proposed diversion via Alexandra Road level crossing would still involve some user interaction with the railway (albeit one which has a lower ALCRM score and is CCTV controlled).</p> <p>Stakeholders were particularly concerned about the shared use of Alexandra Road level crossing with vehicles. Further consideration should therefore be given to better segregation of pedestrians from vehicles at the crossing.</p>
Age	Y	<p>The closure of the Maria Street level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on certain age groups – namely children and older people – compared to the general population.</p> <p><b><u>Children and young people</u></b></p> <p>The nine-day census highlighted that the level crossing is frequently used by children with 417 children (352 accompanied and 65 unaccompanied by an adult) using the level crossing during the survey period.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact children. This is due to their potentially slower walking speeds and also children and younger people can have difficulties correctly processing the speed of oncoming vehicles. Research conducted on behalf of the House of Commons Transport Select Committee, showed that children perceived vehicles moving towards them at more than 20 mph as stationary.<sup>8</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safer diversion as an alternative) is likely to lead to reduced crossing risk for this group.</p> <p>However, the proposed diversion via Alexandra Road level crossing would still involve some user interaction with the railway (albeit one which has a lower ALCRM score and is CCTV controlled).</p> <p>During consultation, stakeholders raised concerns regarding the shared use of Alexandra Road level crossing with vehicles as the crossing itself has only limited separation of pedestrians and vehicles. Further consolidation should be given to the implementation of pedestrian safety measures so that the benefits of closing Maria Street level crossing can be realised.</p>

<sup>7</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'.

<sup>8</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

	<p><b><u>Older people</u></b></p> <p>The nine-day census identified that 14 older people used the level crossing during the survey period.</p> <p><b>Permanent increased walking distances due to length of diversions</b></p> <p>Increases in walking distances, as a result of the permanent diversion routes, are likely to disproportionately impact upon older people.</p> <p>Older people are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk more slowly, tire more easily and may struggle more to climb stairs.<sup>9</sup> Therefore, increased walking distances as a result of the diversion could disproportionately impact older people with mobility issues, as these people are more likely to have difficulties walking long distances and experience pain or discomfort in doing so.<sup>10</sup></p> <p>The proposed diversion route via Alexandra Road would add approximately 500m to the route, potentially adversely impacting older people who use the current level crossing as a shortcut to local amenities.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact older people, due to their potentially slower walking speeds, and the way that older peoples' field of vision tends to decline over time. Studies have shown that this can be at a rate of 1° and 3° per decade.<sup>11</sup></p> <p>Research by University College London showed that older pedestrians (aged 65 and over) walk more slowly than other pedestrians (the mean walking speed achieved in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to the mean for the population as a whole of 1.2 m/s, which places them at greater risk when walking in the road.<sup>12</sup> As such, reduced interaction with railway is likely to lead to significantly reduced crossing risk for this group.</p> <p>As noted above, the proposed diversion via Alexandra Road level crossing would still involve some user interaction with the railway through a safer CCTV controlled level crossing (with a lower ALCRM score). During consultation, stakeholders raised concerns regarding the shared use of Alexandra Road level crossing with vehicles. The level crossing itself has limited separation between pedestrians and vehicles. White lines provide the only segregation, though the pedestrian areas are wide and relatively flat (see <b>Appendix A</b>).</p>
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<sup>9</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway'

<sup>10</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>11</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>12</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

		Further consideration should be given to the implementation of pedestrian safety measures so that the benefits of closing Maria Street level crossing can be realised.
<b>Pregnancy / maternity</b>	Y	Although a large number (117) people with a pushchair or pram were recorded using the crossing over the nine-day survey period, due to the availability of alternative routes it is not anticipated that any disproportionate impacts will occur for this protected characteristic group.
<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	Although there are two churches in the local area, the availability of alternative routes means that we do not anticipate disproportionate impacts for this protected characteristic because of the project. For instance, a journey from the west side of the railway to the Salvation Army Chapel, walking on footways around the station, would be around 150m longer than at present.
<b>Gender</b>	Y	<p><b>Permanent user safety improvements as a result of reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can affect all genders, although they can disproportionately impact men. Male pedestrians are associated with 70% of all train strikes, suggesting that male pedestrians may benefit from a reduced rate of incidents.<sup>13</sup></p> <p>The proposed diversion via Alexandra Road level crossing would still involve some user interaction with the railway, however, this level crossing is CCTV controlled, and therefore considered to have a lower safety risk for users (reflected by a lower ALCRM score). Further consideration should be given to the implementation of route improvement measures.</p>
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

<sup>13</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- Commitment 1: Get everyone home safe every day.  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- Commitment 2: Deliver reliable infrastructure.  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- Commitment 6: Being a customer focused organisation.  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- Commitment 9: A railway fit for the future.  
The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

## Step 4: Consultation

### Q6. How has consultation with those who share a protected characteristic informed your work?

List the groups you have consulted or reference previous relevant consultation? <sup>14</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation – round 1 (June 2016)	<p>As part of Round 1 of public consultation, three questionnaire responses were received with two people preferring the red route and one preferring another route. One positive response and two negative responses were also received.</p> <p>Questionnaire responses received during the first round of public consultation identified the following comments / issues regarding the proposals for Maria Street level crossing:</p> <ul style="list-style-type: none"> <li>• Concerns were raised about the length of the diversion via Alexandra Road.</li> <li>• Concerns were raised about the safety of walking past a particular block of flats.</li> <li>• The issue of noise disruption was raised.</li> </ul>
Public consultation – round 2 (September 2016)	<p>Round 2 of public consultation received three questionnaire responses regarding the proposed changes at Maria Street level crossing. Of the responses, one respondent agreed with the proposals, and two disagreed with the proposals.</p> <p>Questionnaire responses received during the second round of public consultation identified the following comments / issues regarding the proposals for Maria Street level crossing:</p>
Public response	<ul style="list-style-type: none"> <li>• Questioned the need for the closure of the level crossing.</li> <li>• Maria Street was considered to be a convenient level crossing for immediate residents on foot</li> <li>• One respondent did not feel that there was a safety issue as the crossing is adjacent to Harwich Town station where there is a 25mph speed limit</li> <li>• The alternative route via Alexandra Road was felt to have pedestrian safety risks due to the presence of vehicles.</li> <li>• The footbridge next to Dovercourt station has an unpleasant approach with steps. Although it should be noted, that Dovercourt Station does not form part of the proposed diversion route.</li> </ul>

<sup>14</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

	<ul style="list-style-type: none"><li>• Request for lights to be added to the existing crossing.</li></ul>
--	--

**Q7. Where relevant, 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.**

N/A

## Step 5: Informed Decision-Making

### Q8. In light of the assessment above, what is your decision?

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>Due to the current user profile and available alternatives, closure and redirection along the proposed diversion routes is considered an appropriate solution. Route improvements should be considered for the proposed diversion to ensure accessibility.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action Planning

**Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?**

Action	By when	By who
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and any other benefits of the scheme, particularly focussing on user safety.	Ongoing	Network Rail project team
Further consideration should be given to the implementation of measures to further segregate vehicles and pedestrians on Alexandra Road level crossing. This will help improve pedestrian safety and address stakeholders concerns. As a result of this project, it is understood that Network Rail is reviewing ALCRM scores (incorporating level of use and infrastructure) for all level crossings which form part of a diversion route.	Prior to implementing works  (and before any potential public inquiry for the Essex and Others TWAO)	Design team
<b>Review this DIA at every GRIP stage to ensure equality of access is maintained for all.</b>	<b>Ongoing</b>	<b>Network Rail project team</b>

See **Appendix D** for Design Team responses to the proposed actions above.

## Step 7: Sign off

Name	Position	Signed	Date
Superuser <sup>15</sup>	Liability Negotiation Manager		20/07/2017
Senior Manager <sup>16</sup>	Head of Route Safety, Health & Environment		8/9/17

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

<sup>15</sup> Quality assurance check.

<sup>16</sup> Sign-off should be by someone who can approve policy, programme or budget changes.

## Appendix A: Site photographs

### Existing level crossing

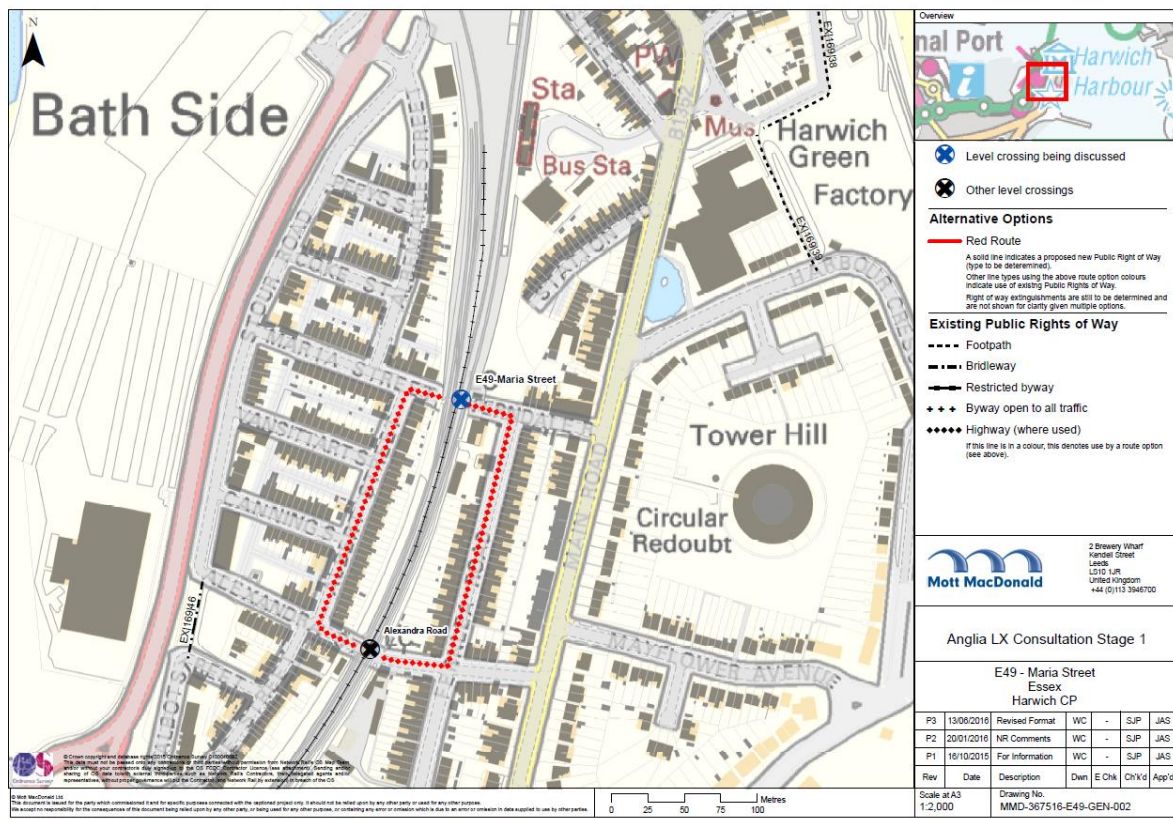


**Alternative railway crossing**

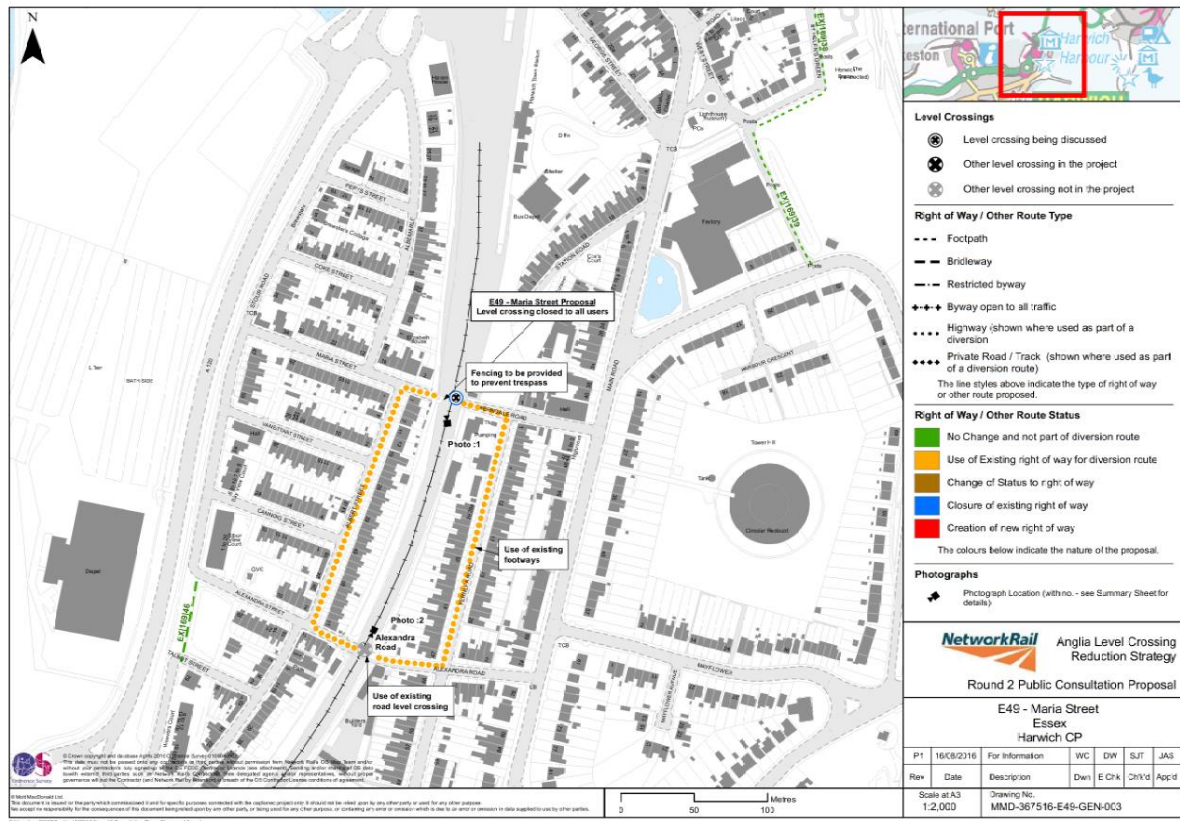


## Appendix B: Site drawings

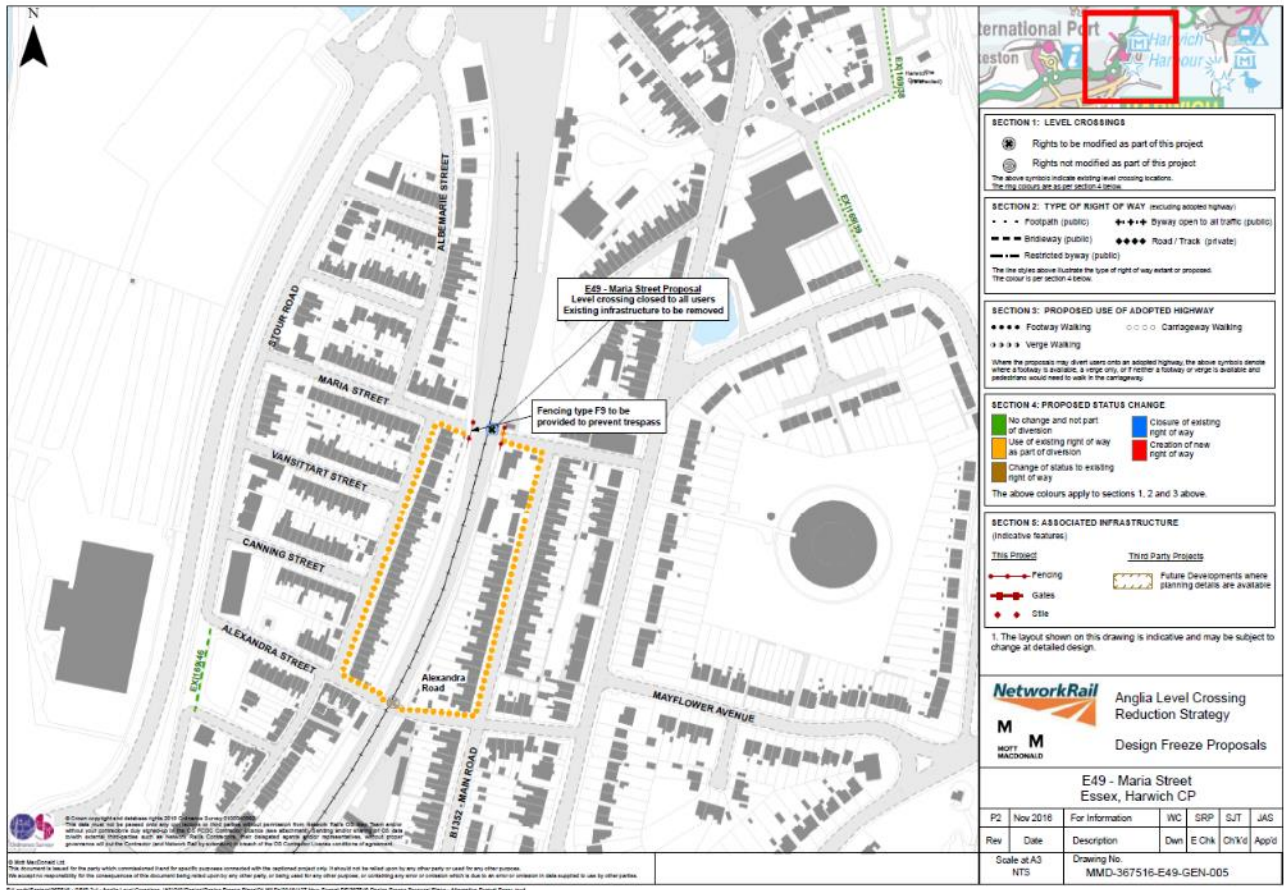
### Round 1 consultation – proposed diversion (initial option, June 2016):



## Round 2 consultations – proposed diversion (September 2016):



## Preferred option (November 2016):



## Appendix C: Nine-day pedestrian census data

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

Combined				
	Horse riders	Riding Cycles	Walking Cycles	Total
Day 1 Saturday 09/07/2016	0	0	0	0
Day 2 Sunday 10/07/2016	0	0	0	0
Day 3 Monday 11/07/2016	0	0	0	0
Day 4 Tuesday 12/07/2016	0	4	3	7
Day 5 Wednesday 13/07/2016	0	9	9	18
Day 6 Thursday 14/07/2016	0	5	6	11
Day 7 Friday 15/07/2016	0	6	10	16
Day 8 Saturday 16/07/2016	0	0	0	0
Day 9 Sunday 17/07/2016	0	7	14	21
	0	31	42	73

Direction : Combined									
Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair/ Pram	Scooter	Railway Personnel	Total
153	34	2	1	0	1	9	0	0	200
127	16	3	6	6	0	5	0	0	163
224	72	14	6	6	0	20	2	0	344
152	43	7	0	2	0	17	0	1	222
155	45	7	0	5	0	12	0	0	224
148	43	10	0	1	0	18	0	1	221
170	41	9	0	2	0	16	0	1	239
179	23	12	1	3	0	8	0	0	226
173	35	1	0	2	2	12	0	0	225
1481	352	65	14	27	3	117	2	3	2064

## Appendix D: DIA Design Team Responses to Action Planning

Action	By when	By who	Design Team comment	NR Response	Design Team Response
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and any other benefits of the scheme, particularly focussing on user safety.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	agreed	Noted
Further consideration should be given to the implementation of measures to further segregate vehicles and pedestrians on Alexandra Road level crossing. This will help improve pedestrian safety and address stakeholders concerns. As a result of this project, it is understood that Network Rail is reviewing ALCRM scores (incorporating level of use and infrastructure) for all level crossings which form part of a diversion route.	Prior to implementing works  (and before any potential public inquiry for the Essex and Others TWAO)	Design team	Network Rail to undertake ALCRM modelling and consider any improvement works to remaining crossings	Agreed. NR have undertaken the ALCRM runs to understand what the new risk profile is at the level crossings where we have diverted to another at grade level crossing. NR is considering if any further action is required.	NR to take appropriate actions

Review this DIA at every GRIP stage to ensure equality of access is maintained for all.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	Yes, but this is not to 'ensure equality of access is maintained for all' it is to ensure that any changes to the design do not worsen the access and they improve where appropriate.	NR to take appropriate actions
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## Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** T04 Jefferies - Anglia Level Crossing Reduction Strategy

### Step 1: Clarifying aims

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



#### **Anglia Level Crossing Reduction Strategy**

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings within the counties of Suffolk, Cambridgeshire, Essex, Hertfordshire, and the unitary authorities of Thurrock, Havering, and Southend-on-Sea. This is referred to as the Anglia Level Crossing Reduction Strategy ('the

Strategy'). Closing or modifying level crossings can help to bring about a number of benefits. It can:

- improve the safety of level crossing users
- deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy
- reduce the ongoing operating and maintenance cost of the railway
- reduce delays to trains, pedestrians and other highway users, and
- improve journey time reliability for railway, highway and other rights of way users.

#### **T04 – Jefferies level crossing**

Jefferies level crossing is a public footpath (FP 32) crossing located in Stanford-le-Hope in the unitary authority of Thurrock. The crossing spans the two track Tilbury Loop of the London, Tilbury and Southend Line.

Jefferies level crossing is a 'Stop, Look and Listen' crossing, where the user determines whether it is safe to cross. Access to the crossing on both sides is via uneven track and crossing gates.

The crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C4. The individual risk rating for this crossing is 'C' (where 'A' is the highest risk and 'M' is lowest) and the collective risk rating is '4' (where '1' is the highest risk and '13' is the lowest), making Jefferies a high risk crossing. Key safety issues include a large number of users, sun glare and frequent trains. Between 2011 and 2015, there were no near misses and no accidents, however, there was one incident of misuse. Approximately 136 trains use this part of the network daily at a line speed of 70mph.

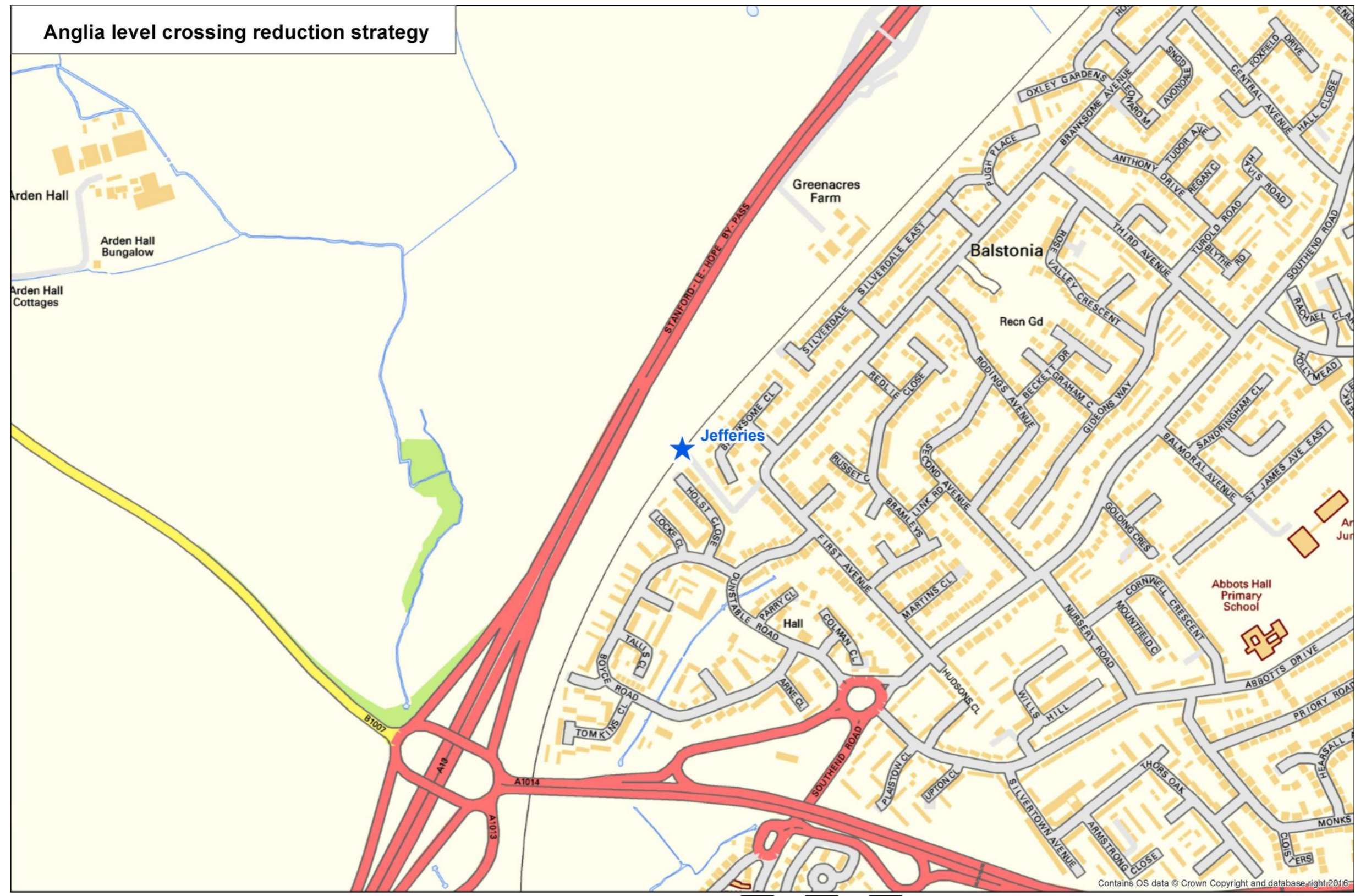
Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

#### **Project location**

Jeffries level crossing is located on the western edge of Stanford-le-Hope. The crossing intersects a residential area to the east and agricultural land to the west. The A13 (Stanford-le-Hope bypass) is located 100m west of the level crossing. Stanford-le-Hope station is approximately 1.2km south of the level crossing.

**Appendix A** contains site photographs and the below map shows the location of the level crossing.

Anglia level crossing reduction strategy



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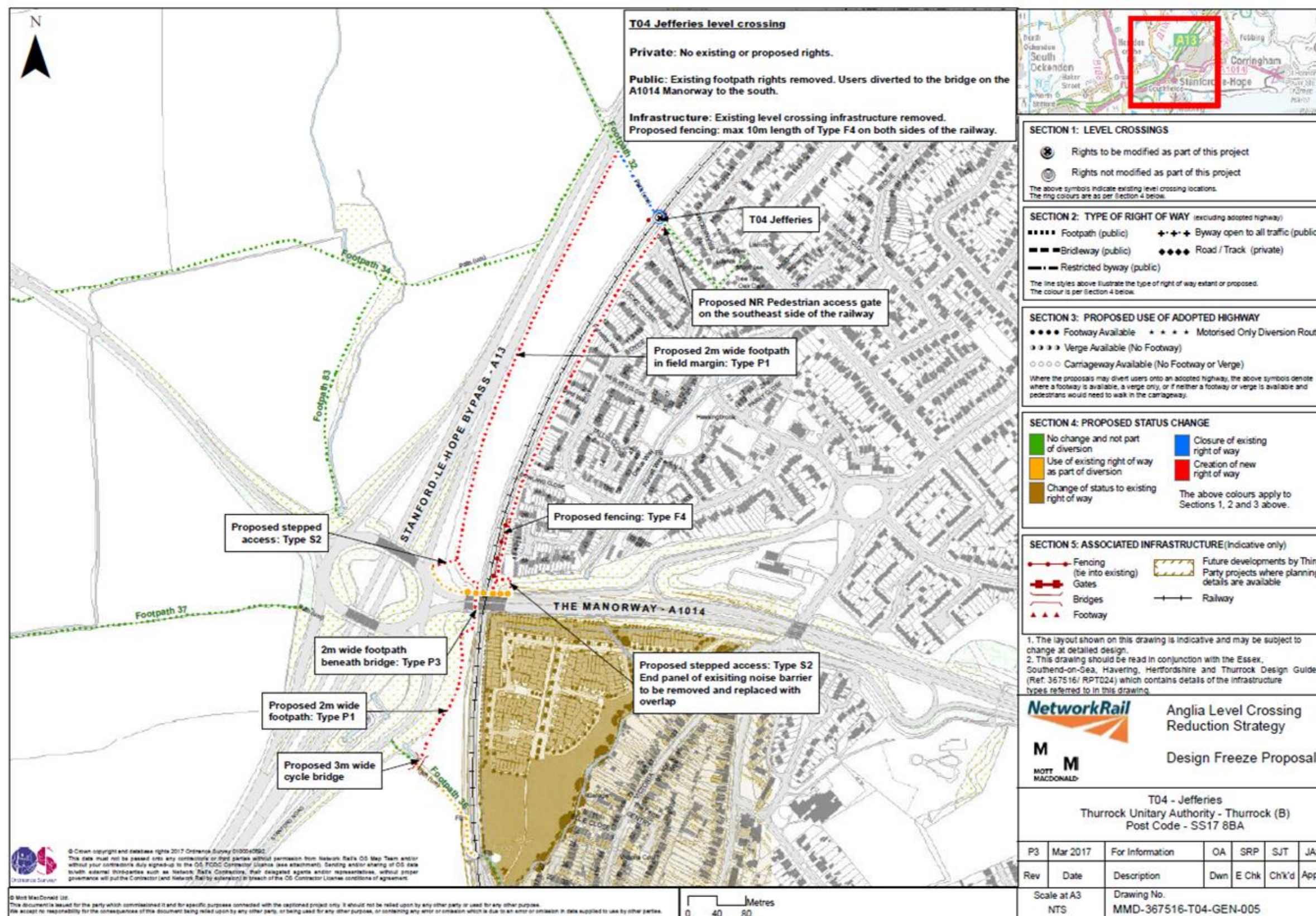
### Proposals for the project

Network Rail has conducted two rounds of public consultation regarding Jefferies level crossing - the first was to obtain feedback on initial options for level crossings in the programme (in June 2016), and the second to obtain feedback on the preferred options (in September 2016). Following the receipt of this feedback, consideration was given as to how any proposed closure of the level crossing and implementation of an alternative route might best be progressed and managed.

Following feedback on the Round two of public consultation, the proposal is to close the level crossing to all users and remove the crossing infrastructure. The preferred proposal is to divert all users to the A1014 Manorway bridge, 560m south of Jefferies level crossing. Users will be diverted to the A1014 along 2m wide public footpaths on either side of the line (utilising the existing hard standing footpath on the edge of the residential area) and access the A1014 via proposed stepped access routes on both sides of the railway (as detailed in the figure below). This route creates a diversion of 1.2km.

A supplementary step-free route, which links existing public footpaths in the area, will also be created on the western side of the line. Specifically, a new 2m wide footpath would be established beneath the A1014 linking Footpath 32 to Footpath 36. Upon linking to Footpath 36, users will be able to cross the railway line via an existing underpass, 900m south of Jefferies level crossing. This extinguishment and replacement of a new right of way provides additional access through the town.

The figure below shows the preferred diversion route following feedback at Round 2 of public consultation. This is also available in **Appendix B**, along with initial options for diversions, taken to Round 1 and 2 public consultations.



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Jefferies level crossing, there is a risk of a future incident at this location. The closure of the crossing will separate people from the railway line, thereby improving the safety of local residents and other users.

The proposals for Jefferies level crossing will impact accessibility, walking distances, and journey times for people using the crossing.

The implementation of a permanent diversion via the A1014 may disproportionately affect certain sections of the population who find walking long distances and / or navigating steps difficult.

However, it should be noted that Jefferies level crossing is primarily used by people for recreational purposes and not to access local facilities.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- Disability including carers<sup>1</sup>
- Pregnancy/maternity
- Religion or belief
- Sexual orientation
- Gender reassignment
- Age
- Race
- Gender
- Marriage/Civil Partnership

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on people with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User profile

The nine-day census carried out in July 2016 indicated that a total of 147 people used the level crossing over the survey period – an average of 16 people per day. 95% of users were adults (139/147). The remaining eight users were children – two accompanied by an adult and six unaccompanied children. No older people, impaired people, wheelchairs or scooters, or people with pushchairs / prams were recorded using the level crossing.

Although cyclists are not a protected characteristic group and so have not been considered as part of this DIA assessment, 8 cyclists used the crossing over the survey period.

A breakdown of the census data can be found in **Appendix C**.

### Population profile

In order to gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as the Thurrock district.<sup>2</sup> These are as follows:

- Children (under 16 years of age) make up 22% of the Thurrock population, which is slightly higher than the national average (19%).
- Younger people (16-24 years old) make up 11% of the population of Thurrock, which is in line with the national figure (12%).

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimates taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157242/report.aspx?town=thurrock>

- The proportion of older people (here described as people of retirement age – 65 and over) in Thurrock is 13%, which is slightly lower than the national figure of 16%.
- 16% of the Thurrock population have a long-term illness or disability that limits their daily activities. This is in line with the national average of 17%.
- 19% of the population of Thurrock is from Black, Asian or ethnic minority (BAME<sup>3</sup>) groups. This is in line with the national figure of 20%.
- The figure for people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Thurrock is 4%, which is lower than the national average of 9%.

The above demographic analysis suggests that the population proportions for many of the groups with protected characteristics (and for which there is demographic data) are broadly in line with national proportions. There is one exception: Thurrock has a lower proportion of people from minority faith groups.

### **Local amenities**

According to a review of local authority planning applications in January 2017, there are no plans for future development in the local area.<sup>4</sup>

An analysis of local amenities shows that there are two care homes, two GP surgeries, two primary schools and a church in the urbanised areas to the east and south of the crossing. Given the location of these amenities it is considered likely that the crossing is primarily used for recreational purposes. The development of a more substantive picture of local desire lines for the crossing and associated routes could be achieved through cordon survey interviews with users at fixed locations and times.

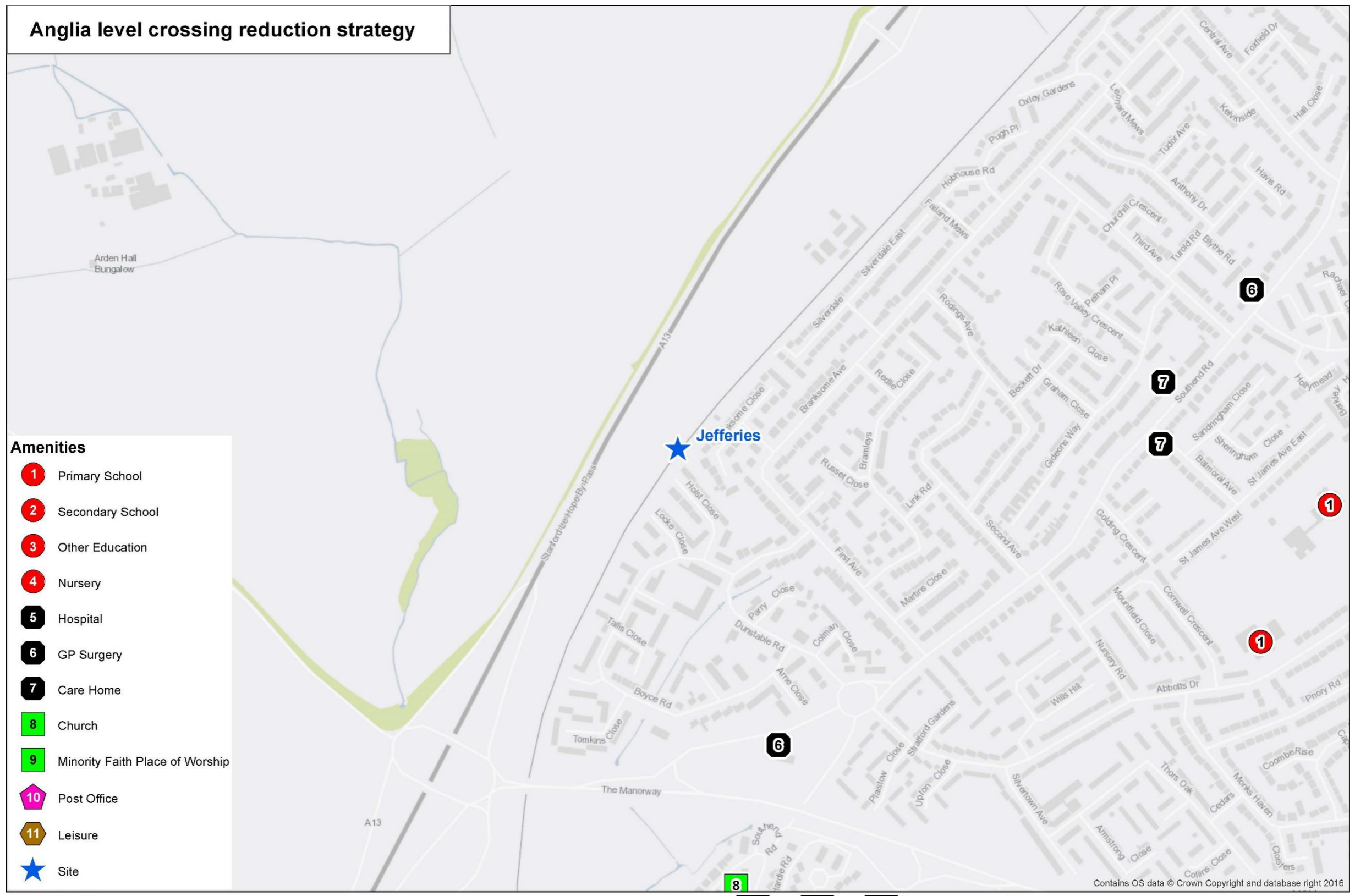
The map below shows local amenities.

---

<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Thurrock Council: <http://regs.thurrock.gov.uk/online-applications/simpleSearchResults.do?action=firstPage>.

Anglia level crossing reduction strategy



- Amenities**
- 1 Primary School
  - 2 Secondary School
  - 3 Other Education
  - 4 Nursery
  - 5 Hospital
  - 6 GP Surgery
  - 7 Care Home
  - 8 Church
  - 9 Minority Faith Place of Worship
  - 10 Post Office
  - 11 Leisure
  - ★ Site

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## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impacts of the proposed work at Jefferies level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic		Explain the potential negative impact
Disability	Y	<p>The permanent closure of Jefferies level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on disabled people (including people with mobility, sensory and respiratory conditions) compared to non-disabled people.</p> <p>As no disabled people were documented using the crossing over the survey period, and it is believed that the crossing is used primarily for recreational purposes the impacts described below should not be overstated.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the proposed permanent diversion route, are likely to disproportionately impact upon some disabled people. People with mobility impairments are more likely to have difficulties walking long distances and many experience pain and discomfort in doing so.</p> <p>A Department for Transport (DfT) study has shown that of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p>The proposed diversion route would add 1.2km, potentially adversely impacting some disabled people – in particular people who may struggle to with the increased distance. Stakeholders also raised concerns about the additional length of the diversion route during consultation. However, impacts are likely to be limited as census data suggests no disabled people are currently using the crossing.</p> <p><b>Permanent reduced pedestrian accessibility due to suitability of the diversion route</b></p> <p>The proposed extinguishment and creation of a new right of way includes stepped access to the footpath on the A1014. This is likely to restrict access for some people with mobility impairments, and is inaccessible for people in wheelchairs or mobility scooters. Even when routes are free from obstacles such as steps, as is the case with the supplementary underpass route, such infrastructure can be</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

	<p>difficult for disabled people unless they are designed with disabled accessibility in mind.<sup>6</sup></p> <p>To ensure that the supplementary underpass route is accessible to all users, the following should be considered. Gradients can be challenging to manage and act as a barrier for those with sight and mobility impairments, and can make routes difficult to manage for those in wheelchairs or mobility scooters.<sup>7</sup></p> <p>In order to comply with the Equality Act 2010, a gradient of no more than 5% (1 in 20) is required.<sup>8</sup> However, it should also be recognised that studies suggest that gradients steeper than 2.5% (1 in 40) can, while legal and within guideline parameters, be very challenging for many manual wheelchair users to manage.<sup>9</sup></p> <table><tr><th>Gradient</th><th>Maximum Length</th><th>Maximum Rise</th></tr><tr><td>1 in 20 (5%)</td><td>10m</td><td>500mm</td></tr><tr><td>1 in 15 (7%)</td><td>5m</td><td>333mm</td></tr><tr><td>1 in 12 (8%)</td><td>2m</td><td>166mm</td></tr><tr><td>More than 1 in 12 (&gt;8%)</td><td>Not permitted</td><td>Not permitted</td></tr></table> <p>Even when infrastructure is designed to accessible standards, there is likely to be an imperfect relationship between the length of an incline and its gradient – the longer the incline the less severe the gradient that is acceptable. Although the preferred gradient is 5% (1 in 20), a slightly steeper gradient of 10% (1 in 10) is acceptable over short distances of less than one metre. As a general rule, 8% (1 in 12) should be used as the absolute maximum, to help ensure pedestrian accessibility is maintained for all users.</p> <p>Assessment of LIDAR data has shown that the existing gradient on the approach to and departure from the underpass itself is approximately 1 in 21 (5%) (subject to confirmation at detailed design), which is consistent with the DfT's preferred gradient of 5%.</p> <p>The Department for Transport (DfT) also states that underpasses should be as wide as possible to give sufficient room for disabled users, and ensure a sense of security. It is recommended that the width of an underpass should be at least 4.8m and have a headroom of 3m. The existing footway of the underpass has a minimum width of 2.7m, however with some minor works it could reach 4.5m (subject to confirmation at detailed design). The height of the existing underpass is approximately 3.5m, which exceeds the recommended 3m. Therefore, it is felt that the width and height of the underpass fulfils the requirements of the above guidelines.</p>	Gradient	Maximum Length	Maximum Rise	1 in 20 (5%)	10m	500mm	1 in 15 (7%)	5m	333mm	1 in 12 (8%)	2m	166mm	More than 1 in 12 (>8%)	Not permitted	Not permitted
Gradient	Maximum Length	Maximum Rise														
1 in 20 (5%)	10m	500mm														
1 in 15 (7%)	5m	333mm														
1 in 12 (8%)	2m	166mm														
More than 1 in 12 (>8%)	Not permitted	Not permitted														

<sup>7</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'.

<sup>8</sup> Transport Scotland (2013): 'Roads for All: Good Practice Guide for Roads'.

<sup>9</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'.

		<p>Within the underpass, handrails set at 1000mm above the walking surface should be considered on both sides. There should be a clear view from one end to the other and a good level of lighting. CCTV cameras should also be considered in the underpass to enhance security. Notices to the effect that CCTV is in operation should deter vandals and provide a measure of comfort to pedestrians.<sup>10</sup></p> <p>The new footpaths should also be created to meet guidelines outlined in the Equality Act 2010, that is 2m wide with tactile paving and dropped kerbs. This will ensure equality of access is maintained for all users.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may also be less able to cross safely because of these factors. People with visual or hearing impairments can also have difficulties crossing safely due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>11</sup></p> <p>Reduced interaction with the railway at this point may potentially result in a reduced crossing risk for this group.</p>
<b>Age</b>	Y	<p>The permanent closure of Jefferies level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on particular age groups – particularly children and older people – when compared with other sections of the population.</p> <p><b><u>Children</u></b></p> <p>The nine-day census recorded eight children using the crossing over the survey period (two accompanied and six unaccompanied by an adult).</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings are also disproportionately likely to impact children. This is due to their potentially slower walking speeds and because children and younger people can have difficulties correctly processing the speed of oncoming vehicles. Research conducted on behalf of the House of Commons Transport Select Committee, showed that children tended to perceive vehicles moving towards them at more than 20 mph as stationary.<sup>12</sup></p>

<sup>10</sup> Department for Transport (2005): 'Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'.

<sup>11</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>12</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

	<p>As such, reduced interaction with the railway (due to the use of a safe diversion as an alternative) is likely to lead to significantly reduced crossing risk for this group.</p> <p><b><u>Older people</u></b></p> <p>The census did not document any older people using the crossing over the nine-day period and it is believed that the crossing is used primarily for recreational purposes. As such, the impacts raised below should not be overestimated.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the permanent diversion route, are likely to disproportionately impact upon older people.</p> <p>Older people are more likely to have difficulties walking long distances and experience pain or discomfort in doing so.<sup>13</sup> Older people are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk more slowly, tire more easily, and are more likely to struggle to climb stairs.<sup>14</sup></p> <p>The proposed diversion route will increase walking distances by 1.2km, potentially adversely impacting older people.</p> <p><b>Permanent reduced pedestrian accessibility due to nature of the diversion route</b></p> <p>The proposed extinguishment and creation of a new right of way includes stepped access to the footpath on the A1014. This is likely to restrict access for some older people, in particular, people with mobility impairments.</p> <p>Even when routes are free from obstacles such as steps, as is the case with the underpass route, such infrastructure can be difficult for disabled people unless they are designed with accessibility for the disabled in mind.<sup>15</sup></p> <p>Assessment of LIDAR data has shown that the existing gradient on the approaches to the underpass are approximately 1 in 21 (5%) (subject to confirmation at detailed design), which is consistent with the DfT's preferred gradient of 5%.</p> <p>As noted above, recommendations from DfT should be considered to ensure that the underpass meets standards and ensures that equality of access is maintained for all users. This is also the case with the new footpaths.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact older people, largely due to their potentially slower walking speeds</p>
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<sup>13</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>14</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway'

		<p>and the way that older peoples' field of vision tends to decline over time. Studies have shown that this can be at a rate of 1° and 3° per decade.<sup>16</sup></p> <p>Research by University College London has shown that older pedestrians (aged 65 or over) walk more slowly than other pedestrian users (the mean walking speed achieved by over-65s in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to the mean for the population as a whole of 1.2m/s<sup>17</sup>), placing older people at greater risk.</p> <p>Level crossing closures, therefore, can improve the safety for older users by reducing interaction with the railway.</p>
<b>Pregnancy / maternity</b>	Y	<p>The nine-day census did not document any uses of Jefferies level crossing by people with a pushchair / pram, suggesting that impacts are likely to be minimal as people are already using alternative routes to cross the railway line. It is believed that the crossing is primarily used for leisure purposes.</p> <p><b>Permanent reduced pedestrian accessibility due to the nature of the diversion routes</b></p> <p>Inaccessible infrastructure, such as stepped access routes (as per the proposed diversion route), can disproportionately impact upon people with pushchairs. However, even underpasses can be difficult to access for people with pushchairs / prams unless they are designed with accessibility for this user group in mind.<sup>18</sup></p> <p>Steep gradients can be challenging to manage for those with pushchairs / prams. As discussed above, standards are in place to ensure that gradients do not exceed appropriate levels.</p> <p>Assessment of LIDAR data has shown that the existing gradient on the approach to and departure from the underpass itself is approximately 1 in 21 (5%) (subject to confirmation at detailed design), which is consistent with the DfT's preferred gradient of 5%.</p> <p>As noted above, recommendations from DfT should be considered to ensure that the underpass meets standards and ensures that equality of access is maintained for all users. This is also the case with the new footpaths.</p>
<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	Although there is a church in relatively close proximity to the crossing, it is not anticipated that any disproportionate impacts for this protected characteristic will arise due to the availability of alternative routes.
<b>Gender</b>	Y	<b>Improved user safety due to reduced interaction with the railway</b>

<sup>16</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>17</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

		<p>Safety issues related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings, associated with 70% of all train strikes. Given that males represent approximately 50% of the population as a whole, this would suggest male pedestrians are more at risk at level crossings than female pedestrians.<sup>19</sup></p> <p>Reduced interaction with the railway (due to the diversion onto the bridge) would lead to reduced crossing risk for men.</p>
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- **Commitment 1: Get everyone home safe every day.**  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- **Commitment 2: Deliver reliable infrastructure.**  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- **Commitment 6: Being a customer focused organisation.**  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- **Commitment 9: A railway fit for the future.**  
The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

## Step 4: Consultation

<sup>19</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

**Q6. How has consultation with those who share a protected characteristic informed your work?**

List the groups you have consulted or reference previous relevant consultation? <sup>20</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation Round 1 (June 2016)	<p>As part of Round 1 of public consultation, one respondent that preferred the blue route was received. Overall, the respondent was neutral towards the proposals.</p> <p>One questionnaire response was received during the first round of public consultation for Jefferies level crossing, but no comments were made.</p>
Public consultation Round 2 (September 2016)	<p>As part of public consultation Round 2, five questionnaire responses were received to the proposals, with all five strongly disagreeing with the proposals.</p> <p>Questionnaire responses received during the second round of public consultation identified the following comments / issues (outlined below) regarding the proposals for Jefferies level crossing:</p>
Thurrock Ramblers	<ul style="list-style-type: none"> <li>• The diversion of Footpath 32 will put walkers alongside the A13, which is a 70mph trunk road.</li> <li>• The additional 1.2-1.9km is an unacceptable increase in distance to walk.</li> <li>• The present route via the rail crossing at the western end of Brankesome Avenue / First Avenue gives walkers direct access to footpaths that lead to Langdon Hills and to Horndon.</li> <li>• It was highlighted that there have been no accidents or incidents at this crossing.</li> </ul>
Public responses	<ul style="list-style-type: none"> <li>• Concerns were expressed about the length of the diversion route, as it requires users to walk alongside the A13 which is a very busy road.</li> <li>• The new footpaths would be created alongside the railway which is not very pleasant.</li> <li>• It was highlighted that there have been no accidents and only one incident at this crossing in five years.</li> </ul>

**Q7. Where relevant, 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.**

<sup>20</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

N/A

## Step 5: Informed decision-making

### Q8. In light of the assessment above, what is your decision?

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>Due to the current user profile and availability of alternative routes, closure and redirection along the proposed diversion route is considered an appropriate solution.</p> <p>Route improvements should be considered for the proposed diversion to ensure accessibility.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action planning

### Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?

Action	By when	By who
Further consideration should be given into implementing ramped access to the A1014 Manorway. If space constraints are present at the site, measures should be taken to ensure gradients of the steps are as low as possible, tactile painting is incorporated and handrailing (at an appropriate height) is installed.	Detailed design	Network Rail project team
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.	Ongoing	Network Rail project team

<p>At detailed design, measures should be considered to improve pedestrian safety in the underpass, so that standards and DfT guidelines can be met wherever possible and practicable.</p> <p>Assessment of LIDAR data has shown that the existing gradient and width of the underpass are generally acceptable to support accessibility and adequately comply with suggested guidelines - these should be confirmed at the detailed design stage.</p> <p>Within the underpass, consideration should be given for the provision of handrails set at 1000mm above the walking surface on both sides. There should be a clear view from one end to the other and a good level of lighting. CCTV cameras should also be considered in underpasses to enhance security. Notices to the effect that CCTV is in operation should deter vandals and provide a measure of comfort to pedestrians.</p>	Detailed design	Network Rail project team
<p>Ensure that the new footpaths that are created meet guidelines outlined in the Equalities Act 2010. Where appropriate, the new paths should have an even surface, tactile paving, dropped kerbs and wayfinding signs. The proposals states that the new paths will be 2m wide. This would help ensure equality of access is maintained for all users.</p> <p>As the proposed diversion is long, rest points should be included as part of the diversion route.</p>	Detailed design	Network Rail project team
<p><b>Review the DIA at every GRIP stage to ensure equality of access is maintained for all.</b></p>	Ongoing	Network Rail project team

See **Appendix D** for Design Team responses to the proposed actions above.

## Step 7: Sign off

Name	Position	Signed	Date
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<u>Superuser</u> <sup>21</sup>	Sponsor	<i>D. Corrigan</i>	11/09/2017
Senior Manager <sup>22</sup>	<i>HORSHE</i>	<i>[Signature]</i>	7/12/17

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

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<sup>21</sup> Quality assurance check.

<sup>22</sup> Sign-off should be by someone who can approve policy, programme or budget changes.  
Diversity and inclusion 31032015

**Appendix A: Site photographs**  
**Existing level crossing**

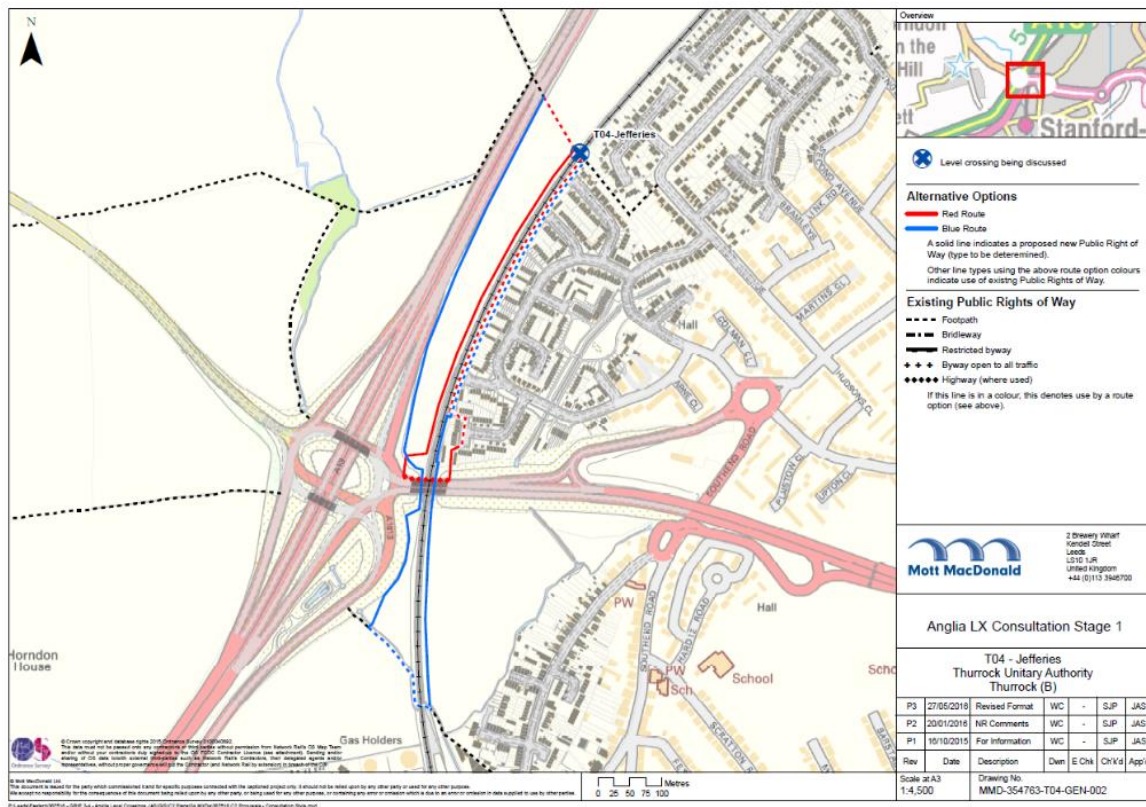


**Alternative railway crossing – existing underpass**

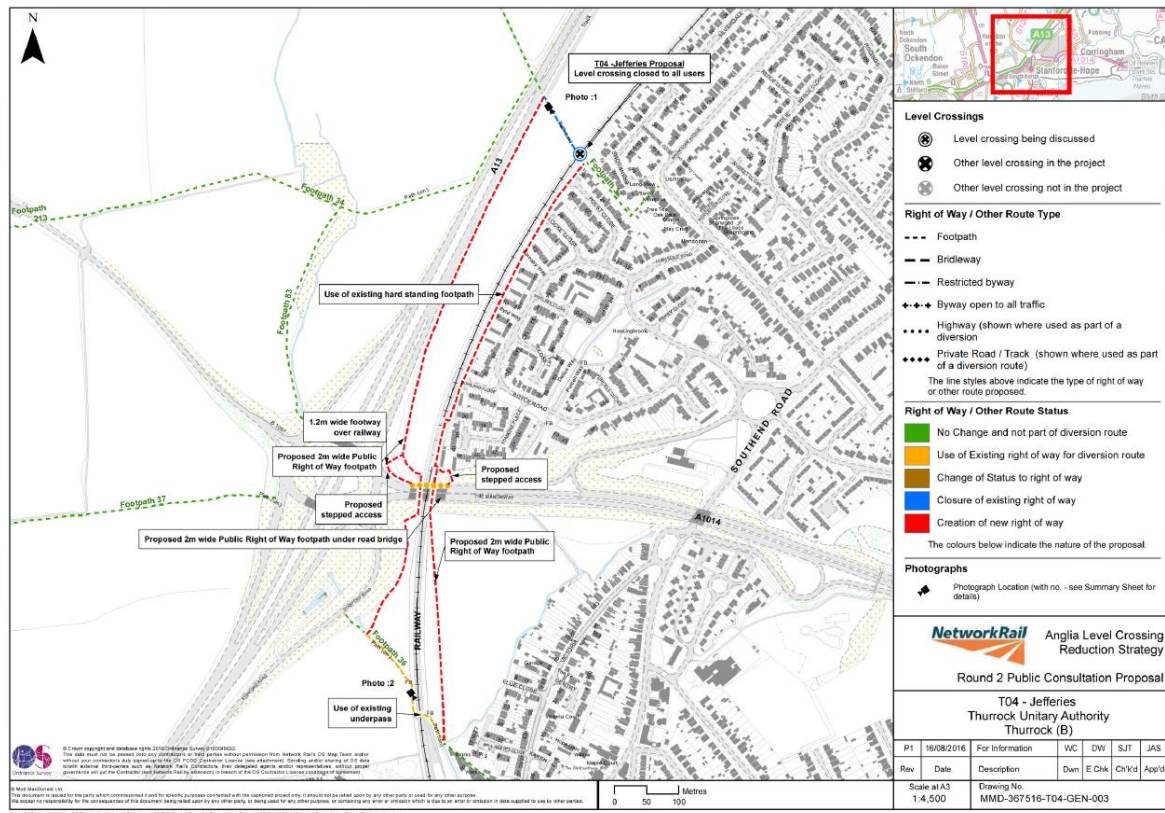


## Appendix B: Scheme drawings

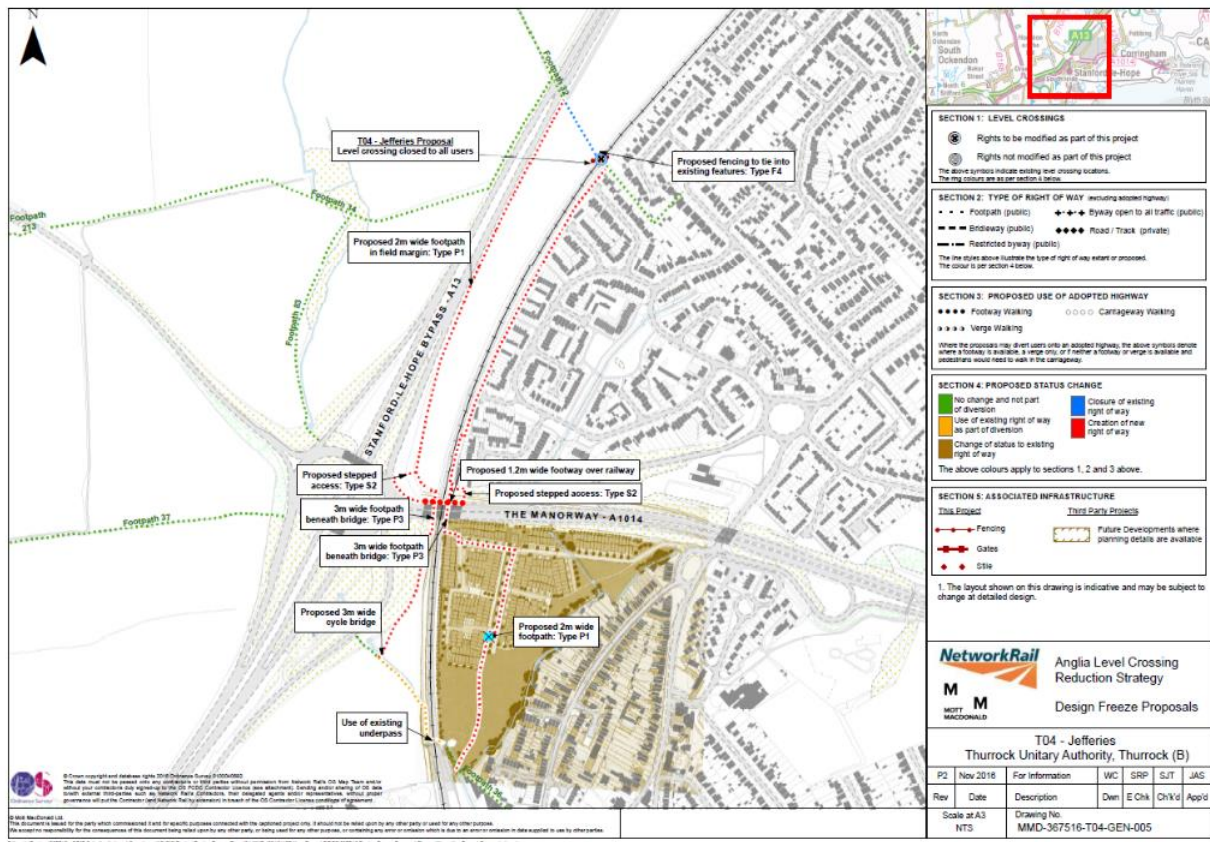
### Round 1 consultation – proposed diversion (initial option)



## Round 2 consultations – proposed diversion (September 2016):



## Following Round 2 consultations – preferred option (at time, November 2016)





## Appendix C: Nine-day census data

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

			Combined			
			Horse riders	Riding Cycles	Walking Cycles	Total
Day 1	Saturday	09/07/2016	0	0	0	0
Day 2	Sunday	10/07/2016	0	0	0	0
Day 3	Monday	11/07/2016	0	0	0	0
Day 4	Tuesday	12/07/2016	0	0	0	0
Day 5	Wednesday	13/07/2016	0	1	2	3
Day 6	Thursday	14/07/2016	0	0	0	0
Day 7	Friday	15/07/2016	0	0	0	0
Day 8	Saturday	16/07/2016	0	0	4	4
Day 9	Sunday	17/07/2016	0	0	1	1
			0	1	7	

Direction : Combined									
Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair/ Pram	Scooter	Railway Personnel	Total
12	0	6	0	0	0	0	0	0	18
26	0	0	0	0	0	0	0	0	26
13	0	0	0	0	0	0	0	2	15
6	0	0	0	0	0	0	0	0	6
7	0	0	0	0	0	0	0	4	11
24	0	0	0	0	0	0	0	0	24
13	0	0	0	0	0	0	0	0	13
19	2	0	0	0	0	0	0	0	21
19	0	0	0	0	0	0	0	0	19
139	2	6	0	0	0	0	0	6	153

## Appendix D: DIA Design Team Responses to Action Planning

Action	By when	By who	Design Team comment	NR Response	Design Team Response
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	agreed	None.
At detailed design, measures should be considered to improve pedestrian safety in the underpass, so that standards and DfT guidelines can be met wherever possible and practicable.	Detailed design	Network Rail project team		The underpass is not longer on the diversionary route. Nothing to do here.	None.
Assessment of LIDAR data has shown that the existing gradient and width of the underpass are generally acceptable to support accessibility and adequately comply with suggested guidelines - these should be confirmed at the detailed design stage.			Noted - to be checked at detailed design stage.		None.

Within the underpass, consideration should be given for the provision of handrails set at 1000mm above the walking surface on both sides. There should be a clear view from one end to the other and a good level of lighting. CCTV cameras should also be considered in underpasses to enhance security. Notices to the effect that CCTV is in operation should deter vandals and provide a measure of comfort to pedestrians.			<p>Provision of handrails can be discussed with the highway authority at the detailed design stage.</p> <p>The provision of CCTV and lighting is not considered appropriate on what is a leisure route. The rest of the new footpath length would not be lit. Lighting in this situation is likely to encourage anti-social behaviour.</p>	Its not a diversion, it's an extinguishment and creation	None.
Ensure that the new footpaths that are created meet guidelines outlined in the Equalities Act 2010. Where appropriate, the new paths should have an even surface, tactile paving, dropped kerbs and wayfinding signs. The proposals states that the new paths will be 2m wide. This would help ensure equality of access is maintained for all users.	Detailed design	Network Rail project team	The provision of these facilities within the adopted highway or on the footpath route should be discussed further with the Highway Authority at the detailed design stage.	The route is the route now and this should have been done before now, at design freeze.	None.
As the proposed diversions are long, rest points should be included as part of the diversion route.			The provision of these facilities within the adopted highway or on the footpath route should be discussed further with the Highway Authority at the detailed design stage.	These have not been requested this far, anything to be provided now must be at the discretion of the HA as we will not have the powers.	None.

Review the DIA at every GRIP stage to ensure equality of access is maintained for all.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	Yes, but this is not to 'ensure equality of access is maintained for all' it is to ensure that any changes to the design do not worsen the access and they improve where appropriate.	Agreed.
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## Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** T05 Howells Farm level crossing- Anglia Level Crossing Reduction Strategy

### Step 1: Clarifying aims

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



#### **Anglia Level Crossing Reduction Strategy**

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings within the counties of Suffolk, Cambridgeshire, Essex, Hertfordshire, and the unitary authorities of Thurrock, Havering, and Southend-on-Sea. This is referred to as the Anglia Level Crossing

Reduction Strategy ('the Strategy'). Closing or modifying level crossings can help to bring about a number of benefits:

- Improve the safety of level crossing users
- Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy
- Reduce the ongoing operating and maintenance cost of the railway
- Reduce delays to trains, pedestrians and other highway users
- Improve journey time reliability for railway, highway and other rights of way users.

### **T05 – Howells Farm level crossing**

Howells Farm level crossing is a public footpath (FP 23) pedestrian crossing located in the unitary authority of Thurrock. The crossing spans the two track Tilbury Loop of the London, Tilbury and Southend Line.

The crossing is a 'Stop, Look and Listen' crossing, where the user determines whether it is safe to cross. It is a decked crossing, which is marked with white lines. The use of stiles is also required on the approach to the crossing.

The crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C6. The individual risk rating for crossings is 'C' (where 'A' is the highest risk and 'M' is lowest) and collective risk rating for this crossing is '6' (where '1' is the highest risk and '13' is the lowest), making Howells Farm a relatively high risk crossing. Key issues at the site include frequent trains and sun glare. Between 2011 and 2015, there were no incidents of misuse or accidents at the level crossing, however two near misses were documented at the site. Approximately 136 trains use this part of the network daily, at a line speed of 70mph.

Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

### **Project location**

Howells Farm level crossing is located in the unitary authority of Thurrock, between the towns of Basildon (3.5km north east) and Stanford-le-Hope (3km south west). The A13 (Stanford-le-Hope bypass) is located 400m west of the level crossing, with the village of Fobbing located 1km south east.

**Appendix A** contains site photographs and the below map shows the location of the level crossing.

Anglia level crossing reduction strategy



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## Proposals for the project

Network Rail has conducted two rounds of public consultation regarding Howells Farm level crossing; the first was to obtain feedback on its initial options for level crossings in the programme (in June 2016), and the second to obtain feedback on its preferred options (in September 2016). Following the receipt of this feedback, consideration was given as to how any proposed closure of the level crossing and implementation of an alternative route might best be progressed and managed.

Following feedback on Round Two of public consultation, the proposal is to close Howells Farm level crossing to all users and remove the crossing infrastructure. The preferred proposal is to divert all users across the railway via two diversion routes: Fobbing level crossing on High Road (500m north east); and Southend Road bridge (830m south west). This is illustrated in the figure overleaf.

From the western side of Howells Farm level crossing, both Fobbing level crossing and Southend Road bridge would be accessed via existing footways along the B1420 Southend Road. From the east, the proposal is to establish a new, 2m wide Public Right of Way between the level crossing and High Road, as well as establish a new footpath along an existing private track in adjacent field margins between the level crossing and Southend Road. As Southend Road is at an elevated level to the fields on the eastern side of the railway, the construction of a stepped access has been proposed linking Southend Road to the new footpath. **Appendix A and B** provides images and plans.

Fobbing level crossing is an automatic half barrier controlled crossing with an ALCRM score of D2. This level crossing additionally has footpaths on either side of the road and is well marked. It should be noted that High Road has a footpath on only one side of the road. The B1420 Southend Road also has a footpath as part of the route but this does not extend beyond Brook House Farm, this would mean users would have to walk in the carriageway of a 60mph road for approximately 220m. Southend Road bridge also has a narrow footpath on one side of the bridge.

The diversion would add an additional 1.2km to the route. Practically, however, users are unlikely to have to walk the full 1.2km due to the availability of alternative routes in the local area.

The figure overleaf shows the preferred diversion route suggested following public consultation Round 2. This is also available in **Appendix B**, along with initial options for diversions taken to Round 1 and 2 of public consultation.



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Howells Farm level crossing, there is a risk of a future incident at this location. The closure of the crossing will separate people from the railway line at this location, thereby improving the safety of local residents and other users.

The proposals for Howells Farm level crossing will impact accessibility, walking distances, and journey times for people using the crossing. The diversion would add an additional 1.2km to the route.

The implementation of a permanent diversion route via Fobbing level crossing and the Southend Road bridge may disproportionately affect certain sections of the population who find walking long distances difficult and may struggle to negotiate the new route terrain.

It is noted that this proposal involves diversion from a passive to an active crossing. Fobbing level crossing provides greater warning of approaching trains and is not dependent on users making their own decisions about the safety to cross the line.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- Disability including carers<sup>1</sup>
- Pregnancy/maternity
- Religion or belief
- Sexual orientation
- Gender reassignment
- Age
- Race
- Gender
- Marriage/Civil Partnership

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on people with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User profile

The nine-day census carried out in July 2016 indicated that a total of 18 people used the level crossing over the survey period – an average of 2 people per day. All 18 users were adults. There were no recorded uses of the crossing by any other groups, including children, older people, impaired or wheelchair users, or people with a pushchair / pram.

A breakdown of the census data can be found in **Appendix C**.

### Population profile

In order to gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as the Thurrock unitary authority area.<sup>2</sup> The data is as follows:

- Children (under 16 years of age) make up 22% of the Thurrock population, which is slightly higher than the national average (19%).
- Younger people (16-24 years old) make up 11% of the population of Thurrock, which is in line with the national figure (12%).
- The proportion of older people (here described as people of retirement age – 65 and over) in Thurrock is 13%, which is slightly lower than the national figure of 16%.
- 16% of the Thurrock population have a long-term illness or disability that limits their daily activities. This is in line with the national average of 17%.

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimates taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157242/report.aspx?town=thurrock>

- 19% of the population of Thurrock is from Black, Asian or ethnic minority (BAME<sup>3</sup>) groups. This is in line with the national figure of 20%.
- The figure for people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Thurrock is 4%, which is lower than the national average of 9%.

The above demographic analysis suggests that the population proportions for many of the groups with protected characteristics (and for which there is demographic data) are broadly in line with national proportions. There is one exception: Thurrock has a lower proportion of people from minority faith groups.

### **Local amenities**

According to a review of local authority planning applications in January 2017, there are no plans for future development in the local area.<sup>4</sup>

An analysis of the local area indicates that there are no local amenities in close proximity to the crossing.

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<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Thurrock Council: <http://regs.thurrock.gov.uk/online-applications/pagedSearchResults.do?action=page&searchCriteria.page=2>.

## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impacts of the proposed work at Howells Farm level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic		Explain the potential negative impact
Disability	Y	<p>The permanent closure of Howells Farm level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on disabled people (including people with mobility, sensory and respiratory conditions) compared to non-disabled people.</p> <p>Following the nine-day census, only 2 people per day (and no impaired or wheelchair users) were documented using the crossing. The use of stiles to access the crossing means that the crossing is not currently accessible for wheelchair users and people with mobility difficulties. As such, the closure of the level crossing is likely to have a very limited impact on disabled people, including people in a wheelchair or with mobility difficulties.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the permanent diversion routes proposed, could disproportionately impact upon some disabled people (such as those with mobility impairments). Disabled people are more likely to have difficulties walking long distances and many experience pain and discomfort in doing so.</p> <p>A Department for Transport (DfT) study have shown that of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p>Walking distances will be permanently increased as a result of the level crossing closure, with the proposed diversion route adding up to 1.2km to the route.</p> <p><b>Permanent reduced pedestrian accessibility due to suitability of the diversion route</b></p> <p>Part of the proposal is to construct stepped access between Southend Road and the new footpath on the eastern side of the track. This is likely to restrict access for some disabled people, such as people with mobility impairments, and is inaccessible for people in wheelchairs / mobility scooters.</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

	<p>During public consultation, stakeholders also highlighted that the pathways along some of the diversion route were unsuitable for pedestrians. There are no designated footpaths on B1420 Southend Road beyond Brook House Farm, consequently requiring users to walk in the carriageway of a 60mph road for approximately 220m. In addition, High Road and Southend Road bridge only have a narrow footpath on one side of the road. This may restrict access, potentially discouraging disabled people, particularly those with visual or sight impairments, mobility difficulties (and people in wheelchairs) from using the new route.</p> <p>Further consideration should be given to measures to improve access along the proposed routes. This could include the implementation of a footpath on the 220m of B1420 Southend Road, ensuring all footpaths meet national guidelines. This should include dropped kerbs, tactile paving and a width of at least 1.5m.</p> <p><b>Permanent impacts on user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may be less able to cross safely because of these factors.<sup>6</sup> People with visual or hearing impairments can also have difficulties crossing safely due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>7</sup></p> <p>While access to the crossing for many disabled users is likely to be limited at present given the presence of stiles (as reflected in the lack of usage by this protected characteristic group), reduced interaction with the railway means potentially reduced crossing risk for this group.</p> <p>The need to use an alternative level crossing (Fobbing level crossing) along one of the proposed diversion routes, means that benefits in safety resulting from the closure of Howells Farm level crossing are likely to be reduced. However, as Fobbing level crossing benefits from enhanced safety features such as automatically controlled barriers, this crossing provides greater warning of approaching trains and is not dependent on users making their own decisions about the safety to cross the line.</p> <p>Safety benefits may further be reduced due to the need for users to walk in the carriageway of a 60mph road for part of the route. Consideration should therefore be given to improving the safety of the route for all users, including those with mobility and sensory impairments, by extending the footpath along the B1420 Southend Road.</p>
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<sup>6</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>7</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

Age	Y	<p>The permanent closure of Howells Farm level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on particular age groups – particularly children and older people – when compared with other sections of the population.</p> <p><b><u>Children</u></b></p> <p>The nine-day census did not document any children using the crossing over the full survey period, suggesting that impacts on children are likely to be limited.</p> <p><b>Permanent impacts on user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact children. This is due to their potentially slower walking speeds and because children and younger people can have difficulties correctly processing the speed of oncoming vehicles. Research conducted on behalf of the House of Commons Transport Select Committee, showed that children perceived vehicles moving towards them at more than 20 mph as stationary.<sup>8</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safe diversion as an alternative) is likely to lead to significantly reduced crossing risk for this group.</p> <p>While safety benefits associated with the closure of Howells Farm level crossing will not be fully realised due to the diversion via an alternative level crossing, Fobbing level crossing features automatically controlled barriers making it a safer crossing to use (ALCRM score of D2) than Howells Farm (ALCRM score C6).</p> <p>The lack of pedestrian footways along part of the diversion route will also limit the positive safety impacts for this group.</p> <p><b><u>Older people</u></b></p> <p>The nine-day census did not document any older people using the crossing, suggesting that any impacts of permanent closure will be minimal. The use of stiles to access the crossing means that the crossing is not currently accessible for people with mobility difficulties. The closure of the level crossing is therefore likely to have a limited impact on older people.</p> <p><b>Permanent increased walking distances due to length of the diversion</b></p> <p>Increases in walking distances, as a result of the permanent diversion routes, could disproportionately impact upon older people.</p> <p>Older people are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk more slowly, tire more easily, and are more likely to struggle to climb stairs.<sup>9</sup> Therefore, increased walking distances as a result of the</p>
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<sup>8</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>9</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway' Diversity and inclusion 31032015

	<p>diversion could disproportionately impact older people with mobility problems.<sup>10</sup></p> <p>The proposed diversion routes will increase walking distances by as much as 1.2km, potentially adversely impacting older people.</p> <p><b>Permanent reduced pedestrian accessibility due to nature of the diversion route</b></p> <p>As noted above, part of the proposed diversion route includes the construction of steps, and concerns were raised about pedestrian safety along the route, due to the lack of footpaths. This may discourage people from using the diversion route and restrict accessibility for older people, particularly those with mobility difficulties.</p> <p>Further consideration for measures to improve access along the proposed routes. This could include the implementation of a footpath on the 220m of B1420 Southend Road, ensuring all footpaths meet national guidelines. This should include dropped kerbs, tactile paving and a width of at least 1.5m.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact older people, largely due to their potentially slower walking speeds and the way that older peoples' field of vision tends to decline over time. Studies have shown that this can be at a rate of 1° and 3° per decade.<sup>11</sup></p> <p>Research by University College London has shown that older pedestrians (aged 65 or over) walk more slowly than other pedestrian users (the mean walking speed achieved by over-65s in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to the mean for the population as a whole of 1.2m/s<sup>12</sup>), placing older people at greater risk.</p> <p>Level crossing closures, therefore, can improve the safety for older users by reducing interaction with the railway.</p> <p>The need to use an alternative level crossing (Fobbing level crossing) along one of the proposed diversion routes, means that benefits in safety resulting from the closure of Howells Farm level crossing are likely to be reduced. However, as Fobbing level crossing benefits from the enhanced safety features mentioned above.</p> <p>Also as noted for disabled people above, safety benefits may further be reduced due to the need for users to walk in the carriageway of a 60mph road for part of the route.</p>
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<sup>10</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>11</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>12</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

<b>Pregnancy / maternity</b>	Y	The nine-day census did not document any people with pushchairs / prams using the crossing, suggesting that any impacts of permanent closure will be minimal. The use of stiles to access the crossing means that the Howells Farm is not currently accessible for people from this protected characteristic group. The closure of the level crossing is therefore likely to have a minimal impact on people with pushchairs / prams.
<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender</b>	Y	<b>Improved user safety due to reduced interaction with the railway</b> Safety issues related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings, associated with 70% of all train strikes. Given that males represent approximately 50% of the population as a whole, this would suggest male pedestrians are more at risk at level crossings than female pedestrians. <sup>13</sup>  While safety benefits associated with the closure of Howells Farm level crossing will not be fully realised due to the diversion via an alternative level crossing, Fobbing level crossing features automatically controlled barriers making it a safer crossing in general.
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- Commitment 1: Get everyone home safe every day.  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- Commitment 2: Deliver reliable infrastructure.  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- Commitment 6: Being a customer focused organisation.  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- Commitment 9: A railway fit for the future.

<sup>13</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

## Step 4: Consultation

### Q6. How has consultation with those who share a protected characteristic informed your work?

List the groups you have consulted or reference previous relevant consultation? <sup>14</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation Round 1 (June 2016)	<p>As part of Round 1 of public consultation, four questionnaire responses were received with two people preferring the red route and two people preferring another route. One response positively agreed with the proposals, with three strongly disagreed.</p> <p>Questionnaire responses received during the first round of public consultation identified the following comments / issues regarding the proposals for Howells Farm level crossing:</p> <ul style="list-style-type: none"> <li>• One respondent stated that the current route is a safe way to access the country parks from the main residential areas. The alternative via main roads is too long.</li> <li>• Doubts were raised over whether the proposal will achieve its objectives as the crossing is perceived to be very safe.</li> </ul>
Public consultation Round 2 (September 2016)	<p>As part of public consultation Round 2, three responses were received to the questionnaire, with all three agreeing with the proposals.</p> <p>Questionnaire responses received during the second round of public consultation identified the following comments / issues (outlined below) regarding the proposals for Howells Farm level crossing:</p>
Thurrock Ramblers	<ul style="list-style-type: none"> <li>• These proposals are a big improvement on the current situation. It maintains the round Basildon walk at this point between the Fobbing Marsh and One Tree Mill Country Park.</li> </ul>
Public response	<ul style="list-style-type: none"> <li>• The south west route from the crossing has the most merit as it would give easier access to Laindon Park Rights of Way. Steps would be needed to get to the road over the bridge.</li> </ul>

<sup>14</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

	<ul style="list-style-type: none"> <li>Also, the pathway over the bridge is narrow and not pedestrian friendly.</li> <li>The footpath going to the Fobbing level crossing will only bring you back to the end of FP23.</li> <li>The crossing should also be closed once a new public right of way has been implemented.</li> </ul>
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**Q7. Where relevant, 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.**

N/A

## Step 5: Informed decision-making

**Q8. In light of the assessment above, what is your decision?**

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>Due to the current low usage of the crossing and the availability of alternative routes, closure and redirection along the proposed diversion route is considered an appropriate solution.</p> <p>However, Network Rail should implement route improvement measures along the proposed diversion (as outlined below in the Action Plan) to ensure that the route is fully accessible for all users.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action planning

**Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?**

Action	By when	By who
Develop a communication strategy to ensure that local residents are kept abreast of developments, including	Ongoing	Network Rail project team

scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.		
Network Rail should consider route improvement measures along the proposed diversion, including consideration of extending the footpath on Southend Road. Assurance should be given that all other footpaths meet guidelines, such as having dropped kerbs, tactile paving and a width of at least 1.5m. Rest points could be considered as part of the diversion route.  New footpaths that are created should also meet guidelines.	Detailed design	Network Rail project team
<b>Review the DIA at every GRIP stage to ensure equality of access is maintained for all.</b>	Ongoing	Network Rail project team

See **Appendix D** for Design Team responses to the proposed actions above.

## Step 7: Sign off

Name	Position	Signed	Date
<u>Superuser</u> <sup>15</sup>	Sponsor	<i>D. Corrigan</i>	11/09/2017
Senior Manager <sup>16</sup>	<i>HORSHE</i>	<i>[Signature]</i>	7/12/17

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

<sup>15</sup> Quality assurance check.

<sup>16</sup> Sign-off should be by someone who can approve policy, programme or budget changes.

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

## Appendix A: Site photographs

### Existing level crossing

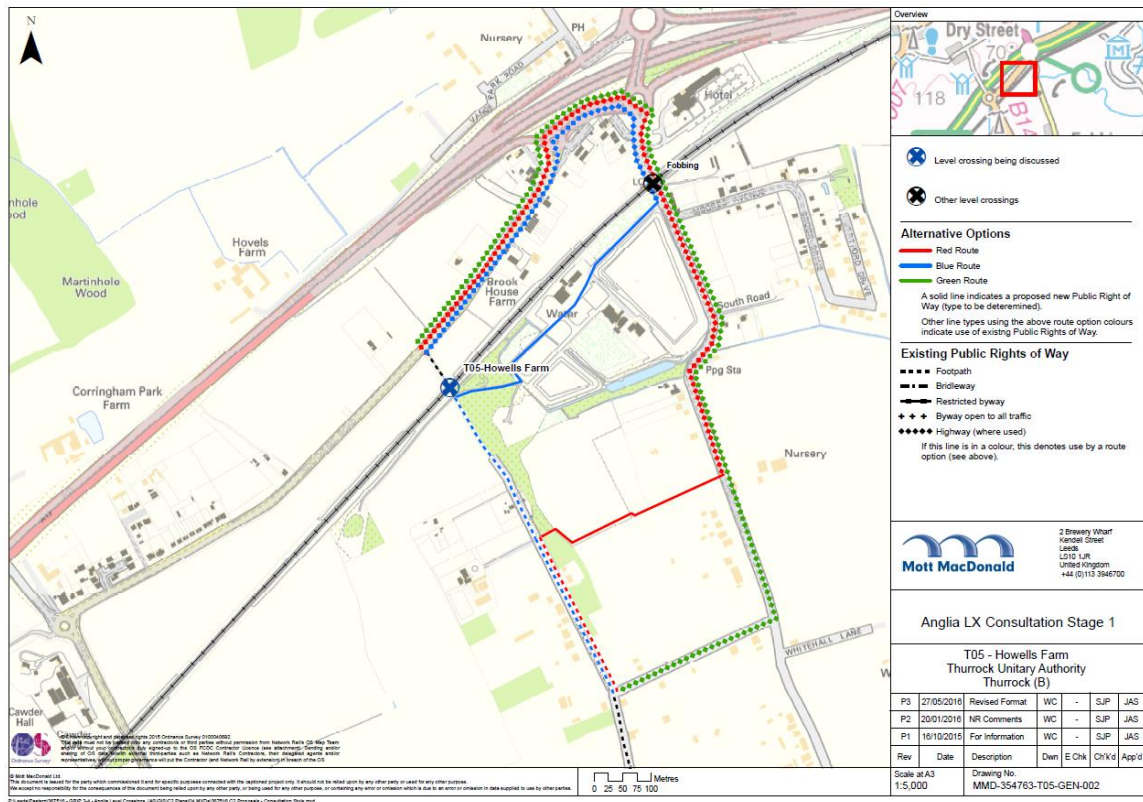


### Alternative railway crossing



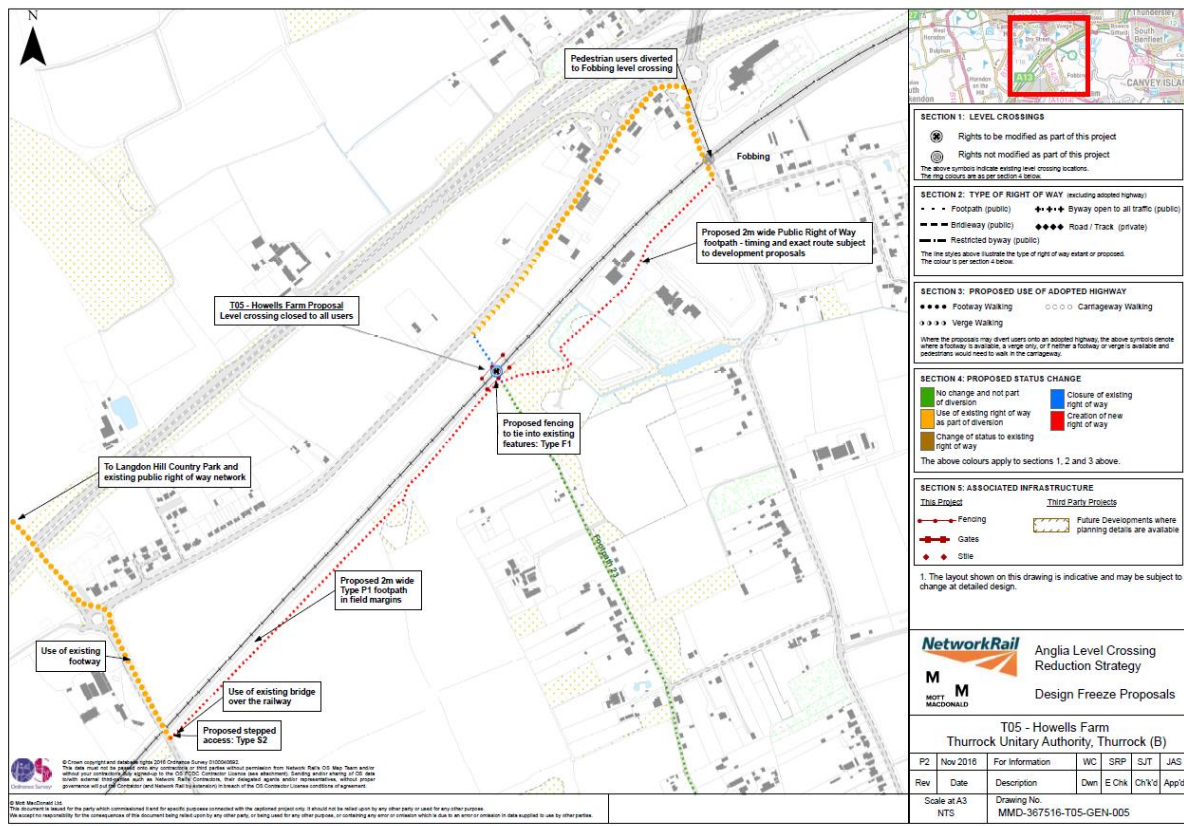
## Appendix B: Scheme drawings

### Round 1 consultation – proposed diversion (initial option)





## Following Round 2 of public consultation – preferred options (at time, November 2016)



## Appendix C: Nine-day census data

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

Combined			
	Horse riders	Riding Cycles	Walking Cycles
			Total
Day 1	Saturday	09/07/2016	0
Day 2	Sunday	10/07/2016	0
Day 3	Monday	11/07/2016	0
Day 4	Tuesday	12/07/2016	1
Day 5	Wednesday	13/07/2016	0
Day 6	Thursday	14/07/2016	0
Day 7	Friday	15/07/2016	0
Day 8	Saturday	16/07/2016	0
Day 9	Sunday	17/07/2016	1
			2

Direction: Combined										
Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair/ Pram	Scooter	Railway Personnel	Total	
0	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	0	0	0	0	3	
2	0	0	0	0	0	0	0	0	2	
3	0	0	0	0	0	0	0	0	3	
0	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	2	
0	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	2	
4	0	0	0	0	0	0	0	2	6	
16	0	0	0	0	0	0	0	2	18	

## Appendix D: DIA Design Team Responses to Action Planning

Action	By when	By who	Design Team comment	NR Response	Design Team Response
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	agreed	Agreed.
Network Rail should consider route improvement measures along the proposed diversion, including consideration of extending the footpath on Southend Road. Assurance should be given that all other footpaths meet guidelines, such as having dropped kerbs, tactile paving and a width of at least 1.5m. Rest points could be considered as part of the diversion route.	Detailed design	Network Rail project team	The proposed diversion route does include a section of verge walking on Southend Road, however the inclusion of a new length of footpath to the southwest of the level crossing means that the proposals will result in significantly less use of Southend Road than is currently the case. The provision of an extended footway is therefore not considered to be appropriate.	Steps are on the plan. Is this an issue for the DIA?	Steps have been considered during the DIA process. Two diversion routes have been identified at this level crossing and one of these is accessible via Fobbing level crossing.
New footpaths that are created should also meet guidelines.			Noted		None.

Review the DIA at every GRIP stage to ensure equality of access is maintained for all.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	Yes, but this is not to 'ensure equality of access is maintained for all' it is to ensure that any changes to the design do not worsen the access and they improve where appropriate.	Agreed.
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## Diversity Impact Assessment

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** E41 Paget - Anglia Level Crossing Risk Reduction Programme

### Step 1: Clarifying Aims

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

##### **Anglia Level Crossing Risk Reduction Programme**

Network Rail has committed to achieve a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

The Anglia Level Crossing Risk Reduction Programme is part of Network Rail's commitment to improving safety and reducing risk at level crossings. As part of the programme, Network Rail has developed proposals for the possible closure or change to public rights of way at over 130 level crossings within the counties of Norfolk, Suffolk, Cambridgeshire, Essex, Hertfordshire, and the Unitary Authority of Thurrock.

##### **E41 - Paget Level Crossing**

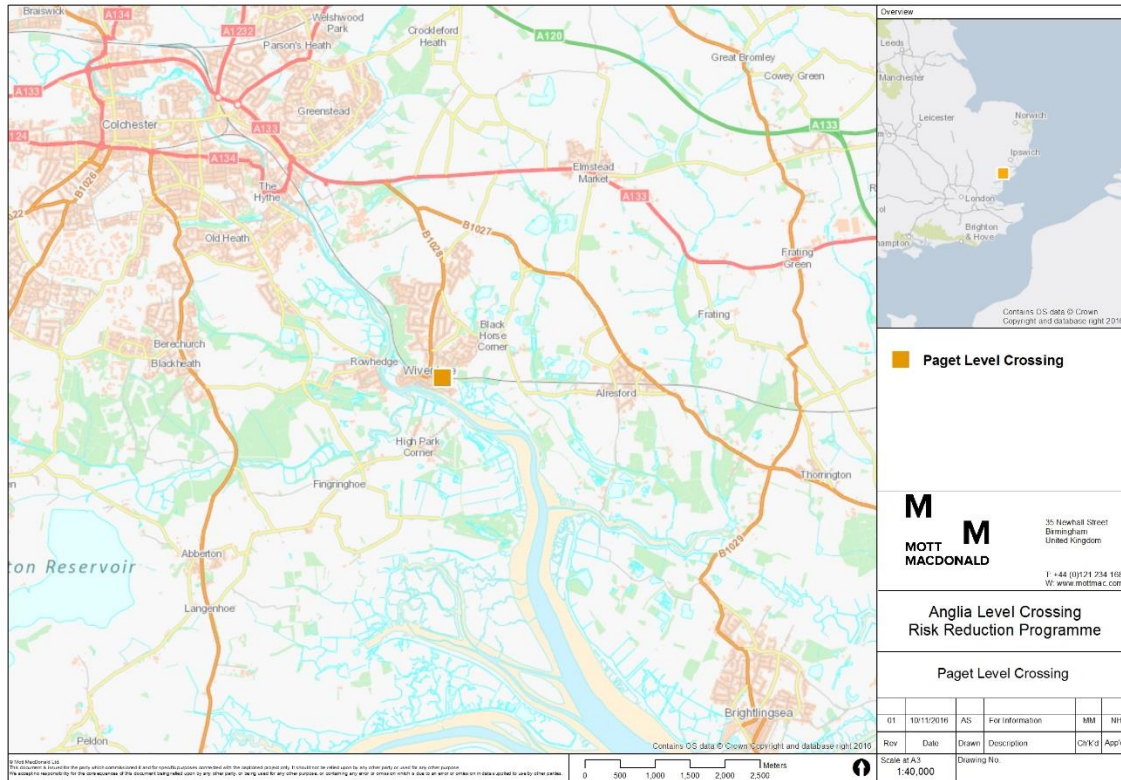
Paget level crossing has been identified as part of the programme as it has a high risk rating for this part of the network.

The crossing has an All Level Crossing Risk Model (ALCRM – the system used to measure risk at crossings) score of C4. The individual risk rating for crossing users is 'C' (where 'A' is highest risk and 'M' is lowest) and the collective risk rating for this crossing is '4' (where '1' is highest risk and '13' is lowest), making Paget a high risk crossing.

The objective of the Programme is to investigate risk reduction measures which could be implemented at the crossing. These measures could include closure or modification of the crossing itself, or the re-routing of users to an alternative. Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

##### **Project location**

Paget level crossing is located in the town of Wivenhoe, Essex. See below:



The crossing is on the two track Sunshine Coast Line (a branch of the Great Eastern Main Line) and is located 400m east of Wivenhoe station. Approximately 94 trains use this part of the network daily and, due to the dangerous nature of the crossing (i.e. insufficient sighting distances), trains are restricted to speeds of up to 25mph.

The level crossing has wicket gates in the railway boundary fence (FPW). It is a passive level crossing where the user is instructed to stop, look and listen: beware of trains, and they must make their own decision whether it is safe to cross. The railway at this crossing comprises two lines of rails and carries passenger trains with a line speed of up to 50mph (although speeds of down trains are restricted). Whistle boards are provided to warn of approaching trains. These are only effective between 0600–2359 owing to the NTQP. SAWD (Covtec) is also present at this crossing, which sounds a horn as a train approaches 24 hours a day, but is not 100% reliable.

As the railway line bisects Wivenhoe, there are residential estates and community and business resources on either side of the crossing. The River Colne is located approximately 270m south of the line. The approach to the level crossing is via a narrow gravel path between residential properties. Metal railings and vegetation narrow the path further nearer to the crossing itself, potentially restricting access for some users.

**Q2. Could this work impact on people? If yes, briefly explain how (considering our duty to promote equality, tackle discrimination and foster good relations between groups).**

Yes.

Without the closure of Paget level crossing, there is a risk of a future incident at this location. The closure of the crossing will separate people from the railway line, thereby improving the safety of local residents and other users.

The proposals for Paget level crossing will impact accessibility, walking distances, and journey times for users in the local community, and walkers using the route recreationally.

The implementation of a permanent diversion via Anglesea Road and / or Phillip Road may disproportionately affect certain sections of the population who find walking long distances difficult and may struggle with the new terrain and gradients required.

## Step 2: The Evidence Base

**Q3. Record here 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 evidence in relation to all the protected characteristics;

- |  |                              |
|--|------------------------------|
| - Disability including Carers <sup>1</sup> | - Age                        |
| - Pregnancy/maternity                      | - Race                       |
| - Religion or belief                       | - Gender                     |
| - Sexual orientation                       | - Marriage/Civil Partnership |
| - Gender reassignment                      |                              |

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on those with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

In order to gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as the Borough of Colchester, Essex.<sup>2</sup> These are as follows:

- Children (under 16 years old) make up 18% of the district of Colchester. This is broadly equivalent to the figure of 19% for England.
- Younger people (16-24 years old) make up 14% of the population of Colchester, which is slightly higher than the 12% national figure.

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimates taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157215/report.aspx?town=colchester>

- Older people (here described as people of retirement age – 65 and over) make up 16% of both the population of Colchester and nationally.
- 15% of the population of Colchester is living with a long-term illness or disability that limits their daily activities; this is lower than the national average of 17%.
- 12% of Colchester are from Black, Asian or minority ethnic (BAME) groups. This is considerably lower than the figure for England (20%).
- Colchester has a low proportion of its population belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) – 4% compared with 9% for England.

An analysis of local amenities indicates that there are a number of local amenities close to the crossing, including places of importance to equalities groups, and in particular St. Mary's Wivenhoe, Wivenhoe Congregational Church, Wivenhoe Montessori Nursery and Millfields Primary School.

The nine-day census carried out in July 2016 indicated that a total of 1,184 people used Paget level crossing during the survey period – an average of 132 people per day. The survey results showed that adult pedestrians constituted 94% (1116/1184) of level crossing users, 17 of whom were classified as older people. Of the 66 child users, 60 were accompanied by an adult and six were unaccompanied. One pushchair / pram was recorded using the crossing. Altogether, children constituted 6% of the survey population. No wheelchair / mobility-chair users were recorded using the crossing, however there was one case of an impaired person using the crossing. A breakdown of the census can be found in Appendix B.

### **Options being considered**

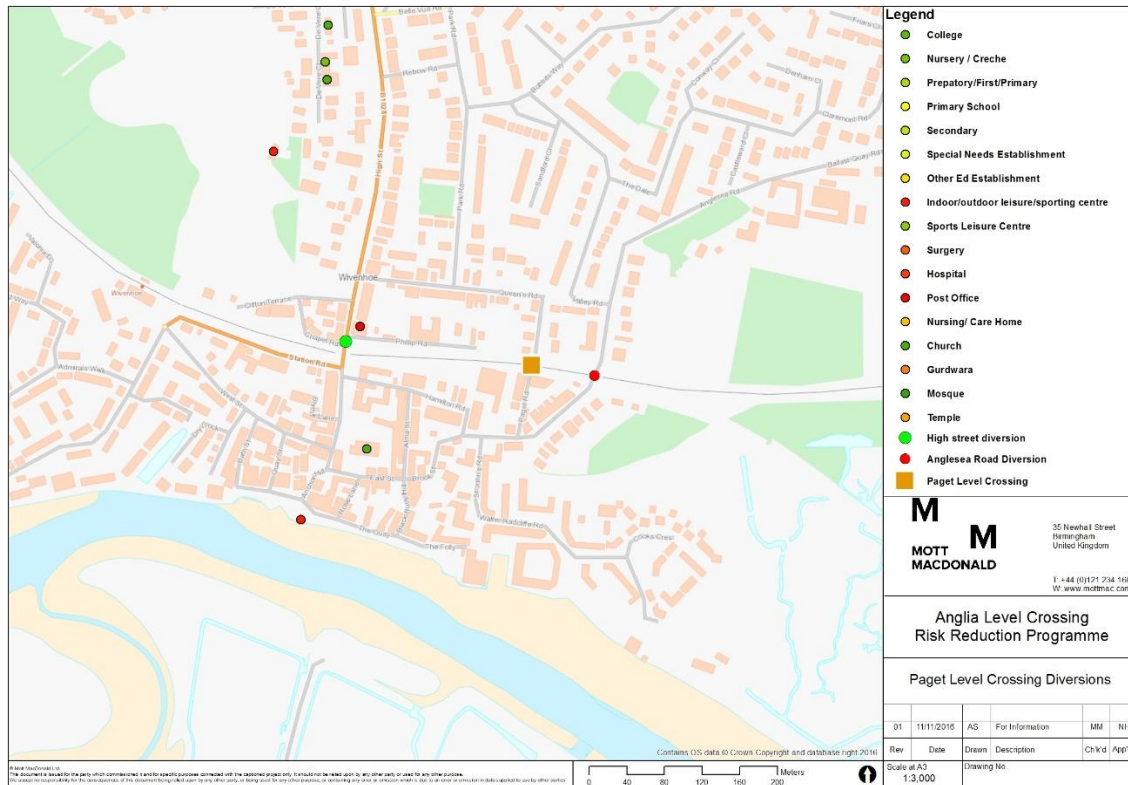
In order to determine the most appropriate solution, Network Rail conducted two public consultation exhibitions were held in Colchester to establish how the closure of the level crossing and establishing of an alternative route might best be progressed and managed. Public consultation exhibitions were held on the 17<sup>th</sup> June 2016 and from the 23<sup>rd</sup> September 2016 to the 14<sup>th</sup> October 2016.

Network Rail is considering the following options:

- Close the level crossing and divert users eastwards via existing roads, crossing the railway via Anglesea Road
- Close the level crossing and divert users westwards via a new footpath linking to Phillip Road and on to the High Street railway crossing.

### **Proposed diversion**

It is proposed that all users will be diverted to the Anglesea Road bridge to the east of the level crossing or, alternatively, a new footpath will be created westwards allowing users to cross the railway via High Street (see below). The development of a more substantive picture of local desire lines for the crossing and associated routes could be achieved through cordon survey interviews with users at fixed locations and times.



Both diversion routes would result in increased walking distances of between 330m and 490m. There are no designated footways along Angelsea Road or Phillip Road, meaning that users would have to walk in the carriageway for all or part of the diversion. Additionally, previous public consultation undertaken by Network Rail raised some concerns regarding the steepness and length of the route via the Angelsea Road bridge.

As part of the proposals for the crossing, there are plans to install a new handrail and re-profile the paved area of Queens Road (leading to Angelsea Road) in order to provide a flatter rest area with a bench. A new footpath link within Network Rail land to Phillip Road is also under consideration.

## Step 3: Impact

**Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?**

Protected Characteristic		Explain the potential negative impact
Disability	Y	The permanent closure of the Paget level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on disabled people wishing to use the routes compared to non-disabled people.

	<p><b>Permanent increased walking distances due to length of diversions</b></p> <p>Increases in walking distances, as a result of the permanent diversion routes, are likely to disproportionately impact upon some disabled people. Disabled people are more likely to have difficulties walking long distances and many experience pain in doing so.</p> <p>Studies have shown that of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>3</sup> The proposed diversion route via Anglesea Road would add approximately 400m to the route, potentially adversely impacting disabled people who use the current level crossing as a shortcut to local amenities.</p> <p>It is proposed that a new handrail would be installed, as well as the re-profiling of the paved area along the route to provide a new, flatter rest area with a bench. These may reduce some of the negative implications associated with the diversion.</p> <p><b>Permanent reduced pedestrian accessibility due to suitability of diversion routes</b></p> <p>Even where routes are free from obstacles such as steps, as is the case with the bridges on Anglesea Road and High Street, diversions involving bridges can act as a barrier for those with sight and mobility impairments, potentially creating additional distances for these users to travel, and potentially requiring challenging gradients to manage (even when designed to standard specifications) for those in wheelchairs.<sup>4</sup></p> <p>In the case of the proposed route via Anglesea Road, stakeholders raised concerns over the steep gradient of the route and the difficulties this may pose to wheelchair users. As such, accessibility may be reduced for some users. It is however noted that, as part of the proposals, there is a plan to provide a flatter 'rest area' with a bench on Queen's Road. This may also help to reduce concern over the suitability of the route, ensuring fewer disabled are deterred from crossing the railway.</p> <p>Additionally, access is considerably restricted along High Street due to narrow pedestrian footpaths and the presence of street lights / utility poles in the middle of footways.</p> <p>Following the nine-day census, one impaired person and no wheelchair users were documented using the crossing. As the current approaches to Paget level crossing are narrow, it is likely that the existing crossing is already inaccessible to some disabled users. While the unpaved nature of Anglesea Road may not be any more restrictive than Paget level crossing, the solutions do not necessarily provide improved access benefits to disabled users.</p>
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<sup>3</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>4</sup> Ibid.

		<p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact disabled people. Crossing speeds are likely to be slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may also be less able to cross safely because of these factors.<sup>5</sup> People with visual or hearing impairments can also have difficulties crossing safely due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>6</sup> While access to the crossing for many disabled users is likely to be limited, reduced interaction with the railway means potentially reduced crossing risk for this group.</p> <p>Due to the lack of footways on Anglesea Road and Philip Road, safety benefits associated with the closure of the level crossing may be reduced by the need for pedestrians to walk in the carriageway when using the proposed diversion routes.</p>
<b>Age</b>	Y	<p>The permanent closure of Paget level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on particular age groups compared to the general population.</p> <p><b><u>Children</u></b></p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings disproportionately impact children. This is due to their potentially slower walking speeds and because children and younger people can have difficulties correctly processing the speed of oncoming vehicles. Research conducted on behalf of the House of Commons Transport Select Committee, showed that children perceived vehicles moving towards them at more than 20 mph as stationary.<sup>7</sup></p> <p>As such, reduced interaction with the railway (due to the use of a safe diversion as an alternative) is likely to lead to significantly reduced crossing risk for this group.</p> <p>Due to the lack of footways on Anglesea Road and Philip Road, safety benefits associated with the closure of the level crossing may be reduced by the need for pedestrians to walk in the carriageway when using the proposed diversion routes.</p> <p>The nine-day census highlighted that the level crossing is frequently used by children, with 66 children (60 accompanied and 6</p>

<sup>5</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>6</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>7</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

	<p>unaccompanied) using the level crossing during the survey period.</p> <p><b><u>Older people</u></b></p> <p><b>Permanent increased walking distances due to length of diversions</b></p> <p>Increases in walking distances, as a result of the closure of Paget level crossing and the permanent use of diversion routes, are likely to disproportionately impact upon older people.</p> <p>The proposed diversion routes would increase walking distances by between 330m and 490m, potentially adversely impacting older people who use the current level crossing as a shortcut to local amenities.</p> <p>Older people are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk slower, get exhausted more easily and struggling to climb stairs.<sup>8</sup> Therefore, increased walking distances as a result of the diversion could disproportionately impact older people with mobility issues, as these people are more likely to have difficulties walking long distances and experience pain or discomfort in doing so.<sup>9</sup></p> <p><b>Permanent reduced pedestrian accessibility due to nature of the diversion routes</b></p> <p>Older people are more likely than other sections of the population to have mobility impairments and therefore require accessible infrastructure. While the proposed alternative routes make use of level accessible bridges, the Anglesea Road diversion route could potentially reduce pedestrian accessibility on account of the steep gradients along the route.</p> <p>Older people are more likely than other sections of the population to have mobility impairments and therefore require accessible infrastructure. NHS data indicates that 62% of fatal falls in those aged 65 and over are on or from stairs or steps.<sup>10</sup> Bridges can act as a barrier for older people, and can create additional distance to travel or require challenging gradients to manage for those who are frail (even when designed to accessible standard specifications). The scheme could therefore result in potentially reduced pedestrian accessibility due to gradient of the route.</p> <p>There are, however, plans to install a handrail along the steep section of the diversion route and re-profile the paved area to provide a flatter rest area with a bench. This may help mitigate some of the negative impacts arising from the route. This may also prevent concern over the suitability of the route from deterring older people from crossing.</p> <p><b>Permanent improved user safety due to reduced interaction with the railway</b></p>
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<sup>8</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway'

<sup>9</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

<sup>10</sup> Health Promotion England: 'Older people and accidents'

		<p>Safety issues related to level crossings disproportionately impact older people, due to their potentially slower walking speeds. Research by University College London has shown that older pedestrians (aged 65 or over) walk more slowly than other pedestrian users (the mean walking speed achieved in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to mean for the population as a whole 1.2m/s<sup>11</sup>), placing them at greater risk. Older people are also particularly at risk as their field of vision declines over time, making them more vulnerable to moving vehicles. Studies have shown that this can be at a rate of 1° and 3° per decade.<sup>12</sup> The nine-day census identified that 17 older people used the level crossing during the survey period.</p> <p>As with disabled people, the lack of footways on both Anglesea Road and Phillip Road mean safety benefits associated with the closure of the level crossing may be reduced by the need for pedestrians to walk in the carriageway when using the proposed diversion routes.</p>
<b>Pregnancy / maternity</b>	Y	<p><b>Permanent reduced pedestrian accessibility due to the nature of the diversion routes</b></p> <p>Inaccessible infrastructure can disproportionately impact upon people with pushchairs. Even accessible infrastructures, such as bridges, can present challenging gradients to manage for people pushing pushchairs.</p> <p>The proposed diversion along Anglesea Road could potentially reduce pedestrian accessibility for people with pushchairs due to the steepness of the route to access the bridge from the level crossing site. Additionally, access is considerably restricted along High Street due to narrow footways and the presence of street lights / utility poles in the middle of footways.</p> <p>The nine-day census identified only one user with a pushchair / pram using Paget level crossing during the survey period, suggesting that parents with pushchairs may already be using alternative routes to cross the railway line.</p>
<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender</b>	Y	<p><b>Improved user safety due to reduced interaction with the railway</b></p> <p>Safety issues related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings, associated with 70% of all train strikes. Given that males represent approximately 50% of the population as a whole, this would suggest male pedestrians are more at risk at level crossings than female</p>

<sup>11</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

<sup>12</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

		pedestrians. <sup>13</sup> Reduced interaction with the railway (due to the diversion onto the bridge) would lead to reduced crossing risk for men.
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

Activities to support equality and diversity are set out in the Action Plan below.

No additional activities are currently identified.

## Step 4: Consultation

**Q6. How has consultation with those who share a protected characteristic informed your work?**

List the groups you have consulted or reference previous relevant consultation? <sup>14</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation	<p>Responses received during the public consultation exhibitions included the following issues regarding Paget level crossing:</p> <ul style="list-style-type: none"> <li>• Concerns about the length of the diversion were raised</li> <li>• Numerous concerns about the steepness of the diversion route were identified</li> <li>• Beliefs that the diversion route is not suitable because the Anglesea Road is an unmade and unadopted road and due to concerns regarding the width of the bridge.</li> <li>• Concerns over the safety of pedestrians on the diversion as there is no segregation between pedestrians and motorists.</li> <li>• The level crossing is a very useful shortcut and therefore widely used</li> </ul>

<sup>13</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>14</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

	<ul style="list-style-type: none"> <li>• Respondents suggest that the diversion route is unsuitable for wheelchairs and pram/pushchairs.</li> <li>• Responses included a request for electronic gates and warning lights on either side of the level crossing to be implemented.</li> <li>• Responses also included a request for a footbridge at the site.</li> </ul>
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**Q7. Where relevant, 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.**

N/A

## Step 5: Informed Decision-Making

**Q8. In light of the assessment above, what is your decision?**

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>Due to the current user profile and available alternatives, closure and redirection along the proposed diversion routes is considered an appropriate solution.</p> <p>However, Network Rail should liaise with the council regarding the proposed route improvement on Queen's Road and consider how other obstructions along pedestrian footways (such street lights / utility poles on High Street) could be altered to provide a fully accessible route for all users.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action Planning

**Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?**

Action	By when	By who
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and any other benefits of the scheme, particularly focussing on user safety.	Ongoing	Network Rail project team
Develop a route improvement strategy along the diversion routes to the crossing with the local authority to enhance the user experience for all groups (e.g. the relocation of utility poles), increase a sense of safety (for example through use of good quality lighting, CCTV, or improved natural surveillance) and encourage use by all groups.	Ongoing	Network Rail project team
Explore improvements to diversion routes in partnership with the local authority including: the relocation of utility poles and street lighting; signage to support way finding; and ensuring level surfaces, including dropped kerbs and tactile paving.	Prior to implementing works	Network Rail liabilities team
Tactile surfaces and handrails of an appropriate height, colour and material should be implemented on the proposed new routes to improve access for users with visual and mobility impairments.	Prior to implementing works	Design team
Consideration should be given to the viability of creating of a footbridge at Paget level crossing and the construction of a footpath on the Anglesea Road bridge to improve pedestrian safety.	Prior to implementing works	Design team
<b>Review this DIA</b>	<b>Ongoing</b>	<b>Network Rail project team</b>

See **Appendix C** for Design Team responses to the proposed actions above.

## Step 7: Sign off

Name	Position	Signed	Date
DIA Owner			
<u>Superuser</u> <sup>15</sup>	Day Liability Negotiation Manager	<i>[Signature]</i>	18/07/2017
Senior Manager <sup>16</sup>	Head of Route Health, Safety and Environment	<i>[Signature]</i>	8/9/2017

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

<sup>15</sup> Quality assurance check.

<sup>16</sup> Sign-off should be by someone who can approve policy, programme or budget changes.  
Diversity and inclusion 31032015

## Appendix A: Site photos (March 2017)



Downside approach



Path across railway



Supplemental audible warning devices



Upside approach from crossing



Upside approach



Wicket gate (downside)

## Appendix B: Nine day pedestrian census report

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

Pedestrians	Adult	Accompanied Child	Unaccompanied Child	Older People	Impaired User	Wheelchair	Pushchair / Pram	Scooter	Railway Personnel	Total
9th July 2016	279	28	0	6	1	0	0	0	0	314
10th July 2016	128	7	2	3	0	0	0	0	0	140
11th July 2016	98	4	0	1	0	0	0	0	0	103
12th July 2016	107	0	2	0	0	0	1	0	0	110
13th July 2016	104	1	0	1	0	0	0	0	0	106
14th July 2016	84	4	0	0	0	0	0	0	0	88
15th July 2016	95	5	2	3	0	0	0	0	0	105
16th July 2016	116	9	0	1	0	0	0	0	0	126
17th July 2016	88	2	0	2	0	0	0	0	0	92
	1099	60	6	17	1	0	0	0	0	1184

## Appendix C: DIA Design Team Responses to Action Planning

Action	By when	By who	Design Team comment	NR Response	Design Team Response
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and any other benefits of the scheme, particularly focussing on user safety.	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	agreed	No action
Develop a route improvement strategy along the diversion routes to the crossing with the local authority to enhance the user experience for all groups (e.g. the relocation of utility poles), increase a sense of safety (for example through use of good quality lighting, CCTV, or improved natural surveillance) and encourage use by all groups.	Ongoing	Network Rail project team	The proposals in effect now offers three diversion routes for users: one via Anglesea Road; one via Queens Road to High Street; and one via the new footpath link and Phillip Road to High Street. Queens Road is lit with a full footway, it also offers (along with Anglesea Road) good natural surveillance. There are no underbridges so CCTV is not considered appropriate. Discussions have been held with the local authority regarding pedestrians improvements to the railway bridge on High Street.	All works now included in order limits	Agreed - to be action at detailed design

Explore improvements to diversion routes in partnership with the local authority including: the relocation of utility poles and street lighting; signage to support way finding; and ensuring level surfaces, including dropped kerbs and tactile paving.	Prior to implementing works	Network Rail liabilities team	A flat rest area has been incorporated into the scheme proposals. A pedestrian improvement scheme to the High Street overbridge has also been provisionally agreed by the Highway Authority. A new footpath link has also been incorporated into the scheme mitigation	All works now included in order limits	Agreed - to be action at detailed design
Tactile surfaces and handrails of an appropriate height, colour and material should be implemented on the proposed new routes to improve access for users with visual and mobility impairments.	Prior to implementing works	Design team	The provision of these facilities within the adopted highway should be discussed further with the Highway Authority at the detailed design stage.	Already covered in plans	Agreed - to be action at detailed design
Consideration should be given to the viability of creating of a footbridge at Paget level crossing and the construction of a footpath on the Anglesea Road bridge to improve pedestrian safety.	Prior to implementing works	Design team	This has been considered by NR and there is not the space for a bridge either with or without ramps. In addition the presence of residential dwellings within 5m of the level crossing would mean unacceptable impacts on the amenity of those households. Anglesea Road is a privately maintained highway which is currently a shared surface. The construction of a footway is not considered necessary or desirable and would likely generate significant opposition from the street owners/ maintainers.	Agreed	Noted

Review this DIA	Ongoing	Network Rail project team	NR to undertake at detailed design / implementation stage.	Yes, but this is not to 'ensure equality of access is maintained for all' it is to ensure that any changes to the design do not worsen the access and they improve where appropriate.	NR to take appropriate actions
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## Diversity Impact Assessment (DIA)

Guidance for completing each section is provided in the  
**Everyone Guide to Diversity Impact Assessments**

**Name of policy, programme or project:** E31 Brickyard Farm - Anglia Level Crossing Reduction Strategy

### Step 1: Clarifying aims

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



#### **Anglia Level Crossing Reduction Strategy**

Network Rail has committed to achieving a 25% reduction in level crossing system risk nationally as part of a programme of works undertaken within Control Period 5 (CP5), which runs from 2014-19.

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings within the counties of Suffolk, Cambridgeshire, Essex, Hertfordshire, and the unitary authorities of Thurrock, Havering, and Southend-

on-Sea. This is referred to as the Anglia Level Crossing Reduction Strategy ('the Strategy'). Closing or modifying level crossings can help to bring about a number of benefits:

- Improve the safety of level crossing users
- Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy
- Reduce the ongoing operating and maintenance cost of the railway
- Reduce delays to trains, pedestrians and other highway users
- Improve journey time reliability for railway, highway and other rights of way users.

### **E31 – Brickyard Farm**

Brickyard Farm level crossing is a public footpath (EX/BENF/12) crossing located in the county of Essex. The level crossing spans the two track London, Tilbury and Southend Railway line.

The level crossing is a 'Stop, Look and Listen' crossing, where the user determines whether it is safe to cross. The approaches, particularly to the north, are unpaved and the crossing requires users to negotiate a stile to access the line.

The level crossing has an All Level Crossing Risk Model (ALCRM – the system used to measures risk at crossings) score of C4. The individual risk rating for crossings is 'C' (where 'A' is the highest risk and 'M' is lowest) and the collective risk rating for this crossing is '4' (where '1' is the highest risk and '13' is the lowest), making Brickyard Farm a high-risk crossing. Key issues at the site relate to frequent trains, sun glare and a large number of users. Between 2011 and 2015, there were no accidents at the level crossing. However, there was one incident of misuse and two near misses at the site. Approximately 274 trains use this part of the network daily at a speed of 75mph.

Network Rail aims to ensure the most viable option for continued access across the line based on the need to ensure public safety, meet local needs, and ensure compliance with its duties under the Equality Act 2010.

### **Project location**

Brickyard Farm level crossing is located in the Castle Point district in the county of Essex. It is located approximately 400m south of the village of Benfleet and 380m west of Benfleet station. The crossing links recreational land (Benfleet Downs / Hadleigh Park) comprising of long walking routes to the B1014 and riverside (as illustrated in the map below).

**Appendix A** contains site photographs and the below map shows the location of the level crossing.



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### Proposals for the project

Network Rail has conducted two rounds of public consultation regarding Brickyard Farm level crossing. The first consultation obtained feedback on its initial options for the level crossings in the programme (in June 2016), and the second to obtain feedback on its preferred options (September 2016).

The preferred proposal for Brickyard Farm (based on feedback received during the first and second rounds of consultation) is to close the level crossing to all users and remove the crossing infrastructure. Under the preferred proposal, users of Brickyard Farm level crossing will be diverted 360m west to an existing underpass where they can cross the railway. The underpass is wide, paved and well-lit meaning that it is unlikely that accessibility problems will arise. Fencing will be erected to prevent trespass onto the railway

From the northern side of the railway, users will be able to access the underpass via a new 2m wide unsurfaced footway linking the existing footpath (EX|BENF|12) at the level crossing to Benfleet station car park. A 1.5m wide footpath is then proposed through the car park to the underpass. On the southern side of the railway, users can access the underpass via B1014 Ferry Road. The proposed diversion results in a maximum increase in walking distance of approximately 710m level walking.

The figure below shows the preferred diversion route suggested following public consultation Round 2. This is also available in **Appendix B**, along with initial options for diversions taken to Round 1 and 2 of public consultation.



**Q2. Could this work impact on people? If yes, briefly explain how** (considering our duty to promote equality, tackle discrimination and foster good relations between groups).

Yes, the work could impact on people.

Without the closure of Brickyard Farm level crossing, there is a risk of a future incident at this location. The closure of the level crossing will separate people from the railway line at this location, thereby improving the safety of local residents and other users.

The proposals for Brickyard Farm level crossing will impact accessibility, walking distances, and journey times for people using the crossing. The diversion will add up to an additional 710m to routes over the line in this area.

The implementation of a permanent diversion route via the underpass may disproportionately affect certain sections of the population who find walking longer distances difficult and may struggle to negotiate the new terrain along the route. However, given the current accessibility problems with the crossing, which has stiles, and insufficient sighting to accommodate slower moving users, adverse impacts resulting from the proposals are likely to be limited.

## Step 2: The evidence base

**Q3. Record here 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 evidence in relation to all the protected characteristics:

- Disability including carers<sup>1</sup>
- Pregnancy/maternity
- Religion or belief
- Sexual orientation
- Gender reassignment
- Age
- Race
- Gender
- Marriage/Civil Partnership

This Diversity Impact Assessment is primarily concerned with ensuring fulfilment of Network Rail's duties under the Equality Act 2010.

Network Rail's responsibility is to identify any potential negative impacts on those with protected characteristics and mitigate these wherever possible and practicable by reasonable adjustments.

### User profile

The nine-day census, carried out in July 2016, indicated that a total of 103 people used the crossing over the nine-day period – an average of 11 people per day. Of the 103 users, 102 were adults. The one remaining user was a child accompanied by an adult. No unaccompanied children, older people, impaired, or people with a pushchair / pram were documented using the crossing over the survey period.

A summary of the survey data can be found in **Appendix C**.

### Population profile

To gain a better insight into the local community and potential users of the level crossing, existing statistical data was reviewed to establish the composition of the local population – here taken as Castle Point district.<sup>2</sup> The data is as follows:

- Children (under 16 years of age) make up 17% of the Castle Point population, which is slightly lower than the national average of 19%.
- The proportion of older people (here described as people of retirement age – 65 and over) in Castle Point is 22%, which is higher than the national average of 16%.
- 19% of the Castle Point population is living with a long-term illness or disability that limits their daily activities. This is in line with the national average of 18%.

<sup>1</sup> 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

<sup>2</sup> Source: ONS Population estimate taken from nomis. Available at:  
<https://www.nomisweb.co.uk/reports/lmp/la/1946157213/report.aspx?town=castle point>.

- 5% of the population of Castle Point is from Black, Asian or minority ethnic (BAME<sup>3</sup>) groups. This is considerably lower than the national figure of 20%.
- The figure for people belonging to minority faith groups (including Buddhist, Hindu, Jewish, Muslim, Sikh and 'other' in national Census data) in Castle Point is 2%, which is lower than the national average of 9%.

The above demographic analysis suggests that the population proportions from many of the groups with protected characteristics (and for which there is demographic data) are broadly in line with national proportions. There are three notable exceptions: Castle Point district has a lower level of people from BAME and minority faith groups and a higher proportion of older people.

### **Local amenities**

A review of local authority planning applications in April 2017 shows that there are no plans for future development in the local area that will impact upon this proposal.<sup>4</sup>

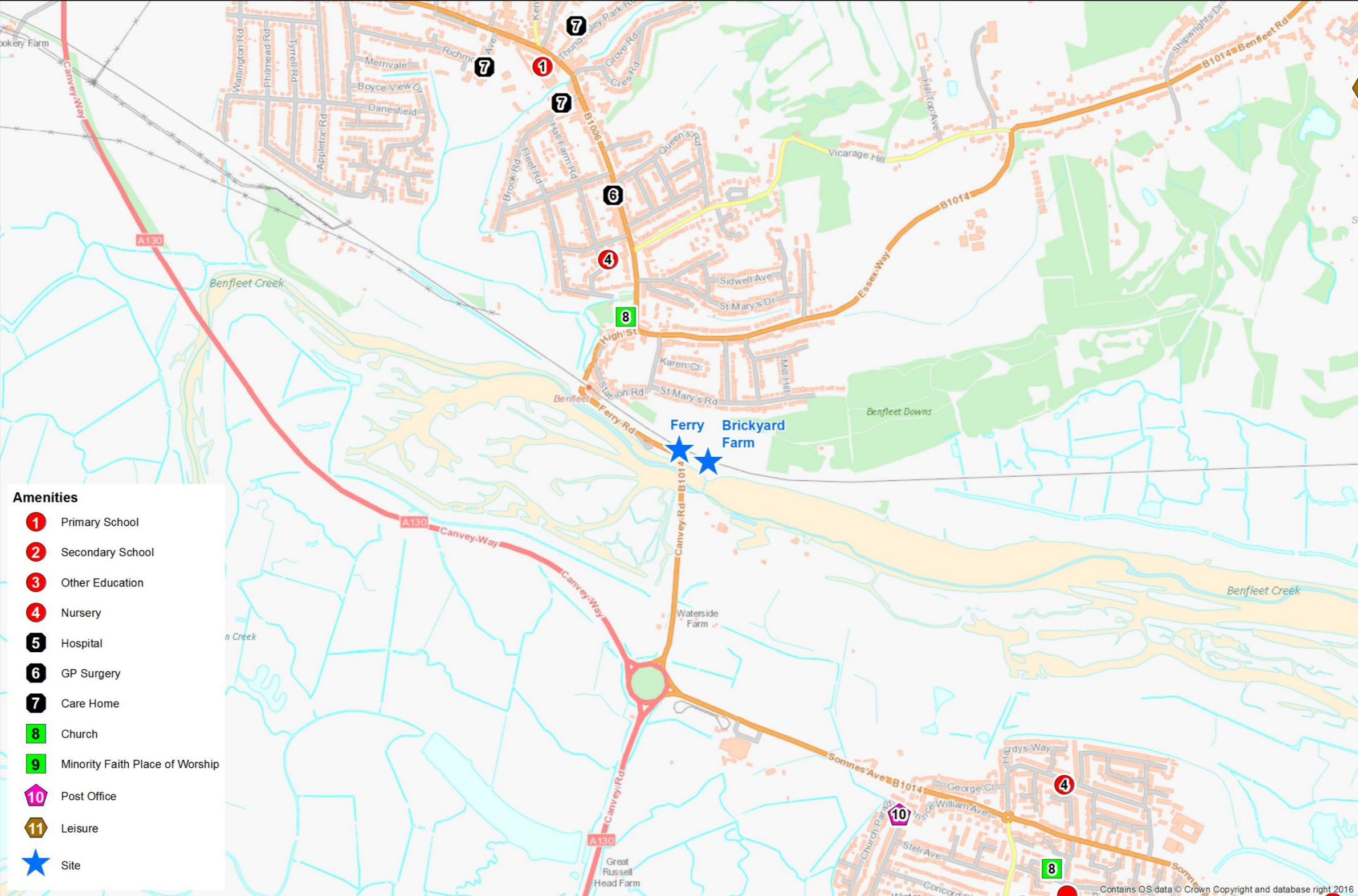
Broad analysis of the local area indicates that within 1.5km of the level crossing, there is a GP surgery, three care homes, a church, a primary school and a nursery school. However, it is noted Brickyard Farm level crossing does not form a key route to access any amenities of importance to those who share a protected characteristic. As such the crossing is most likely predominantly used for leisure purposes, such as accessing the river side and leisure walking.

Further afield, in South Benfleet and on Canvey Island, there is a greater range of local amenities including education facilities, churches and GP surgeries.

The map below shows amenities located in the local area.

<sup>3</sup> Including white Irish, Gypsy and Irish travellers and other white ethnic populations.

<sup>4</sup> Castle Point District Council (2017): 'Planning application search'. See: <https://publicaccess.castlepoint.gov.uk/online-applications/simpleSearchResults.do?action=firstPage>.



- Amenities**
- 1 Primary School
  - 2 Secondary School
  - 3 Other Education
  - 4 Nursery
  - 5 Hospital
  - 6 GP Surgery
  - 7 Care Home
  - 8 Church
  - 9 Minority Faith Place of Worship
  - 10 Post Office
  - 11 Leisure
  - ★ Site

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## Step 3: Impact

### Q4. Given the evidence listed at step 2, what potentially negative impacts could this work have on people with protected characteristics?

The below table assesses the potential impact of the proposed work at Brickyard Farm level crossing on the protected characteristic groups as outlined in the Equality Act 2010 (disability, age, pregnancy / maternity, race, religion / belief, gender, sexual orientation, marriage / civil partnership and gender reassignment).

Protected Characteristic		Explain the potential negative impact
Disability	Y	<p>The permanent closure of Brickyard Farm level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on some users. However, no wheelchair, mobility scooter or mobility impaired people were recorded using the crossing during the survey period. This is likely due to the fact that users are required to negotiate a stile to use the current crossing. As such, the closure of the level crossing is unlikely to have a disproportionate impact on disabled people.</p> <p><b>Permanent impact on walking distances due to implementation of the proposed diversion route</b></p> <p>Stakeholders noted that the proposed diversion was lengthy and as a result of the level crossing closure, walking distances will be permanently increased by up to 710m for those following the proposed diversion route.</p> <p>Increases in walking distances could potentially impact some disabled people (in particular, people with mobility impairments who are able to navigate the stiles). Disabled people are more likely to have difficulties walking long distances and many experience pain and discomfort in doing so. A Department for Transport (DfT) study has shown that of people with a disability who are able to walk, around 30% can walk no more than 50 metres without stopping or experiencing severe discomfort and a further 20% can only manage between 50 and 200 metres.<sup>5</sup></p> <p>However, as noted above, the current crossing is not easily accessible for people with mobility impairments, and as such any impact is likely to be very limited. Those making use of the crossing are also likely to be doing so with the intention and ability to undertake a longer walk, as the crossing is part of longer distance routes in the area. As such, adverse impacts in walking distances are likely to affect only a very limited number of disabled people.</p> <p>Positively, the establishment of the proposed level diversion route adjacent to the railway line would decrease walking distances by 50m for people who are currently using alternative paths in the</p>

<sup>5</sup> Department for Transport (2005): 'Inclusive mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'

		<p>country park to access the station. This could disproportionately benefit disabled users by decreasing walking distances on other routes.</p> <p><b>Permanent impacts on pedestrian accessibility due to suitability of the diversion route</b></p> <p>As the proposal diverts users from a currently restrictive level crossing to a fully accessible underpass, the implementation of the diversion will improve physical access for all users, potentially disproportionately benefiting disabled people.</p> <p>However, part of the proposal is to construct an unsurfaced footpath to provide access to the north of the crossing, which could restrict access for some disabled people who may struggle with the new terrain. Stakeholders noted that there is the potential for the path to be churned up by use by cyclists and cars, reducing the suitability of the path for pedestrians.</p> <p>However, existing walking routes in the area are predominantly unsurfaced, meaning current users of the route are already likely to be familiar with the unsurfaced terrain.</p> <p><b>Permanent improvements to user safety due to reduced interaction with the railway</b></p> <p>While access to the crossing for many disabled users is limited at present (as reflected in the lack of usage by this protected characteristic group), reduced interaction with the railway potentially means reduced crossing risk for this group</p> <p>Crossing speeds tend to be slower for people with disabilities and level crossings often require users to negotiate physical challenges related to structure, gradient and exposure to the track. Pedestrians with sensory, physical or cognitive impairments may be less able to cross safely because of these factors.<sup>6</sup> People with visual or hearing impairments can also have difficulties crossing safely due to not being able to pick up on the variety of visual and audible warning messages at level crossings.<sup>7</sup></p>
Age	Y	<p>The permanent closure of Brickyard Farm level crossing will remove pedestrian access at this point, potentially having a disproportionate impact on children and older people.</p> <p><b><u>Children</u></b></p> <p>The nine-day census recorded one child (accompanied by an adult) using the crossing over the survey period, suggesting that impacts on children are likely to be limited.</p> <p><b>Permanent improvements to user safety due to reduced interaction with the railway</b></p> <p>Safety risks related to level crossings can disproportionately impact children. This is due to their potentially slower walking speeds and</p>

<sup>6</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

<sup>7</sup> Rail Safety and Standards Board (2011): 'Research Programme: Operations and Management - Improving safety and accessibility at level crossings for disabled pedestrians'

	<p>because children and younger people can have difficulties correctly processing the speed of oncoming vehicles. Research shows that children perceived vehicles moving towards them at more than 20mph as stationary.<sup>8</sup></p> <p>While usage of this crossing by children is limited, reduced interaction with the railway (due to the use of a safe diversion as an alternative) would lead to reduced risk for this group.</p> <p><b><u>Older people</u></b></p> <p>The nine-day census did not document any older people using the crossing, suggesting that disproportionate impacts of permanent closure will be limited. The use of a stile and unsurfaced paths to access the crossing means that it is not currently accessible for some older people, especially those with mobility difficulties. The closure of the level crossing is therefore likely to have a very limited impact on older people.</p> <p><b>Permanent impact on walking distances due to implementation of the proposed diversion route</b></p> <p>Stakeholders suggested that the proposed diversion was lengthy and reduced access to Hadleigh Country Park. As noted above, walking distances will be permanently increased by up to 710m as a result of the closure.</p> <p>Increases in walking distances, as a result of the use of permanent diversion routes, could disproportionately impact older people as they are more likely to experience conditions such as arthritis or weak muscles, meaning that they typically walk more slowly and tire more easily.<sup>9</sup></p> <p>Those making use of the crossing are also likely to be doing so with the intention and ability to undertake long walking distances, as the crossing is part of longer distance routes in the area. As such, adverse impacts in walking distances are likely to affect limited number of older people.</p> <p>Positively, the establishment of the proposed diversion route adjacent to the railway line would decrease walking distances by 50m for people who are currently using alternative paths in the country park to access the underpass. It would also provide a new level link between the station and the Country Park. This could disproportionately benefit older users.</p> <p><b>Permanent impacts on pedestrian accessibility due to suitability of the diversion route</b></p> <p>As noted above, the proposal diverts users from a level crossing with restricted access to a fully accessible underpass, the implementation of the diversion will improve access for all users, potentially disproportionately benefiting older people.</p>
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<sup>8</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>9</sup> NHS (2014): 'Safe, compassionate care for frail older people using an integrated care pathway' Diversity and inclusion 31032015

		<p>However, part of the proposed diversion route includes the construction of an unsurfaced path and use of narrow footpaths. This may discourage people from using the diversion route and restrict accessibility for older people, particularly those with mobility difficulties.</p> <p>However, existing walking routes in the area are predominantly unsurfaced, meaning current users of the route are already likely to be familiar with the unsurfaced terrain.</p> <p><b>Permanent improvement to user safety due to reduced interaction with the railway</b></p> <p>Level crossing closures can improve the safety of older users by reducing interaction with the railway. Safety risks related to level crossings disproportionately impact older people, largely due to their potentially slower walking speeds and the way that older peoples' field of vision tends to decline over time. Studies have shown that this can be at a rate of 1° and 3° per decade.<sup>10</sup></p> <p>Research has shown that older pedestrians (aged 65 or over) also walk more slowly than other pedestrian users (the mean walking speed achieved by over-65s in controlled studies was 0.9 metres per second (m/s) in men and 0.8 m/s in women, compared to the mean for the population as a whole of 1.2m/s<sup>11</sup>), placing older people at greater risk.<sup>12</sup></p> <p>Despite low usage, the closure of the level crossing can improve the safety for older users by reducing interaction with the railway.</p>
<b>Pregnancy / maternity</b>	Y	<p>The use of a stile to access the crossing means that Brickyard Farm is not currently accessible for people from this protected characteristic group. As a likely result, the nine-day census did not document any people with pushchairs or prams using the crossing, suggesting that any impacts of permanent closure will be limited for this group.</p> <p><b>Permanent impacts on pedestrian accessibility due to suitability of the diversion route</b></p> <p>As noted above, the proposal diverts users from a currently restrictive level crossing to a fully accessible underpass, the implementation of the diversion will improve access for all users, disproportionately benefiting people with a pushchair / pram.</p> <p>However, part of the proposed diversion route includes the construction of an unsurfaced path. This may discourage people from using the diversion route and restrict accessibility for people with a pushchair / pram.</p>

<sup>10</sup> House of Commons Transport Committee (2014): 'Safety at level crossings: Eleventh Report of Session 2013–14'

<sup>11</sup> 1.2 m/s is the speed assumed in the programming of pedestrian level crossings on the road network, and is generally taken to be the mean walking speed.

<sup>12</sup> Asher, L., et al. (2012): 'Most older pedestrians are unable to cross the road in time: a cross-sectional study', *Age and Ageing* 41.

<b>Race</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Religion or belief</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender</b>	Y	<b>Permanent improvement to user safety due to reduced interaction with the railway</b>  Safety risks related to level crossings can disproportionately impact men. Male pedestrians dominate accidents at level crossings and are associated with 70% of all train strikes. Reduced interaction with the railway (due to the use of an alternative route) could potentially lead to reduced crossing risk for men.
<b>Sexual orientation</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Marriage/Civil Partnership</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.
<b>Gender reassignment</b>	N	No disproportionate impacts are anticipated for this protected characteristic because of the project.

**Q5. What could you do to ensure your work has a positive impact on diversity and inclusion including by supporting delivery of the [Everyone Strategy](#).**

The project will support the delivery of Network Rail's Everyone Strategy, and in particular the following commitments:

- **Commitment 1: Get everyone home safe every day**  
Improving the safety of level crossings reduces the risk of crossing the railway for all users. The project will help to improve safety for rail users by reducing interaction with the railway through safe diversionary route.
- **Commitment 2: Deliver reliable infrastructure**  
The project will help to deliver more reliable infrastructure by reducing the assets along the network requiring maintenance and management.
- **Commitment 6: Being a customer focused organisation**  
The project will help to improve the safety of journeys for infrastructure users through, among other things, use of customer engagement and stakeholder involvements in the planning process.
- **Commitment 9: A railway fit for the future**  
The project helps to deliver an inclusive and accessible railway that links people to communities, education and jobs – ultimately delivering economic growth. The project helps to deliver required improvements and rationalisation to ensure network infrastructure is fit for future use.

## Step 4: Consultation

### Q6. How has consultation with those who share a protected characteristic informed your work?

List the groups you have consulted or reference previous relevant consultation? <sup>13</sup>	What issues were raised in relation to one or many of the protected characteristics?
Public consultation Round 1 (June 2016)	<p>As part of Round 1 of public consultation, four questionnaire responses were received, with one response positive about the proposals and three negative responses.</p> <p>Questionnaire responses received during the first round of public consultation identified the following comments / issues regarding the initial preferred option for Brickyard Farm level crossing:</p> <ul style="list-style-type: none"> <li>• One respondent was concerned that cyclists will be tempted to use the new path as an easy route into Hadleigh Country Park, leading to the path surface being churned up. They suggest that this either needs to be discouraged by the erection of a suitable barrier at the car park end, or by ensuring that a hard surface is provided that will withstand cycling. Ideally this surface treatment would be extended east to the point where Footpath 12 meets Bridleway 60.</li> <li>• One respondent suggested that should safety be a concern, the crossing should be relocated close to the east end of Benfleet station platforms when the trains are either stationary or travelling slowly as they approach the station.</li> <li>• A suggestion was made that a gate is needed to stop cars going from the car park onto the new footpath.</li> <li>• Objection to the closure of the level crossing as the visibility is good and the diversion is long.</li> </ul>
Public consultation Round 2 (September 2016)	<p>As part of public consultation Round 2, six questionnaire responses were received. One respondent was positive about the proposals, while five responded negatively.</p> <p>Questionnaire responses received during the second round of public consultation identified the following comments / issues, outlined below, regarding the proposals for Brickyard Farm level crossing:</p> <ul style="list-style-type: none"> <li>• It was suggested that the crossing was not dangerous and does not need to be closed. The proposed alternative route though does seem convenient.</li> </ul>

<sup>13</sup> This could include our staff networks, the Built Environment Access Panel, local faith leaders etc.

	<ul style="list-style-type: none"> <li>• There should be a physical barrier to keep cyclists off the new footpath, or a hard surface be provided up to the point where Footpath 12 meets Bridleway 60.</li> <li>• The diversion route was described as lengthy and breaks a link in rights of way in the area, making access to the Hadleigh Country Park more time consuming and difficult when approaching from south of the railway, particularly from Canvey Island. Hadleigh Country Park is recognised as a considerable asset to the local leisure scene and access should be made as easy as possible. If it is necessary to close this crossing, then E30 (Ferry level crossing) should remain open.</li> <li>• The user census data was cited as being unreliable.</li> <li>• As Ferry level crossing (E30) is also being closed, the diversion will be lengthy.</li> <li>• The crossing is a great way onto the footpath between Benfleet and Leigh on Sea stations, taking in Hadleigh Downs and Hadleigh Castle. The respondent did not recall any incidents involving this crossing. The usage is fairly low and it appears that those of us who do not use it are perfectly capable of crossing safely and sensibly. Closure of the crossing is disproportionate to the risk.</li> </ul>
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**Q7. Where relevant, 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.**

N/A

## Step 5: Informed decision-making

**Q8. In light of the assessment above, what is your decision?**

Please tick one box and provide a rationale (for most DIAs this will be box 1).

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)	<p>✓</p> <p>Due to the current user profile of the crossing and the availability of alternative routes, closure and redirection along the proposed diversion route is considered an appropriate solution.</p>

4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

## Step 6: Action planning

**Q9. What specific actions will be taken to deliver positive impacts and address any potentially negative impacts identified at step 3 or through consultation?**

Action	By when	By who
Develop a communication strategy to ensure that local residents are kept abreast of developments, including scheduling of works, details of enhancements and improvements, and other benefits of the scheme, including user safety.	Ongoing	Network Rail project team
Network Rail should consider hard surfacing all new footpaths, as well as ensuring that they meet all relevant guidelines. Signage detailing permitted usage should also be provided. Rest points could also be considered along the diversion route to mitigate against any impacts associated with increased walking distances.	Detailed design	Network Rail project team
<b>Review this DIA at all future GRIP stages</b>	<b>Ongoing</b>	<b>Network Rail project team</b>

## Step 7: Sign off

Name	Position	Signed	Date
Superuser <sup>14</sup>	Day Liability Negotiations Manager	<i>[Signature]</i>	18/07/2017
Senior Manager <sup>15</sup>	Head of Route Safety, Health & Environment	<i>[Signature]</i>	8/9/17.

<sup>14</sup> Quality assurance check.

<sup>15</sup> Sign-off should be by someone who can approve policy, programme or budget changes.

If you don't have a local superuser please send your DIA for quality assurance to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk)

To help us respond more quickly please make sure you have;

1. Sent your DIA as a Word document not a PDF
2. Used this naming convention '**Name of project-Draft DIA**'
3. Used the correct DIA form with no additional pages e.g. 'not for circulation cover-sheets'
4. Included any relevant maps / diagrams needed to understand your project
5. Completed all sections of the DIA in line with guidance and training

## Step 8: Publication

Send your final DIAs to [DiversityImpactAssessment@networkrail.co.uk](mailto:DiversityImpactAssessment@networkrail.co.uk). Customer related DIAs will be published on our website.

## Appendix A: Site photographs

**Photo 1: Existing level crossing**

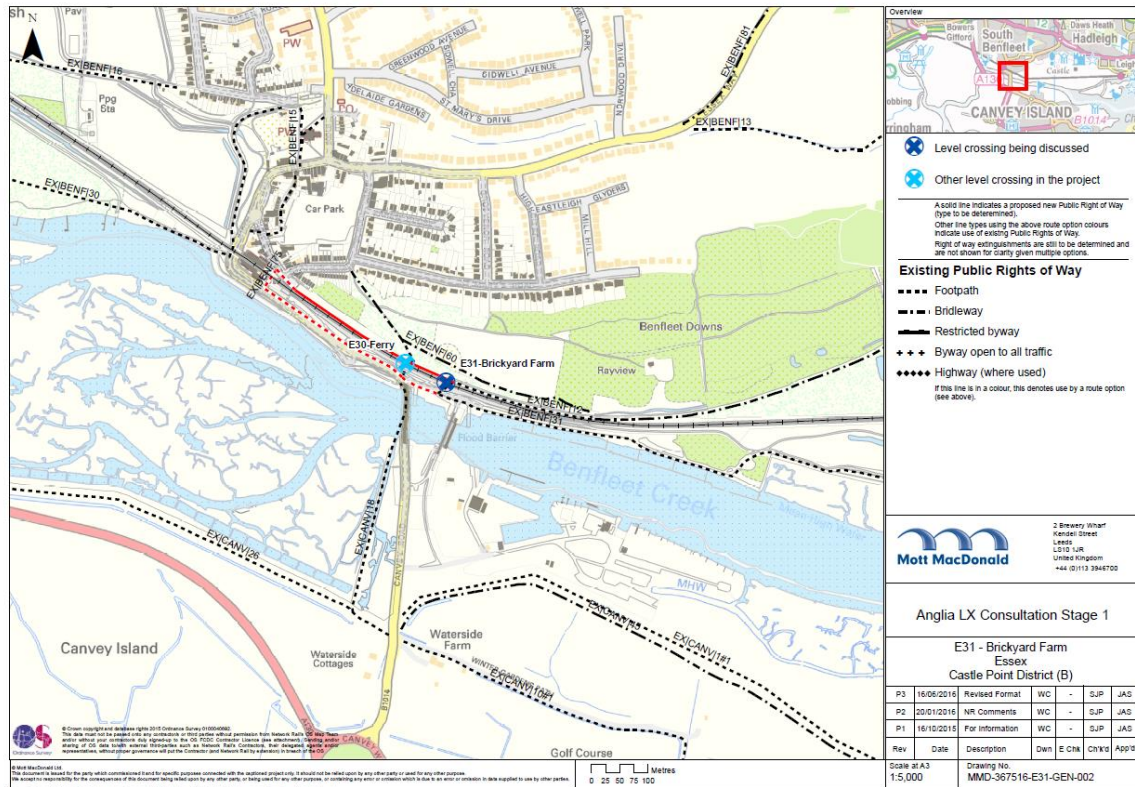


**Photo 2: Alternative railway crossing**

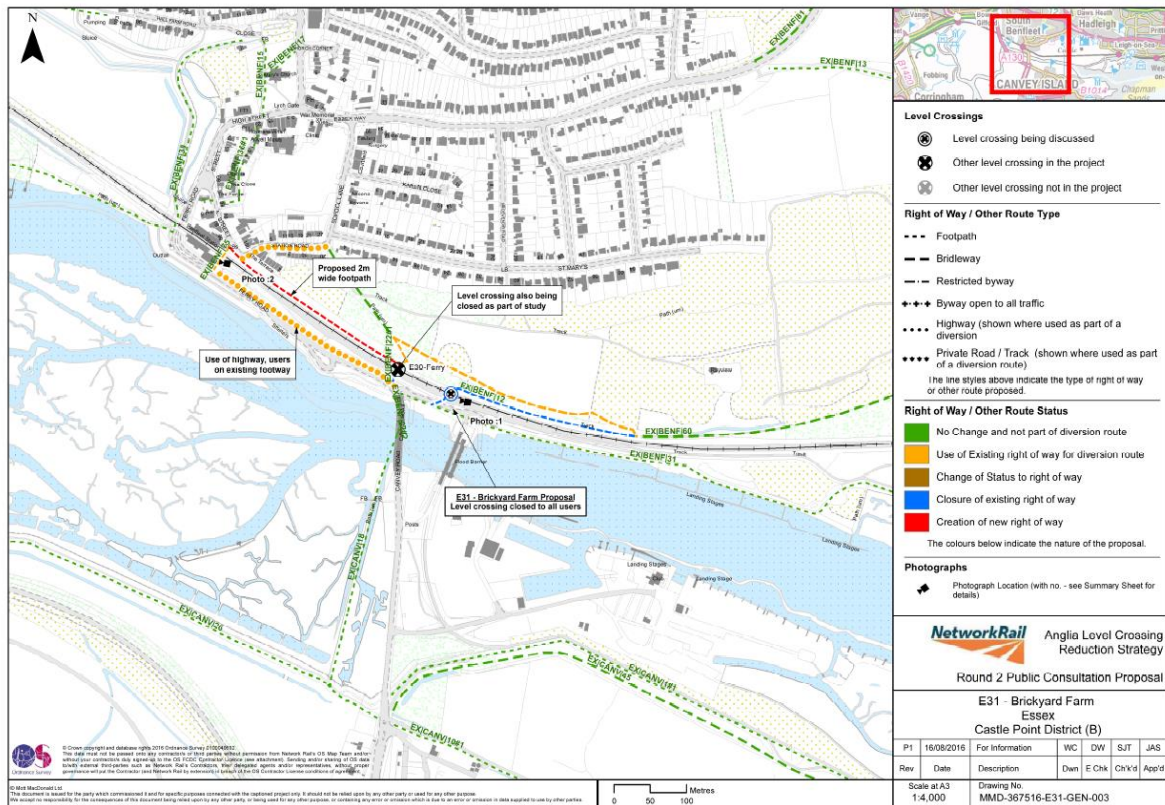


## Appendix B: Scheme drawings

### Round 1 consultation – proposed diversion (initial option)



## Round 2 consultations – preferred option (September 2016):





## Appendix C: Census summary

### Summary

The survey was successfully completed in accordance with the Network Rail specification.

The data is summarised below:

Direction : <b>Combined</b>										
Adult	Accompanied Child	Unaccompanied Child	Elderly	Impaired	Wheelchair	Pushchair/ Pram	Scooter	Railway Personnel	Total	
38	0	0	0	0	0	0	0	0	38	
19	0	0	0	0	0	0	0	0	19	
6	0	0	0	0	0	0	0	0	6	
3	0	0	0	0	0	0	0	0	3	
7	0	0	0	0	0	0	0	0	7	
4	0	0	0	0	0	0	0	5	9	
1	0	0	0	0	0	0	0	0	1	
8	0	0	0	0	0	0	0	0	8	
22	1	0	0	0	0	0	0	0	23	
108	1	0	0	0	0	0	0	5	114	