

TRANSPORT AND WORKS ACT 1992

**TRANSPORT AND WORKS (INQUIRIES
PROCEDURE) RULES 2004**

**THE NETWORK RAIL
(SUFFOLK
LEVEL CROSSING REDUCTION)
ORDER**

PROOF OF EVIDENCE

-OF-

SUSAN TILBROOK

Document Reference	NR32/1
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1 PROW Project Level Proof

1.1 Qualifications/experience

- 1.1.1 I am Susan Tilbrook, a Projects Director with Mott MacDonald, which is a major engineering, management and development consultancy. Mott MacDonald is one of the largest firms of consulting engineers and environmental specialists in the UK and employs in excess of 16,000 staff. We have a strong track record of helping to deliver transport projects in the highways and rail sectors.
- 1.1.2 My qualifications include a BEng(hons) in Civil and Structural Engineering from the University of Sheffield and I am a member of the Chartered Institution of Highways and Transportation.
- 1.1.3 I have 28 years' experience in the planning, design and construction of transport infrastructure projects. This has included working in the highways team of a Local Authority for 10 years and within the Road Safety team of the same Local Authority for 2 years. During this time I was responsible for designing and supervising the construction of new highways, the design of major and minor highway improvements and road safety schemes. I also carried out Road Safety Audits as part of my role within the Road Safety team. For the past 16 years I have worked for Mott MacDonald on many major transport projects through the various stages of project development including feasibility, planning and approvals, detailed design and construction. Projects have included A4146 Stoke Hammond Bypass, The Great Yorkshire Way, East Coast Main Line (ECML) Level Crossing Closure Project (Northern Section).
- 1.1.4 The ECML Level Crossing Closure Project (Northern Section) was a project to consider the feasibility of the closure of 36 railway level crossings in three local authority areas (Lincolnshire, Nottinghamshire and Doncaster) and to develop preferred solutions for the provision of alternative means of access, which could be taken forward under a Transport and Works Act Order application. I led the development of the technical design from option identification through to selection of the preferred solution in consultation with multiple local authorities. Proposed infrastructure on the project included a highway underpass, several highway bridges and ramped footbridges, new lengths of highway with junction improvements and traffic management, as well as public right of way diversions. The work also involved the preparation of information for and attendance at public consultation events. The project failed to secure funding to progress it beyond selection of the preferred options, however, the work carried out provided Network Rail with a good understanding of the likely issues and level of works required to close level crossings of the nature included within that project.
- 1.1.5 I am Mott MacDonald's design lead for our inputs to the Anglia Level Crossings Reduction project ("the project") and am the designated Contractor's Engineering Manager (CEM) for the project, which means that I have overall accountability for all engineering activities included within Mott MacDonald's scope of work on this project. Mott MacDonald's role on the project has included:
- a. Development and assessment of options for alternative rights of way required in order to close level crossings
 - b. Diversity Impact Assessments (DIA)
 - c. Environmental assessments
 - d. Public and stakeholder consultation

1.1.6 My evidence will primarily address (a) above. I also make reference to points (b) to (d) where relevant, although I would note that I am not an expert witness on environmental or DIA assessments (those assessments were carried out by other teams within Mott MacDonald), and that public and stakeholder consultation is addressed in more detail in the Proofs of Evidence of Andrew Kenning and Nigel Billingsley.

1.1.7 I have been involved with the Anglia Level Crossings Closure Project since 2015 when our first commission commenced. Our involvement with the project has continued through until present day with a short 2 month break between commissions in early 2016. I therefore have a close understanding of the how and why the alternative routes have developed into the final TWAO proposals and the constraints, considerations and views that have been taken into account during the process.

1.2 Overview

1.2.1 My evidence concerns the development of proposed alternatives for each crossing and I will first set out the general approach to option identification and assessment together with reference to relevant standards and guidance. I will then address the following on a crossing by crossing basis:

- a. Purpose and characteristics of the route being closed, extinguished or amended
- b. Selection of alternative of the diversionary route or rights
- c. Any alternatives considered
- d. How the alternative or diversionary route fulfils the purpose of the original route and the relationship to the wider PROW network (where applicable)
- e. If route includes road walking, how safe that route is and any necessary mitigation measures proposed
- f. Engagement with the local Highway Authority (HA) and any changes made in response to HA comments or other consultation responses
- g. Consideration of any alternatives proposed by objectors to the Order
- h. Whether the proposed route is suitable and convenient

1.3 General Approach

1.3.1 These proposals have been made as part of a Transport and Works Act Order Application.

1.3.2 Section 5(6) of the Transport and Works Act provides that an order shall not extinguish a public right of way over land unless the Secretary of State is satisfied that an alternative right of way has been or will be provided, or that one is not required. Although there is no definition of 'required' in the Act itself, the DfT Guide to TWA Procedures states (in Annex 2) that if alternative is to be provided, the Secretary of State would wish to be satisfied that it will be a convenient and suitable replacement for existing users. This is the basis on which alternative routes have been identified and assessed.

1.3.3 It should be noted that this is not an application under s.119 of the Highways Act 1980, under which any proposed diversion must not be "substantially less convenient" to the public, and the decision maker must also take into account 'public enjoyment of the footpath as a whole'. This is a different statutory test to that under s.5(6) of the Transport and Works Act 1992.

1.3.4 It is clear from the guidance that the focus is on existing users of the public right of way – not someone who might, theoretically, wish to use the route, or those who might insist on their legal rights to do so.

- 1.3.5 Nor does the guidance invite a comparative exercise between the extinguished right of way and the alternative (if required) – unlike the tests set out in, for example, sections 116 and 119 of the Highways Act 1980.
- 1.3.6 I would also highlight that s.5(6) is not concerned with seeking enhancements to the PROW network: the question is whether the alternative proposed is suitable and convenient for users of the PROW which would be affected if the TWAO is confirmed.
- 1.3.7 As to what is meant by ‘suitable and convenient’, neither the TWA 1992 nor the DfT Guide provide any further detail as to how that term is to be interpreted or applied. The 2011 edition of the Concise Oxford English Dictionary defines these terms in the following way:
- Suitable - right or appropriate for a particular person, purpose, or situation (i.e. in this case, for “existing users”)
- Convenient - fitting in well with a person’s needs, activities and plans involving little trouble or effort.
- 1.3.8 I would also highlight that section 5(6) anticipates that an alternative may not be required at all. I explain below, in the context of specific crossings where an alternative is not proposed why it is considered that an alternative is not ‘required’. In reaching a decision as to whether an alternative is or is not required, Network Rail has been informed by the view of Suffolk County Council, in its capacity as highway authority, being the body responsible for maintaining the PROW network in this area.

1.4 The Strategy

- 1.4.1 The Anglia Level Crossing Reduction Strategy (The Strategy) comprises five phases; however, the application and Mott MacDonald’s commission only relates to Phases 1 and 2. The Strategy is set out in core document **NR18**; Client Requirements Document Anglia CP5 Level Crossing Reduction Strategy
- 1.4.2 Phases 1 (mainline) and 2 (branch line) comprise level crossings where the proposals are located in the vicinity of an existing alternative means of crossing the railway, do not require any new form of grade separation across the railway, and where benefits may be deliverable and affordable within Network Rail Control Period 5 (to 31/3/19) and Control Period 6 (to 31/03/2024). Network Rail specified within Route Requirement Documents (RRD) prepared for each highway authority area¹ that circa 230 level crossings should be considered within the Phase 1 and 2 GRIP Stage 1 concept feasibility study.
- 1.4.3 Phases 3 to 5 include new grade separated crossings of the railway, and diversion or downgrading of major highways. These phases will require more substantive associated infrastructure and this means that they will take longer to develop and secure the necessary funding. Level crossings within Phase 3, 4 and 5 of the Strategy are not included within the application.
- 1.4.4 The background to the Strategy and further explanation for its rationale is addressed by Mark Brunnen and Eliane Algaard in their Proofs of Evidence, documents **NR27/1** and **NR28/1**

1.5 Option Identification and Development

- 1.5.1 Network Rail identified concept solutions for Phase 1 and 2 of the Strategy in early 2015. Mott MacDonald was commissioned to review the feasibility of the concept solutions and make

¹ A copy of the RRDs for Suffolk is appended to Andrew Kenning’s Proof of Evidence NR30/2 at Tab 1

recommendations for alternatives that should be considered. This work was carried out between August 2015 and February 2016. In August 2015, the number of level crossings by County (or Unitary Authority) under study were: Norfolk x 41, Suffolk x 31, Essex x 56, Cambridgeshire x 35, Thurrock x 3, Hertfordshire x 9 and Havering x 4. After considering the GRIP Stage 1 feasibility study outcomes and reviewing funding, Network Rail reduced the number of Phase 1 and 2 level crossings to be taken forward into the next stage of the project. Norfolk and certain Suffolk level crossings were not progressed as part of the project due to the funding available.

- 1.5.2 In April 2016 Mott MacDonald was commissioned to develop the concept solutions into preliminary designs for the crossings to be taken forward within Phase 1 and 2 and to carry out the necessary assessment work determine if they were a convenient and suitable replacement for existing users.
- 1.5.3 During the development work, other level crossings were withdrawn from the scheme by Network Rail due to technical issues, third party consideration or affordability reasons. The decision-making process is addressed by Mr Andrew Kenning in his Proof of Evidence, **NR30/1**

1.6 Assessment of Concept Solutions

- 1.6.1 In order to assess the feasibility of the concept solutions and identify alternative options the following factors were considered:
- a. Changes to rights of way and crossing rights
 - b. Level Crossing information
 - c. Diversity Impact Assessment (DIA)
 - d. Land Ownership and use
 - e. Safety
 - f. Environmental issues
 - g. Costing of the proposals and maintenance liability
 - h. Stakeholder consultation
- 1.6.2 The project team visited each level crossing where access was available. Site observations were generally made from publicly accessible land and no railway lineside access was permitted.
- 1.6.3 Baseline data regarding each crossing was provided by Network Rail which gave details about the physical infrastructure at the crossing, how it currently operates and the rights over it, line speeds, usage data and the current level crossing risk assessment details.
- 1.6.4 The project team considered the proposed amendments to the rights at the crossing and what rights the alternative route would need to accommodate. For example, would the route need to accommodate pedestrians, equestrians or vehicles etc. Our assessment also included consideration of the proposed alternative route within the overall network of public rights of way, existing highways and where appropriate private means of access. The availability and condition of existing features within the existing highway network such as bridges, footways and verges was considered.
- 1.6.5 In order to assist Network Rail in meeting their public sector equality duty under the Equality Act 2010, a DIA scoping exercise was undertaken by Mott MacDonald's DIA specialist to provide a preliminary assessment of the likely impact that closure of each level crossing could have on their surrounding communities, and to determine which of the level crossings may require a full DIA. I will describe the DIA process in section 1.16 of my Proof of Evidence. This exercise

informed the assessment work to determine if the viability of the concept solution could be affected, and if an alternative option existed that might be more appropriate.

- 1.6.6 Land ownership details were acquired for land parcels in the vicinity of the proposals to identify the likely impact on private landowners and to understand if land ownership and use could affect the viability of the concept solution.
- 1.6.7 Safety and security on the proposed alternative routes was considered. This assessment included consideration of personal security in the new environment and also road safety where the new routes would interface with both public and private roads.
- 1.6.8 The need to carry out a road safety audit (RSA) was considered for each concept solution by a road safety specialist within the Mott MacDonald design team. Crossings where alternative routes interfaced with public highways were assessed to determine if a RSA was required to confirm the viability of taking the concept solution forwards. This assessment included consideration of existing pedestrian and other non motorised user (NMTU) facilities on the highway, category and nature of the road, and the posted speed limit. I describe the RSA process in section 1.15 of my Proof of Evidence.
- 1.6.9 Mott MacDonald undertook a high level environmental desk based study to identify environmental constraints within a 2km radius of each level crossing (the “study area”). These included
- a. Flood risk zones within 500m of study area
 - b. Agricultural land classification within 1km of study area
 - c. Watercourses within 10m of study area or, ponds, drainage ditches etc within 500m of study area
 - d. Active/historic landfill sites within 500m of study area
 - e. Designated statutory sites of nature conservation (e.g. SSSIs, LNRs, AONBs, etc.) within 2km of the study area
 - f. Historic and cultural heritage features (e.g. Conservation Areas, Listed Buildings Scheduled Monuments, Registered Parks & Gardens etc.) within 1km of study area
 - g. Nearby receptors (e.g. hospitals, schools, residential)
 - h. Ancient Woodland, Hedgerows
- 1.6.10 Using the data gathered from the high level review and observations made during the site visits, potential environmental issues that might affect the viability of the concept solution were identified.
- 1.6.11 Mott MacDonald supported Network Rail during consultation carried out at this stage of the project with the following key stakeholders:
- a. Suffolk County Council
 - b. Historic England
 - c. Environment Agency
 - d. Natural England
 - e. Highways England
 - f. Local user groups

- 1.6.12 Feedback received from consultation with these stakeholders was considered in the assessment of the viability of the proposals and changes that might need to be incorporated into the future development of each crossing proposal.
- 1.6.13 The concept solutions proposed by Network Rail were assessed by Mott MacDonald as described in paragraphs 1.6.1 to 1.6.12, and, based on the viability of the proposals recommendations were made as follows:
- a. The concept solution is viable and can be taken forward for development.
 - b. The concept solution has some areas of concern and an alternative option has been identified that should be progressed in parallel.
 - c. The concept solution has some areas of concern and is not suitable for progressing. An alternative solution has been identified that should be progressed.
 - d. The concept solution has some areas of concern and is not suitable for progressing. No suitable alternative has been identified and the level crossing closure should be considered in a later phase of the Strategy.

1.7 Development of the Proposed Solutions

- 1.7.1 Following on from the assessment of and recommendations for concept solutions Mott MacDonald were commissioned to develop the proposed solutions to allow the preparation of a Transport and Works Act Order application. This required the designs to be developed to sufficient detail to establish the rights and any land required to deliver the project. The design proposals, principles and infrastructure components are set out in the Suffolk Design Guide, core document **NR12**. The infrastructure components described in this document are illustrative and therefore give a good representation of what will be built when the scheme is implemented, but the final works will be subject to detailed design and agreement with the relevant adopting authorities.
- 1.7.2 As part of the development of the alternative routes for each crossing the following activities were carried out:
- a. Collection of further level crossing census data
 - b. Collection of traffic data where appropriate
 - c. Support to Network Rail during two rounds of public consultation and a further round of public engagement for selected crossings.
 - d. Support to Network Rail during consultation with Stakeholders
 - e. Assessment of the suitability and convenience of the proposed route
 - f. Environmental assessment of the impact of the proposals and preparation of an environmental screening request
 - g. An appraisal of the options considered for each level crossing closure proposal.
 - h. Outline design of infrastructure requirements
 - i. Road Safety Audits
 - j. Diversity Impact Assessments
- 1.7.3 I describe these activities in more detail in sections 1.8 to 1.16

1.8 Census and Traffic Surveys

- 1.8.1 The project team arranged for the collection of further level crossing census data to help understand how each crossing was used. The census surveys were commissioned to take

place for a period of nine days which were to include two weekends with 24 hours of footage being recorded each day. The surveys were specified to be undertaken in accordance with Network Rail standard GRD007 which is used nationwide by Network Rail. This document outlines a standard form of data collection which provides information that can be used to monitor and assess operations at each crossing. Several additions were made to the standard GRD specification to reflect the nature of the individual crossings being considered, with pedestrian use class being expanded to capture additional detail regarding the nature of pedestrians and cyclists using the crossings. The following classifications of users were recorded:

- a. Pedestrian census
 - i. Adult pedestrians;
 - ii. Accompanied children;
 - iii. Unaccompanied children;
 - iv. Elderly pedestrians;
 - v. Physically impaired pedestrians;
 - vi. Pedestrians with a pram/pushchair; and
 - vii. Pedestrians on a mobility scooter.
- b. Vehicle census
 - i. Cars;
 - ii. Light Goods Vehicles;
 - iii. Motor cycles;
 - iv. Heavy Goods Vehicles;
 - v. Agricultural vehicles (tractors/vehicles with trailers);
 - vi. Buses;
 - vii. Equestrians;
 - viii. Pedal Cycles; and
 - ix. Herded animals.

- 1.8.2 The DfT's Transport Assessment Guidance outlines that highway surveys should be carried out in a neutral month, making specific reference to late March and April, May, June, September, October and November. It was considered that in order to record the maximum likely usage, June or early July would be the most appropriate period to undertake the surveys as it was outside of the school holiday periods but with better than average weather conditions and longer daylight hours, which typically encourage greater use of public rights of way.
- 1.8.3 The census survey results formed part of the information that was assessed to give the design team an understanding of the numbers and purpose of usage of each level crossing, along with consultation and stakeholder engagement feedback, and a review of the wider network and environment. The actual number of users recorded was taken as a guide to the likely level of usage but not used as a definitive figure for numbers of people using each crossing. We were also informed by local authorities and user groups that walking events may not have been picked up in the surveys. The Census survey data can be found in core document **NR25**. It should be noted that the census survey data for sites S01, S03, S07, S18 and S21 has been updated and can be found appended to my Proof of Evidence, **NR32/2 at Tab 17**.

- 1.8.4 Automatic Traffic Count (ATC) surveys were also commissioned to take place on certain diversion routes for a period of nine days, again to include two weekends, with 24 hours of data to be recorded each day. These surveys were used to help understand the volume, composition and speed of traffic on diversionary routes and how that might impact of the use of the route by PROW users. The ATC survey data can be found appended to my Proof of Evidence, **NR32/2 at Tab 1**.
- 1.8.5 I will give details of the results of the census surveys, and ATC surveys where relevant, in each of my crossing specific evidence in section 2.

1.9 Public Consultation

- 1.9.1 Mott MacDonald supported Network Rail through two rounds of public consultation and a one further public information exercise for crossings where there were some late changes to the proposals. Our role included the following activities:
- a. Preparation of documentation and plans to show the scheme proposals
 - b. Attendance at public consultation events
 - c. Analysis of feedback
- 1.9.2 Details of the Public Consultation activities held as part of the project are set out in the Statement of Consultation, core document **NR05**. The public consultation process is dealt with by Mr Andrew Kenning in his Proof of Evidence, **NR30/1**.
- 1.9.3 The public consultation events provided an opportunity to explain the proposals to members of the public who attended the events. The scheme information was also available on Network Rail's website.
- 1.9.4 Members of the public who attended the events were invited to provide feedback via a questionnaire at each round of consultation. Members of the public were also able to provide feedback by email or letter. The feedback was used to help the design team understand how the existing crossings and routes were used, views on the proposals, concerns of users and if there were any other suggested proposals that should be considered. The questionnaire was also available as a web based form that could be completed online. Copies of the questionnaires are appended to the Proof of Evidence of Mr Andrew Kenning, document **NR30/2 at Tabs 4 and 5**.
- 1.9.5 The first round of Public Consultation was held in June 2016 and the second round in September 2016. The consultation process allowed feedback to be taken on board in the development of the options and finalising the proposals to be submitted within the Order.

1.10 Stakeholder Engagement

- 1.10.1 The project team also consulted with key stakeholders regarding the project. These included the following organisations:
- a. Suffolk County Council
 - b. District, Parish and Community Councils
 - c. Members of Parliament
 - d. Schedule 5 and 6 consultees
 - e. Landowners
 - f. Local user and interest groups

- 1.10.2 The consultation information was issued to the relevant Highway and Planning Authorities in advance of each round of public consultation. Representatives from several Councils attended the public consultation events. Workshops or teleconferences were held with technical officers from the Local Highway Authority (including representatives from the PROW and highway teams) following each round of consultation. Minutes from each workshop or teleconference are appended to my Proof of Evidence, **NR32/2 at Tab 5**.
- 1.10.3 The Highway Authority meetings were used to gain an understanding of the acceptability of the proposals to Suffolk County Council and other local councils and to highlight any mitigation measures considered necessary by their officers. The PROW officers were able to share their knowledge of the PROW network in the vicinity of the proposals and the principles of PROW widths, infrastructure requirements and maintenance considerations were discussed with the design team.
- 1.10.4 Feedback from the other consultees and landowners was considered in the assessment of the overall acceptability of the proposals.
- 1.10.5 Landowner engagement is specifically dealt with by Mr Nigel Billingsley in his Proof of Evidence, **NR29/1**.

1.11 Suitability and Convenience of the Proposed Route

- 1.11.1 It should be noted that the suitability and convenience of the proposed route has to be considered for each crossing based on local circumstances and in the context of usage, the local environment and the relationship of the existing route to the wider PROW and highway network. In order to assist with the understanding of the wider PROW network I have appended wider OS mapping to my Proof of Evidence, **NR32/2 at Tab 9**.
- 1.11.2 Further to the assessment work carried out on the concept solutions, additional data from surveys, public consultation, stakeholder engagement and a study of the existing PROW network was used to gain a better understanding of the level and purpose of use of the routes that would be affected by the level crossing closures.
- 1.11.3 The design team assessed how the proposed diversion route would fit into the wider network considering:
- a. Access to services
 - b. Local walks and circular routes
 - c. Long distance routes
 - d. Gaps in the existing off-road PROW network
- 1.11.4 When assessing the diversion route, the design team considered the features of the diversion route as follows:
- a. Use of existing footpaths and footways
 - b. Provision of off road Public Rights of Way
 - i. Field edge
 - ii. Cross field
 - c. Use of continuous highway verges - suitability of verge width and maintenance requirements
 - d. Use of partial highway verges
 - e. Use of rural carriageway, no suitable verges

f. Necessary infrastructure works

- 1.11.5 Where Network Rail structures were proposed as a means of crossing the railway, as built or inspection data was provided by Network Rail to help the design team understand any potential restrictions on loading, headroom or width. More detailed studies were undertaken at existing road bridges to assess the feasibility of improving facilities for pedestrians where necessary.
- 1.11.6 In addition to advice given by the Local Highway Authority regarding their requirements for the design of PROWS, the design team also referenced the following design guidance when considering the suitability of the route:
- a. Design Manual for Roads and Bridges
 - i. TD 9/93 - Highway Link Design
 - ii. TD 27/05 - Cross-Sections and Headrooms
 - iii. TA 90/05 - The Geometric Design of Pedestrian, Cycle and Equestrian Routes
 - iv. TD 36/93 - Subways for Pedestrians and Pedal Cyclists Layout and Dimensions
 - v. HD 19/15 - Road Safety Audit
 - vi. BD 29/04 - Design Criteria for Footbridges
 - b. Department for Transport 2005: Inclusive mobility. A guide to best practice on access to pedestrian and transport infrastructure
 - c. Department for Transport: Local Transport Note LTN 1/04 - Policy, Planning and Design for Walking and Cycling
 - d. Department for Transport: Manual for Streets
 - e. Chartered Institution of Highways and Transportation: Manual for Streets 2
- 1.11.7 Network Rail's proposals generally provide for alternative public rights of way in place of those crossing the railway. In some cases, the proposals enhance the local PROW network. The alternative public rights of way proposed must, under the Order, be completed to the Highway Authority's reasonable satisfaction. As such they are also broadly in line with the Suffolk County Council Rights of Way Improvement Plan (ROWIP), which is incorporated in to the Suffolk County Council Local Transport Plan.
- 1.11.8 The ROWIP identifies changes that will "improve provision for walkers, cyclists, horse riders and those with mobility problems" and, whilst under this order there is no requirement to enhance the network (as set out in paragraph **Error! Reference source not found.**), through the provision of alternative routes that are suitable and convenient it is considered that there will be no detriment to the network.
- 1.11.9 In April 2017, following deposition of the Network Rail (Suffolk Level Crossing Reduction) Order application, the Department for Transport published its Cycling and Walking Investment Strategy. On review of that strategy, it is noted that the ambition of the document is stated as "We want to make cycling and walking the natural choices for shorter journeys, or as part of a longer journey". In the context of the existing use of each level crossing and the provision of alternatives that have been assessed as convenient and suitable, it is considered that the proposals are unlikely to change the choice of mode of transport for users. Hence, there is no requirement to amend any of the proposals following publication of the DfT Cycling and Walking Investment Strategy.

1.11.10 In order to assist with the understanding of the wider PROW network I have appended wider OS mapping to my Proof of Evidence, **NR32/2 at Tab 9**.

1.11.11 I have discussed the rationale for 'suitable and convenient' in relation to the Transport and Work Act in section 1.3 and will discuss how each level crossing proposal provides a suitable and convenient alternative in my crossing specific evidence in section 2.

1.12 Environmental assessment

1.12.1 In order for the Secretary of State to determine if the proposed works under the Network Rail (Suffolk & Others Level Crossing Reduction) Order would be likely to have significant effects on the environment during construction or operation, a high level assessment was carried out to allow an Environmental Impact Assessment (EIA) Screening Request to be submitted to DfT on 19 January 2017 with supporting information, in accordance with Rule 7 of the Transport and Works (Applications and Objections Procedure)(England and Wales) Rules 2006.

1.12.2 The assessment considered the characteristics of the project having regard, in particular, to; the size, nature and location of the project, the cumulation with other projects, the use of natural resources, the production of waste, pollution and nuisances and the risk of accidents. It was assumed that all construction contractors would be obliged to comply with Network Rail's environmental contract requirements and they will be required to produce a contractor's construction environment management plan prior to commencing any physical works and to comply with any relevant legislation.

1.12.3 The following environmental topics were considered in relation to the proposals to close or downgrade level crossings and provide diversionary routes:

- a. Ecology;
- b. Landscape;
- c. Historic environment;
- d. Ground conditions;
- e. Water resources;
- f. Traffic and transport;
- g. Noise;
- h. Air quality; and
- i. Socio-economics and community.

This process is further outlined in the Environmental Assessment Summary Note appended to my Proof of Evidence, **NR32/2 at Tab 8**.

1.12.4 The assessment concluded that no potential significant environmental effects were likely during construction or operation of the proposed works. Therefore, for the scheme as a whole, it was considered that an EIA would not be required in support of the order application, due to the size, nature and location of the works.

1.12.5 On 3rd March 2017 the Secretary of State issued a screening decision which confirmed that the project would be unlikely to have a significant effect on the environment and that an Environmental Impact Assessment was not required to support the Network Rail (Suffolk & Others Level Crossing Reduction) Order. The Screening Decision letter can be found at core document **NR11**.

- 1.12.6 It is considered that any changes to the order proposals through the removal of crossings will not change the outcome of the environmental assessment work carried out and therefore the conclusion that no potential significant environmental effects are likely during the construction or operation of the proposed works is unaffected by the changes proposed following deposit of the draft Order.
- 1.12.7 Network Rail has also made a request to the Secretary of State for deemed planning permission for the development authorised by the draft Order (**NR10**). The permission requested is intended to be granted subject to conditions relevant to the works proposed which provide certain environmental controls. These include conditions to limit working hours, to protect nesting birds during the bird nesting season, to require a plan to describe procedures if protected species are unexpectedly discovered during the works, and to require an archaeological scheme to identify any location where a watching brief is required during construction and procedures if significant archaeological remains are found. The plans are to be approved by the local planning authority in writing before works commence and it will be for the local planning authority to enforce the planning conditions.

1.13 Appraisal of Options

- 1.13.1 In order to demonstrate consistency throughout the assessment process and to show that all options were considered objectively, they were appraised under the headings considered in the Department for Transport's Transport Analysis Guidance (WebTAG) using the New Approach to Transport Appraisal (NATA) methodology. The guidance identifies the need to undertake appraisal in a proportionate manner and enabling a lighter touch approach, where appropriate.
- 1.13.2 The guidance provides a framework for assessing schemes against the Government's objectives for transport namely:
- a. Economy,
 - b. Environmental,
 - c. Social,
 - d. Public Accounts
- 1.13.3 In addition, it was considered that there was a benefit to including assessment of the results of the Public Consultation exercise, so that the option acceptability could be considered as an objective in the wider appraisal.
- 1.13.4 In order to ensure that the options developed for each level crossing were assessed in a consistent way, considering the above objectives, an Appraisal Summary Table (AST) was developed in which the assessment could be recorded and comparative benefits and adverse impacts could be seen. A template of the AST is appended to my Proof of Evidence, **NR32/2 at Tab 6**.
- 1.13.5 The ASTs for the initial stage were assessed at a high level and only considered objectives based on the information available at the time of the studies. They were completed to a level of detail commensurate with the concept/outline nature of the options development.
- 1.13.6 Options were appraised against the above objectives, and if sufficient information was available, they were also scored against their associated sub-categories using the matrix shown below using the assessment criteria provided. It should be noted that the scoring matrix is a comparative scale used to differentiate options and does not necessarily imply detrimental impacts.

Adverse	Slight Adverse	Neutral	Slight Benefit	Benefit
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- 1.13.7 The ASTs were used to assist NR with their decision making process for selection of the alternative routes to take forward for development and in the order application following each round of public consultation.

1.14 Outline Design and Consideration of Infrastructure Requirements

- 1.14.1 The level of design necessary at this stage of the project is to be able to give users and stakeholders a good understanding of the proposals and to carry out the following assessment work:
- a. Feasibility of the proposals
 - b. Requirements for land and rights
 - c. The environmental impacts
 - d. An estimate of the cost of implementation
- 1.14.2 The design team discussed design principles and received standard details from Suffolk County Council and then used this information to develop an indicative Design Guide for the crossing proposals in the Network Rail (Suffolk Level Crossing Reduction) Order, core document **NR12**.
- 1.14.3 2m wide footpaths are, in general, proposed for field edge and cross field footpaths, which is wider than the minimum widths stated during initial discussions with Suffolk County Council as recorded in the meeting minutes appended to my Proof of Evidence **NR32/2 at Tab 5**. SCC subsequently accepted the principle of 2m wide footpaths. This is in line with SCC's current guidance, which requires new footpaths to be at least 1.5m wide but recognises that wider routes are appropriate depending on local circumstances such as usage of the route, position next to boundaries or between fences, or be otherwise confined.
- 1.14.4 Where the footpaths are bounded by features such as hedges at field edges a 0.5m set back to the path from these features will be implemented on site to mitigate the potential for vegetation overgrowth of the public right of way. Where the proposals vary from this width at any particular level crossing solution, I describe the details and rationale in my crossing specific evidence.
- 1.14.5 The proposed 2m width for footway diversions is consistent with the provision of new footways across all counties within the Anglia Level Crossing Reduction Strategy Project.
- 1.14.6 3m wide bridleways are proposed for field edge and cross field bridleway diversions, which is wider than the minimum widths stated for cross field bridleways during initial discussions with Suffolk County Council as recorded in the meeting minutes appended to my Proof of Evidence **NR32/2 at Tab 5**. This is in line with current design guidance. The Design Manual for Roads and Bridges, TA 90/05 - The Geometric Design of Pedestrian, Cycle and Equestrian Routes states in section 7.11 that Ridden horses can occupy a width of around 1.5m, and a surfaced width of 2.0m should be provided as a minimum to accommodate this. Where horses are expected to pass, a minimum width of 3.0m should be provided. Where the bridleways are bounded by features such as hedges at field edges a 0.5m set back to the bridleway from these features will be implemented on site to mitigate the potential for vegetation overgrowth of the public right of way.
- 1.14.7 The proposed 3m width for bridleway diversions is consistent with the provision of new bridleways across all counties within the Anglia Level Crossing Reduction Strategy Project. Volume 1 of the design guide, core document **NR12**, describes the design principles and infrastructure components to be incorporated into the project. The infrastructure components described in this document are illustrative and therefore give a good representation of what will

be built when the scheme is implemented, but the final works will be subject to detailed design and agreement with the relevant adopting authorities.

- 1.14.8 It is the general presumption that the fence line (or equivalent feature such as a hedge or drainage ditch) represents the highway boundary. I understand that this assumption is supported by case law and I refer to Information Sheet no C10: Highway Verges published by the Open Spaces Society and found appended to my Proof of Evidence **NR32/2** at **Tab 12**. The Local Highway Authority has commented where the verges are not highway verges and the routes have been developed accordingly. Where any physical works are required to the verges, they have been referenced and included in the Book of Reference, core document **NR09**.
- 1.14.9 The proposals have been discussed with the affected Local Highway Authority and any planned highway improvements that could affect the proposals have been taken into consideration. It should be noted however, as a general principle that any future highway improvement schemes or development schemes that may affect any of the public rights of way within Suffolk, should consider all highway users and therefore pedestrian needs must be taken into consideration when any such future schemes are taken forward, along with RSAs where necessary.
- 1.14.10 Maintenance of highway verges is the responsibility of the Local Highway Authority (see Information Sheet no C10: Highway Verges published by the Open Spaces Society **NR32/2** at **Tab 12**). The verges have generally been considered for use in their current state. Where maintenance measures over and above the normal regime are deemed necessary to maintain grass verges in a suitable condition for use by pedestrians, this can be addressed through an appropriate payment by way of commuted sums. . The matter of commuted sums has been discussed throughout the scheme development with Suffolk County Council and I understand that discussions are ongoing with the aim of reaching agreement on the principles on which the commuted sums will be calculated.
- 1.14.11 The proposed diversion routes have been assessed in the context of existing rural road widths, available existing verge width or footway widths, traffic volumes and speeds, and with cognisance of any issues raised during the Stage 1 RSAs. Due to the historical nature of many of the existing rural roads, verges and footways it is noted that these may not meet with current design standards for new infrastructure although they are still deemed suitable for use by Suffolk County Council. It is not appropriate to generalise about the appropriate minimum design standards for existing rural carriageway widths in relation to current design standards for new infrastructure as each individual crossing proposal and highway environment is different. Section 2 of my Proof of Evidence sets out the particular circumstances of each proposal and explains why the proposed routes are suitable.
- 1.14.12 Any level crossings where the proposals require more than the standard infrastructure components are described in more detail and I will discuss this in my crossing specific evidence.
- 1.14.13 Volume 2 of the design guide describes the design freeze proposals and includes drawings for each level crossing closure proposal. The drawings show the proposed diversion routes together with necessary infrastructure components required to make the routes useable.

1.15 Road Safety Audits

- 1.15.1 Road Safety Audits have been carried out on this project in accordance with Document HD 19/15, Road Safety Audit, contained within Volume 5 of the Design Manual for Roads and Bridges.
- 1.15.2 The Road Safety Audit (RSA) procedure has been developed to ensure that operational road safety experience is applied during the design and construction process in order that the

number and severity of collisions is kept to a minimum. Road Safety Auditors identify and address problem areas using the experience gained from highway design, road safety engineering, collision analysis and road safety related research. A Highway Authority's aim is that the Road Safety Audit process will lead to schemes that rarely require road safety related changes after opening.

- 1.15.3 Document HD 19/15, Road Safety Audit, contained within Volume 5 of the Design Manual for Roads and Bridges requires that RSAs are carried out for Highway Improvement Schemes, i.e. all works that involve construction of new highway or permanent change to the existing highway layout or features. This includes changes to road layout, kerbs, signs and road markings, lighting, signalling, drainage, landscaping, communications cabinets and the installation of roadside equipment. HD 19/15 sets out the process for undertaking RSAs.
- 1.15.4 RSAs are carried out at the following stages of highway improvement schemes as follows:
- a. Stage 1 Road Safety Audit: Completion of Preliminary Feasibility Design
 - b. Stage 2 Road Safety Audit: Completion of Detailed Design
 - c. Stage 3 Road Safety Audit: Completion of Construction
 - d. Stage 4 Road Safety Audit: Monitoring
- 1.15.5 With reference to the level of design works required to submit an application under the Transport and Works Act order, which I have described in 1.7.1, it is appropriate for the project to undertaken only a Stage 1 Road Safety Audit prior to the submission of the TWAO application. Further Road Safety Audits will be undertaken following detailed design of the proposals, if appropriate.
- 1.15.6 The requirement for a Stage 1 Road Safety Audit (RSA) on an individual level crossing basis was scoped early in the first stage of the project following an initial site visit and during assessment of concept solutions, with those solutions that interfaced with the public highway with a potential for road safety issues prioritised.
- 1.15.7 At the next stage of the project, development of proposed solutions, the requirement for further RSAs was assessed. This was to ensure that all routes that interfaced with the public highway were considered, including those crossings that had already been subject to a RSA but where additional or amended options had been identified. It should be noted, however, that where no new alternative is provided due to an existing NMU route providing a suitable alternative, the existing routes were generally not subject to a RSA.
- 1.15.8 In line with the process set out in HD 19/15, a Road Safety Audit Brief was prepared by the project team giving instructions to the independent² Road Safety Audit Team defining the scope and details of the proposals to be audited. Whilst HD 19/15 lists various information (including collision data and traffic flows/speed data) that could be provided with the Brief as part of the general scheme details, it is not a mandatory requirement that additional information is supplied. The RSAs undertaken for the project were carried out prior to Personal Injury Collision data, traffic flows and speed data being available. However, it is a mandatory requirement that if the Road Safety Audit Team considers the Road Safety Audit Brief to be insufficient for their purpose, then requests for further information must be made to the Design Team Leader and copied to the Project Sponsor. Any information requested but not supplied to the Road Safety Audit Team must be identified in the introduction to the Road Safety Audit Report. No such requests for additional information were made by the independent Audit team who were

²That is, not involved with preparing the design proposals

satisfied that Stage 1 RSAs could be undertaken to highlight any road safety problems for the nature of the proposals planned as part of this project.

- 1.15.9 Stage 1 RSAs were undertaken for the project as the design proposals are at a preliminary design stage. The brief identified the following factors that may affect road safety:
- a. Non-motorised users (NMUs) are being diverted to alternative level crossings or grade separated crossings where they may be exposed to live traffic by:-
 - i. walking along existing footways;
 - ii. walking in existing grassed verges; or
 - iii. walking in the carriageway on rural roads.
 - b. The interface of NMUs and agricultural vehicles on the PROWs; and
 - c. The access points off the public highway for occasional use by large agricultural vehicles.
- 1.15.10 The Road Safety Audits were carried out by an independent Audit Team within Mott MacDonald. The Road Safety Audit Team comprised a minimum of two people (a Team Leader and Team Member). RSA team members have appropriate training, skills and experience to carry out the role.
- 1.15.11 It has been suggested by Mr John Russell of Motion Consultants that the Audit Team for this project was not independent from the design team and that some documents were missing from core document **NR16**. This is not the case: the Audit Team was independent from the design team and it is two typing errors that have led to confusion in what documentation has been provided. A response to the concerns raised by Mr Russell has been sent to Motion Consultants, and to the Programme Officer, and a copy is appended to my proof, **32/2 at Tab 16**.
- 1.15.12 The Road Safety Audit team visited each location of the proposed diversion routes where they interfaced with the public highway network. Following the site visits a report was produced by the Road Safety Audit Team describing any road safety related problems identified by the Road Safety Audit Team and the recommended solutions to those problems. The reports are contained within core document **NR16**.
- 1.15.13 The design team prepared a Road Safety Audit Response Report, which is contained within core document **NR16**. The report provides a response to the problems and recommendations raised in the Road Safety Audit Report giving details of any changes made to mitigate any issues.
- 1.15.14 RSAs were carried out for 2 further level crossing sites in September 2017. These audits were carried out at previously audited crossings to ensure that late changes during design development were fully considered. Paragraph 2.62 of HD19/15 sets out a mandatory requirement for RSAs to be repeated if the scheme design materially changes, if there are many minor changes which could together impact on road user safety or if the previous finalised Road Safety Audit for the relevant stage is more than 5 years old, therefore it was considered necessary to carry out further audits after deposition. The RSAs carried out since order deposition can be found appended to my Proof of Evidence, **NR32/2 at Tab 13**. No problems were identified as part of the RSAs carried out for these sites. The Road Safety Audit Response Report has been updated to reflect the additional audits undertaken and this document can be found appended to my Proof of Evidence, **NR32/2 at Tab 14**.
- 1.15.15 I will describe any particular RSA issues raised during the design process within each relevant crossing specific evidence.

1.16 Diversity Impact Assessments

- 1.16.1 A DIA is a systematic assessment of the likely or actual effects of policies or proposals on social groups with the following protected characteristics (as defined by the Equality Act 2010):
- a. Age, including children aged under 16, younger people aged 16-24, and older people aged 65 and over
 - b. Disability, including people with sensory impairments, mobility impairments, learning disabilities, mental wellbeing disabilities, and long term medical conditions
 - c. Gender reassignment, including persons who are proposing to undergo, are undergoing, or have undergone gender reassignment
 - d. Marriage and civil partnership, with a focus purely on discrimination on the basis of whether someone is married or in a civil partnership – single people are not covered by this characteristic;
 - e. Pregnancy and maternity, including pregnant women and nursing mothers
 - f. Race and ethnicity, including ethnic or national origins, colour or nationality
 - g. Religion or belief, including all religion, faith or belief groups, including lack of belief
 - h. Sex, including both women and men
 - i. Sexual orientation, including heterosexuals, as well as lesbians, gay men and bisexual people
- 1.16.2 In order to assist Network Rail in complying with their public sector equality duty under the Equality Act 2010, a scoping study was carried out at the concept solution review stage to identify potential issues related to the closures and gather evidence on the potential impacts on people with different protected characteristics in order to make an assessment about which crossings required further consideration through a full DIA.
- 1.16.3 This exercise informed the assessment work to determine if the viability of the concept solution could be affected, and if an alternative option existed that might be more appropriate.
- 1.16.4 At the development of the proposed solutions stage an Equality and Diversity overview report was prepared by Mott MacDonald on behalf of Network Rail. The preparation of the DIA overview document included a review of the developed proposals at the level crossing sites within the Suffolk Order to understand the content and proposed changes at each site.
- 1.16.5 A number of full DIAs were carried out following the scoping study and overview. These assessments identified key conclusions and recommendations relating to the proposed level crossing closures within the Suffolk Order, and the design team used this information to incorporate any necessary features or mitigation measures into the proposals.
- 1.16.6 I will describe any particular DIA issues raised and how they were mitigated in my crossing specific evidence.

2 Crossing Specific Details

2.1 S01 Sea Wall

- 2.1.1 The level crossing connects Footpath 13 Brantham south of Brantham Industrial Estate to a footpath leading from the level crossing east bound along the Coastline (Footpath 13). Restricted Byway 14 Brantham surrounds the Industrial Estate to the north and connects to Footpath 13 Brantham to the east of the Industrial Estate Boundary. The Restricted Byway 14 Brantham leads along the north side of the railway line past Sewage works and then connects to Footpaths 15 Brantham (which continues north west away from the railway line) and 11 Brantham (which runs north bound parallel along the east side of the railway line) as well as 12 Brantham (leading south east towards the coast).
- 2.1.2 The accessibility of this crossing is limited by the unpaved, uneven path from which the crossing can be reached. As the railway is elevated on embankment in this area, users are required to negotiate the steps that lead up to the crossing from each side. This would have the effect of reducing the ability of users with limited mobility or who use a wheelchair from accessing the crossing.
- 2.1.3 Following a review of existing census data held by Network Rail, a 9-day census survey undertaken in October 2014 was identified as being appropriate for use in establishing the existing use of this level crossing.
- 2.1.4 During the 9-day survey period 100 adult pedestrian users were recorded, with the busiest day recording 22 pedestrians using the crossing on Friday 31st October 2014.
- 2.1.5 On completion of the consultation exercises involving both the public and Suffolk County Council, it was identified that a more recent survey of pedestrian usage of Sea Wall level crossing would be beneficial to allay concerns about current usage of the level crossing.
- 2.1.6 As a result, an additional 9-day census survey was undertaken between 24th September and 2nd October 2016 in accordance with Network Work Rail Standard GRD007.
- 2.1.7 During the 9-day survey period 98 pedestrian users were recorded, with the busiest day recording 25 pedestrians using the crossing on Sunday 25th September 2016. Census data can be found appended to my Proof of Evidence, **NR32/2 at Tab 17**
- 2.1.8 Of the 18 people that provided feedback during the first round of public consultation, 3 people indicated that they used the crossing daily, 4 used it weekly, 2 used it fortnightly, 4 used it monthly, 4 rarely used the level crossing and 1 person never used it. Responses indicated that the crossing is mainly used for leisure purposes, as stated by 15 people, with 3 replies not stating a use.
- 2.1.9 Based on location of the crossing point and feedback from public consultation, it was considered that the crossing provides leisure and recreational access to the local footpath network for a moderate number of users on a regular basis.
- 2.1.10 The proposed alternative route can be seen on drawing number MMD-367516-S01-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.1.11 Existing public rights of way over the level crossing will be extinguished. Footpath 13 Brantham will be diverted onto a new footpath, approximately 700m in length, on the south east side of the railway heading north west across field and then north east following the railway within a field

margin outside of Network Rail land, connecting to Footpath 12 Brantham . Users can then use the existing footbridge to cross the railway to connect onto Restricted Byway 14 Brantham. This new footpath will be 2m wide and unsurfaced.

- 2.1.12 A timber footbridge is required at the diversion of Footpath 13 Brantham to allow users to cross a ditch and connect to the new footpath. A timber footbridge (up to 5m in length) is also required along the new footpath to allow users to cross a drainage ditch. Footpath 13 Brantham on the north side of the railway leading from Restricted Byway 14 Brantham to Sea Wall level crossing will be extinguished (approximately 300m in length). Approximately 300m of Footpath 13 Brantham heading south from Sea Wall level crossing will be extinguished.
- 2.1.13 On the south side of the railway 1.35m high strained wire fence with stock proof fencing will be provided as a third party requirement to protect reed beds, along with a 3.6m wide steel half mesh single field gate to provide farm access into this area.
- 2.1.14 The maximum diversion route via Footpath 13 Brantham is an additional length of approximately 490m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.1.15 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.1.16 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 490m which would take approximately 7.3 minutes longer to undertake than the current route.
- 2.1.17 The diversion route is on unsurfaced paths, which is the same as the existing footpath.
- 2.1.18 Following a scoping study, a DIA was not considered necessary at this crossing due to the problems with accessibility at the current crossing (notably the presence of steps and uneven paths).
- 2.1.19 The footpath route which uses the level crossing links to the long distance Stour and Orwell Walk to the east of the level crossing, which provides users with the opportunity to walk for over 20 miles. To the west of the level crossing the Stour Valley Way provides similar long distance walk opportunities. Within the context of the local public rights of way, the level crossing affords relatively long distance walks and it is noted for instance, that the circular route from Brantham (Restricted Byway 16, Rectory Road, Restricted Byway 14, Footpath 12 and Footpath 13) would necessitate a walk of approximately 5km. The proposed route is in a similar environment and although it is longer than existing for some of the potential routes, as it provides leisure walking within long distance walks it is considered acceptable.
- 2.1.20 LIDAR long sections have been checked and it has been noted that the existing gradient of Footpath 13 north of the railway is approximately 1:10. The existing gradient of Footpath 12 (south of the existing footbridge) is approximately 1:12. By comparison the proposed gradient of the new footpath adjacent to the railway is approximately 1:11. It is considered that the proposed route is similar in terms of gradients to the existing footpaths in the vicinity of the level crossing.
- 2.1.21 The proposals maintain the connectivity from the Stour and Orwell Way to the public rights of way on the north side of the railway via the existing footbridge. The routes provides opportunity for circular walks. The proposals retain the land access required for local farming operations.

- 2.1.22 During the design development stages several different routes were considered which can be seen on the consultation summary sheets in **NR32/2 at Tab 2**
- a. Users would be diverted on a new right of way south along the coast and through the proposed development site which provides a link to Factory Lane. The diversion crosses the railway via an existing underpass in the development site (red route shown on **NR32/2 at Tab 2, page 59**)
 - b. Blue Route - Users would be diverted on a new right of way to the east of the railway in farm fields to the existing footbridge. This creates a new circular route to the east of the railway. West of the railway the existing restricted byway would be used (blue route shown on **NR32/2 at Tab 2, page 59**)
 - c. Green Route - Users would be diverted on a new right of way south along the coast to cross the railway via an existing viaduct which provides a link to Factory Lane. (green route shown on **NR32/2 at Tab 2, page 59**)
 - d. Orange Route - Users would be diverted on an existing footpath to cross the railway at an existing footbridge north east of Sea Wall level crossing. West of the railway the existing restricted byway would be used (orange route shown on **NR32/2 at Tab 2, page 59**)
 - e. Purple Route - Users would be diverted on a new right of way to the east of the railway in farm fields to link to existing rights of way. To cross the railway users would be diverted on a new right of way south along the coast and through the proposed development site which provides a link to Factory Lane (purple route shown on **NR32/2 at Tab 2, page 59**)
- 2.1.23 It was noted from the information obtained from the Round 1 consultation that there was likely to be significant flooding issues with the use of the Cattawade viaduct to the west (green route). Comments from the RSPB indicated strongly that the use of the coastal route to the west of the level crossing (green route) would have a detrimental effect on wildlife. As a result the green, red and purple route were not progressed. Public feedback indicated that a circular route would be preferable. The potential impact on the wildlife supported by the area of reed beds was also considered to be significant from comments that were received from the RSPB and Natural England. The orange route was not taken forward as this was considered to not provide a circular walk.
- 2.1.24 During the pre-round 2 design stage, consideration was given as to whether it would be feasible to retain the coastal footpath up to the south side of the level crossing and it was noted that Suffolk County Council would not object if this was retained. Meetings were held with Natural England and the RSPB, who are both key stakeholders for this section of the route. Natural England had concerns that any future development north of the railway could increase footfall on that section of footpath within close proximity to such a sensitive ecological area. To allow the RSPB to access the site when required it was noted that private access rights could be arranged with Natural England. Therefore, taking cognisance of the comments from the Natural England who wished to seek to ensure that the footfall to the ecologically sensitive area was managed, the round 1 red route was amended for the second round of consultation to lie outside the reed bed area which can be seen in **NR32/2 at Tab 3, page 106**.
- 2.1.25 To mitigate concerns raised from the ecologist, a 1.35m high wire and stock proof fence along the field boundary with the reed bed area was included to prevent dogs from encroaching into the habitat area. This also necessitated the installation of a 3.6m wide vehicle farm gate to allow farm access.
- 2.1.26 Following ecological constraint survey work in January 2017 an amendment was made to the route of the proposed footpath where it connected to the coastal Footpath 13 Brantham, which runs along the top of the flood bund. It was evident during the survey that the original location,

which is currently used by the landowner for vehicular access to the flood bund, was waterlogged during wet weather and therefore a bridge suitable for pedestrian and vehicle use would be required. The amendment to the proposed route moved the transition point from the coastal Footpath 13 Brantham into the private field approximately 75m to the east. This position was chosen to reduce the effect on the habitat area and although a footbridge is required to cross a ditch in this location, the farmer's current access arrangements onto the bund are unaffected and therefore there is no requirement for a structure suitable for vehicle loading.

- 2.1.27 It was noted that the land adjacent to the reed bed could become muddy due to water ingress and the footpath surface construction would require further considerations at detailed design.
- 2.1.28 The final design proposals can be seen on drawing number MMD-367516-S01-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.1.29 The proposed alternative route does not interact with the public road network and therefore there are no related safety issues. It is noted that it is common practice to have footpaths located in the field margin of agricultural land with its associated farm vehicle use and that this practice can be accommodated without precluding the use or installation of the alternative route.
- 2.1.30 The proposals at S01 Sea Wall have been discussed in two workshops with the local highway authority. Officers have objected to the proposed route due to concerns about the potential for wet ground conditions making the route unviable at certain times of the year. They also believe that the section of path to the south of the crossing should not be extinguished. I have explained the reasons for extinguishment of this section of path in paragraph 2.1.24 above. The proposed route has been visited in winter and summer and it is considered that the route will be suitable through all seasons. Any soft or wet areas that need a different surface treatment can be agreed with the Local Highway Authority as part of the approval process at detailed design stage.
- 2.1.31 In response to the TWAO submission different alternative routes or concepts were suggested by Objectors as part of the TWAO process. These have been assessed further and the considerations are presented in **NR32/2 at Tab 7 (pages 179 and 191)**
- 2.1.32 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing public rights of way and the wider public rights of way network.

2.2 S02 Brantham High Bridge

- 2.2.1 S02 level crossing is located on Footpath 06 Brantham which starts on an unnamed track north of the Junction of Church Lane and Ipswich Road A137 along the west and north boundary of an agricultural field. Heading east the path passes Victoria Cottage and the surrounding Woodland to reach the level crossing via an unnamed path. Bridleway 11 Brantham runs parallel to the east side of the Railway towards the A137 Ipswich Road, connecting Brantham Lodge to Hill Farm settlement and Restricted Byway 09 Brantham runs along Newmill Lane from Brantham Farm northbound to A137 Ipswich Road.
- 2.2.2 The crossing is currently inaccessible for those with mobility and visual impairments, as well as parents with pushchairs due to stiles which are a physical barrier and the heavily overgrown, steep approaches to the railway line.

- 2.2.3 The need for new data was identified at Brantham High Bridge and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016. Census data can be found at core document **NR25**.
- 2.2.4 During the nine-day survey period, which included two weekends, a total of 8 pedestrians were recorded using the level crossing with the busiest day being Wednesday 29th June 2016 when 6 pedestrians who were identified as railway personnel were recorded.
- 2.2.5 Of the 13 people that provided feedback during the first round of public consultation, 2 indicated that they used the crossing weekly, 4 people used it monthly, 5 rarely used it and 2 never used the level crossing. 1 person did not indicate a frequency of use. Responses indicated that the crossing is used for leisure purposes by 10 people and that 1 person used it to access local amenities. 3 people did not state a purpose.
- 2.2.6 Based on location of the crossing point, usage figures and feedback from public consultation, it was considered that the crossing provides leisure and recreational access to the local footpath network small number of people on an infrequent basis.
- 2.2.7 The proposed alternative route can be seen on drawing number MMD-367516-S02-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.2.8 Existing public rights of way over the level crossing will be extinguished. Footpath 06 Brantham will be diverted onto a new 2m wide footpath over existing track (Jimmy Lane), approximately 200m in length, heading south to connect to Ipswich Road. The section of Footpath 06 Brantham to the east of the woodland, to the crossing, would be extinguished. Boundary fencing (1.275m high strained wire) will be installed where the footpath is to be extinguished. Users will then use existing footway on Ipswich Road, heading east to cross the railway via the existing footbridge adjacent to the road bridge on Ipswich Road. Users will then be diverted via the creation of new footpath rights over existing private road (The Street) and the private road to head north, to the west of Hill Farm. New infrastructure (steps or bridge) will be required for users to cross from the existing private road into a field to the west, where the new footpath will continue north as a 2m wide unsurfaced path along the field margin outside of Network Rail land. This new footpath will then connect into existing Footpath 06 Brantham to the east of the railway. A short section of asphalt footway approximately 80m long will be provided within the highway verge on the A137 to link the northern end of Footpath 06 Brantham to Footpaths 001 Bentley and 034 Tattingstone to the north
- 2.2.9 The maximum diversion route is an additional length of approximately 675m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.2.10 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.2.11 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 675m which would take approximately 10 minutes longer to undertake than the current route.
- 2.2.12 The diversion route is partially on unsurfaced paths, which is the same as the existing footpath and partially on a tarmac footway and unmade roads.
- 2.2.13 Following a scoping study, a DIA was not considered necessary at this crossing due to the problems with accessibility at the current crossing (notably the presence of steps and uneven paths).

- 2.2.14 The level crossing lies on the public rights of way that provides general east west connectivity across the railway. Ongoing public rights of way to the west of Footpath 06 Branham (at Ipswich Road) can only be reached via public roads. There are ongoing public footpaths to the east and north of Footpath 06 Branham. There is the potential for users to reach Bentley village from Branham village which is approximately 4km walking distance to the north. By utilising Footpath 07 Branham to the east a walk of approximately 2.5km from Footpath 06 Branham can be undertaken.
- 2.2.15 The alternative proposal maintains the east west connectivity. In addition to the proposed alternative pedestrians may choose to use the existing footway on the A137 which would reduce the additional length of the diversion to approximately 250m.
- 2.2.16 The proposed route to the east of the railway provides improved links to Bridleway 11 Branham and Restricted Byway Branham 9 to the south of The Street
- 2.2.17 The following options were also considered, which can be seen on the consultation summary sheets in **NR32/2 at Tab 2**
- a. Users would be diverted on a new footpath in Network Rail land adjacent to the railway which would join up with Ipswich Road/The Street to the south. The diversion will use the A137 footway and a bridge over the railway on the A137. Footpath 06 Branham on the west side of the railway would be extinguished over its whole length. (red route shown on **NR32/2 at Tab 2, page 61**)
 - b. Blue Route - Users would be diverted on a new footpath mainly along field margins adjacent to the A137 which provides a link to The Street to the south. The diversion will use the footway and existing road bridge on the A137 to cross the railway. Footpath 06 Branham on the west side of the railway would be extinguished over its whole length. (blue route shown on **NR32/2 at Tab 2, page 61**)
 - c. Users would be diverted on a new footpath in farm fields which would join up with the existing private road The Street to the south. The diversion will use the road footway and a bridge over the railway on the A137. Footpath 06 Branham on the west side of the railway would be extinguished over its whole length. (green route shown on **NR32/2 at Tab 2, page 61**)
- 2.2.18 These three alternatives made use of the existing footways on the A137 and the existing verge/carriageway to link between Footpath 06 Branham and Footpath 01 Branham. These options were subject to a Stage 1 Road Safety Audit carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit identified the following problem with the blue route only:
- A137 - Narrow road width may lead to conflict between pedestrians and vehicles.
- 2.2.19 This refers to sections of the blue route which were not common to the red and green route.
- 2.2.20 Following round 1 consultations and discussions with Suffolk County Council the blue route was not progressed as there were concerns that the route would be too steep within the field margins, steps would be required to transition between the field margin and the A137, and a new footway would have to be provided along the A137 to link with the existing bridge over the railway.
- 2.2.21 Following round 1 consultations and discussions with Suffolk County Council the green route was not progressed as there were concerns that the route as shown would impact on private gardens in order to link with the field margins north of the private properties.

- 2.2.22 The red route which was proposed by the Network Rail Level Crossing Manager was considered to provide a suitable alternative whilst details were considered further.
- 2.2.23 It was noted that Suffolk County Council considered that in order to mitigate some factors associated with the additional walking distances of the alternative proposals that a more permanent link (footpath/footway) should be provided between Footpath 06 Brantham and Footpath 01 Brantham to the north. It was noted that this was an existing issue with the proposed public rights of the way. As a result it was considered that this would not be directly associated with the works to close the level crossing and would not be shown at the round 2 consultation to determine the public feedback to this proposal.
- 2.2.24 Following consultation it was noted that the public and local authority perception of road walking was not favourable and therefore it was decided to propose the retention part of Footpath 06 Brantham west of the railway to reduce road walking and to retain access to local woodland although there was no requirement for the footpath to continue on to the level crossing to be closed. A right of access for a proposed footpath along Jimmys Lane would be required. The footway on the A137 would be available as existing for users who chose this option for a more direct link to the railway bridge.
- 2.2.25 The following option therefore was also considered for round 2 consultation, which can be seen on the consultation summary sheets in **NR32/2 at Tab 3**
- d. The existing public right of way network to the west of the railway would be used by connecting Footpath 06 Brantham to Ipswich Road via a new public right of way along Jimmy Lane. To the east of the crossing a new 2m wide footpath in Network Rail land would be provided from The Street to Footpath 06 Brantham east of the railway. (see red route shown on **NR32/2 at Tab 3, page 108**).
- 2.2.26 Following round 2 consultation Network Rail were able to fully investigate the proposed route and the option was instructed to be withdrawn as the likely engineering solution would not be deliverable within Phase 1 and 2 of the project.
- 2.2.27 Further investigations were carried out by the project team and an alternative route was identified which would avoid the private gardens which had originally prevented the green option from being progressed, as discussed in paragraph 2.2.21. This option was therefore deemed suitable for progression as the revised alternative solution. The route parallel to the east side of the railway was amended to lie with private field margins.
- 2.2.28 Following round 2 discussions with Suffolk County Council it was noted that Suffolk County Council would remove their objections if a safer route the could be provided between Footpath 06 Brantham and 01 Brantham. Therefore in order to mitigate their concerns a new tarmac footway in this location was introduced into the design proposals submitted with the TWAO application.
- 2.2.29 As the TWAO route was not substantially different from the round 1 consultation it was not considered necessary to re-consult with the public on this option but further landowner consultation was undertaken.
- 2.2.30 The proposed diversion involves use of the existing public footway on the A137. I have stated in paragraph 2.2.18 that this proposal was subject to a Stage 1 Road Safety Audit carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit did not identify issues with this section of the A137 west of the railway.

- 2.2.31 Accident data for the 5 year period 2011 to 2015 recorded 1 accident of slight severity in the vicinity of the route. The accident occurred at the junction of Ipswich Road and Church Lane and no pedestrians were involved.
- 2.2.32 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 28**) was collected on A137 east of the junction with Newmill Lane and showed an average 2 way daily traffic flow of 11655 vehicles and 85th percentile speed of vehicles of 33.8mph where the posted speed limit is 30mph. Based on the traffic data, accident records and RSA outcome the proposed route is considered suitable.
- 2.2.33 The proposals at S02 Brantham High Bridge have been discussed in two workshops with the local highway authority. I have discussed the design progression that has occurred to address the concerns that Suffolk County Council Highways officers have raised. Officers have objected to the TWAO diversionary route due to concerns about stability of existing railway cutting adjacent to the route. It is considered however, that the proposed field edge footpath will not increase loading on the ground in this area and therefore can be provided in this location.
- 2.2.34 In response to the TWAO submission different alternative routes or concepts were suggested by Objectors as part of the TWAO process. These have been assessed further and the considerations are presented in **NR32/2 at Tab 7 (pages 189, 190)**.
- 2.2.35 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route and the wider public rights of way network.

2.3 S03 Buxton Wood

- 2.3.1 At S03 the footpaths run along agricultural fields and areas of woodland. Footpath 45 Tallingstone connects Stutton Road to Station Road (approximately 120 m east of Bentley level crossing) along a field verge and unnamed stream. Footpath 22 Bentley leads from Station road approximately 50 m east of the Bentley level crossing north bound towards Buxton Wood level crossing. The existing Footpath 22 Bentley runs west of the Buxton Wood level crossing northbound towards a path connection to Falstaff crossing. The nearest residential properties are located approximately 230m south at Bentley Junction.
- 2.3.2 The eastern and western approaches are along an uneven, natural footpaths which currently limit accessibility for those with mobility impairments and parents with pushchairs. Users will also have to manage wooden stiles to traverse the line.
- 2.3.3 A nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 24th September and 2nd October 2016.
- 2.3.4 During the nine-day survey period, which included two weekends, a total of 11 pedestrians were recorded using the level crossing with the busiest day being Sunday 25th September 2016 when 4 pedestrians were recorded. Census data can be found appended to my Proof of Evidence, **NR32/2 at Tab 17**
- 2.3.5 Census data can be found at Of the 12 people that provided feedback during the first round of public consultation, 2 indicated that they used the crossing weekly, 3 people used it fortnightly, 5 used it monthly and 2 rarely used the level crossing. Responses indicated that the crossing is used for leisure purposes by all 12 people.

- 2.3.6 Based on location of the crossing point, usage figures and feedback from public consultation, it was considered that the crossing provides leisure and recreational access to the local footpath network for a small number of people on an relatively frequent basis.
- 2.3.7 The proposed alternative route can be seen on drawing number MMD-367516-S03-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.3.8 Existing public rights of way over the level crossing will be extinguished. Footpath 22 Bentley, to the west of Buxton Wood level crossing will be extinguished up to Footpath 21 Bentley, approximately 450m in length. To the west of the railway users will make use of existing Footpath 21 Bentley up to Falstaff level crossing where users will cross the railway. Users can then continue east on Footpath 19 Bentley or head south via a new footpath. The footpath will be 2m wide and unsurfaced (approximately 550m in length) along a field margin, beside an area of woodland and a watercourse to the east before heading west to connect to existing Footpath 22 Bentley to the east of Buxton Wood level crossing.
- 2.3.9 The maximum diversion route is an additional length of approximately 330m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.3.10 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.3.11 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 330m would take approximately 5 minutes longer to undertake than the current route.
- 2.3.12 The diversion route is on unsurfaced footpaths, which is the same as the existing footpath.
- 2.3.13 Following a scoping study, a DIA was not considered necessary at this crossing due to the problems with accessibility at the current crossing (notably the presence of steps and uneven paths).
- 2.3.14 The existing public right of way that accesses the level crossing runs north south over the railway. There is generally considered to be a north south route that the level crossing serves. East west routes are available at Footpath 21 Bentley and Footpath 19 Bentley which currently uses Falstaff level crossing. Continuing east to west movements involves a more convoluted use of the public rural road network and public rights of way. From the western end of Footpath 21 Bentley it is possible to walk south approximately 4.8km to the village of Brantham via the level crossing. Circular walks require the use of the public rural road network. The proposed alternative route will maintain the north south connectivity. Although the route is longer than existing, as it provides leisure walking it is considered acceptable.
- 2.3.15 The following options were also considered, which can be seen on the consultation summary sheets in **NR32/2 at Tab 2**
- a. Users would be diverted on a new footpath in farm fields west of the railway which provides a link to Station Road to the south and Falstaff level crossing in the north. To the south the diversion uses Station Road and Bentley Road level crossing to cross the railway. See red shown on **NR32/2 at Tab 2, page 63**
 - b. Users would be diverted on a new footpath in farm fields west of the railway which provides a link to Station Road to the south and Bentley Road level crossing to cross the railway. See blue shown on **NR32/2 at Tab 2, page 63**

- c. Users would be diverted on a new footpath on the east of the railway to Falstaff level crossing in the north. Falstaff level crossing and existing footpaths will be used to take walkers across the railway. See green shown on **NR32/2 at Tab 2, page 63**

- 2.3.16 These proposals were subject to a Stage 1 Road Safety Audit carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit identified the following problem with the blue and red route only:
- *Location: Station Road, west of the railway line.*
 - *Summary: Risk of vehicle collisions with pedestrians.*
 - Where the proposed diversion adjoins the highway, there is a no existing verge and thick high vegetation. Pedestrians entering the highway at this location will have reduced visibility to oncoming vehicles and drivers will also have restricted forward visibility to pedestrians. Restricted visibility may lead to collisions between vehicles and pedestrians. There is also a significant level difference between the carriageway and the verge at this location, which introduces an additional risk of pedestrians falling into the carriageway.
- 2.3.17 As a consequence of this safety assessment the blue and red route were not progressed further.
- 2.3.18 Feedback from round1 consultation indicated the potential for flooding on the proposed green route and highlighted potential issues with the local topography in the area of the Falstaff level crossing.
- 2.3.19 Prior to the round 2 consultation therefore a site visit was undertaken which noted an area of standing water which would give potential issues for the use of the land as the footpath route. There was seen to be no issues with the topography at Falstaff, which has been overcome by Suffolk County Council's use of steps. Discussions with Suffolk County Council indicated that they are satisfied that the existing steps are appropriate for the diverted route.
- 2.3.20 This route was shown at round 2 consultation which can be seen on the consultation summary sheets in **NR32/2 at Tab 3 page 110**.
- 2.3.21 The land available within the TWA Order Limits for the route of the proposed footpath on the east side of the railway allows the footpath to be located 2m away from the edge of the drainage ditch which it is considered will permit ditch clearing operations to be undertaken and spoil to be tipped adjacent to the ditch bank if required. I have noted in section 1.14 the level of design and considerations that are required in order to produce the alternative for submission with the TWAO and the details of the footpath adjacent to the ditch will be subject to further consideration at detailed design.
- 2.3.22 I have stated in paragraph 2.3.16 that this proposal was subject to a Stage 1 Road Safety Audit carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit did not identify issues with this proposal.
- 2.3.23 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 4**) was collected on Station Road to the west of the railway line south of Buxton Wood Level Crossing and showed an average 2 way daily traffic flow of 1626 vehicles and 85th percentile speed of vehicles of 27.6mph where the posted speed limit is 30mph. Based on the traffic data and RSA outcome the proposed route is considered suitable.
- 2.3.24 The proposals have been discussed in 2 workshops with the local highway authority. Officers have no objections to the proposed route.

- 2.3.25 In response to the TWAO submission a different alternative route or concept was suggested by Objectors as part of the TWAO process. This has been assessed further and the considerations are presented in **NR32/2 at Tab 7 (pages 196-197)**.
- 2.3.26 Following consideration of use of the existing route across Buxton Wood level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route and the wider public rights of way.

2.4 S04 Island

- 2.4.1 From the east, Footpath 18 Bentley leads from Bentley Hall along a paved track on an east-west axis, which leads to the Island crossing. From the west, Footpath 36 Bentley leads from Capel St Mary west of Malting Farm to the west across the Island level crossing to connect with Footpath 18. The nearest residential properties are located approximately 270 m south-west of the level crossing (Uplands Fruit Farm) and 280 m east of the level crossing (building near Maltings Farm).
- 2.4.2 The footpaths leading to the crossing would be difficult for many people with limited mobility to use. Wheelchair users and people with pushchairs would not realistically be able to navigate stiles and steps at both sides of the crossing. This effectively excludes these groups from using the crossing.
- 2.4.3 The need for new data was identified at Island and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.4.4 During the nine-day survey period, which included two weekends, a total of 39 pedestrians were recorded using the level crossing with the busiest day being Tuesday 28th June 2016 when 13 pedestrians were recorded. Census data can be found at core document **NR25**.
- 2.4.5 Of the 9 people that provided feedback during the first round of public consultation, 1 indicated that they used the crossing weekly, 4 used it monthly and 4 rarely used the level crossing. Responses indicated that the crossing is used for leisure purposes by 8 people with 1 person accessing other local amenities.
- 2.4.1 Based on location of the crossing point, usage figures and feedback from public consultation, it was considered that the crossing provides leisure access to the local footpath network for a relatively small number of people on a relatively frequent basis with some use as access to local facilities.
- 2.4.2 The proposed alternative route can be seen on drawing number MMD-367516-S04-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.4.3 Existing public rights of way over the level crossing will be extinguished. Footpath 18 Bentley to the west of the railway will be diverted onto a new 2m wide, unsurfaced footpath (approximately 500m in length). This new footpath will be within a field margin, outside of Network Rail land to the west of the woodland and then heading north parallel to the railway connecting onto the existing highway. Users will make use of the carriageway, verges and existing footway on the highway bridge, heading east over Bentley Bridge to cross the railway. To the east of the railway, users will divert onto a new 2m wide unsurfaced footpath within Network Rail land, approximately 290m in length, heading south to connect to existing Footpath 18 Bentley. It will

be necessary to use the private field margin to complete the last 50m section of the footpath to the existing level crossing.

- 2.4.4 The maximum diversion route is an additional length of approximately 600m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.4.5 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.4.6 Therefore, to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 600m which would take approximately 9 minutes longer to undertake than the current route.
- 2.4.7 The diversion route is on unsurfaced footpaths over the majority of the route (490m), which is the same as the existing footpath, with a section of approximately 110m on carriageway and verges.
- 2.4.8 Following a scoping study, a DIA was not considered necessary at this crossing due to the problems with accessibility at the current crossing (notably the presence of steps and stiles and uneven paths).
- 2.4.9 The existing public rights of way over the level crossing provide east west routes linking Capel St Mary in the west to Tattingstone in the east. This route would provide a public right of way in excess of 4km. Connectivity to the north via the level crossing would link Tattingstone to Belstead village over a distance in excess of 5km. The proposed alternative route will maintain this connectivity. Although the route is longer than existing, as it provides leisure walking on long distance routes it is considered acceptable.
- 2.4.10 Generally no significant alternative proposals other than a diversion of the footpath north to the existing road bridge over the railway were considered. However, during the design development and consultation stages the design was considered against feedback which was received.
- 2.4.11 The round 1 consultation option can be seen on the consultation summary sheets in **NR32/2 at Tab 2 page 65**. This proposal made use of the field margins and road bridge.
- 2.4.12 Following consultation, the proposal was amended to incorporate an off road footpath on Capel St Mary to mitigate the concerns of Suffolk County Council. The round 2 consultation option can be seen on the consultation summary sheets in **NR32/2 at Tab 3 page 112**. This proposal made use of the field margins and road bridge.
- 2.4.13 Following round 2 consultation, objections were received from the landowner and a further assessment of the suitability of Network Rail land was undertaken. It was considered that the footpath on the east of the railway could be located largely in the Network Rail corridor to mitigate the concerns of the landowner. In addition the proposed link to Capel St Mary was deemed not to be a compelling requirement to justify the use of private land due to the availability of the rural road and local verges. To assess this further, an ATC and Road Safety Audit were undertaken which I have summarised in sections 2.4.14 to 2.4.16. Plans were received from Suffolk County Council which shows that crash barriers were to be installed by the local authority at the road bridge to prevent vehicle encroachment onto the railway. The alternative route for the diversion route was amended to take account of the likely location of the crash barriers.
- 2.4.14 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 7**) was collected at the road bridge north of the level crossing between Saturday 25th June and Sunday 3rd July 2016 and showed

an average 2 way daily traffic flow of 231 vehicles and 85th percentile speed of vehicles of 27.5mph where the posted speed limit is 30mph.

- 2.4.15 An additional Automatic Traffic Count (see **NR32/2 at Tab 1 page 48**) was collected approximately 170m west of the road bridge north of the level crossing between Saturday 10th and Sunday 18th December 2016 and showed an average 2 way daily traffic flow of 150 vehicles and 85th percentile speed of vehicles of 28.4mph where the posted speed limit is 30mph.
- 2.4.16 This proposal was subject to a Stage 1 Road Safety Audit in August 2016 and again in September 2017 (see **NR32/2 Tab 13 at page 258**) which was carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit did not identify any issues.
- 2.4.17 No road traffic accidents were recorded in the vicinity of the proposed route during the 5 year period 2011-2015.
- 2.4.18 Based on the traffic data, recorded accidents and RSA outcome the proposed use of Capel St Mary is considered safe and suitable.
- 2.4.19 The proposals have been discussed in two workshops with the local highway authority. Officers have no objections to the proposed route.
- 2.4.20 As the final route was considered to be materially different from that shown in round 2, a further information update was issued to parties including the public and statutory consultees in December 2016 and this is shown in **NR32/2 at Tab 4, page 154**. No changes were made following this exercise.
- 2.4.21 In response to the TWAO submission a different alternative route or concept was suggested by Objectors as part of the TWAO process. This has been assessed further and the considerations are presented in **NR32/2 at Tab 7 (page 178)**.
- 2.4.22 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route and wider public rights of way.

2.5 S07 Broomfield

- 2.5.1 At the level crossing Footpath 12 Barham connects Barham CP (east of railway) to Great Blakenham CP (west of railway) via tracks through an open space of manmade waterbodies and the Gipping Valley River. The nearest residential properties are located approximately 290m south of the level crossing at Great Blakenham and 300m east of the crossing at Barham. The Gipping Valley River Path also crosses the railway approximately 350 m north and approximately 310 m south of the level crossing.
- 2.5.2 Within the larger public right of way network, the links connecting Footpath 12 Barham to the wider public rights of way to the east of the railway have been severed by the construction of the A14. Footpath 12 Barham terminates at the end of Lower Crescent and pedestrians are required to use Pesthouse Lane to the south to cross the A14 at the road bridge approximately 500m east of the level crossing. To the west Footpath 12 Barham connects to the long distance Gipping Valley River Path. Footpath 12 Barham over the level crossing could be considered to provide access to the local fishing ponds to the east and access to a long distance walking route to the west.

- 2.5.3 The footpaths leading to the level crossing are uneven and unpaved meaning those people requiring wheelchairs or prams will likely struggle to access the crossing. Stiles located on either side of the crossing further exclude those with mobility impairments.
- 2.5.4 The need for new data was identified at Broomfield and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.5.5 During the nine-day survey period, which included two weekends, a total of 188 pedestrians and 8 cyclists were recorded using the level crossing with the busiest day being Sunday 26th June 2016 when 39 pedestrians were recorded. Census data can be found appended to my Proof of Evidence, **NR32/2 at Tab 17**.
- 2.5.6 Of the 16 people that provided feedback during the first round of public consultation, 1 indicated that they used it daily, 3 indicated that they used the crossing weekly, 2 people used it fortnightly, 4 used it monthly and 6 rarely used the level crossing. Responses indicated that the crossing is used for leisure purposes by 14 people with 1 use for commuting and 1 use for access to other local amenities.
- 2.5.7 Based on location of the crossing point, usage figures and feedback from public consultation, it was considered that the crossing provides mainly leisure and recreational access to the local amenities such as the fishing ponds for a relatively high number of people on a regular basis.
- 2.5.8 The proposed alternative route can be seen on drawing number MMD-367516-S07-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.5.9 Existing public rights of way over the level crossing will be extinguished. To the west of the railway, users of Footpath 23 Barham will be diverted east onto a new 2m wide footpath to be made out of compacted stone, (approximately 175m in length) set slightly north of existing Footpath 12 Barham that heads east to the existing underbridge. The section of Footpath 12 Barham heading east towards the underbridge will be extinguished (approximately 195m in length).
- 2.5.10 Users will use the existing underbridge approximately 320m south of Broomfield level crossing to cross the railway heading east. Users will then continue north east along an existing footpath to connect into a new 2m wide footpath on an existing track (approximately 280m in length). This new footpath will connect into existing Footpath 12 Barham.
- 2.5.11 Following a scoping study, a DIA was not considered necessary at this crossing due to the problems with accessibility at the current crossing (notably the presence of stiles and uneven paths).
- 2.5.12 The maximum diversion route is an additional length of approximately 650m, however, the origin and destination points will affect the overall diversion length for many users. This distance reflects an origin point west of the railway at the start of the new footpath diversion and a destination point at the western end of the retained section of Footpath 012 Barham on the east side of the railway, adjacent to the fishing lakes.
- 2.5.13 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate. Therefore, to cross the railway via the diversion route for amenity access to the ponds would introduce an additional walking distance for the north/south connectivity of 650m would take approximately 10 minutes longer to undertake than the current route.

- 2.5.14 To reach the junction of Pesthouse Lane and Footpath 12 Barham, from the western end the extinguished section of Footpath 12 Barham via the diversion would increase the walking distance by approximately 130m (or 2 minutes walking time). However, I have highlighted that the ongoing Footpath 12 Barham terminates at the A14 and provides no ongoing routes.
- 2.5.15 For users wishing to undertake ongoing walks I have noted that the route across the railway to the west is via the road bridge on Pesthouse Lane. It is reasonable to assume that the most direct route here from the western side of the railway is via Footpath 30 Barham and Footpath 11 Braham and that the proposed closure of the level crossing would not affect this route.
- 2.5.16 The diversion route is on unsurfaced footpaths and existing tracks which are of the same type of surface as existing rights of way in the area. It makes use of the existing Footpath 30 Barham on the high amenity long distance Gipping Valley River Path and the existing underpass to cross beneath the railway in the same manner as currently provided by Suffolk County Council.
- 2.5.17 The level crossing provides east west public rights of way over the railway and access to the local fishing ponds. The proposed route provides continued east west connectivity and access to the ponds as does the original route. By keeping Footpath 12 Barham on the east side of the railway additional access to the ponds has been retained for the amenity use. The alternative route to the south is longer than existing and it is considered acceptable.
- 2.5.18 The following options were also considered during the development of the alternative diversion proposals.
- 2.5.19 Initially during GRIP Stage 1 considerations, an option to provide a new footpath on the east side of the railway, to connect Footpath 30 to Footpath 12 Barham using private land (fishing ponds) adjacent and parallel to the railway was considered³ but this was discounted following site visits that had shown there was insufficient space between the railway boundary and fishing ponds along the full extent of this route. The use of the Network Rail land corridor was discounted due to the sloping embankment which makes it unsuitable for walking. An additional initial option to use the existing underbridge (reference 260) approximately 340m northwest of the level crossing (currently used by Footpath 35 Barham) was discounted on the technical advice from Network Rail that the route would not be suitable for pedestrians on the east side of the railway.
- 2.5.20 An alternative option was considered were users would be diverted on the existing footway along Pesthouse Lane and then via existing footpaths next to the fishing ponds to an existing railway underpass (See red shown on **NR32/2 at Tab 2, page 67**)
- 2.5.21 Automatic Traffic Count (ATC) data (**see NR32/2 at Tab 1 page 31**) was collected on Pesthouse Lane west of the road bridge and showed an average 2 way daily traffic flow of 231 vehicles and 85th percentile speed of vehicles of 38.2mph where the posted speed limit is 30mph.
- 2.5.22 The red route was not progressed due to the road safety issues, including a consideration of the ATC data, and the alternative route was developed to retain the section of Footpath 12 Barham to the east of the railway.
- 2.5.23 Consultation feedback was considered and it was noted that the location of the existing footpath was considered by some consultees to be obstructed by anglers due to its location at the river bank and that the section of footpath may be occasionally deteriorate due to water issues. Therefore, the proposals were revised to relocate the footpath further from the riverbank to

³ As shown in the RRD for Suffolk, which is appended to Andrew Kenning's Proof of Evidence **NR30/2 at Tab 1**

avoid anglers and the surfacing of the footpath was changed from unsurfaced to compacted stone to mitigate the effects of water after flooding events. It should be noted however, that the Environment Agency flood mapping shows that the existing footpaths adjacent to the River Gipping and Footpath 12 Barham to the west of the railway are currently located in Flood Zone 3 and therefore the existing PROW network is subject to some disruption during flood events. Therefore, it is considered that users of the level crossing would not be adversely affected by new route. This route can be seen in **NR32/2 at Tab 3 page 114**.

- 2.5.24 The TWAO proposal was subject to a Stage 1 Road Safety Audit which was carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit did not identify any issues.
- 2.5.25 The proposals have been discussed in two workshops with the local highway authority. Officers have no objections to the proposed route. I have highlighted that the proposals were amended to address Suffolk County Council officers' concerns about the potential flooding of the footpath and the need to retain Footpath 12 Barham on the east side of the railway.
- 2.5.26 Following consideration of use of the existing route across the Level Crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route and wider public rights of way.

2.6 S08 Stacpool

- 2.6.1 At the level crossing Footpath 34 Barking leads from Darmsden Hall (approximately 620 m west of Railway) across the B1113, Lower Street and the level crossing to connect with the Gipping Valley River Path east of the railway line. The nearest residential properties are located approximately 450 m north east of the level crossing (Pipps Hall).
- 2.6.2 The accessibility of the Stacpool crossing is limited by the presence of stiles, narrow footpaths and grassy inclines that have the effect of reducing the ability of those with limited mobility or who use a wheelchair to access the site.
- 2.6.3 The need for new data was identified at Stacpool and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.6.4 During the nine-day survey period, which included two weekends, a total of 39 pedestrians were recorded using the level crossing with the busiest day being Tuesday 28th June 2016 when 15 pedestrians were recorded. Census data can be found at core document **NR25**.
- 2.6.5 Of the 10 people that provided feedback during the first round of public consultation, 1 indicated that they used the crossing weekly, 2 people used it fortnightly, 4 used it monthly and 3 rarely used the level crossing. Responses indicated that the crossing is used for leisure purposes by all 10 people who responded.
- 2.6.6 Based on location of the crossing point, usage figures and feedback from public consultation, it was considered that the crossing provides leisure and recreational access to the local amenities for a relatively small number of people on a regular basis.
- 2.6.7 The proposed alternative route can be seen on drawing number MMD-367516-S08-GEN-005, which can be found in Appendix F of core document **NR26**.

- 2.6.8 Existing public rights of way over the level crossing will be extinguished. Users of Footpath 33 Needham Market heading west towards the railway will be diverted onto a new 2m wide unsurfaced footpath within a field margin, running parallel to the railway. This new footpath is approximately 400m in length and heads north west to connect into existing Footpath 31 Needham Market. 1.275m high fencing with concrete posts and six wires will be installed to separate the new footpath and the existing quarry track for safety and security purposes. Users can make use of the existing overbridge approximately 400m north of the Stacpool level crossing which is the current route of Footpath 31 Needham Market. The existing footpath to the west of Stacpool level crossing will be extinguished (approximately 100m in length).
- 2.6.9 Following a scoping study, a DIA was not considered necessary at this crossing due to the problems with accessibility at the current crossing (notably the presence of stiles, slopes and uneven paths).
- 2.6.10 The maximum diversion route (from the junction of Footpath 34 and 35 Dormsden to Footpath 33 Needham Market) is an additional length of approximately 600m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.6.11 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.6.12 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 600m would take approximately 9 minutes longer to undertake than the current route.
- 2.6.13 The diversion route is on unsurfaced footpaths, existing tracks and footways which is the same type of surfaces as existing rights of way in the area.
- 2.6.14 The existing public rights of way over the level crossing provide generally east west routes and it is possible to reach Willisham to the west of the level crossing approximately 4km to the west. Ongoing public rights of way to the east of the railway are severed by the A14 although it is possible to reach Bramford some 7km to the southeast of the level crossing and Stowmarket some 7km northwest of the level crossing using the public rights of way which link to the level crossing. The proposed alternative route will maintain this connectivity. Although the route is slightly longer than existing, as it provides leisure walking on long distance routes it is considered acceptable.
- 2.6.15 No alternative proposals other than a diversion of the footpath north to the existing road bridge over the railway were considered. However, during the design development and consultation stages the design was considered against feedback that was received.
- 2.6.16 The round 1 consultation option can be seen on the consultation summary sheets in **NR32/2 at Tab 2 page 69**. This proposal made use of the field margins and road bridge. It was noted that the quarrying operations currently make use of the bridge to the north of the level crossing over which Footpath 31 Needham Market is also located. The shared use of this route by quarry vehicles and pedestrians is understood to be considered suitable by Suffolk County Council (given its current usage) and therefore was not considered to be an impediment to the alternative diversion. Use of the footway on the B1113 was shown from Footpath 33 to 31 Downham Market.
- 2.6.17 Consultation feedback noted that the use of the existing footway on B1113 was of concern to some users. Suffolk County Council confirmed that the footway was suitable and they had no schemes under consideration to improve the footway on any grounds including safety. It was

noted that the entire length of footway shown at round 1 was not required as the ongoing routes to the west of the railway could be reached via Footpath 35 Dormsden without need to access Footpath 34 Dormsden. The need to cross the B1113 is required at present for footpath users to continue east west journeys and this is maintained with the diversion alternative.

- 2.6.18 The round 2 consultation option can seen on the consultation summary sheets in **NR32/2 at Tab 3 page 116**.
- 2.6.19 Suffolk County Council had some concerns about the amenity value of the route of the proposed new section of footpath on the east of the railway, running parallel to and between the railway and quarry access road. However, following round 2 it was determined that the programme for the cessation of the quarrying operations was likely to accord with the implementation of the level crossing closure works. Hence the presence of quarry vehicles on the track adjacent to the new would be reduced, which would address Suffolk County Council's concerns about this matter.
- 2.6.20 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 34**) that was collected on the B1113 opposite the level crossing showed an average 2 way daily traffic flow of 5152 vehicles and 85th percentile speed of vehicles of 57.7mph where the posted speed limit is 60mph.
- 2.6.21 Accident data for the 5 year period 2011 to 2015 recorded 1 accident of slight severity in the vicinity of the route and no pedestrians were involved.
- 2.6.22 This proposal was subject to a Stage 1 Road Safety Audit which was carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit did not identify any issues. Based on the traffic data, recorded accidents and RSA outcome the proposed route is considered safe and suitable.
- 2.6.23 The proposals have been discussed in two workshops with the local highway authority. Officers have no objections to the proposed route.
- 2.6.24 In response to the TWAO submission different alternative routes or concepts were suggested by Objectors as part of the TWAO process. These have been assessed further and the considerations are presented in **NR32/2 at Tab 7 (pages 186-187, 201)**.
- 2.6.25 Following consideration of use of the existing route across the Level Crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route.

2.7 S11 Leggetts

- 2.7.1 Footpaths 33 Bacton and 06 Old Newton with Dagworth run along field tracks connecting Ward Green to the wider PROW network to the west of the railway via the existing level crossing south of Old Bells Farm. The nearest residential property is located approximately 170 m to the north of the crossing (Old Bell's Farm).
- 2.7.2 The accessibility of this crossing is poor as the site incorporates stiles to access the line from both sides. This excludes wheelchair users and people with limited mobility. The access routes to this crossing are also largely inaccessible to wheelchair users as the on uneven ground at the perimeter of farm fields. The alternative crossing is much more accessible as it uses flat and paved approach roads without stiles, steps or inclines to reach the crossing which is itself paved.

- 2.7.3 The need for new data was identified at Leggetts and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.7.4 During the nine-day survey period, which included two weekends, no pedestrian users were recorded. Census data can be found at core document **NR25**.
- 2.7.5 Of the 3 people that provided feedback during the first round of public consultation, 1 indicated that they rarely used the crossing and that 2 used it monthly. Feedback indicates that the crossing provides leisure access for 1 person, 1 person accessed local amenities with 1 person specifying no purpose of use.
- 2.7.6 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is used very infrequently by a very small number of people to access the wider footpath network.
- 2.7.7 The proposed alternative route can be seen on drawing number MMD-367516-S11-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.7.8 Existing public rights of way over the level crossing will be extinguished. Footpaths 12 Haughley and 06 Old Newton with Dagworth which head east towards the railway will be closed. The length of footpath to be extinguished is approximately 300m. Users will be diverted along the existing Restricted Byway 13 Haughley which heads south towards Wassicks Lane along the west side of the railway. Users will use the existing Wassicks road automatic half barrier level crossing, approximately 580m south of the Leggetts crossing, and head north along the east side of the railway along existing Footpaths 48 Haughley and 61 Old Newton with Dagworth to connect with Footpath 33 Bacton which heads east from the railway.
- 2.7.9 The maximum diversion route is an additional length of approximately 930m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.7.10 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.7.11 Therefore, to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 930m which would take approximately 14 minutes longer to undertake than the current route.
- 2.7.12 The diversion route uses existing public rights of ways.
- 2.7.13 Following a scoping study, a Diversity Impact assessment was not considered necessary at this crossing due to the current restricted accessibility of the existing crossing route which mean that pedestrian accessibility and safety will not be reduced.
- 2.7.14 The level crossing lies within the east west public rights of way that connect the local villages (Ward Green, Brown Street) in the east to Haughley, Haughley Green/Bacton Green and Earls Green in the west. Using the level crossing it is possible to undertake relatively long distances walks and circular walks. Recreational walks of over 3km would be possible from Bacton Green to Ward Green or over 5km from Bacton Green to Old Newton and this is generally reflected in the routes available in the area. The new diversion route to the south of the railway maintains links between the public rights of way on both sides of the railway. The route is longer than existing for some users wishing to use Footpaths 06 Old Newton & Dagworth and 33 Bacton (which are retained in the proposals), however, as it provides leisure walking it is considered acceptable.

- 2.7.15 No alternatives routes were considered.
- 2.7.16 There is no change to the use of the roads and footpaths in the area and no Road Safety Audit was required.
- 2.7.17 The proposals have been discussed in 2 workshops with the local highway authority. Officers have no objections to the proposed route.
- 2.7.18 Following consideration of use of the existing route across the Level Crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route and the wider public rights of way network.

2.8 S12 Gooderhams, S13 Fords Green and S69 Bacton

- 2.8.1 These three level crossings have been considered together as they are in the same locality and the design solutions are linked.
- 2.8.2 S12 Gooderhams level crossing is both a public footpath level crossing and a user worked accommodation crossing for the local farmer which provides for farm vehicles to cross the railway after first telephoning for permission.
- 2.8.3 At S12 Gooderhams Footpath 19 Bacton runs from footpaths to the east of Bacton Green in an easterly direction towards the B1113 via S12 Gooderhams level crossing. Bacton village is 1.7km to the north of the level crossing. The nearest residential property is located approximately 280 m to the east of the crossing (Canhams Farm). To reach ongoing public rights of way to the east of the level crossing (BOAT 34 Bacton, footpath 17 Bacton, Footpath 20 Bacton, BOAT 20 Bacton) the use of the B1113 rural road and verges is required at present. Public rights of way on the west of the level crossing are such that it is possible to reach Haughley Green from Canhams Green approximately 4.5km walking distance. To the north at present the level crossing links Canhams Green to Bacton approximately 3.5km walking distance away.
- 2.8.4 The accessibility of this crossing is poor as the use of stiles at the pedestrian crossing prevents access to wheelchair users and those with limited mobility to access the crossing. The ground surface is unpaved and uneven with grass and railway ballast forming the majority of the surface at this crossing. This would make the crossing even more difficult for wheelchair users and those with limited mobility.
- 2.8.5 The need for new data was identified at Gooderhams and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016. During the nine-day survey period, which included two weekends, a total of 8 pedestrians were recorded using the level crossing with the busiest day being Saturday 25th June 2016 when 5 pedestrians were recorded. Census data can be found at core document **NR25**.
- 2.8.6 Of the 4 people that provided feedback on S12 during the first round of public consultation, 1 indicated that they used the crossing daily, 2 used it weekly and 1 never used the level crossing. Feedback indicated that the crossing provides access to other local amenities for one person and access to their own property for one person. Two people did not indicate a reason for use.
- 2.8.7 Based on location of the public footpath crossing point, usage figures and feedback from public consultation, it was considered that the crossing potentially is primarily used for farm access

and may provide leisure and recreational access to the local footpath network for a small number of people on an infrequent basis.

- 2.8.8 S13 Fords Green level crossing is traversed by a public footpath only. Footpath 14 Bacton crosses S13 Fords Green level crossing to meet Bacton village in the north west and the B1113 to the east. The agricultural fields south of Bacton and to the west of the railway line are bordered by a number of footpaths leading to Rectory Rd to the west and Roswell's Lane to the south. The village of Fords Green is east of the level crossing. The closest residential property is Kerry's Farmhouse, which is also the closest listed building. Bacton level crossing is located approximately 550m northeast of the level crossing. To reach ongoing public rights of way to the east of the level crossing (BOAT 34 Bacton, Footpath 17 Bacton, Footpath 14 Bacton) the use of the B1113 rural road and verges is required at present. Public rights of way on the west of the level crossing are such that it is possible to reach Haughley Green from Cow Creek, a walking distance of approximately 5km. At present the level crossing links Cow Creek to Bacton to the north, approximately 2.5km walking distance away.
- 2.8.1 The approach to the pedestrian crossing on both sides is through fields, culminating in stiles on both sides just before the railway. As such, it is highly unlikely that any users with mobility issues, people with pushchairs or in wheelchairs/mobility scooters currently use the crossing.
- 2.8.2 The need for new data was identified at S13 Fords Green and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016. Following the completion of data analysis from this level crossing it was noted that footage had been lost due to equipment failure and subsequently data was recorded between Tuesday 28th June to Monday 4th July and Saturday 16th to Monday 18th July 2016.
- 2.8.3 During the nine-day survey period, which included two weekends, a total of 6 pedestrians were recorded using the level crossing with the busiest day being Thursday 30th June and Monday 18th July when 2 pedestrians were recorded on each day. Census data can be found at core document **NR25**.
- 2.8.4 Of the 4 people that provided feedback on S13 during the first round of public consultation, 1 indicated that they used the crossing weekly, 2 used it rarely and 1 never used the level crossing. Feedback indicated that the crossing provides access to other local amenities for one person and 2 people used it to access to their own property. One person did not indicate a reason for use.
- 2.8.5 Based on location of the public footpath crossing point, usage figures and feedback from public consultation, it was considered that the crossing potentially is primarily used for property access and provides may provide leisure and recreational access to the local footpath network for a small number of people on an infrequent basis.
- 2.8.6 S69 Bacton level crossing is traversed by a public footpath. Access to the S69 Bacton level crossing west of the railway is via Footpath 13 Bacton, which starts from the junction of Cedar Close, Pretymann Avenue and Birch Avenue and leads to Bacton level crossing. Access from the east side of the railway is via Footpath 13 Bacton, which runs from the B1113 Broad Road through a football ground up to the level crossing. The nearest residential property is located approximately 60m to the north west of Bacton level crossing.
- 2.8.7 At S69, Footpath 13 Bacton is an isolated section of footpath within the wider public right of network. To the west the use of the roads/footways within the village of Bacton is required to continue ongoing foot journeys. To reach ongoing public rights of way to the east of the level crossing (Footpath 4 Cotton, Footpath 44 Cotton) the use of the B1113 rural road and verges is

required at present. For users of Footpath 4 Cotton wishing to access the wider public rights of way to the west (Bridleway 9 Bacton) the desire line would be to use Pound Hill.

- 2.8.8 The approach to the level crossing is uneven with a gravel path and requires the use of stiles. It is unlikely therefore that the crossing is currently used by people with mobility issues, or with wheelchairs and pushchairs.
- 2.8.9 The need for new data was identified at S69 Bacton and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016. During the nine-day survey period, which included two weekends, a total of 28 pedestrians were recorded using the level crossing with the busiest day being Sunday 3rd July when 22 unaccompanied child pedestrians were recorded. Census data can be found at core document **NR25**.
- 2.8.10 Of the 4 people that provided feedback on S69 during the first round of public consultation, 1 indicated that they used the crossing daily, 2 used it rarely and 1 never used the level crossing. Feedback indicated that the crossing provides access to other local amenities for one person and 2 people used it for leisure purposes. One person did not indicate a reason for use.
- 2.8.11 Based on location of the public footpath crossing point, usage figures and feedback from public consultation, it was considered that the crossing potentially is used for amenity access (football pitches) and provides may provide leisure and recreational access to the local footpath network for a relatively small number of people on an infrequent basis during the week with higher use at the weekend.
- 2.8.12 The proposed alternative route can be seen on drawing numbers MMD-367516-S12-GEN-005, MMD-367516-S13-GEN-005 and MMD-367516-S69-GEN-005 which can be found in Appendix F of core document **NR26**.
- 2.8.13 At S12 the existing public rights of way over the level crossing will be extinguished. Private crossing rights will be retained. Footpath 19 Bacton will be extinguished on both the west and east sides of the railway (approximately 1.08km in length). West of the railway, users will be diverted north east along existing Footpath 18 Bacton and then eastwards towards the railway along Footpath 18 Bacton. Users will use the existing Cow Creek level crossing, approximately 530m north east of Gooderhams crossing, and continue east along the existing footpath on Kerrys Farm Lane to join the existing carriageway. The existing stiles will be removed on both sides of the level crossing. Existing vehicle gates will remain.
- 2.8.14 As S12 Gooderhams, the maximum diversion route from Byway Open To all Traffic 34 Bacton to the western end of Footpath 19 Bacton is an additional length of approximately 365m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.8.15 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.8.16 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 365m would take approximately 5.5 minutes longer to undertake than the current route.
- 2.8.17 The diversion route is on existing public rights of ways with a short section of road walking.
- 2.8.18 Following a scoping study, the current problems with the crossing, such as stiles and unpaved / uneven walking routes to reach the crossing, means that pedestrian accessibility is unlikely to be reduced further. Walking distances are also not significantly increased. In addition, usage of

the crossing is low likely due to the rural nature of the crossing. Therefore, a Diversity Impact Assessment was not considered necessary at this crossing.

- 2.8.19 The proposed S12 alternative route provides access for pedestrians wishing to travel west to east between over the railway as does the original route. The route is longer than existing for users heading south, however, as it provides leisure walking it is considered acceptable. Circular walks are still possible using footpaths to the north of the S12 level crossing.
- 2.8.20 At S13 the existing public rights of way over the level crossing will be extinguished. On the west side of the railway line, users will be diverted either north along existing Footpath 14 Bacton, or south along a new 2m wide unsurfaced public footpath in the field margin which runs parallel with and adjacent to the railway. The new footpath would be approximately 550m long and join existing Footpath 18 Bacton which crosses the railway at the Cow Creek level crossing, approximately 570m to the south east of Fords Green level crossing. On the east side of the railway, users will be diverted either east along existing Footpath 14 Bacton, south to Cow Creek level crossing via Footpath 20 Bacton or north along a new 2m wide unsurfaced public footpath in the field margin which runs parallel with and adjacent to the railway. The new footpath would be approximately 670m long and would join existing Footpath 13 Bacton at its northern end.
- 2.8.21 As S13 Fords Green, the maximum diversion route south via Footpath 20 Bacton and Cow Creek level crossing is an additional length of approximately 1450m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.8.22 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.8.23 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 1450m would take approximately 21.5 minutes longer to undertake than the current route.
- 2.8.24 The diversion route is on existing public rights of ways with a short section of road walking.
- 2.8.25 An additional footpath link has been provided north to Footpath 13 Bacton which will remove some road walking for users for instance from Footpath 20 Bacton to Footpath 4 Cotton. This would reduce this journey distance by approximately 70m.
- 2.8.26 Following a scoping study, a Diversity Impact assessment was not considered necessary As accessibility at the current crossing is limited (by the presence of stiles and field paths to reach the crossing), it is felt that pedestrian accessibility will not reduce as a result of the proposed diversion route.
- 2.8.27 The proposed S13 alternative route provides access for pedestrians wishing to travel west to east between over the railway as does the original route. The route is longer than existing, however, as it provides leisure walking it is considered acceptable. Circular walks are still possible using footpaths around the S13 level crossing.
- 2.8.28 At S69 Bacton level crossing the existing public rights of way over the level crossing will be extinguished. An existing right of way to the west of the level crossing Footpath 13 Bacton (approximately 90m in length) will be removed. Users will be diverted to the existing underbridge on Pound Hill. Users will get to Pound Hill underbridge via the B1113 Broad Road to the east of the railway (along the verge) and Birch Avenue (existing footway) to the west of the railway. Users can connect to the existing public right of way network to the west of the railway (public Footpath 14 Bacton) via an existing track and the addition of a new 2m wide public footpath

(approximately 225m in length) and proposed wooden bridge (less than 5m in length) over the existing ditch. In addition, a new 2m wide unsurfaced public footpath (approximately 650m in length) will run down the east side of the railway to connect to S13 Fords Green. As part of the works, pedestrian improvement measures would be implemented at the Pound Hill underbridge and details can be found in Suffolk Design Guide (core document **NR12 at page 32**)

- 2.8.29 As S69 Bacton, the maximum diversion route from Birch Avenue to the eastern side of the level crossing is an additional length of approximately 960m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.8.30 The route is along tarmac footways and Guidance from the Chartered Institution of Highways and Transportation (CIHT) guidance for Providing for Journeys on Foot (an extract from this guidance is appended to my Proof of Evidence, **NR32/2 at Tab 15**) indicates a walking rate of 1.4m/s (approximately 3 miles/hour) for people without mobility difficulties. This shows that that 960m would take approximately 11.5 minutes longer to undertake than the current route.
- 2.8.31 For users accessing the club house, from western end of Footpath 13 Bacton (at Pretymen Avenue/Birch Avenue) the use of Pound Hill his would increase this journey distance by approximately 600m (7 minutes).
- 2.8.32 For users accessing Footpath 4 Cotton, from western end of Footpath 13 Bacton (at Pretymen Avenue/Birch Avenue) the use of Pound Hill his would reduce this journey distance by approximately 30m.
- 2.8.33 An additional footpath link has been provided south from Footpath 13 Bacton which will remove some road walking for users for instance from Footpath 4 Cotton to Footpath 20 Bacton. This would reduce this journey distance by approximately 70m.
- 2.8.34 For S69 a DIA scoping exercise recommended that due to the use of the B1113 that a full Diversity Impact Assessment was undertaken. The DIA concluded that due to the availability of the alternative route in the local area to cross the railway, closure and redirection along the proposed diversion route is considered an appropriate solution. However, there were further points raised as potential actions for which consideration should be given. These are recorded in the table below:

DIA identified Action	Project Team comment
Installing a footpath on Broad Road should also be considered further.	<p>This has been considered and discounted for the following reasons:</p> <ul style="list-style-type: none"> - a grass verge exists for the full 250m length allowing pedestrians to step off the carriageway when a vehicle approaches or walk on the verge. - The road is reasonably straight and flat with good forward visibility - the existing footpath ends on Broad Lane so users (unless going to the sports club from the west), will already be walking on this length of road - the Road Safety Audit raised no issues with this part of the diversion route - there is no accident record on this length of road - the provision of a footway over this full length would be a considerable expense, potential requiring 3rd party land or road narrowing, together with the loss of trees and other vegetation - the number of LX users do not warrant this level of intervention

Following concerns raised by stakeholders, Network Rail should consider improvements to diversion routes, including: creation of footpaths and rest areas along the route, signage to support way finding; and ensuring level surfaces, including dropped kerbs and tactile paving.	<p>Permanent and temporary signing after the LX closure will be discussed in further detail with the highway authority at the detailed design stage. This can be incorporated within the adopted highway with the agreement of the highway authority.</p> <p>An improvement scheme is proposed on the approach and through the Pound Hill underbridge to provide safer passage for pedestrians. this area is included in the order limits and the details of the proposals will be agreed with the highway authority at the detailed design stage.</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 any other benefits of the scheme, particularly focussing on user safety improvements.	NR to undertake at detailed design / implementation stage.
Review the DIA at every design stage to ensure equality of access is maintained for all.	NR to undertake at detailed design / implementation stage.

2.8.35 The proposed closure of Footpath 13 Bacton removes a short cut to the football club and utilises the existing roads, footways and verges to circumnavigate the level crossing to the east and west of the railway. This largely maintains the current usage of the existing features and I have noted that the use of B1113 is currently required for users to reach the eastern end of Footpath 13 Bacton and that Pound Hill is the desire line between Bridleway 9 Bacton and Footpath 4 Cotton. The alternative road use maintains access for pedestrians wishing to travel west to east between Bacton village and the footpath network to the east of the railway as does the original route. For some users, the route is longer than existing, however, as it provides leisure walking it is considered acceptable.

2.8.36 At S12 the proposals for the public right way remained the same throughout the design development stages, namely to close the public rights at the level crossing and to divert users to Cow Creek level crossing. During the consultation stages, discussions were held with local landowners and farmers. Following the first round of consultation it was determined that there were sufficient issues with the provision of alternative farm access via Cow Creek level crossing such that the closure of the private rights at S12 was not progressed and the crossing was retained for private farm use at this time.

2.8.37 The following options were considered for S13 and S69, which can be seen on the round 1 consultation summary sheets in **NR32/2 at Tab 2**:

- a. At S13 users would be diverted south alongside the railway, on a new public footpath in farm fields to Cow Creek (Kerrys Farm) level crossing. The diversion will use the existing public footpaths on the west of the railway (red route **NR32/2 at Tab 2, page 75**).

- b. At S69 users would be diverted on existing footways to the north, crossing the railway on the underbridge at Pound Hill (no footway through the bridge) and on to Broad Road. A new public footpath on the west side of the railway in farm fields is proposed to link to existing public rights of way to the west and south and an alternative railway level crossing point at Cow Creek (Kerry's Farm). The Red Route is associated with proposals at S13 Ford Green and is shown for information regarding alternative railway crossing routes (green route **NR32/2 at Tab 2, page 75**).
- c. At S69 users would be diverted on existing footways to the north, crossing the railway at the underbridge on Pound Hill (no footway through the bridge) and on to Broad Road. A new public footpath next to the allotments would be constructed to link to existing public rights of way to the west and south and an alternative railway level crossing point at Cow Creek (Kerry's Farm). The Red Route is associated with proposals at S13 Ford Green and is shown for information regarding alternative railway crossing routes (blue route **NR32/2 at Tab 2, page 75**).

- 2.8.38 It was not considered necessary to undertake a road safety audit for S12 and S13 which did not require changes or use of the road network.
- 2.8.39 The proposed route for S69 includes a long section of road walking on B1113. These round 1 consultation proposals were subject to a Stage 1 Road Safety Audit carried out in line with HD19/15 and by an independent team remote from the option development design team.
- 2.8.40 The Audit identified the following problem with the round 1 proposals (blue and green) for S69:
- *Location: Broad Road.*
 - *Summary: Risk of vehicle to pedestrian collisions.*
 - *The standard of verge varies along Broad Road with a minimal verge in places and several sections where vegetation is overgrown restricting the available width for pedestrians. This is likely to result in pedestrians walking within the carriageway. Traffic speeds were observed to be high particularly on the straight section and towards the southern end of Broad Road there is a sharp bend which may restrict forward visibility of pedestrians in the carriageway. These factors could result in collisions between vehicles and pedestrians.*
 - *Recommendation: It is recommended that a suitable footway is provided to enable pedestrians to continue along Broad Road without walking within the carriageway.*
- 2.8.41 I have noted that this comment pertains to the long use of the B1113 which was part of the round 1 consultation plans.
- 2.8.42 Following round 1 discussions were held with Suffolk County Council who had concerns about the length of road walking on the B1113. There were some public concerns about a lack of footways at the Pound Hill bridge. Suffolk County Council indicated that they would like to consider this further and provide their own alternative suggestions for consideration.
- 2.8.43 Investigation were undertaken to ascertain the history of Footpath 13 Bacton in relation to the development of the football pitches to the east of the level crossing. This showed that an accommodation of an alternative alignment of the right of way was not reached and the definitive alignment remains across the football pitches.
- 2.8.44 As a result of the round 1 consultation feedback it was considered that road walking on Broad Road (B1113) could be removed by providing a new diversion route to the east side of the railway from Footpath 13 Bacton north along land adjacent to the railway which would have terminated adjacent to the road bridge. A site visit showed that the topography of the land south

of Pound Hill adjacent to private property was unsuitable for use as a pedestrian route due to the presence of steep embankments.

- 2.8.45 Land to the south west of the level crossing is used as football pitches and was private. Access was not available and the land was investigated from the public footpath. It was determined that there was likely to be space available to provide a new footpath to the south east without impinging on the playing surfaces. Land further to the south west could be seen to be arable land suitable for use as the diversion. Therefore to mitigate concerns about road walking on the B1113 this option to provide a new footpath south to S13 Fords Green was taken forward to round 2 public consultation. This option was an alternative to the green route which was not taken forward.
- 2.8.46 Alternatives options were received from Suffolk County Council on 31/08/16 which can be seen at in **NR32/2 at Tab 10 page 233** The proposed route north from S12 as suggested by Suffolk County Council was rejected as there was not considered to be a benefit in terms of any reduction to the diversion length which would justify taking rights over private land. However, the route amendment proposed by Suffolk County Council to provide a diversion north from S13 on the west side of the railway was assessed as suitable and would alleviate the need for a footbridge on the previous easterly diversion. Suffolk County Council were advised of these considerations.
- 2.8.47 The proposed link from Footpath 14 Bacton just south of the allotments was amended to make use of an existing track north to Church Road which was seen to be used as a walking route from a site visit.
- 2.8.48 These amendments can be seen on the round 2 consultation summary sheets in **NR32/2 at Tab 3, page 122**:
- 2.8.49 Following round 2 consultation representations were made from the landowner in relation to the use of the track east of the allotments. Consequently the proposed footpath was realigned to avoid this track. The plans were amended to show where it was proposed to have new sections of footway on Pound Hill in the vicinity of the bridge beneath the railway.
- 2.8.50 Planning approval for a housing development proposed at Broad Road, Bacton (Mid Suffolk District Planning Ref: MS/0764/15) has been granted with a condition to provide new footways and a 'give and take' type arrangements at the Pound Hill bridge due to the larger anticipated volumes of traffic and footway users arising from the additional 47 houses that the Planners considered would use Pound Hill bridge. Bacton Parish Council has expressed concerns about the walking route through Pound Hill bridge for users of the level crossing, in particular due to the increase in footfall and traffic due to the development site. Suffolk County Council have also suggested that a traffic management system should be implemented to reduce the carriageway through the bridge to single way working, allowing more room to be dedicated to NMUs. However, this type of arrangement is not considered necessary as a result of, or to accommodate, the likely additional use of Pound Hill by pedestrians resulting from the closure of the S69 level crossing. The proposals as part of the level crossing closure project will not preclude a suitable traffic management scheme being put in place at such time when the housing development goes ahead but do not justify implementation of such a scheme as part of the Order proposals
- 2.8.51 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 45**) was collected on Pound Hill to the north of the S69 level crossing, that showed an average 2 way daily traffic flow of 2848 vehicles and 85 percentile speed of vehicles of 32.6mph where the posted speed limit is 30mph.

- 2.8.52 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 25**) was collected on Kerry Farm to the east of the rail line to the south of Fords Green level crossing, that showed an average 2 way daily traffic flow of 99 vehicles and mean speed of vehicles of 13.2mph where the posted speed limit is 60mph.
- 2.8.53 Accident data for the 5 year period 2011 to 2015 recorded 1 accident of slight severity in the vicinity of the route and no pedestrians were involved.
- 2.8.54 Based on the traffic data, RSA outcome and consideration of existing usage of Pound Hill and Broad Road the proposed route is considered safe and suitable.
- 2.8.55 The proposals have been discussed in two workshops with the local highway authority. Officers have no objections to the proposed alternative for S12 and S13 but object to the proposals for S69. Officers have noted that there is a flooding issue beneath the bridge which can be considered further and investigated at detailed design stage, but it is anticipated that this issue can be resolved: for example, through remedial works to the existing highway drainage system or the provision of a raised pedestrian area.
- 2.8.56 In response to the TWAO submission different alternative routes or concepts were suggested by Objectors as part of the TWAO process. These have been assessed further and the considerations are presented in **NR32/2 at Tab 7 (pages 180, 181, 184, 185, 188, 198-199, 202)**
- 2.8.57 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route.

2.9 S16 Gislingham

- 2.9.1 The existing crossing leads from Redhouse Farm 620m north of the crossing via Bridleway 23 Gislingham that connects to Eastlands Lane, leading from Eastlands Farm at the level crossing to Wickham Road (600m to the south of the crossing). The nearest residential property is located approximately 20m east of the crossing (Eastlands Farm).
- 2.9.2 The need for new data was identified at Gislingham and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.9.3 During the nine-day survey period, which included two weekends, a total of 5 pedestrians were recorded using the level crossing with the busiest days being Wednesday 29th June and Sunday 3rd July 2016 when 2 pedestrians were recorded on each day. Census data can be found at core document **NR25**.
- 2.9.4 Only 1 person provided feedback during the first round of public consultation who stated that they never used it.
- 2.9.5 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is used infrequently by a very small number of people, potentially to access the wider footpath network that lies to the north and south of the crossing.
- 2.9.6 The proposed alternative route can be seen on drawing number MMD-367516-S16-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.9.7 Existing public rights of way over the level crossing will be extinguished. The southern end of Bridleway 23 Gislingham will be extinguished (approximately 50m in length). Users will be

diverted south along a new 3m unsurfaced public bridleway which will connect with existing public Byway Open to all Traffic (BOAT) 22 Finningham. The new bridleway will follow the field boundary and be approximately 550m in length. Users will head east towards the railway along the existing Byway Open to all Traffic 22 Finningham and use the existing underbridge to cross the railway, approximately 400m south west of the Gislingham level crossing. Users will continue eastwards along the BOAT and join Eastlands Lane, which then heads north to Eastland Farm where the Gislingham crossing is located.

- 2.9.8 As S16 Gislingham, the maximum diversion route around the level crossing is an additional length of approximately 1340m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.9.9 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.9.10 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 1340m would take approximately 20 minutes longer to undertake than the current route.
- 2.9.11 The likely diversion is to ongoing public rights of way Footpath 11 Gislingham south of the level crossing which is an additional length of approximately 250m and would take approximately 4 minutes longer to undertake than the current route.
- 2.9.12 The diversion route is the same character as the existing public right of way.
- 2.9.13 A DIA scoping exercise recommended that full Diversity Impact Assessment was undertaken. The DIA concluded that due to the availability of the alternative route in the local area to cross the railway, closure and redirection along the proposed diversion route is considered an appropriate solution. However, there were further points raised as potential actions for which consideration should be given. These are recorded in the table below:

DIA Action	Project Team Response
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.	NR to undertake this at detailed design and/or implementation stage.
Explore improvements to diversion routes including: signage to support way finding; and ensuring level surfaces. This will ensure that pedestrian accessibility is maintained along the route.	Appropriate signage will be provided. Unsurfaced footpaths will be level surfaces within the proviso that they are cross field paths that will match such existing rights of way
Ensure that measures to improve the permanent diversion route meet guidelines in	To be considered at detailed design

<p>the Equality Act 2010 wherever possible to ensure that the route is as accessible as can be for all groups.</p> <p>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.</p> <p>Within the underbridge, 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 appropriate levels of light. Where security is a concern, CCTV cameras should also be considered in underbridges. Notices to the effect that CCTV is in operation should deter vandals and provide a measure of comfort to pedestrians.</p> <p>Review this DIA at every GRIP stage</p>	<p>The diversion route utilises the underpass and it is noted that the route through the underpass is already designated as public byway open to all traffic reference BOAT 22 Finningham which is on the public rights of way definitive map. It is considered that this route and the use of the underpass is deemed safe and suitable for use by Suffolk County Council. CCTV provision can be discussed with Suffolk County Council at detailed design to confirm their views on the matter of provision of such CCTV in rural locations but it not considered appropriate in this location.</p> <p>NR to undertake this at detailed design and/or implementation stage.</p>
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- 2.9.14 The existing PROW route across the level crossing provides north south connectivity. It would be possible to reach Gislingham in the north from Finningham in the south using the public rights of way via the level crossing which is approximately 3.3km. The proposed alternative maintains the existing connectivity.
- 2.9.15 Following consultations the northern part of the proposed diversion was amended to mitigate concerns of the local landowner to align closer with field margins. The southern end of the diversion was amended to use an existing field access to provide a more suitable flatter transition to the rural road for equestrian users.
- 2.9.16 No significant changes to the use of the road network would result from the alternative proposals and it was not considered necessary to undertake a Road Safety Audit.
- 2.9.17 The proposals have been discussed in 2 workshops with the local highway authority. Officers have no objections to the proposed route.
- 2.9.18 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route and the wider public rights of way.

2.10 S17 Paynes

- 2.10.1 Footpath 27 Gislingham leads from the High Street in Gislingham to agricultural fields and leads through a number of connecting footpaths to the south east of the village, to the level crossing. The existing Footpath 22 Gislingham continues on the east side of the railway where it extends 600m to the south east to connect to Starhouse Farm. The closest residential properties are at Gislingham, approximately 600 m northwest of the level crossing.
- 2.10.2 The level crossing provides north south connectivity from the public right of way to the south east of the railway, linking to a wider PROW network to the north west of the railway. The majority of public rights of way lie to the northwest of the level crossing. Footpaths using the level crossing provide a link from Gislingham to the village of Wickham Street, a distance of approximately 2.5km.
- 2.10.3 The accessibility of this crossing is poor as the approach route consists of narrow and uneven pathways along farmer's fields that reduce the ability of wheelchair users and people with limited mobility to access the crossing. This is exacerbated by the presence of steps to reach the line. These have a significant impact on people with limited mobility or wheelchair users who will not be able to navigate these obstacles to use the crossing. This is also the case for users with visual impairments
- 2.10.4 The need for new data was identified at Paynes and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.10.5 During the nine-day survey period, which included two weekends, a total of 14 pedestrians were recorded using the level crossing with the busiest day being Sunday 26th June, Tuesday 28th June and Sunday 3rd July 2016 when 4 pedestrians were recorded each day. Census data can be found at core document **NR25**.
- 2.10.6 Of the 3 people that provided feedback during the first round of public consultation, 2 people used it monthly and 1 person stated that they never used the level crossing. Responses indicated that the crossing is used by 1 person for leisure purposes and for 1 person for access to local amenities. 1 person did not state a reason.
- 2.10.7 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is used on an infrequent basis by a relatively small number of people to access the wider footpath network.
- 2.10.8 The proposed alternative route can be seen on drawing number MMD-367516-S17-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.10.9 Existing public rights of way over the level crossing will be extinguished. Public Footpath 22 Gislingham will be extinguished on both the west and east sides of the railway (approximately 50m to the west and 500m to the east). To the west of the railway, users will be diverted northwards and eastwards along existing public Footpaths 22 Gislingham and 29 Gislingham which heads east towards the railway. Users will cross at an existing bridge, approximately 350m north east of Paynes level crossing, and continue east along Footpath 21 Gislingham. Users will then head south along a new 2m wide unsurfaced public footpath in a field margin. The new footpath will be approximately 700m in length and will join existing public Footpath 04 Wickham Skeith at its southern end.
- 2.10.10 As S17 Paynes, the maximum diversion route around the level crossing is an additional length of approximately 970m, however, the origin and destination points will affect the overall diversion length for many users.

- 2.10.11 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate. Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 970m which would take approximately 14.5 minutes longer to undertake than the current route.
- 2.10.12 I have noted that the level crossing provides connectivity on the 2.5km route from Gislingham to Wickham Street and the diversion would add an approximately 400m to this route from the junction of Footpath 27 and 29 which would take approximately 6 minutes longer to undertake than the current route.
- 2.10.13 The proposed route links into the existing network of public rights of way by providing a north south link between existing PROWs on the east side of the railway. The route is longer than existing, however, as it provides leisure walking it is considered acceptable.
- 2.10.14 Following a scoping study, a Diversity Impact assessment was not considered necessary at this crossing due to the current restricted accessibility of the existing crossing route and the provision of the diversion route would not reduce accessibility.
- 2.10.15 The proposals that were put forward at public consultation can be seen in **NR32/2 at Tab 2, page 79**.
- 2.10.16 Following round 2 it was considered that the landowner objections could be removed if the route was amended to follow the blue route **NR32/2 at Tab 2, page 79**. Enquires were made with the affected landowner of the revised route and no issues were highlighted.
- 2.10.17 It was not necessary to undertake a Road Safety Audit.
- 2.10.18 The proposals have been discussed in 2 workshops with the local highway authority. Officers have no objections to the proposed route.
- 2.10.19 As the final route was considered to be materially different from that shown in round 2, a further information update was issued to parties including the public and statutory consultees in December 2016 and this is shown in **NR32/2 at Tab 4, page 156**. No changes were made following this exercise.
- 2.10.20 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route

2.11 S18 Cow Pasture Lane

- 2.11.1 The existing Byway Open to all Traffic (BOAT) 11 Burgate (Cowpasture Lane), which is currently restricted to a bridleway over the crossing, connects Willow Farm approximately 320m north of the railway to Chapel Farm approximately 700 m south east of the railway line. The village of Thornham Parva lies approximately 1.6km southeast of the level crossing and the village of Mellis lies approximately 1.0km northeast of the level crossing.
- 2.11.2 The need for new data was identified at Cow Pastures Lane and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.11.3 During the nine-day survey period, which included two weekends, a total of 67 pedestrians and 7 cyclists were recorded using the level crossing with the busiest day being Sunday 3rd July

2016 when 12 pedestrians and 2 cyclists were recorded. Census data can be found appended to my Proof of Evidence, **NR32/2 at Tab 17**

- 2.11.4 Census data can be found at The proposals can be seen on drawing number MMD-367516-S18-GEN-005 in Appendix F of core document reference **NR26**.
- 2.11.5 The Cow Pasture Lane crossing will be downgraded from a public byway open to all traffic, to a public bridleway crossing. The existing gates will be replaced with bridleway gates that provide a clear opening of 1.525m. Mounting blocks will be provided on each side of the railway.
- 2.11.6 The legal status of the level crossing is currently a Byway Open to All Traffic which was a result of an upgrade from footpath status in 2005. However, a Traffic Restriction Order restricting the use to bridleway was confirmed 14/03/2008 and there has been no byway (vehicular) use since that time. There is no infrastructure at the level crossing that allows use as a byway and no public rights connecting the byway to Mellis Road north of railway. The downgrade to a bridleway legally formalises the current situation.
- 2.11.7 There will be no effects on journey lengths due to the proposals.
- 2.11.8 Following a scoping study, a DIA was not considered necessary at this crossing as the level crossing will be used in the same manner as existing.
- 2.11.9 A Stage 1 Road Safety Audit is not required.
- 2.11.10 The proposals have been discussed in 2 workshops with the local highway authority. Officers have no objections to the proposed alternative.
- 2.11.11 I am satisfied that no alternative is required to facilitate the proposed downgrade of this level crossing to bridleway status as the proposal formalises the existing arrangements.

2.12 **S21 Abbotts**

- 2.12.1 The level crossing is in a central village location and connects east and west Mellis via a private track. There is no public right of way at this crossing. Earlsford Road runs along east of the railway to connect to Mellis Road to the north. There is common land immediately to the north and south of the crossing. To the west Footpath 01 Mellis provides a link north to the village of Mellis. The closest residential property is located approximately 30m to the west of the level crossing.
- 2.12.2 There are few off road public rights of way to the south of the level crossing. Footpath 06 Mellis lies approximately 600m to the southeast. To the north, Footpath 01 and 04 Mellis provide an ongoing route.
- 2.12.3 The approach to the pedestrian gate on the eastern side is along the side of a field, culminating in a stile fence just before the railway. On the western side, the approach is over a patch of grass, again with a stile just before the crossing. As such, people with mobility impairments or parents with pushchairs are currently unable to use this crossing.
- 2.12.4 The need for new data was identified at Abbotts and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned, which took place between the 28th June to 3rd of July 2016 and 16th July to 18th July. During the nine-day survey period, which included two weekends, a total of 26 pedestrians were recorded using the level crossing with the busiest day being Saturday 2nd July 2016 when 6 pedestrians were recorded. Census data can be found appended to my Proof of Evidence, **NR32/2 at Tab 17**

- 2.12.5 Census data can be found at Of the 9 people that provided feedback during the first round of public consultation, 2 indicated that they used the crossing daily, 1 used it weekly, 2 used it monthly, 3 people rarely used it and 1 person never used it. Feedback indicates that the crossing provides leisure access for 2 users, 1 person used it to access neighbouring properties, 1 person used it to access their own property, 1 person to access school, 3 people accessed other local amenities and 1 person gave no response.
- 2.12.6 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is used on a regular basis by relatively small number of people who use it to access the properties and services in and around the village of Mellis.
- 2.12.7 The proposed alternative route can be seen on drawing number MMD-367516-S21-GEN-005 in Appendix F of core document reference **NR26**.
- 2.12.8 There is no public right of way at this crossing and the level crossing will be closed with all rights extinguished. To the west of the railway, users will be diverted across the common to join Mellis Road (with verge walking) and head northeast along existing Footpath 01 Mellis which re-joins Mellis Road at its northern end. Users will cross the railway at the Mellis automatic half barrier road level crossing, approximately 280m north east of Abbots level crossing, and continue east along Mellis Road. To the east of the railway, users will head south down Earlsford Road. The proposed route utilises existing highways and PROWs.
- 2.12.9 There would be no changes needed to the existing footpaths or footways provided by Suffolk County Council which form the alternative diversion route.
- 2.12.10 As S21, the maximum diversion route around the level crossing is an additional length of approximately 930m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.12.11 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.12.12 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 930m which would take approximately 14 minutes longer to undertake than the current route.
- 2.12.13 A DIA scoping exercise recommended that full Diversity Impact Assessment was undertaken. The DIA concluded that due to the availability of the alternative route in the local area to cross the railway, closure and redirection along the proposed diversion route is considered an appropriate solution. However, there were further points raised as potential actions for which consideration should be given. These are recorded in the table below:

Action	Project Team comment

<p>The installation of footpaths, drainage and rest points on both Earlsford Road and Mellis Road should be considered by the design team at the detailed design stage, in order to improve pedestrian safety. Reducing the speed limit on these sections of road (from 30 to 20mph) should also be considered.</p>	<p>The village of Mellis is a rural one with no footpaths throughout. Those existing users of the S21 level crossing must approach by walking on the carriageway or grass verges. For the majority of the diversion route, wide grass verges are available to walk on, or act as points for pedestrians to step off the road at the approach of a vehicle.</p> <p>There is no accident record in the village and the Road Safety Audit did not raise any issues with the diversion route.</p> <p>The provision of footways and positive drainage along the diversion route would be a significant cost and potentially impact on the rural character of the village. Given the low usage (3 people per day on average), the costs and potential impacts cannot be justified. There has been no request from SCC or the Parish Council for this level of infrastructure</p> <p>Rest points in the form of benches at points have not been requested by the Highways Authority (HA) and hence anything to be provided now must be at the discretion of the HA as powers to do so are not in the TWAO.</p> <p>Observations on site do not point to need for a reduction in speed limits, ATC surveys show an average speed of 21mph and 85% speed of 25mph. SCC could progress this separately if desired by locals.</p>
<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>	<p>NR to undertake at detailed design / implementation stage.</p>
<p>Review the DIA at every GRIP stage to ensure equality of access is maintained for all.</p>	<p>NR to undertake at detailed design / implementation stage to ensure that any changes to the design do not worsen the access and they improve where appropriate.</p>

2.12.14 No different options were also considered for the closure of the level crossing.

2.12.15 The new diversion route maintains the east / west connectivity and retains access to the village amenities via the diversion route.

- 2.12.16 Mellis Road level crossing is an automatic half barrier (AHB) crossing, meaning that it has road traffic signals and a lifting barrier on both sides of the railway. Audible warning for pedestrians is also in place. This means that pedestrians can be managed at the crossing rather than relying the users judgement - 'stop, look and listen' - that has to be used at S21 Abbots level crossing.
- 2.12.17 Earlsford Road is an existing rural road without footways, but with occasional verge space. Mellis Road to the west of the level crossing is a rural road with wide verge area. To access land either side of the S21 Abbots level crossing, pedestrians would use these existing roads at present. The longer diversion would make use of roads currently which are walked along at the moment. Both of these roads are highways maintainable at public expense by Suffolk County Council and discussions with the local authority have not highlighted concerns or indicated that works are needed to remediate any existing issues of concern to road walkers in the area.
- 2.12.18 The proposal shown at round 1 public consultation (see **NR32/2 at Tab 2, page 83**) was subject to a Stage 1 Road Safety Audit carried out in line with HD19/15 and by an independent team remote from the option development design team. No issues were identified with the proposals.
- 2.12.19 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 10**) was collected on Mellis Road west of the railway that showed an average 2 way daily traffic flow of 1714 vehicles and 85th percentile speed of vehicles of 39.4mph where the posted is 30mph. The proposals make use of off highway verges and hardstanding areas to separate pedestrians from traffic.
- 2.12.20 On completion of the consultation exercises involving both the public and Suffolk County Council, it was identified that additional traffic data would be beneficial to the study and an Automatic Traffic Count (ATC) was commissioned on Earlsford Road east of Rectory Road level and north of the junction with Rectory Road (see **NR32/2 at Tab 1 page 51**). This showed that showed on Earlsford Road there was an average 2 way daily traffic flow of 219 vehicles and 85th percentile speed of vehicles of 28.8mph where the posted is 30mph.
- 2.12.21 Accident data for the 5 year period 2011 to 2015 recorded no accidents in the vicinity of the route.
- 2.12.22 Based on the traffic data, accident records and the RSA outcome the proposed route is considered safe and suitable.
- 2.12.23 The proposals have been discussed in two workshops with the local highway authority. Officers have made no comment as this is a private crossing.
- 2.12.24 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route.

2.13 S22 Weatherby

- 2.13.1 The existing level crossing is located in the south part of the town of Newmarket and connects Cricket Field Road (east of the railway) to Granary Road (west of the railway). There is no public right of way over this crossing.
- 2.13.2 There are a number of residential properties along Willow Crescent and Granary Road and Sovereign court, the closest of which are at a distance of approximately 30 m. There is a Sports playing field and allotments south of the crossing on Cricket Field Road.
- 2.13.3 On the northern side, the crossing is accessed via Granary Road. There is a pedestrian crossing linking the level crossing to the pavement on the opposite side of Granary Road. On the

southern side, the level crossing is accessed via Willow Crescent, with a pavement leading up to the crossing. On both sides, the approach is paved, level and accessible for any users with mobility issues and people with pushchairs or in wheelchairs/mobility scooters. There are also gates on either side of the crossing.

- 2.13.4 The need for new data was identified at Weatherby and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.13.5 During the nine-day survey period, which included two weekends, a total of 3597 pedestrians and 442 cyclists were recorded using the level crossing with the busiest day being Saturday 2nd July 2016 when 484 pedestrians and 41 cyclists were recorded. Census data can be found at core document **NR25**.
- 2.13.6 Of the 33 people that provided feedback during the first round of public consultation, 22 indicated that they used the crossing daily, 8 used it weekly, 1 used it monthly, 1 person rarely used it and 1 person never used it. Feedback indicates that the crossing provides leisure access for 2 users, 17 to access other local amenities, 2 accessed their own property, 5 used it for commuting and 7 people stated Other uses.
- 2.13.7 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is used regularly by a very high number of people to access property and amenities on both sides of the railway.
- 2.13.8 The proposed alternative route can be seen on drawing number MMD-367516-S22-GEN-005 in Appendix F of core document reference **NR26**.
- 2.13.9 There is no public right of way at this crossing and the level crossing will be closed to all users. Existing users will be diverted along existing public highways on both sides of the railway. To the west of the railway, users will head south west along Granary Road, parallel with the railway, and then head south east along The Avenue, crossing the railway using the existing underbridge. To the east of the railway, users will continue eastwards along New Cheveley Road and head back towards Weatherby along Cricket Field Road. It should be noted that the diversion route is on existing footways for the full extent of the route.
- 2.13.10 On the west side of the crossing, between the railway and Granary Road, 4.5m of existing 2m wide tarmac footway will be replaced with grass. On the eastern side of the crossing, between the railway and the western end of Cricket Field Road, 30m of existing 2.25m wide tarmac footway will be removed and replaced with grass.
- 2.13.11 At S22, the maximum diversion route around the level crossing is an additional length of approximately 850m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.13.12 The route is along tarmac footways and Guidance from the Chartered Institution of Highways and Transportation (CIHT) guidance for Providing for Journeys on Foot (an extract from this guidance is appended to my Proof of Evidence, **NR32/2 at Tab 15**) indicates a walking rate of 1.4m/s (approximately 3 miles/hour) for people without mobility difficulties. This shows that that 850m would take approximately 10 minutes longer to undertake than the current route.
- 2.13.13 A DIA scoping exercise recommended that full Diversity Impact Assessment was undertaken. The DIA concluded that due to the availability of the alternative route in the local area to cross the railway, closure and redirection along the proposed diversion route is considered an appropriate solution. However, there were further points raised as potential actions for which consideration should be given. These are recorded in the table below:

Action	Project Team comment
<p>As the diversion route incorporates an underpass, measures should be considered to ensure the safety and usability of the route. The DfT states that where underpasses are provided, they should be as wide as possible to give a sense of security. Within the underpass, handrails set at 1000mm above the walking surface should be provided on both sides. There should be a clear view from one end to the other and a good level of lighting.</p>	<p>The underbridge is an existing road bridge with footways to both sides which have been provided by SCC to meet their recommended width requirements. Lighting should be provided by the local highway authority to the appropriate standard.</p> <p>Hand railing is already provided beneath the underbridge on the east side of the road which is associated with the diversion route (due to a level difference between footway and carriageway). No handrails are needed as route on diversion under bridge already has them.</p> <p>The route through the underbridge is short and straight with good forward visibility.</p> <p>It is noted that SCC have not requested any improvements at this location.</p> <p>No further mitigation or improvement works are considered necessary</p>
<p>Consider measures along the diversion routes to help mitigate any negative impacts of increased walking distances and steeper gradients, including: the widening of pavements; signage to support way finding; and ensuring level surfaces including dropped kerbs and tactile paving. This will enhance the user experience for all groups and increase a sense of safety.</p>	<p>Footways are present for the full length of the diversion route and are of reasonable width for their current and proposed usage.</p> <p>Permanent and temporary signing after the LX closure will be discussed in further detail with the highway authority at the detailed design stage. This can be incorporated within the adopted highway with the agreement of the highway authority.</p> <p>Dropped kerbs and tactile paving already exist at the junction of Green Road and New Cheveley Road. The provision of new dropped kerbs and tactile paving could be provided at the junction of Cricket Field Road and New Cheveley Road and should be discussed further with the highway authority. This can be incorporated within the adopted highway with the agreement of the highway authority.</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 any other benefits of the scheme, particularly focussing on user safety at the site for children.	NR to undertake at detailed design / implementation stage.
Review the DIA at every future GRIP stage to ensure equality of access is maintained for all.	NR to undertake at detailed design / implementation stage to ensure that any changes to the design do not worsen the access and they improve where appropriate

- 2.13.14 At the initial feasibility stage an option was considered to provide a new footpath on the south side of the railway line to link from the level crossing to New Cheverley Road bridge⁴. This was discounted due to the likely effects on private land, environmental impacts, the unsuitability of Network Rail land for use as a footpath due to sloping embankments.
- 2.13.15 No significant changes to the public road infrastructure is required as a result of the alternative proposals and it was not considered necessary to undertake a Road Safety Audit as the route follows footways currently used by pedestrians.
- 2.13.16 It was not considered necessary to collect Automatic Traffic Count data due to the existing off highway facilities (footways) for diverted users.
- 2.13.17 Accident data for the 5 year period 2011 to 2015 recorded 2 accidents of slight severity in the vicinity of the route and no pedestrians were involved.
- 2.13.18 The new diversion route maintains the connectivity for pedestrians via the use of the bridge under the railway.
- 2.13.19 In response to the TWAO submission different alternative routes or concepts were suggested by Objectors as part of the TWAO process. These have been assessed further and the considerations are presented in **NR32/2 at Tab 7 (page 200)**.
- 2.13.20 The proposals have been discussed in two workshops with the local highway authority. Officers have objected to the proposed closure due to the high level of usage at this crossing whilst recognising that there are no public rights of way at this crossing. The Council believes that the closure of this crossing should fall into the later phases of the Anglia Level Crossing Reduction Strategy and that a grade separated option should be considered in this location. Network Rail's response to this is addressed by Andrew Kenning in his Proof of Evidence.
- 2.13.21 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route, subject to discussions with the local authority on the issues raised by the Diversity Impact Assessment.

2.14 S23 Higham and S24 Higham Ground Frame

- 2.14.1 These two level crossings are considered together as they share a common locality and solution.

⁴ As shown in the RRD for Suffolk, which is appended to Andrew Kenning's Proof of Evidence **NR30/2 at Tab 1**

- 2.14.2 At the S23 Higham level crossing Footpath 01 Higham runs north between the A14 and the railway line approximately 300 m west of Coalpit Lane. To the south of the level crossing, it continues to Higham Road. Higham Road connects to Gazeley village approximately 3.3 km to the southwest and to Coalpit Lane approximately 430m to the east. The paths lead through agricultural fields either side of the A14 and railway line. The closest residential property is Tollhouse Cottage approximately 300m to the east.
- 2.14.3 The accessibility of the S23 level crossing is severely limited by the approach roads being through uneven farmland that would pose a significant challenge to many wheelchair users and people with limited mobility. The uneven surfaces and obstacles to reach the crossing effectively exclude wheelchair users from accessing the crossing.
- 2.14.4 The S23 Higham level crossing was temporarily closed as a result of safety concerns however survey equipment was set up on site between the 25th June and 3rd of July 2016. At the time of the surveys the level crossing was temporarily closed and as a result the usage data sought to capture instances of pedestrians approaching the level crossing with the intention to cross the railway line but were prevented from doing so. No users were recorded intending to use the crossing during the survey period. It is acknowledged that this data is not representative of 'normal' crossing usage at this location.
- 2.14.5 Only 1 person provided feedback during the first round of public consultation who stated that they never used it.
- 2.14.6 Whilst there is no census data to assist with assessment of the likely level of usage of the crossing, based on the feedback from consultation and the location of the crossing which has no ongoing public footpath links to the north of the railway over the A14, it is considered that it would likely have very low usage.
- 2.14.7 At the S24 Higham Ground Frame level crossing Footpath 06 Barrow runs from south to north crossing the railway at Higham Ground Frame level crossing approximately 140m south of the A14. Footpath 06 Barrow connects to Footpath 04 Higham just south of the A14 and Footpath 03 Higham continues in a northerly direction from the A14 to connect to Footpath 02 Higham. There is an at grade pedestrian crossing route across the A14 connecting Footpaths 04 and 03 Higham. There is a small area of woodland and dense vegetation immediately north east of Higham Ground Frame and arable land to the south. The closest residential properties are located approximately 560m south west of the level crossing. There is an area of historic landfill approximately 120m north of the level crossing and Breckland Farmland SSSI and SPA are located approximately 1.4km from the level crossing. Breckland Farmland SSSI and SPA are located approximately 150m north of proposed bridleway creation works.
- 2.14.8 The accessibility of the S24 level crossing is severely limited by the approach roads being through uneven farmland that would pose a significant challenge to many wheelchair users and people with limited mobility. The uneven surfaces and obstacles to reach the crossing effectively exclude wheelchair users from accessing the crossing.
- 2.14.9 The need for new data was identified at S24 Higham Ground Frame and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.14.10 During the nine-day survey period, which included two weekends, a total of 50 pedestrians were recorded using the level crossing with all this usage being on a single day, Wednesday 29th June 2016 with no other use recorded during the 9 day period. Census data can be found at core document **NR25**.

- 2.14.11 Only 1 person provided feedback during the first round of public consultation who stated that they never used it.
- 2.14.12 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is generally used very infrequently by a very small number of people. The large single daily use has been noted potentially as an organised leisure walk to access the wider footpath network that lies to the north and south of the crossing.
- 2.14.13 The proposed alternative route can be seen on drawing numbers MMD-367516-S23-GEN-005 and MMD-367516-S24-GEN-005 in Appendix F of core document reference **NR26**.
- 2.14.14 At S23 the existing public rights of way over the level crossing will be extinguished. Existing Footpath 01 Higham to the north of the railway (approximately 130m in length) and to the south of the railway (approximately 200m in length) will be extinguished. To the south of the railway, users will be diverted along Higham Road crossing the railway at the existing bridge approximately 300m east of Higham level crossing. Pedestrian users will make use of existing verges and carriageways up to the point where Higham Road meets the A14 slip road. From this point east, to the junction with Coalpit Lane, an asphalt planning footway will be provided within the highway verge. It is not considered that there are any ongoing footpaths to the north of the A14.
- 2.14.15 As S23, the maximum diversion route around the level crossing is an additional length of approximately 510m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.14.16 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.14.17 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 510m would take approximately 7.5 minutes longer to undertake than the current route.
- 2.14.18 However, there are no ongoing routes at the northern end of Footpath 01 Higham or to the west of this point. It is a reasonable to assume that the 'desire lines' would take walkers between Footpath 01 Higham at the level crossing to Footpath 01 Higham and the conjunction of Footpaths 01, 02 and 013 Higham to the north of the A14. The proposed diversion will reduce this route by approximately 250m.
- 2.14.19 Following a scoping study, it was considered that a DIA was not required for S23. It was noted that the level crossing had been closed at the instruction of the Level Crossing Manager.
- 2.14.20 At S24 the existing public rights of way over the level crossing will be extinguished. Footpaths 02, 03 and 04 Higham, and 06 Barrow to the north of the railway will be extinguished. To the south of the railway, users will either be diverted eastwards on a new 2m wide unsurfaced footpath in the private field margins, which runs parallel with the railway to the Needles Eye underpass. Users will then turn east along a proposed 3m unsurfaced bridleway, providing a link to crossing the railway at the existing bridge approximately 2500m east of Higham Ground Frame level crossing. An alternative to the south of the railway, users will be diverted westwards on a new 2m wide unsurfaced footpath in the private field margins, which runs parallel with the railway to Coalpit Lane. Pedestrian users will use field margins to walk south to a point opposite to existing Footpath 05 Higham. A new footbridge (up to 5m long) and steps or a ramp will be provided to cross a ditch and gain access to Coalpit Lane. Users will cross Coalpit Lane and follow Footpath 05 Higham and then make use of the existing bridge on Higham Lane to cross

the railway. A new 2m wide unsurfaced footpath in the field margin will also be created between Footpath 06 Barrow and Bridleway 18 Barrow.

- 2.14.21 As S24, the maximum westerly diversion route around the level crossing via existing Footpath 05 Higham and Higham Lane to Footpath 02 Higham is an additional length of approximately 910m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.14.22 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.14.23 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 910m would take approximately 7.5 minutes longer to undertake than the current route.
- 2.14.24 Although current accessibility at the crossing is not especially inclusive, the presence of steps as part of the route means that pedestrian accessibility is likely to be reduced. Walking distances are also likely to increase as a result of the proposed diversion. Therefore a DIA scoping exercise recommended that full Diversity Impact Assessment was undertaken. The DIA concluded that due to the availability of the alternative route in the local area to cross the railway, closure and redirection along the proposed diversion route is considered an appropriate solution. However, there were further points raised as potential actions for which consideration should be given. These are recorded in the table below:

DIA Action	Project Team Response
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.	NR to undertake this at detailed design and/or implementation stage.
Explore improvements to diversion routes which could include: vehicular speed control measures along Coalpit Lane, Higham Road and the A14 slip road; signage to support way finding; and ensuring level surfaces. This will ensure that pedestrian accessibility is enhanced along the proposed route.	<p>Appropriate signage will be provided.</p> <p>Unsurfaced footpaths will be level surfaces within the proviso that they are cross field paths that will match such existing rights of way</p> <p>A new footway is proposed on the A14 slip road and it is not considered that speed control measures will be appropriate. This can be confirmed at detailed design stage.</p>
Ensure that measures to improve the permanent diversion route meet guidelines in the Equality Act 2010 wherever possible in	To be considered at detailed design. A ramped footbridge is under consideration and has been noted on the TWAO plan.

order to ensure that the route is as accessible as can be for all groups. This includes installing a ramped footbridge on Coalpit Road, rather than a stepped structure.	
Review this DIA at every GRIP stage	NR to undertake this at detailed design and/or implementation stage.

- 2.14.25 The public right of way over the S23 level crossing has no ongoing wider links to public rights of way to the north of the level crossing.
- 2.14.26 From an assessment of the public rights of way in the area, the new diversion routes retain the existing connectivity in the area.
- 2.14.27 During the design development stages several different routes were considered which can be seen on the consultation summary sheets in **NR32/2 at Tab 2, page 88**
- Users would be diverted west on a new public footpath in farm fields to Coalpit Lane. The diversion would use the rural road and bridges over the railway and A14 on Coalpit Lane. A new public footpath link would be provided within fields to the north side of the A14. site (red route shown on **NR32/2 at Tab 2, page 89**)
 - Users would be diverted west on a new public footpath in farm fields, across Coalpit Lane then to Higham Road via an existing footpath. The diversion uses roads, footpaths and a road bridge over the railway on Higham Road to the A14 slip road. To provide more access to the east a new public footpath will be made to link with Haysborder Road and an existing bridleway (blue route shown on **NR32/2 at Tab 2, page 89**)
- 2.14.28 These proposals were subject to a Stage 1 Road Safety Audit carried out in line with HD19/15 and by an independent team remote from the option development design team.
- 2.14.29 The following issues were identified with the blue route following the Audit.
- Location: Coalpit Lane j/w A14 Westbound Entry.*
 - Summary: Risk of pedestrian trip type accidents.*
 - The diversion route guides pedestrians to cross the A14 Westbound entry slip road. Vehicles were observed to be travelling fast when turning onto the slip road and pedestrians may be hurried when crossing. Pedestrians rushing to cross the slip road will be more vulnerable to trips resulting in injury, or worse still, subsequent collisions with vehicles.*
 - Recommendation: It is recommended that a dropped kerb crossing point is provided to reduce the risk of pedestrians tripping. This can be positioned to guide pedestrians to the safest crossing location.*
 - Summary: Risk of vehicle collisions with pedestrians.*
 - Higham Road is a busy road providing access to the A14 westbound carriageway. The diversion route guides pedestrians along Higham Road from Coalpit Lane to the A14 on-slip. Traffic speeds were observed to be high and it is likely motorists will be accelerating towards the A14 on-slip. There is limited grass verge suitable for*

pedestrians who may be forced to walk within the carriageway which could result in collisions with vehicles.

- *Recommendation: It is recommended that a suitable footway is provided to enable pedestrians to continue along Higham Road without walking within the carriageway*

2.14.30 The following issues were identified with the red route following the Audit.

- *Location: Coalpit Lane, south of A14.*
- *Summary: Risk of vehicle collisions with pedestrians.*
- *Coalpit Lane is a busy road which links to the A14 at Junction 40. The diversion route guides pedestrians along Coalpit Lane from south of the railway bridge to north of the A14. There is no grass verge suitable for pedestrians between the railway bridge and the access to CPL Cambridge Coal and pedestrians will be forced to walk within the carriageway which also features a bend with limited forward visibility. The combination of high vehicle flows, high vehicle speeds and limited forward visibility places pedestrians walking within the carriageway at risk of collisions with vehicles.*
- *Recommendation: It is recommended that a suitable footway or footpath is provided to enable pedestrians to continue without walking within the carriageway.*

2.14.31 As a result of the issues raised on the road safety audit the red route was not progressed. Modifications to address the RSA issues on the blue route were subsequently included into the next stage of the design progression. These features were a new crossing point and footway on the A14 slip road. It was considered that by incorporating the footway within the verge, rather than adjacent to the carriageway, that no kerbing and no additional road drainage measures would be required.

2.14.32 No Road Safety Audit issues were identified with the S23 proposals shown on in **NR32/2 at Tab 2, page 87**

2.14.33 Discussions were held with Suffolk County Council following the round 1 consultation. The Council noted that the use of the Needles Eye underpass appeared suitable as another alternative route to link to the east. It was agreed that the Council would assess the wider network and supply the design team with further consideration of their preferred routes in the area.

2.14.34 Details of the Suffolk County Council considerations of their public rights of way proposals were received on 31/8/16 and these are shown in **NR32/2 at Tab 10, page 234**. The Council indicated that they would wish to see additional routes to the east as mitigation for the loss of the north/south route and the extinguishment of footpath.

2.14.35 Suffolk County Council proposed a route to the east that would use the Needles Eye underbridge to cross the railway and then running along the north side of the railway as a bridleway to link to New Road to the east, forming a circular bridleway route in the local area. This proposal appeared suitable as mitigation to the closure of the north south, and as the bridleway section of the route to the north of the railway to the east of the Needles Eye was on an existing farm track, the right of way would not impact of current farming operations. This was taken forward in the design proposals.

2.14.36 Suffolk County Council also suggested an additional route to extend the bridleway linkage further to the east. It was noted that this route would use the access track to Symonds Farm off New Road and this was seen to be heavily trafficked with HGVs and likely to pose a safety risk to users of the PROW unless mitigation measures were undertaken. It was generally considered that the Council's suggested proposal in this location was betterment to the existing public rights

of way and could not be justified as mitigation to the loss of the north/south route across Higham Ground Frame level crossing as part of the closure works.

- 2.14.37 The landowner associated with the proposed section of bridleway to the north east of the Needle's Eye has objected to the proposals on the basis that the presence of the bridleway on his land will affect shooting activities carried out in this area. It is considered that any such activities are currently restricted by the presence of the railway to the south and the A14 to the north, and that the new bridleway to be located along the railway boundary will not add further restrictions. All existing and future shooting activity should be carried out in line with *The Code of Good Shooting Practice* published by The British Association for Shooting and Conservation (BASC). Any concerns about trespass from the bridleway onto private land can be dealt with by the provision of appropriate fencing and information signs can be provided if necessary to inform users of the adjacent land use.
- 2.14.38 The alignment of the proposed footpath west of the S24 level crossing was relocated to field edge adjacent to the railway to mitigate impacts on crop production. The crossing point of Coalpit Lane was kept opposite Footpath 5 Higham to ensure that the road access point was the same as currently provided on site by Suffolk County Council. The forward visibility on Coal Pit Lane to the crossing point is approximately 150m. In relation to TD9/93 Table 3, the stopping sight distances equates to a speed of approximately 48mph. Vegetation clearance can be considered further if necessary.
- 2.14.39 These amendments can be seen in consultation summary sheets in **NR32/2 at Tab 3 page 136**
- 2.14.40 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 13**) was collected on Higham Road, that showed an average 2 way daily traffic flow of 893 vehicles and 85th percentile speed of vehicles of 39.4mph where the posted is 60mph.
- 2.14.41 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 40**) was collected on Higham Lane bridge over the railway, that showed an average 2 way daily traffic flow of 890 vehicles and 85th percentile speed of vehicles of 41.0mph where the posted is 60mph.
- 2.14.42 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 16**) was collected on the slip road to the A14, west of Higham Road, that showed an average 2 way daily traffic flow of 1835 vehicles and 85th percentile speed of vehicles of 35.5mph where the posted is 60mph.
- 2.14.43 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 43**) was collected on New Road approximately 2.5km west of S24, that showed an average 2 way daily traffic flow of 448 vehicles and 85th percentile speed of vehicles of 36.4mph where the posted is 60mph.
- 2.14.44 Accident data for the 5 year period 2011 to 2015 recorded 3 accidents in the vicinity of the route. The accidents occurred on Coalpit Lane, one of slight severity at the junction of the westbound A14 slip road and one of slight and one of serious severity north of the A14 where the pedestrians facilities are off highway.
- 2.14.45 This proposal was subject to a Stage 1 Road Safety Audit in September 2017 (see **NR32/2 Tab 13 at page 258**) which was carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit did not identify any issues.
- 2.14.46 Based on the traffic data, accident records and the RSA outcome the proposed route is considered safe and suitable.
- 2.14.47 The proposals have been discussed in two workshops with the local highway authority. Officers have no objections to the proposed alternative at S24 Higham Ground Frame but have objected to the alternative at S23 Higham on the basis of concerns about the suitability of use of the

verge on Higham Road and the safety of the crossing point on Coalpit Lane. It is considered that Higham Road verges can be safely used and if additional maintenance measures are deemed necessary at detailed design stage, the increased burden on the highway authority can be covered through commuted sums. The RSA did not identify any problems with the crossing point on Coalpit Lane.

- 2.14.48 Following round 2 it was considered that the structure required to cross the ditch and bund to access Coalpit Lane would either steps or a ramp and this would be assessed further at detailed design.
- 2.14.49 In response to the TWAO submission different alternative routes or concepts were suggested by Objectors as part of the TWAO process. These have been assessed further and the considerations are presented in NR32/2 at **Tab 7 (pages 192-193, 195, 203)**.
- 2.14.50 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route.

2.15 S25 Cattishall

- 2.15.1 The level crossing connects the public road that runs between the unnamed road to the south (Cherry Trees property) and Green Lane via Cattishall Farm to the north. This forms part of the National Cycle Network. The agricultural fields south of the level crossing and west of Cattishall Farm are allocated for development. The closest residential properties are located at Cattishall Farm 120 m north of the level crossing and 200 m west at Great Barton.
- 2.15.2 There are few off road public rights of way in the vicinity of the level crossing. Bridleway 75 Bury St Edmunds lies approximately 800m to the southwest, Footpath 29 lies 1400m to the southeast of the level crossing and Restricted Byway 4 Great Barton lies approximately 500m to the north. The routes are reached by the road network.
- 2.15.3 I am aware that the area to the north of the level crossing is subject to housing development proposals.
- 2.15.4 There is a good level of accessibility at this crossing as it is fully paved and the approaches are wide with standard gates that would allow most standard width wheelchairs and mobility scooters to use the crossing.
- 2.15.5 The need for new data was identified at Cattishall and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.15.6 During the nine-day survey period, which included two weekends, a total of 190 pedestrians and 153 cyclists were recorded using the level crossing with the busiest day being Sunday 3rd July 2016 when 59 pedestrians and 59 cyclists were recorded. Census data can be found at core document **NR25**.
- 2.15.7 Of the 13 people that provided feedback during the first round of public consultation, 2 indicated that they used the crossing daily, 7 used it weekly, 1 used it fortnightly, 1 used it monthly and 2 rarely used the level crossing. Responses indicated that the crossing is used for leisure purposes by 10 people, with 2 people stating they used it to access their own properties and 1 use for commuting.

- 2.15.8 Based on location of the crossing point, usage figures and feedback from public consultation, it was considered that the crossing provides mainly leisure and recreational access to the local area for a moderately high number of people on a regular basis.
- 2.15.9 The proposed alternative routes can be seen on drawing number MMD-367516-S25-GEN-005 in Appendix F of core document **NR26**.
- 2.15.10 Existing public rights of way over the level crossing will be extinguished. Users will be diverted along a new 3m wide surfaced tarmac planings surfaced bridleway which will form part of the National Cycle Route network. This material will form a compacted surface suitable for cycle use. The new track will be approximately 420m in length and will run parallel to and along the north side of the railway.
- 2.15.11 Users will cross the railway using the existing underpass, approximately 420m west of the Cattishall level crossing. To the south of the railway, users will head south along the highway and turn eastwards along the unnamed road, making use of the existing footpath and cycle lane.
- 2.15.12 As S25, the maximum diversion route around the level crossing to the junction of Green Lane / Mount Road is an additional length of approximately 860m to continue easterly journeys, however, the origin and destination points will affect the overall diversion length for many users.
- 2.15.13 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate. Road walking sections on the diversion route amount for approximately 650m which suggests an average walking speed of approximately 3 miles per hour on these sections.
- 2.15.14 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 860m would take approximately 11 minutes longer to undertake than the current route. For cycle users accessing NCR 51, the additional journey time would be reduced.
- 2.15.15 I have noted that the closest public right of way for westerly ongoing routes is Bridleway 13 Bury St Edmunds and the proposed alternative reduces the distance required by approximately 100m.
- 2.15.16 Following a scoping study, a DIA was considered necessary at this crossing but it was noted that Network Rail had carried out this exercise separately.
- 2.15.17 The following options were also considered, which can be seen on the consultation summary sheets in **NR32/2 at Tab 2**.
- a. Users would be diverted west via the shared use cycle / path along Mount Road and through the new housing development crossing the railway at an existing underpass. A new public track in farm fields would be provided to the north of the railway which would provide a link to an existing byway (and Sustrans route). This would be suitable for use as a cycle trail (red route shown on **NR32/2 at Tab 2, page 91**)
 - b. Users would be diverted west on a new public track in farm fields on the north side of the railway which would provide a link to Bradbrook Close via an existing railway underpass. This would be suitable for use as a cycle trail (blue route shown on **NR32/2 at Tab 2, page 91**)
- 2.15.18 Following round 1 consultation the proposals were discussed with Suffolk County Council who raised the fact that a stepped footbridge is proposed by the developer at the location of the

existing level crossing. I am also aware that the development proposals include a link to the existing underpass, approximately 420m west of the Cattishall level crossing which would concur with the alternative proposals for the level crossing closure.

- 2.15.19 As a result of the proposed development the red route was not taken forward.
- 2.15.20 The round 2 option is shown on the consultation summary sheets in **NR32/2 at Tab 3 page 138**.
- 2.15.21 No changes to the route were made following round 2 consultation other than a minor relocation of the proposed path to lie 15m north of the railway to align more closely with the development proposals.
- 2.15.22 No significant changes to the public road infrastructure or existing use were required as a result of the alternative proposals and it was not considered necessary to undertake a Road Safety Audit.
- 2.15.23 Accident data for the 5 year period 2011 to 2015 recorded no accidents in the vicinity of the route.
- 2.15.24 It was not considered necessary to collect Automatic Traffic Count data due to the existing off highway facilities (footways/cycle paths) for diverted users.
- 2.15.25 The proposals have been discussed in two workshops with the local highway authority. Officers have objected to the proposed alternative on the basis that the proposal to close the level crossing should be deferred whilst the development proposals are ongoing. It is understood that Suffolk County Council wish to see the proposed solution through the underpass to the west of the level crossing in addition to the new footbridge on the existing line of the level crossing route. Whilst Network Rail are supportive of the provision of a footbridge as part of the development proposals, it is not appropriate to delay closure until the development is brought forward, as explained by Andrew Kenning in his Proof of Evidence.
- 2.15.26 It is considered that the closure and diversion works are separate from any third party developments and are suitable to facilitate the level crossing to be closed within the current phase of work submitted as part of the current TWAO.
- 2.15.27 The diversion proposals would not preclude the installation of a 3rd party funded footbridge should this be approved as part of the development proposals.
- 2.15.28 In response to the TWAO submission a different alternative route or concept was suggested by Objectors as part of the TWAO process. This has been assessed further and the considerations are presented in **NR32/2 at Tab 7 (page 194)**.
- 2.15.29 Following consideration of use of the existing route across the level crossings and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route.

2.16 S27 Barrells and S28 Grove Farm

- 2.16.1 These two level crossings are considered together as they share a common locality and solution.
- 2.16.2 The S27 level crossing is located on public Footpath 05 Thurston that runs from north to south through agricultural land from the end of Birds Road in the south to Barrell's Road to the north. There are a small number of dispersed properties in the vicinity of the crossing, the nearest of

which are located 70m to the south, 120m to the north east and 150m to the north. The village of Thurston is located approximately 350 north west of the crossing at its nearest point.

- 2.16.3 At S27, the narrow, unpaved, footpaths that lead to the crossing are uneven and overgrown in places and the use of both stiles and steps to reach the line makes this journey untenable for those with disabilities and parents with pushchairs.
- 2.16.4 The need for new data was identified at S27 Barrells and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.16.5 During the nine-day survey period, which included two weekends, a total of 28 pedestrians were recorded using the level crossing with the busiest day being Saturday 2nd July 2016 when 7 pedestrians were recorded. Census data can be found at core document **NR25**.
- 2.16.6 Of the 7 people that provided feedback during the first round of public consultation, 2 indicated that they used the crossing daily, 2 used it weekly, 2 people rarely used it and 1 person never used it. Feedback indicates that the crossing provides leisure access to the local footpath network for 4 users, 1 person stated access to neighbouring properties and 2 gave no response on purpose of use.
- 2.16.7 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is used on a regular basis by a relatively small number of people to access the wider footpath network or properties.
- 2.16.8 The S28 level crossing is located on Footpath 11 Thurston that runs in a north-easterly direction through agricultural land from the end of Birds Road 180m to the west to Barrell's Road 400m to the east. There are a small number of dispersed properties in the vicinity of the crossing, the nearest of which are located 70m to north east and 100m to the north west. The village of Thurston is located approximately 550 north west of the crossing at its nearest point.
- 2.16.9 The accessibility of the S28 level crossing is poor as the crossing has stiles and steps. This excludes wheelchair users, those with pushchairs and many with limited mobility from using the crossing. The narrow and unpaved pathways along the edges of farm fields on either side also act to exclude these groups for whom the uneven surfaces and high chance of poor ground conditions poses a significant challenge.
- 2.16.10 The need for new data was identified at S28 Grove Farm and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.16.11 During the nine-day survey period, which included two weekends, a total of 13 pedestrians were recorded using the level crossing with the busiest day being Monday 27th June, Tuesday 28th June and Sunday 3rd July 2016 when 3 pedestrians were recorded on each day. Census data can be found at core document **NR25**.
- 2.16.12 Of the 7 people that provided feedback on S28 during the first round of public consultation, 1 indicated that they used the crossing daily, 2 used it weekly, 1 used it monthly, 3 person never used it. Feedback indicates that the crossing provides leisure access to the local footpath network for 3 users, 1 used it for access to other local amenities and 3 gave no response on purpose of use.
- 2.16.13 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the S28 crossing is used on a regular basis by a relatively small number of people to access the wider footpath network.

- 2.16.14 The proposed alternative route can be seen on drawing number MMD-367516-S27-GEN-005 and MMD-367516-S28-GEN-005 in Appendix F of core document reference **NR26**. However, it has been identified that an existing footpath, Footpath 05 Thurston south of the S27 level crossing was omitted from these plans in error. Revised plans are presented in **NR32/2 at Tab 11**.
- 2.16.15 Existing public rights of way over the S27 level crossing will be extinguished. Existing Footpath 05 Thurston to the north of the railway (approximately 200m in length) and south of the railway (approximately 100m in length) will be extinguished. To the north of the railway, users heading west will be diverted along Barrell's Road where they would use the verge. Barrell's Road crosses over the railway, approximately 360m west of Barrells level crossing. As part of the works, pedestrian improvement measures would be implemented at the existing bridge and details can be found in core document **NR12 at page 30**. Users heading east would be diverted briefly along Barrell's Road and then south along a new 2m wide unsurfaced public footpath. A new footbridge (6m span) will be provided over a ditch running parallel to Barrell's Road. Users would then turn east along another new 1.5m wide unsurfaced footpath which runs parallel to and adjacent to the railway within Network Rail land, and joins existing Footpath 11 Thurston, which in turn joins an existing carriageway which crosses over the railway at an existing bridge approximately 670m east of Barrells level crossing. Pedestrian users would utilise the carriageway. The total length of new footpath to the north of the railway is approximately 400m.
- 2.16.16 South of the railway, users heading west would follow Birds Road, where users would utilise the carriageway and head north along Barrell's Road, crossing the railway at the existing Barrell's Road bridge. Users heading east would be diverted along existing Footpath 11 Thurston and then make use of the proposed new footpath forming part of the proposed work for S28 Grove Farm.
- 2.16.17 At S28, on the south side of the railway users heading east would be diverted along a new 2m wide unsurfaced public footpath in the field margin which runs parallel to and adjacent to the railway. The new footpath would be approximately 480m in length and would join an existing highway at its eastern end. Users would cross the railway using the existing highway bridge.
- 2.16.18 As S27 and S28, the maximum calculable westerly diversion route around the level crossing is an additional length of approximately 1480m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.16.19 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.16.20 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 1480m would take approximately 22 minutes longer to undertake than the current route.
- 2.16.21 As S27 and S28, the maximum calculable easterly diversion route around the level crossing is an additional length of approximately 960m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.16.22 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 960m and would take approximately 14.5 minutes longer to undertake than the current route.
- 2.16.23 However, both these diversions return the users to either side of Footpath 05 Thurston and it has been noted that the actual diversion distances will depend on origin and destination. In is

noted that there is a single footpath, Footpath 05 Thurston approaching the S27 level crossing from the south. Ongoing public rights of way BOAT 23 Thurston lies to the northeast of S28 and Footpath 17 Thurston on Stoney Lane lies to the northwest of S27.

- 2.16.24 To reach BOAT 23 Thurston from Footpath 05 Thurston on Bird Road via Footpath 11 Thurston (towards S28) in an eastern direction is approximately 200m longer than the existing route of Footpath 11 Thurston and would take approximately 3 minutes longer to undertake than the current route.
- 2.16.25 To reach Footpath 17 Thurston on Stoney Lane from Footpath 05 Thurston on Bird Road via Bird Road and Barrell's Road in an westerly direction is approximately 350m longer than the existing route of Footpath 05 Thurston and would take approximately 5 minutes longer to undertake than the current route.
- 2.16.26 The diversion route is on unsurfaced paths and rural roads, which is the same as the existing footpath network currently utilises to fulfil ongoing journeys.
- 2.16.27 Following a scoping study, a DIA was not considered necessary at these crossings due to the current restricted accessibility of the existing crossing routes.
- 2.16.28 The S27 level crossing provides a north south public right of way link over the railway. To reach the public rights of way north of the railway it can be seen that road walking is required at present to reach footpaths connecting to Thurston, Great Green or Norton. It is not apparent that there is a direct footpath link to Thurston or Great Green which could be associated with the level crossings. It is feasible to reach Beyton Green from footpaths via the level crossing which is over 1.5km from the level crossings. Circular walk in the area of the level crossing would require rural road walking at present.
- 2.16.29 The new diversion route retains the connectivity over the railway using footpaths and rural roads in the same manner as existing routes via the longer diversion considered suitable for leisure use.
- 2.16.30 Alternative were considered at round 1 consultation which can be seen in **NR32/2 at Tab 2, page 93.**
 - a. Red Route – Users heading west would be diverted on a new footpath on the north side of the railway (NR land) to Barrell's Road (west). This diversion uses the existing footpaths, rural roads and road bridge on Barrell's Road to cross the railway. Users heading east would be diverted on new footpath in farm fields to Barrells Road (east).
 - b. Blue Route – Users heading west would be diverted on new footpaths north and south of the railway to Barrell's Road (west). This diversion uses the existing footpaths and road bridge on Barrells Road to cross the railway. Users heading east would be diverted on a new footpath in farm fields to Barrell's Road (east).
 - c. Green Route – Users would be diverted by using the existing rural roads. A new footpath diversion would be needed on the east side of the level crossing to link to Gingells Cottage bridge (Barrell's Road).
 - d. Orange Route – Users heading west would be diverted on a new footpath in on the north side (NR land) of the railway to Barrells Road (west). The diversion uses the existing footpaths, rural roads and road bridge on Barrell's Road to cross the railway. Users heading east would be diverted on new footpath in farm fields to Barrell's Lane (east).
- 2.16.31 This proposals were subject to a Stage 1 Road Safety Audit which was carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit did not identify any issues for all the options.

- 2.16.32 Alternatives options were received from Suffolk County Council on 31/08/16 which can be seen at in **NR32/2 at Tab 10 page 235**. The proposed route west from S27 as suggested by Suffolk County Council was rejected This was due to the existing rural roads providing an existing route over the railway west of S27 which meant it was not considered that there was a compelling case to take rights over high amenity private land to create an alternative footpath.
- 2.16.33 The routes were therefore amalgamated into a single preferred solution for the next stage of consultation which can be seen in **NR32/2 at Tab 3, page 140**.
- 2.16.34 Landowner feedback from consultation suggested that Footpath 5 Thurston could be relocated east to the field edge. This was taken forward following further site investigations by Network Rail as this proposed amendment would assist in reducing the length of walking within the Network Rail corridor on the north side of the railway between S27 and S28.
- 2.16.35 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 19**) that was collected on the road bridge on Barrells Road west of S27, showed an average 2 way daily traffic flow of 83 vehicles and 85th percentile speed of vehicles of 24.7mph where the posted speed limit is 60mph.
- 2.16.36 Accident data for the 5 year period 2011 to 2015 recorded no accidents in the vicinity of the route.
- 2.16.37 I have noted in paragraph 2.16.31 that there were no road safety issues identified with the use of Barrell's Road and Birds Road.
- 2.16.38 With regards to the existing bridge west of the level crossing on Barrell's Road, feasibility checks have been undertaken using LIDAR levels information on the visibility over the crest of the bridge. With reference to Manual for Street (1 and 2) for low speed roads, it is noted that the minimum stopping sight distance for 25mph (with reference to the ATC 85th percentile design speed of 24.7mph) is in the order of 33m. This is reduced by vehicles travelling uphill, as is the case for the hump backed bridge. Initial checks have shown that the vertical forward visibility from 0.6m above the road to the drivers eye height of 1.05m is approximately 34m. An assessment of horizontal forward visibility around the bend to the north of the road bridge, using OS Mapping, has the visibility to be approximately 53m. Within the context of the low speeds, low traffic volumes, existing verges, the proposed improvements to the road bridge, the Road Safety Audit and the guidance of Manual for Streets, I am satisfied that the use of Barrell's Road is safe and suitable.
- 2.16.39 The proposals have been discussed in 2 workshops with the local highway authority. Officers have objected to the proposed alternative at S27 Barrells but have not objected to the alternative at S28 Grove Farm. The objection to S27 Barrells is on the basis of concerns about pedestrian safety over the road bridge, however, I have set out above in 2.16.38 the assessment carried out of the use of this structure.
- 2.16.40 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route and wider rural road and footpath network.

2.17 S29 Hawk End Lane

- 2.17.1 The crossing is located on Footpath 12 Elmswell, that runs north eastwards through an industrial area, and joins Hawk End Lane approximately 20m to the south. The land to the south of the railway is occupied by a densely populated residential area of Elmswell with the nearest

properties within 10m of the crossing. There are also a number of listed properties in the vicinity, the nearest of which is on Hawk End Lane, approximately 50m south east. The land to the immediate north and north east of the crossing is occupied by a depot with industrial and commercial uses including sewage works. This site is being developed as a residential area. There are agricultural fields 75m north west of the crossing and in the wider surrounding area.

- 2.17.2 Within the wider context of the public rights of way served by the level crossing, there is long distance footpath connectivity to the west and northwest of the level crossing where Norton Little Green is linked to Elmswell. This would provide routes approximately 4km in length. There is also the opportunity to continue onwards west to Norton or northwest to Stowlangtoft. There is more limited public right of way connectivity to the east of the level crossing outside of Elmswell.
- 2.17.3 Network Rail advised that this level crossing was temporarily closed and no census surveys were commissioned as a result.
- 2.17.4 Accessibility is an issue for this crossing as there is a stile on each side of the track which would exclude wheelchair users and those with limited mobility from accessing the crossing. The narrow alley that is the approach to the crossing would also restrict wheelchair users and those with pushchairs or young children as the existing environment may pose a challenge to mobility and a risk to young children.
- 2.17.5 It is noted that this level crossing was closed at the time of the public consultation. However, of the 6 people that provided feedback during the first round of public consultation, 1 person stated that they used it daily, 1 used it monthly and that 2 people rarely used it and 2 people never used it. Feedback indicates that the crossing provides leisure access to the local footpath network for 3 users and commuting use for 1 person. 2 people did not state a reason for use. It is not apparent whether this stated use refers to the level crossing prior to closure.
- 2.17.6 Whilst there is no census data to assist with assessment of the likely level of usage of the crossing, based on the feedback from consultation and the location of the level crossing it is considered that it would likely provide access to areas of Elmswell north and south of the railway.
- 2.17.7 The proposed alternative route can be seen on drawing number MMD-367516-S29-GEN-005 in Appendix F of core document reference **NR26**.
- 2.17.8 Existing public rights of way over the level crossing will be extinguished. A short length of existing public Footpath 12 Elmswell between the railway and Hawk End Lane (approximately 30m in length) will be extinguished. To the north of the railway, users heading west will be diverted along a new 2m wide unsurfaced public footpath, mostly in field margins, which runs parallel to and adjacent to the railway, to Hall Farm, where the new footpath will join the private track that runs north from Parnell Lane. Users will cross the railway using the existing underbridge on the private track. A short length of steps is required to traverse a small embankment to reach the private track. The total length of new footpath to the north of the railway is approximately 430m. Users heading east would be diverted along existing Footpath 12 Elmswell, an existing carriageway and Station Road which crosses the railway approximately 270m east of Hawk End level crossing.
- 2.17.9 South of the railway, users heading west would be diverted along Hawk End Lane and along existing Footpath 13 Elmswell which runs parallel with the railway and joins the private track that runs north from Parnell Lane at its western end. Users heading east will be diverted along Hawk End Lane, School Road and Station Road.

- 2.17.10 The total additional length of the diversion route varies greatly depending on user origin and destination. The maximum calculable additional diversion route to the east is approximately 760m. The maximum calculable additional diversion route to the west is approximately 870m.
- 2.17.11 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate. Therefore to cross the railway via the diversion route to the west would introduce an additional walking distance for the north/south connectivity of approximately 870m which would take approximately 13 minutes longer to undertake than the current route. However, this new route to the north of the railway is intended to mitigate the closure of the level crossing for users of Footpath 13 Elmswell who would be prevented from access to Footpath 12 Elmswell. This usage would see a reduction in the journey distance.
- 2.17.12 The route to the east is along roads and footways and Guidance from the Chartered Institution of Highways and Transportation (CIHT) guidance for Providing for Journeys on Foot (an extract from this guidance is appended to my Proof of Evidence, **NR32/2 at Tab 15**) indicates a walking rate of 1.4m/s (approximately 3 miles/hour) for people without mobility difficulties. This shows that that 760m would take approximately 9 minutes longer to undertake than the current route for access to industrial units closest to the level crossing.
- 2.17.13 Following a scoping study, a DIA was not considered necessary at this crossing due to the current restricted accessibility of the existing crossing route.
- 2.17.14 The proposals that were put forward at round 1 public consultation (blue route and red route) can be seen in **NR32/2 at Tab 2, page 97**. The proposals that were put forward at round 2 public consultation (a combination of blue and red routes) can be seen in **NR32/2 at Tab 3, page 144**.
- 2.17.15 Taylor Wimpey are taking forward a housing development by to the north of the level crossing. The development was given planning consent with the requirement for the developer to work with Network Rail to find a suitable alternative route to allow closure of the level crossing due to Network Rail's concerns about increased usage of the crossing which could result from the development.
- 2.17.16 The proposals to the north and east of the crossing are shown on the existing footpath and access road to the development site. Minor changes may be required to this route to suit the new development layout and these will be dealt with by dedication of the relevant land to highway. The amended route will be broadly in line with the proposed route following an east west route on relatively level ground, and as such will provide a suitable and convenient replacement.
- 2.17.17 No significant changes were made to the proposals following consultations although the route was refined and steps introduced near Hall Farm as required.
- 2.17.18 No changes to the public road infrastructure or existing use were required as a result of the alternative proposals and it was not considered necessary to undertake a Road Safety Audit.
- 2.17.19 Accident data for the 5 year period 2011 to 2015 recorded 4 accidents in the vicinity of the route to the east of the level crossing. 3 of these occurred at the junction of School Road and Station Road and 1 on School Road. It should be noted that there are pedestrian footways along the whole of the route to the east.
- 2.17.20 It was not considered necessary to collect Automatic Traffic Count data due to the existing off highway facilities (footways) for diverted users.

- 2.17.21 The proposals have been discussed in two workshops with the local highway authority. Officers have no objections to the proposed route.
- 2.17.22 Following consideration of use of the existing route across the level crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route.

2.18 S30 Lords No 29

- 2.18.1 The crossing is located on Footpath 09 Elmswell that runs in north to south direction in an agricultural area. The land surrounding the crossing comprises of agricultural fields. The town of Elmswell is located to the west, with the nearest residents located approximately 240m to the west
- 2.18.2 The level crossing is on Footpath 09 Elmswell which is a dead end footpath approximately 70m south of the railway. There are no ongoing public rights of way south of the railway and the level crossing can only be reached via permissive use of private land south of the railway. Likewise ongoing journeys to the south would only be via permissive rights. Users thus able to do so would then be able follow public rights of way east to Elmswell (approximately 1100m) or north to Grove Lane (approximately 1600m)
- 2.18.3 The accessibility of this crossing is poor as the approaches are narrow, uneven and muddy tracks that run along fields in dense farmland. This has the effect of making access difficult for many people with limited mobility or those who use wheelchairs. Similarly, the presence of stiles and steps to access the crossing itself also restrict and exclude users with limited mobility and those who use wheelchairs as well as people with pushchairs who would not realistically be able to navigate the stiles and steps.
- 2.18.4 The need for new data was identified at Lords No. 29 and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.18.5 During the nine-day survey period, which included two weekends, a total of 49 pedestrians were recorded using the level crossing with the busiest day being Sunday 3rd July 2016 when 16 pedestrians were recorded. Census data can be found at core document **NR25**.
- 2.18.6 Of the 4 people that provided feedback during the first round of public consultation, 1 indicated that they used the crossing daily, 1 rarely used it and 2 never it rarely. Feedback indicates that the crossing provides leisure use for 2 users who stated a reason.
- 2.18.7 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is used regularly by a moderately small number of people to access the wider footpath network.
- 2.18.8 The proposed alternative route can be seen on drawing number MMD-367516-S30-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.18.9 Existing public rights of way over the level crossing will be extinguished. Users will be diverted along two new 2m wide unsurfaced field margin public footpaths running parallel with and adjacent to the railway, one on the north side and one on the south side. Both footpaths will run eastwards from existing Footpath 25 which crosses over the railway with a footbridge, approximately 230m to the west of Lords No. 29 level crossing. The new footpaths are approximately 230m long each, and join existing Footpath 09 which runs perpendicular to the railway at Lords No. 29.

- 2.18.10 As S30, the maximum calculable westerly diversion route around the level crossing is an additional length of approximately 450m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.18.11 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.18.12 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 450m which would take approximately 7 minutes longer to undertake than the current route.
- 2.18.13 The diversion route is on unsurfaced paths, which is the same as the existing footpath.
- 2.18.14 Following a scoping study, a Diversity Impact assessment was not considered necessary at this crossing due to the current restricted accessibility of the existing crossing route.
- 2.18.15 The alternative route is an extension to the footpath and of the same character to the wider network. The new diversion route to the south of the railway maintains improves links between the public rights of way on both sides of the railway. The route is longer than existing, however, as it provides leisure walking it is considered acceptable.
- 2.18.16 Initially an alternative was considered which proposed that the entire length of Footpath 09 Elmswell was extinguished and that no alternative be provided due to the dead end nature of the path. This is shown in **NR32/2 at Tab 2, page 99**. Site visits had indicated that this was feasible as access to Mutton Hall farmland south of the level crossing had been withdrawn.
- 2.18.17 Through the consultation process it became clear that a permissive access route to Mutton Hall exists on the south side of the railway which provides for future access to Mutton Hall. It was noted that future access could not be guaranteed via the permissive route given that the level crossing access alternative from north of the railway was to be removed. Therefore a new public footpath was introduced to mitigate this loss. Consultation had also highlighted the amenity value of a circular walk and therefore a new footpath was considered suitable for inclusion on the north side of the railway.
- 2.18.18 The proposals have been discussed in 2 workshops with the local highway authority. Officers have no objections to the proposed route.
- 2.18.19 Following consideration of use of the existing route across the Level Crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose and characteristics of the existing route.

2.19 S31 Mutton Hall

- 2.19.1 The crossing is located at the junction of three footpaths, Footpath 36 Wetherden that runs west along the north side of the railway, Footpath 35 Wetherden that runs west along the south side of the railway before turning south to follow the course of a stream, and Footpath 20 Wetherden that runs east along the north of the railway. The area surrounding the crossing is predominantly agricultural with a small number of dispersed farm buildings and residential properties in the vicinity.
- 2.19.2 The surrounding area north and south of the railway line is predominantly agricultural. The level crossing generally provides north south connectivity for the public rights of way over the railway. An inspection of the public rights of way shows that the majority of the ongoing routes lie to the

northeast of the level crossing. The public rights of way over the level crossing connect Wetherden in the south to Haughley Green (via a 3.2km walk) and Bacton (via a 5km walk). The existing public rights of way Footpath 20 Wetherden and Footpath 17 Wetherden use Wetherden Road to allow ongoing connectivity to the south of the railway and users have a walk along Wetherden Road at present to access the footpaths.

- 2.19.3 The accessibility of this site is limited by the narrow, uneven and overgrown pathways from which the crossing is reached and the presence of stiles, which collectively exclude wheelchair users, people with pushchairs and those with impaired vision or mobility who would be at an unduly great risk from attempting to cross.
- 2.19.4 The need for new data was identified at Mutton Hall and a nine-day census survey to be undertaken in accordance with Network Rail Standard GRD007 was subsequently commissioned to take place between the 25th June and 3rd of July 2016.
- 2.19.5 During the nine-day survey period, which included two weekends, a total of 38 pedestrians were recorded using the level crossing with the busiest day being Saturday 2nd July 2016 when 14 pedestrians were recorded. Census data can be found at core document **NR25**.
- 2.19.6 Of the 7 people that provided feedback during the first round of public consultation, 2 people indicated that they used the crossing weekly, 1 used it fortnightly, 2 rarely used the level crossing and 2 never used it. Feedback indicates that the crossing provides leisure access use for the 5 people who gave a reason.
- 2.19.7 Based on location of the crossing point and feedback from public consultation and usage data it is considered that the crossing is used relatively regularly by a small number of people to access the wider footpath network.
- 2.19.8 The proposed alternative route can be seen on drawing number MMD-367516-S31-GEN-005, which can be found in Appendix F of core document **NR26**.
- 2.19.9 Existing public rights of way over the level crossing will be extinguished. To the north of the railway, users will be diverted along existing Footpaths 36 Wetherden and 20 Wetherden, which joins the unnamed road to the east of the level crossing. Users will head south along the carriageway and cross over the railway using the existing road bridge, approximately 210m east of Mutton Hall level crossing. As part of the works, a short length of the carriageway on the south side of the bridge will be widened and improvement measures will be implemented for pedestrians walking along the carriageway, and details can be found in core document **NR12 at page 31**. To the south of the railway, users will be diverted along a new 2m wide unsurfaced public footpath in the field margin which will run parallel with and adjacent to the railway, joining the existing carriageway at its eastern end. The new footpath would be approximately 200m long.
- 2.19.10 As S31, the maximum calculable westerly diversion route around the level crossing is an additional length of approximately 500m, however, the origin and destination points will affect the overall diversion length for many users.
- 2.19.11 Guidance on calculations of walking pace on the publicly available Ramblers website suggests an average walking speed of 2.5 miles an hour with a proviso on level of fitness increasing this pace and that ground conditions may reduce this rate.
- 2.19.12 Therefore to cross the railway via the diversion route would introduce an additional walking distance for the north/south connectivity of approximately 500m which would take approximately 7.5 minutes longer to undertake than the current route.

- 2.19.13 The diversion route is on unsurfaced paths and roads, which is the same as the existing footpath network utilises.
- 2.19.14 Following a scoping study, a Diversity Impact assessment was not considered necessary at this crossing due to the current restricted accessibility of the existing crossing route.
- 2.19.15 The alternative route is an extension to the footpath and of the same character to the wider network. The new diversion route maintains links between the public rights of way on both sides of the railway and maintains the connectivity of the ongoing routes which generally run to the east and north east. The route is longer than existing, however, as it provides leisure walking it is considered acceptable.
- 2.19.16 Considerations were given as to whether it would be advantageous to relocate the alternative proposal to the west and to use the bridge under the railway on Captains Lane as the diversion route. With reference to the wider footpath network in the area, this was not taken forward due to the comparative lower convenience to the user and increase in diversion length.
- 2.19.17 Automatic Traffic Count data (see **NR32/2 at Tab 1 page 22**) was collected on the road bridge east of the level crossing and showed an average 2 way daily traffic flow of 1061 vehicles, 85th percentile speed of vehicles of 37.7mph and mean speed of 33.3mph where the posted speed limit is 60mph.
- 2.19.18 Further assessments of the use of road bridge was made following Round 2 consultation and suggested improvements have been described in the Suffolk Design Guide (core document **NR12 at page 31**). This entailed provision of additional hard standing for pedestrians to wait adjacent to the carriageway and other measures such as vegetation clearance to improve visibility. It was considered that for the low number of users and the short distance of the use of the road bridge that the modification proposed to the west side of the bridge would be appropriate.
- 2.19.19 The recorded 85% speeds of vehicles over the road bridge can be seen to be significantly slower than the posted speed limit of 60mph with the mean speeds slower still. The lowest number of vehicles use the road at the weekend which census data shows is the most popular time for pedestrians to use the crossing.
- 2.19.20 Accident Data for the most recent five-year period was received from Suffolk County Council. This data confirmed that no accidents had been recorded on the proposed diversion route between the years 2011 and 2015. Publicly available accident data shows no recorded accidents in the vicinity of the road bridge/diversion route from 1999 to 2016.
- 2.19.21 This proposal was subject to a Stage 1 Road Safety Audit carried out in line with HD19/15 and by an independent team remote from the option development design team. The Audit did not identify issues with the proposals.
- 2.19.22 With reference to Design Manual for Roads and Bridges Volume 6 Section 1 TD9/93, it is considered that car approaching the bridge from the south at the 85% speed of 37mph (61.1kph) will need approximately 100m forward visibility to have the necessary stopping sight distance. It is considered that the drivers approaching from the south can see both the proposed footpath on the south side of the bridge and the existing footpath at the north side of the bridge with the required stopping sight distances for safe use of the bridge by diverted pedestrians.
- 2.19.23 Accident data for the 5 year period 2011 to 2015 recorded no accidents in the vicinity of the route.

- 2.19.24 Within the context of the traffic data, the proposed improvements to the road bridge and the Road Safety Audit outcome I am satisfied that the use of the existing highway and road bridge is safe and suitable.
- 2.19.25 The proposals have been discussed in two workshops with the local highway authority. Officers have objected to the proposed alternative.
- 2.19.26 In response to the TWAO submission a different alternative route or concept was suggested by Objectors as part of the TWAO process. This has been assessed further and the considerations are presented in **NR32/2 at Tab 7 (pages 182-183)**.
- 2.19.27 Following consideration of use of the existing routes across the Level Crossing and the assessment of the proposed alternative in terms of impacts on the environment, users and other impacted parties, I am satisfied that the proposed route is suitable and convenient when considered in the context of the purpose, use and characteristics of the existing route.

3 **Witness declaration**

I hereby declare as follows:

- (i) This proof of evidence includes all facts which I regard as being relevant to the opinions that I have expressed and that the Inquiry's attention has been drawn to any matter which would affect the validity of that opinion.
- (ii) I believe the facts that I have stated in this proof of evidence are true and that the opinions expressed are correct.
- (iii) I understand my duty to the Inquiry to help it with matters within my expertise and I have complied with that duty.

Susan Tilbrook
January 2018