



NR16

Road Safety Audits

Road Safety Audit Brief

1. General details							
1.1 Highway improvement scheme name and road number				Anglia Level Crossing Reduction Strategy Multiple Roads (specified in description below)			
1.2 Type of scheme (e.g. new road scheme, junction improvement, traffic signs and road markings improvement, traffic calming scheme, etc.) The Anglia Level Crossing Reduction Strategy intends to reduce the risk that level crossings pose and have developed proposals to manage the possible closure or change of use of around 130 level crossings in Anglia across Cambridgeshire, Essex and Suffolk. The study intends to close level crossings by the means diverting people to nearby alternatives or creating new public rights of way to nearby infrastructure.							
1.1 RSA stage (tick as appropriate)	1 ✓	2	1&2	3	Interim	4 (12 months)	4 (36 months)
1.2 Overseeing organisation project sponsor details Contact: Nicholas Eddy Commercial Scheme Sponsor Route Enhancements Network Rail Nicholas.Eddy@networkrail.co.uk				1.3 Design organisation details Contact: Jason Smith Mott MacDonald 2 Brewery Wharf, Kendell Street, Leeds LS10 1JR United Kingdom jason.smith@mottmac.com			
1.4 Police contact details (required for Stage 3 Road Safety Audits only) Not required at this Stage 1 Road Safety Audit.				1.5 Maintaining agent contact details Suffolk County Council			
1.6 Road Safety Audit team membership The RSA team will be made up of a Team Leader and one other member of staff selected according to availability. Tim Blaney (Audit Team Leader) Road Safety Auditor, Member of the Society of Road Safety Auditors Certificate of Competence in Accordance with IAN 152/11. Mott MacDonald, 35 Newhall Street, Birmingham, B3 3PU, United Kingdom Andy Coleman Road Safety Auditor, Member of the Society of Road Safety Auditors Certificate of Competence in Accordance with IAN 152/11. Mott MacDonald, 35 Newhall Street, Birmingham, B3 3PU, United Kingdom Rachael Collins BA (Hons), MSc Mott MacDonald, 111 Piccadilly, Manchester, M1 2HY							
1.7 Terms of reference This Stage 1 Road Safety Audit (RSA) is to be undertaken in accordance with the DMRB Standard HD 19/15, and the contents of this Road Safety Audit Brief.							

<p>1. Scheme description / objective (provide a brief description of the scheme and its objectives)</p>
<p>1.1 General (including scheme purpose and start date for construction)</p> <p>We have been working to reduce the risk that level crossings pose and have developed proposals to manage the possible closure or change of use of around 130 level crossings in Anglia across Cambridgeshire, Essex and Suffolk.</p> <p>We believe it's possible to close level crossings:</p> <ul style="list-style-type: none"> • with private rights only • by diverting people on existing public routes to a nearby alternative crossing of the railway exists • by providing a new public route to a nearby alternative crossing of the railway <p>We will also look to downgrade road level crossings to allow non-motorised users only. None of the crossings in this proposal involve closing public A or B roads.</p> <p>We recognise the importance of public rights of way and where possible we will maintain access to the countryside.</p> <p>Closing or modifying level crossings is likely to provide the following long term benefits:</p> <ul style="list-style-type: none"> • Improve the safety of level crossing users • Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy • Reduce the ongoing operating and maintenance cost of the railway • Reduce delays to trains, pedestrians and other highway users • Improve journey time reliability for all railway, highway and other rights of way users <p>The study involves two rounds of public consultation that will then potentially feed into a public enquiry. Construction start date is set for works to commence 2019.</p>
<p>1.2 Design standards applied to the scheme design</p> <p>Anglia Level Crossing Reduction Strategy has been designed and under the process of the Transport and Works Act Order and current industry standards at the time of design.</p>
<p>1.3 Design speed</p> <p>It is not proposed create or amend any speeds on the roads that from part of the proposals.</p>
<p>1.4 Speed limits</p> <p>The speed limits at the level crossing closure proposals are as follows:-</p> <ul style="list-style-type: none"> • S02 – A137 National Speed Limit/30mph; • S03 – Station Road 30mph • S04 – Church Road National Speed Limit; • S06 – B1113 50mph • S07 – Pesthouse Lane National Speed Limit • S08 – Private track • S23 – Higham Road National Speed Limit • S24 – Coal Pit Lane National Speed Limit, Higham Road National Speed Limit; • S27 –Barrells Road National Speed Limit,, Birds Road National Speed Limit; • S28 – Barrells Road National Speed Limit; • S31 – Unamed road National Speed Limit

- S32 – Bacton Road
- S36 – Butts Road 30mph
- S38 – The Street 30mph
- S44 – Unnamed road National Speed Limit
- S45 – Unnamed Road National Speed Limit and B1078 National Speed Limit
- S46 – Church Road National Speed Limit, Beverhsam Road National Speed Limit, Rectory Road National Speed Limit
- S48 – Clayhills National Speed limit
- S51 – Tiggins Lane National Speed Limit, Fordley Road National Speed Limit
- S53 – Unnamed road National Speed Limit
- S62 – A14 National Speed Limit
- S64 – High Road 30mph, Grimstone Lane 30mph, Thorpe Lane National Speed Limit
- S69 – Birch Avenue 30mph, Pound Hill 30mph, and B1113 Broad Road 40mph/30mph;

1.5 Existing traffic flows / queues

No traffic data is available at the moment, however traffic surveys and level crossing census surveys are being commissioned as part of the project and the data will be available at Stage 2.

1.6 Forecast traffic flows

It is not anticipated that these proposals would generate or transfer significant volumes of traffic.

1.7 Non-motorised users (NMU) desire lines

All existing Public Rights of Way (PROW), i.e. footpaths, cycle-ways and bridleways, in the vicinity of the level crossing closure proposals are shown on the attached plans.

The proposal drawings indicate the existing user route and the proposed diversion routes.

1.8 Environmental constraints

The proposals may involve small scale works either at the level crossing or along proposed or existing diversion routes. The assessments of the environmental impacts of these proposals are available separately if required.

2. Description of locality

2.1 General description

Anglia Level Crossing Reduction Strategy project has 69 level crossings within the county of Suffolk. Of these 69 level crossing proposals, a prioritised list of 22 proposals was subject to a Stage 1 Road Safety Audit in November 2015.

The purpose of this Stage 1 Road Safety Audit is to review the proposals at 22 level crossings which divert users along the public highway including any associated highway works within the county of Suffolk. At this stage, the scheme proposals consist of indicative (high level) diversion routes as the result of closures and no formal highway works have been designed. Therefore this road safety audit is to consider potential road safety problems as a result of the proposed routes and their interaction with the highway.

The level crossing closure proposals are summarised below:-

- S02 – 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 road and existing road bridge on the A137 to cross the railway.
- S03 – Users are diverted via a single footpath diversion route on the west side of the railway, south to the Station Road via agricultural fields. NMUs then use the existing road and

highway level crossing on Station Road to join the footpath exit on the east of the railway.

- S04 – Users would be diverted on new footpaths either side of the railway which provide a link to Church Road to the north and footpaths to the south. The diversion also uses the existing road and a bridge over the railway on Church Road.
- S07 – users are diverted via a single footpath diversion route on the east side of the railway, to provide a link between footpaths E-120 012/0#1 and E-120 011/0#1 via footways on Pesthouse Lane. NMUs then use the existing PROWS to continue onwards.
- S08 – users are diverted via a single footpath diversion route on the east side of the railway, to provide a link between footpath W-121 033/0 and footpath W-121 031/0 via private quarry land. NMUs then use the existing PROWS to continue onwards.
- S23 – Users would be diverted along the existing roads.
- S24 – Users would be diverted west on a new public footpath in farm fields to Coalpit Lane. The diversion uses roads, footpaths and a road bridge over the railway on Coalpit Lane to the A14 slip road.
- S27 – 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 (Barrells Road)
- S28 – Barrells 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 Barrells Road (east)
- S31 – Divert users east to bridge 1170 on the south side of the railway within private land and use the road (Base Green Road) to cross the existing bridge.
- S32 – Divert users east to bridge 1171 on the east side of the railway and use the road (Base Haughley Green) to cross the existing bridge. .
- S36 – Divert users east to bridge on the east side of the railway and use the road (Base Butts Road) to cross the existing bridge. .
- S38 – Divert users east to bridge on the east side of the railway and use the road (Base The Street) to cross the existing bridge. .
- S44 – Divert users east to bridge 437 on the east side of the railway and use the road (Mill Lane) to cross the existing bridge. .
- S45 – Divert users east to bridge on the east side of the railway and use the road (Ash Road) to cross the existing bridge.
- S46 – Divert users east to Beverhsam Road on the east side of the railway in the vicinity of Beversham automatic half barrier highway level crossing.
- S48 – Divert users east to bridge 451 on the east side of the railway and use the road (Clay Hills) to cross the existing bridge.
- S51 – Users to use existing footpath E-344 017/0 on the west side of the railway and cross the railway at North Green automatic barrier highway level crossing.
- S53 – Users are diverted via an unnamed road and the A144 Bramfield Road to the existing road level barrier crossing.
- S62 – Downgrade the level crossing to a footpath and extinguish vehicle rights.
- S64 – upgrade the footway along Thorpe Lane AHB level crossing to allow Thorpe Grove LC to close. This is to be a mixture of field boundary and road improvements.
- S69 – Users would be diverted onto Broad Road and a new public footpath would be constructed to link to existing public rights of way to the west and south to an alternative railway level crossing point at Cow Creek (Kerry's Farm).

2.2 Relevant factors which may affect road safety

The following factors have been identified that may affect road safety:

- Non-motorised users are being diverted to alternative level crossings or grade separated crossings where they may be exposed to live traffic by:-
 - walking along existing footways;
 - walking in existing grassed verges; or
 - walking in the carriageway on rural roads.

<ul style="list-style-type: none"> • The interface of NMU's and agricultural vehicles on the PROWs; and • The access points off the public highway for occasional use by large agricultural vehicles. 			
3. Personal injury collision analysis (provide personal injury collision data covering both the extent of the scheme and the adjoining sections of highway)			
3.1 Summary of personal injury collision data (a minimum of the most recent 36 months available) No personal injury collision data is available at the moment, however the information will be available at Stage 2.			
3.2 Personal injury collision details See above			
4. Departures and relaxations from standards (including details of their status – approved or pending) plus any Design Strategy Records produced for improvements to existing motorways and trunk roads.			
4.1 General No departures from standards.			
5. Previous Road Safety Audit Reports, Road Safety Audit Response Reports, and Exception Reports			
5.1 Stage 1 N/A			
5.2 Exception Reports Not applicable – no exception reports were prepared following the Stage 1 Audits.			
6. Strategic decisions – items outside the scope of this RSA			
6.1 General N/A			
7. List of included documents and drawings			
7.1 Documents GRIP 1 Feasibility reports available on request.			
7.2 Drawings The following figures, plans, information and drawings are provided: <ul style="list-style-type: none"> • 12 Scheme Proposal Plans 			
8. Checklist (tick all that are included and provide reasons for those that are not included)			
8.1 Road Safety Audit Brief including description of scheme objectives	✓ (Section 1.1)	8.2 Site location plan	✓

8.3 Scale layout plans	✓	8.4 Construction / typical details	✗ The scheme is not that developed
8.5 Previous Road Safety Audit Reports	✗ Not applicable	8.6 Previous Road Safety Audit Response Reports	✗ None prepared
8.7 Road Safety Audit Exception Reports	✗ Not applicable	8.8 Departures and relaxation from standards	✗ None (section 4)
8.9 Traffic signal staging	✗ Not applicable	8.10 Personal injury collision data	✗ Not available at the moment
8.11 Personal injury collision plot	✗ Not available at the moment	8.12 Traffic counts	✗ Not available at the moment
8.13 Speed surveys	✗ Not available at the moment	8.14 NMU desire lines and volumes	✓
8.15 NMU Context and Audit Report	✗ None prepared	8.16 Items outside the scope of the RSA/ strategic decisions	✓ (Section 6)
8.17 Other factors that may impact on road safety	✓ (Section 2.2)	8.18 Design speeds/ speed limits	✗ Design Speeds not applicable ✓ Speed limits (Section 1.4)
8.19 Design standards used	✓ (Section 1.2)	8.20 Adjacent land uses	✗ Multiple sites with various land uses including agricultural

Road Safety Audit Brief approved by:
(The Project Sponsor)

Nicholas Eddy
Commercial Scheme Sponsor
Route Enhancements
Network Rail

Nicholas.Eddy@networkrail.co.uk

Summary CV

Tim Blaney

Profile

A Road Safety Engineer with a background in development control and road safety engineering work.

Has eleven years' experience in all aspects of road safety engineering and has worked in the UK and internationally. Undertaken 87 audits in the last 12 months as either an Audit Team Leader or Member and approximately 670 in total on a variety of schemes, including junction improvements, major maintenance, airport forecourts and safety improvements.

Experience and skills

Mott MacDonald, Principal Road Safety Engineer – Integrated Transport Division (2004 – present)

Currently team leader of the Road Safety Teams in the Manchester and Birmingham offices.

HD19/15 and SQA-0170 qualified Road Safety Audit Team Leader.

Selected projects

Nottingham Express Transit Phase Two

Responsible for overseeing the completion of Stage 2 and Stage 3 Road Safety Audits for the Beeston and Clifton extensions to the Nottingham tram system.

A63 Castle Street, Hull

Team Leader for a Stage 1 Safety Audit on a scheme to introduce a grade separated junction on a section of the A63 as it passes through Hull.

OVT Oost Safety Analysis, Utrecht, Netherlands

As part of a multi-national team of experts, provided road safety input into a safety assessment of proposals for a new bus / tram interchange.

Crossrail, Old Oak Common

Completed a Stage 1 Road Safety Audit on new access arrangements for Old Oak Common maintenance depot as part of the Crossrail scheme.

Midland Metro Tram, City Centre, Centenary Square and Eastside Extensions

RSA Team Leader responsible for the organisation and completion of Stage 1

and Stage 2 Road Safety Audits for various extensions to the Midland Metro.

Victoria Station Upgrade

Responsible for the completion of Road Safety Reviews and Audits on traffic management arrangements in the vicinity of London Victoria Station during the completion of construction work.

NMU Related Road Safety Audits

Have experience of completing Non-Motorised User audits as well as road safety audits on a variety of NMU related schemes including:

- Sovereign Harbour Cycle Routes
- Bedlinog Square Shared Space
- East London Line Cycleway
- Bryn Glas Escape Routes
- Hunts Grove NMU Audit
- ECML Level Crossing Closures

ECML and East Anglia Level Crossings

Undertaken numerous safety audits and NMU audits for the closure of level crossings on a number of railway lines in East Anglia and on the East Coast.

Tottenham Hale Bus Station

RSA Team Leader for changes to the road layout to Tottenham Hale Gyratory and the provision of a new bus interchange.

Medway Dynamic Bus Station, Chatham

Responsible for providing road safety advice on the design of a new dynamic bus station in Chatham.

Bath and North East Somerset Road Safety Audits

Undertaken numerous safety audits of varying stages for the local authority. These have ranged from junction improvement schemes to traffic calming. A number of these have been associated with bus route improvement including bus gates and park and ride schemes.

Great Western Electrification

Responsible for undertaking road safety audits for numerous road bridges along the Great Western Main Line that require modification for the electrification of the route.



Position

Principal Road Safety Engineer

Year of birth

1983

Nationality

British

Language

English – mother tongue

Qualifications

BSc (Hons) Human and Physical Geography

Road Safety Engineering Course (CRASH@Aston)

Highways Agency Road Safety Audit Certificate of Competence

Profession membership

Chartered Member of the Institute of Logistics and Transport

Member of the Chartered Institution of Highways and Transportation

Member of the Society of Road Safety Auditors

CSCS Card holder – Yellow (Site visitor - Registration No. 04989485)

Highways Agency Motorway Pass (N3Q7GP4TIY7CZ, Epiry 10-Apr-19)

Key skills

HD 19/15 and SQA-0170 qualified Road Safety Audit Team Leader.

Proficient in the completion of Accident Investigation Studies and safety reviews.



Supplementary Information for HD19

The following details provide evidence that the above Road Safety Audit Team member meets the minimum recommended requirements HD19/15 for the purposes of undertaking the Road Safety Audits upon the Highways England Motorway and Trunk Road network in the UK.

1. Training - Recognised Structured training in Road Safety Engineering or Collision Investigation

Profile	Duration (Days)	Date (Days)	Organiser (Days)
CRASH@Aston	10	Jun-2006	Aston University
Non-motorised User Audit	2	Dec-2008	Aston University
Certificate of Competency in Road Safety Audit (Highways Agency approved)	2	May-2011	TMS Consultancy
Total 14 Days			

Note: Formal Training does not include seminars, conferences, exhibitions and the like.

2. Experience - Example of Five Road Safety Audits undertaken in the last 24 months as either Team Leader, Team Member or Observer.

Scheme Name Client	Date	Audit Team Role	Audit Stage
Capacity improvements at signallised junction Windle Island, St Helens - St Helens MBC	Nov-2014	Leader	1/2
A590 Quebec Street Signalisation – Highways England	Nov-2015	Leader	2
Dalton Gate Junction Signalisation – Cumbria County Council	Jan-2016	Member	2
Motorway to Motorway Ramp Metering M6 to M62 – Highways England	Jan-2016	Leader	Interim 2
Garrison Roundabout, hamburger roundabout upgrade – Highways England	Mar-2016	Member	Stage 2

Undertaken 182 RSAs in past 24 months (87 in past 12 months)

Note: 'Full Road Safety Audit Record' of all audits undertaken available upon request.

3. Continued Professional Development (CPD) record for last 12 months, in the field of Road safety Engineering, Collision Investigation or Safety Audit.

Profile	Duration (Days)	Date	Organiser
PTRC Evening Lectures - Road Safety Audits	1	09/12/2015	PTRC
Safe Way to Work	0.25	02/06/2016	Mott MacDonald
Personal Reading - SoRSA Conference 2016 Presentations	0.25	22/06/2016	CIHT
Safety Wheel Training	0.5	27/06/2016	Mott MacDonald
Total 2.0			

Andrew J Coleman

Profile

Has 10 years' experience in Road Safety Engineering and 9 years' experience in the field of Collision Investigation.

A qualified HD19/15 Road Safety Audit Team Leader with a background in road safety engineering work. Have completed over 50 audits in the last 12 months as either an Audit Team Leader or Member and approximately 1500 in total on a variety of schemes in the UK, Europe and the Middle East. A Member of the Society of Road Safety Auditors and possesses the Highways England approved Certificate of Competency for Road Safety Auditors.

Has experience in carrying out road safety audits, cycle audits, NMU audits, Mobility audits, road safety assessments, site safety assessments, junction assessments and report writing. Also have experience in the use of various software packages including KeyACCIDENT, ARCADY, PICADY, LINSIG and Microsoft Office.

Experience and skills

Mott MacDonald (2014 – present)
Integrated Transport Division

TMS Consultancy (2006 – 2014)
Integrated Transport Division

Selected projects

Road Safety Audits

Undertaking Road Safety Audits as Audit Team Leader or Member on a variety of schemes in the UK, Europe and the Middle East, including motorway schemes, motorway service areas, dual carriageways, single carriageway bypasses, road realignment, major signal and roundabout junctions, new development access roads, safer routes to school schemes and cycle, mobility and NMU audits.

Local Network Management Schemes, Area 10

Undertook an analysis of accidents for selected schemes and reported recommendations for engineering measures to address and improve accident performance. A full financial assessment measuring the potential improvements with BCR analysis was also carried out for each scheme.

Route Safety Reports, Area 10

Review of the road safety situation on numerous routes in Lancashire comparing the latest accident data with historical accident data to determine the route's performance. A detailed analysis of road safety issues identified from the last 5 years data was completed with a summary of potential schemes and areas for further investigation. The effectiveness of previously completed works/ initiatives along the route was also monitored.

M40 Accident Investigation

Accident investigation of the M40 between junctions 5 and 7 in Buckinghamshire, based on accident data highlighted by the annual road safety monitoring report. Provided recommendations for safety improvements.

A21 Tonbridge to Pembury, NMU Audit

Team Leader for the detailed design stage NMU Audit of the A21 dualling scheme between Tonbridge and Pembury in Kent. The 3.5km parallel NMU route is predominantly off line and features grade separated crossings and a crossing of an at-grade roundabout junction.

West Midlands Authorities SLS Traffic Accidents

Responsible for producing the Annual Accident Data Report to the West Midlands Authorities making comparisons to national data and presenting areas for improvements.

Tram Scheme Road Safety Audits

Road Safety Auditor of several tram major schemes including Midland Metro, Nottingham Express Transit and Dublin Luas.

Contra Flow Cycle Facilities, Camden, London

Road Safety Assessor of proposals to permit cycle use of a contra flow cycle lane along the A40 High Holborn in the London Borough of Camden. Concern was raised regarding high volumes of illegal cycle use within a very busy and narrow contra flow bus lane with recommendations to improve safety presented.



Position

Road Safety Engineer

Year of birth

1983

Nationality

British

Language

English – mother tongue

Dutch - moderate

Qualifications

BA (hons) 2005

RoSPA AIP Certificate 2007

Certificate of Competency in Road Safety Audit (Compliant to EU Directive 2008/96/EC, HE approved)

CSCS Card holder – Yellow (Site visitor - Registration No. 03141299)

Highways England Motorway Pass (Q86DEIRNPBFM2, Epiry 24-Apr-19)

Profession membership

Member of Chartered Institution of Highways and Transportation (MCIHT)

Member of Society of Road Safety Auditors (MSoRSA)

Key skills

Collision Investigation

Road Safety Audit

Road Safety Scheme Design

Supplementary Information for HD19

The following details provide evidence that the above Road Safety Audit Team member meets the minimum recommended requirements of HD19/15 for the purposes of undertaking the Road Safety Audits upon the Highways England Motorway and Trunk Road network in the UK.

1. Training - Recognised Structured training in Road Safety Engineering or Collision Investigation

Profile	Duration (Days)	Date (Days)	Organiser (Days)
RoSPA Accident Investigation & Prevention Certificate	10	Aug-2007	RoSPA (TMS Consultancy)
Introduction to Road Safety Audit	3	Dec-2007	TMS Consultancy
TD 19/06 Road Restraint Systems	2	Oct-2008	Aston University
Advanced Road Safety Audit	2	Feb -2011	TMS Consultancy
Non-motorised User Audit	2	Apr-2012	TMS Consultancy
Certificate of Competency in Road Safety Audit (Highways England approved)	2	Oct-2012	TMS Consultancy
Total		21	Days

Note: Formal Training does not include seminars, conferences, exhibitions and the like.

2. Experience - Sample of Road Safety Audits undertaken in the last 24 months as either Team Leader or Team Member.

Scheme Name Client	Date	Audit Team Role	Audit Stage
Modified priority cross road junction A64 Barton Hill, Yorkshire – Highways England	September 2015	Leader	2
Proposed link road to motorway junction M58 Pemberton Link Road, Wigan – Wigan Council	October 2015	Leader	3
Motorway to motorway metering M6 to M62 – Highways England	January 2016	Member	3
New dual carriageway signalised junctions Aberdeen Exhibition & Conference Centre - Henry Boot Developments	May 2016	Leader	2
Redesign of signal junctions with cycle lanes & pedestrian crossings Tameside Interchange – Ashton MBC	May 2016	Member	2

Note: Please request separate 'Full Road Safety Audit Record' for details of all audits undertaken in last 12 months.

3. Continued Professional Development (CPD) record for last 12 months, in the field of Road safety Engineering, Collision Investigation or Safety Audit.

Profile	Duration (Days)	Date (Days)	Organiser (Days)
SoRSA Conference, Birmingham	2	20-June-2016	CIHT
Total		2	Days

Road Safety Audit CV



Name	Rachael Collins
Audit Team Position	Team Member
Contact Email address	rachael.collins@mottmac.com

Continued Professional Development Record		
CPD / Training Title (<i>last 12 months</i>)	Date	Duration
Introduction to Road Safety and Road Safety Auditing – Course tutor assisting with the provision of a 1 day introduction to road safety engineering.	May-15	1 Day
SoRSA Conference – variety of presentations relating to road safety engineering and auditing.	Jun-15	1 Day
Road Safety Audit – Highways England Approved CoC	Apr-16	2 Day

Qualifications		
Qualification Name & Awarding Body	Post Nominal	Date
Highways Agency Motorway Pass (X9SNZN7TEUQBY, Expiry 17-Dec-19)		2014
Construction Skills Certification Scheme (CSCS): Yellow (Site visitor - Registration No. 05180437)		2014
MSc European Traffic & Transportation, The Nottingham Trent University	MSc	2002
RoSPA AIP (Accident Investigation & Prevention)		1999
BSc Hons Geography, University of Staffordshire	BSc (Hons)	1998

Record of Recent Safety Audits (<i>some examples from the last 12 months</i>)		
Scheme / Details	Date	Role
A49, Ludlow, David Tucker Associates	June 2015	Member
<i>Stage 1 Safety Audit on a scheme to introduce a site access off the A49 in Ludlow.</i>		
Colwyn Bay Promenade Phase 2 – Conwy County Borough	June 2015/Oct 2015	Member
<i>Stage 1 & Stage 2 Road Safety Audits of the proposed improvements to the promenade in Colwyn Bay. This is an extension of improvements already made to a section of the promenade that have been previously completed and audited. The scheme includes highway realignment, the provision of improved parking, pedestrian crossing facilities and a shared-space promenade for cyclists and pedestrians.</i>		
Chandag Road, Bath – Bath and North East Somerset	August 2015	Member
<i>A Stage 2 Road Safety of road safety improvements including the provision of a Zebra crossing outside Wellsway School, the installation and upgrade of uncontrolled crossings and the provision of In/OUT signing at Chandag Road Shops.</i>		
Daltongate, Ulverston – Cumbria County Council	Sept 2015	Member
<i>A series of Stage 1 Road Safety Audit on proposed junction modification works. The scheme involves the addition of a new arm to an existing junction and its signalisation to include pedestrian crossing facilities. The scheme also includes localised road widening and kerb re-alignments.</i>		
Mill Street, Llangollen	November 2015	Member
<i>A Stage 3 Road Safety Audit for a new medical centre accessed off Mill Street. The scheme includes a new access, PUFFIN crossing and footway improvements, minor highway works and relocation of 30mph. A Stage 1/2 was previously completed in December 2014.</i>		

Career Summary (including experience and key dates)

Rachael is Senior Road Safety Engineer based within Mott MacDonalds Northern road safety team. She is a Road Safety Auditor with over 10 years experience in road safety engineering and in the field of collision investigation, having completed over 350 Road Safety audits over her career. Rachael is a qualified HD 19/15 Road Safety Audit Team Member.

Rachael has a vast range of experience in transport engineering and planning but specialises in accident investigation & prevention (AIP) and undertaking of road safety audits.

Rachael began her career at TMS Consultancy in 1998 where she gained a wide experience in areas including Junction and Transport Assessments, Safer Routes to Schools, site surveys, parking assessments, Local Safety schemes, Accident Investigation and undertook over 300 Road Safety Audits at various stages and of various scheme sizes. During her time at TMS Rachael attended the RoPSA 10 AIP Course.

In 2003 Rachael joined Mott MacDonalds Transport Planning Team carrying out a combination of road safety engineering and AIP work and Junction and Transport Assessments. During this time Rachael was responsible for the Altrincham Road Safety Team and continued to undertake Road Safety Audits as Team Leader. During this time she also undertook a secondment to Stockport Council working on numerous Local Safety Schemes.

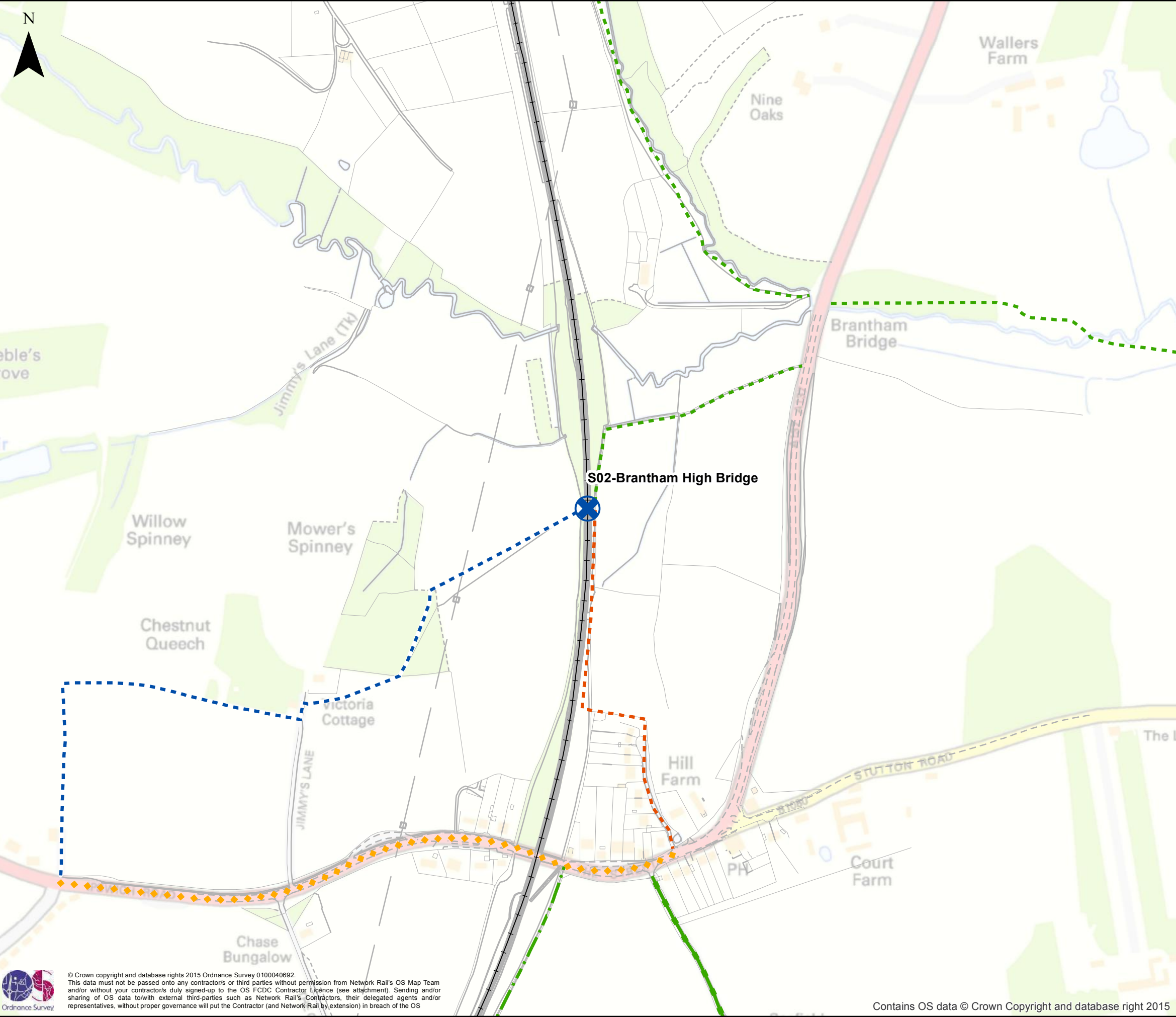
In 2009 Rachael took a career break but re-joined Mott MacDonald in 2014 and is currently a Senior Road Safety Engineer within the Northern Road Safety Team. She is a qualified Team Member having completed 30 audits in the last 12 months at stages 1 to 4 on varying size schemes throughout the UK, many of which include non-motorised user (NMU) elements. Experience also includes the undertaking of NMU audits. Since returning to Mott MacDonald she has worked on numerous Area 10 Projects including the completion of Route Safety Reports and the feasibility of cycling schemes. Rachael continues to build upon her AIP experience to identify road safety issues and subsequently the generation of mitigation measures. She is proficient in the use of KeyACCIDENT.

Statement of Fact: *I confirm that the information given above is a true and accurate reflection of my experience and training and that I meet the requirements as defined in HD 19/15.*

Name:

Rachael Collins

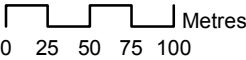
Signature:



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Overview



Current level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status



2 Brewery Wharf
Kendell Street
Leeds
LS10 1JR
United Kingdom
+44 (0)113 3946700

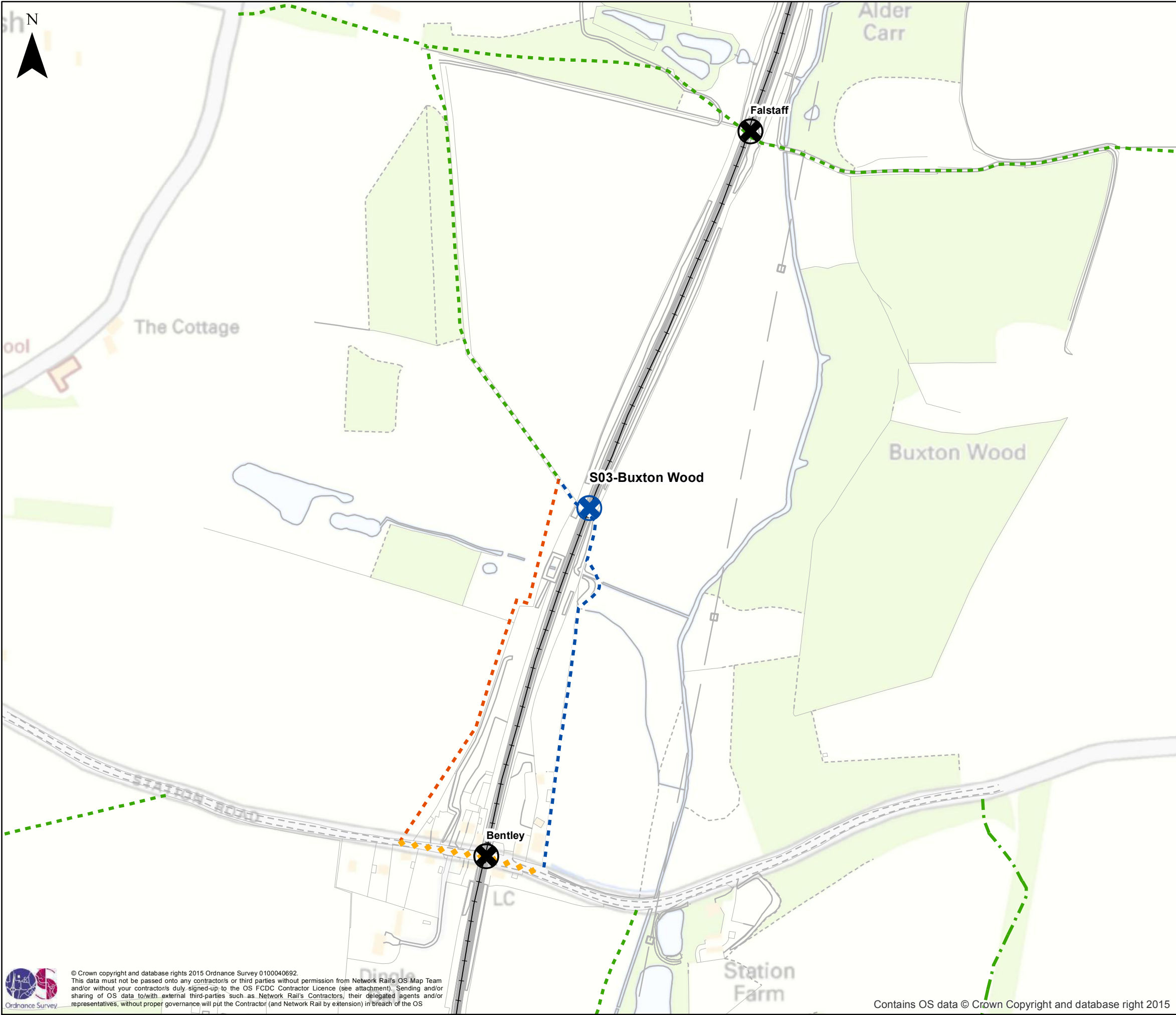
GRIP 1 Proposals

S02 - Brantham High Bridge
Suffolk
Brantham CP
SK/E-159/006/0

P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:4,500

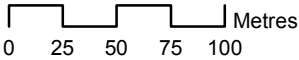
Drawing No.
MMD-354763-S02-GEN-001



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Overview



Current level crossing



Other level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status



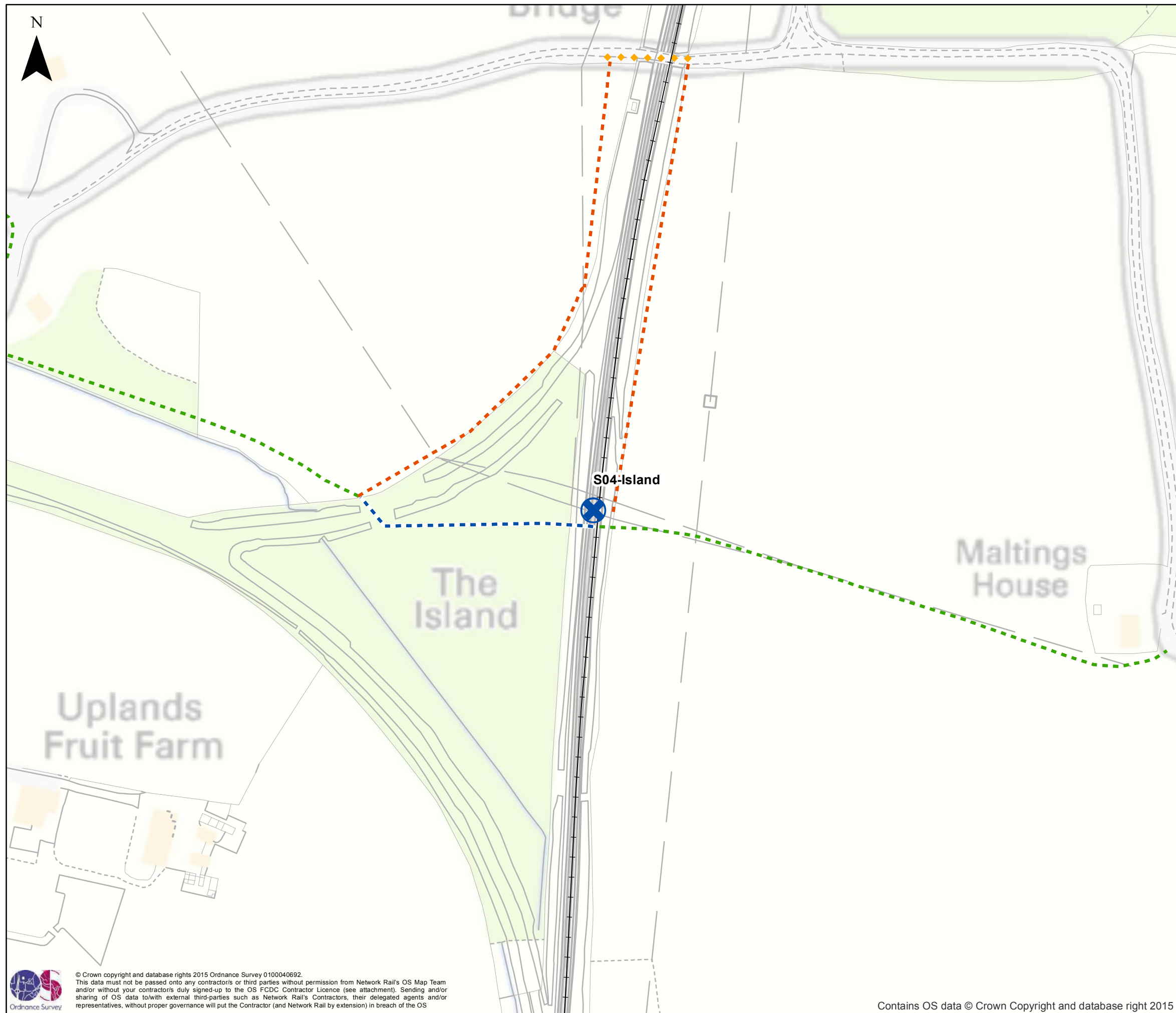
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Kendell Street
Leeds
LS10 1JR
United Kingdom
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GRIP 1 Proposals

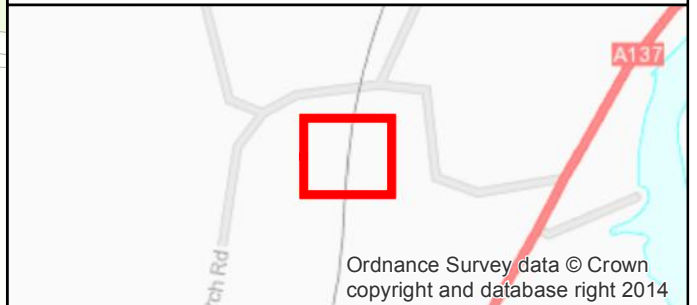
S03 - Buxton Wood Suffolk Bentley CP SK/E-138/022#1 and SK/E-138/022#3						
P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:3,500

Drawing No.
MMD-354763-S03-GEN-001



Overview



Current level crossing

Right of way/highway symbology by type

■ ■ ■ Footpath

— • — Bridleway

■ ■ ■ Restricted byway

+++ Byway open to all traffic

◆◆◆◆ Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

Creation

 Extinguishment

 Use of existing

Change of status

 No change to existing status



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GRIP 1 Proposals

S04 - Island
Suffolk
Bentley CP
SK/W-138/018/0#2

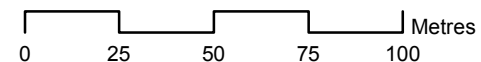
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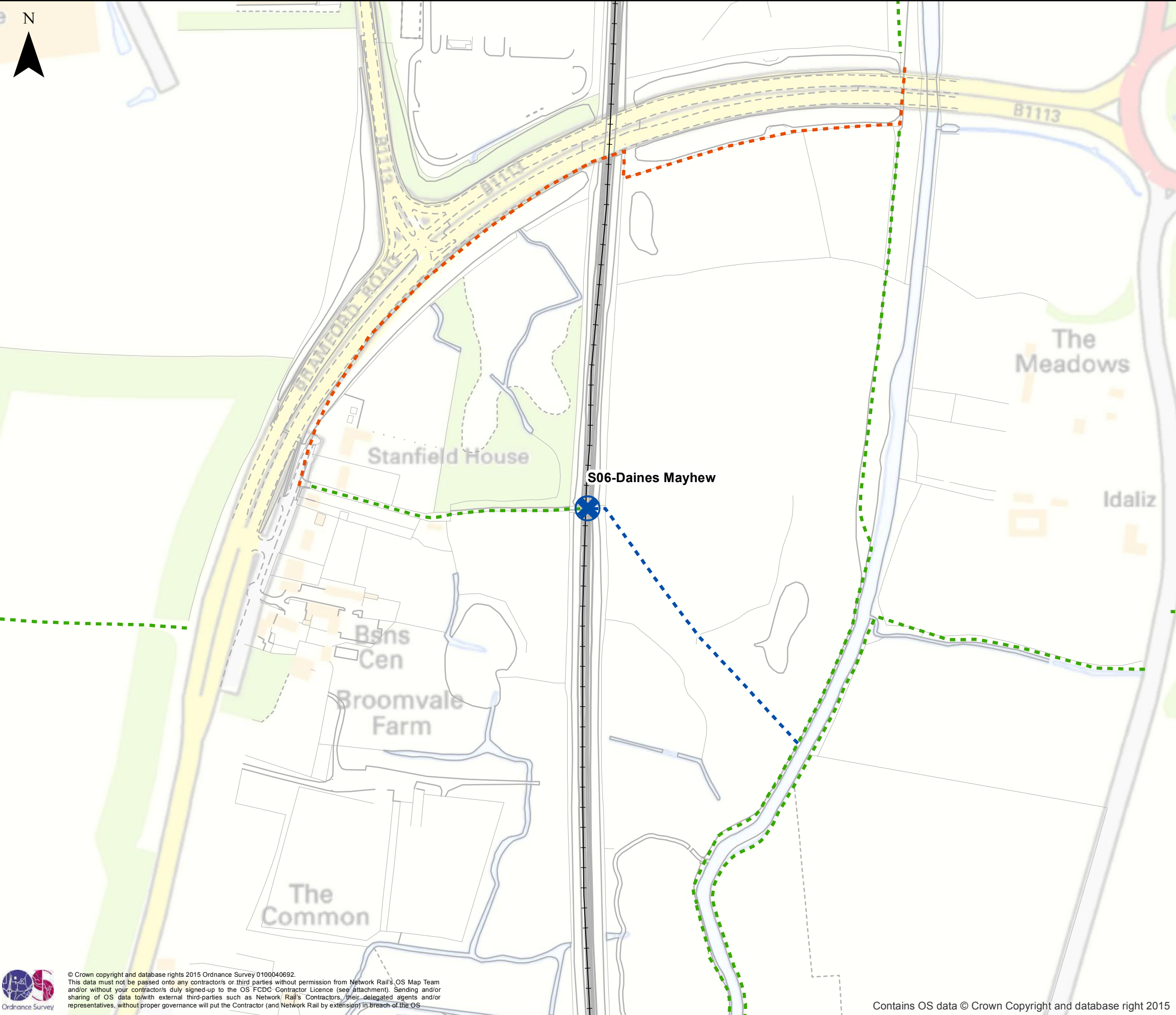
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Drawing No.	MMD-354763-S04-GEN-001
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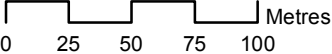




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Overview



-  Current level crossing
- Right of way/highway symbology by type
-  Footpath
 -  Bridleway
 -  Restricted byway
 -  Byway open to all traffic
 -  Highway (only shown where a change of use is proposed)
- Right of way/highway symbology by proposed status
-  Creation
 -  Extinguishment
 -  Use of existing
 -  Change of status
 -  No change to existing status



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United Kingdom
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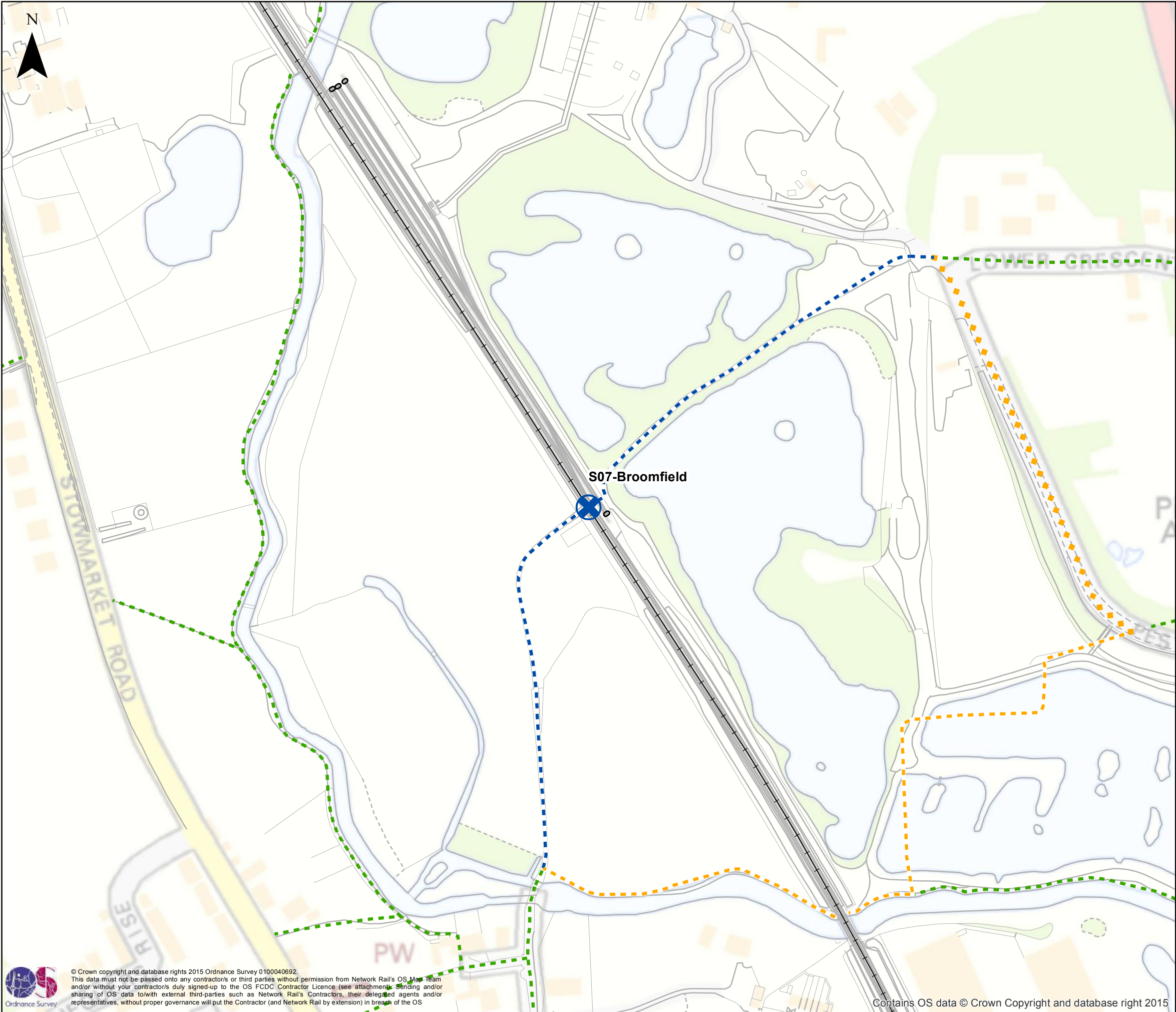
GRIP 1 Proposals

S06 - Daines Mayhew
Suffolk
Little Blakenham CP
SK/W-370/015/A#1

P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:3,000

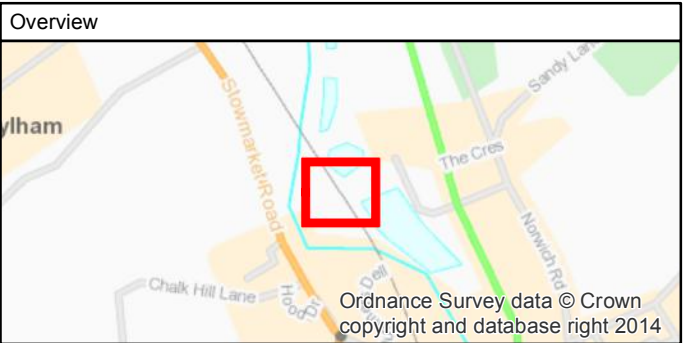
Drawing No.
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0 25 50 75 100 Metres

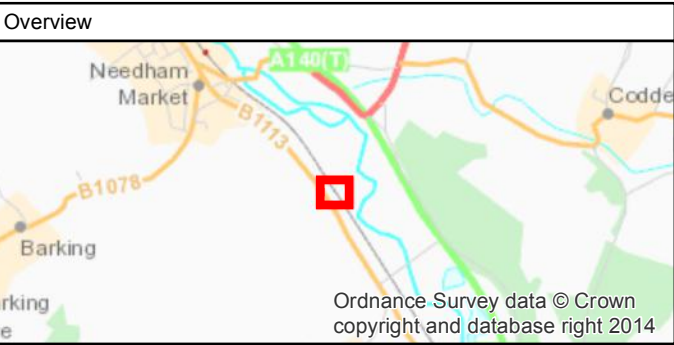
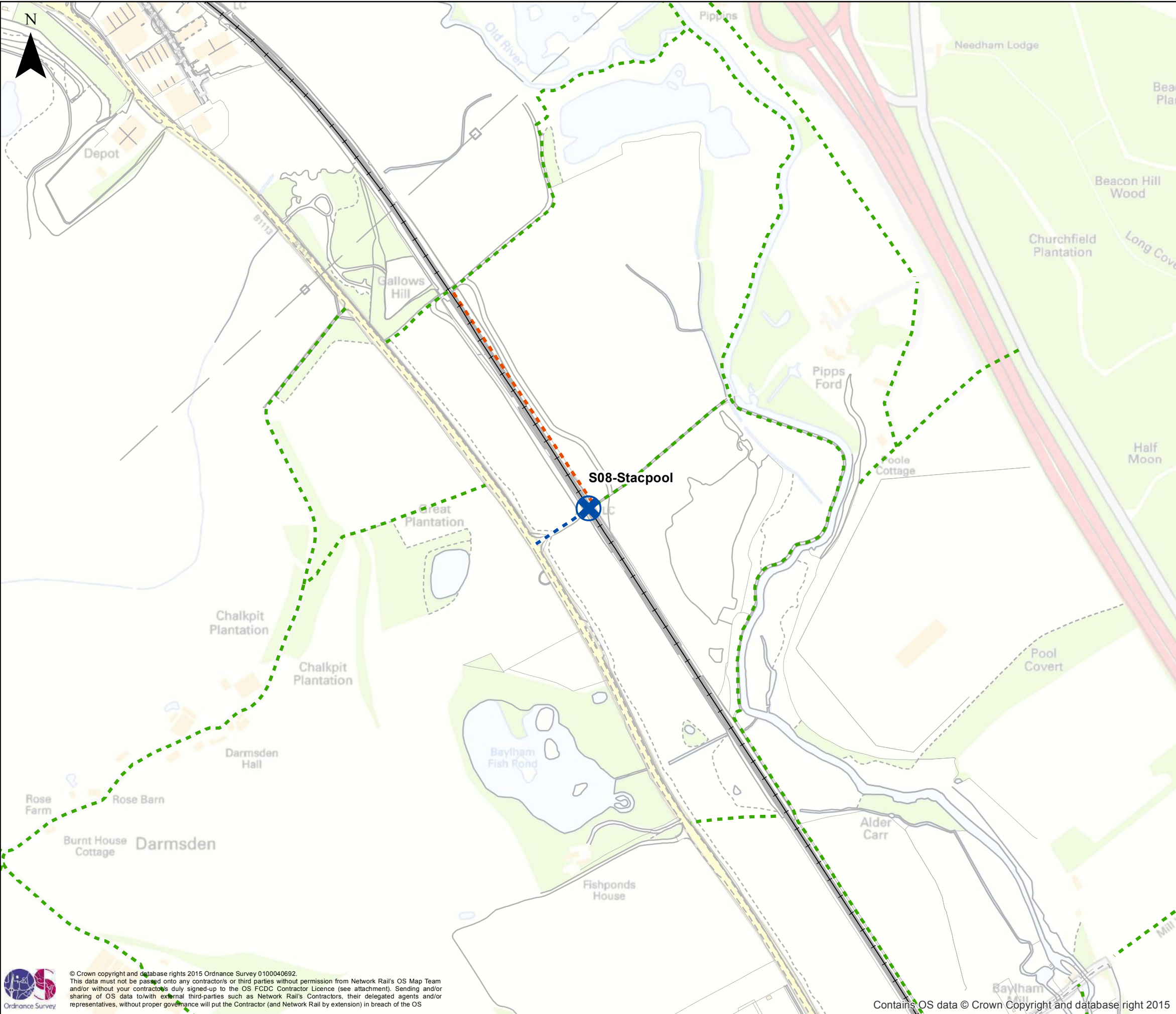


- ⊗ Current level crossing
- Right of way/highway symbology by type
- Footpath
 - . - Bridleway
 - Restricted byway
 - + + + Byway open to all traffic
 - ◆◆◆◆ Highway (only shown where a change of use is proposed)
- Right of way/highway symbology by proposed status
- Creation
 - Extinguishment
 - Use of existing
 - Change of status
 - No change to existing status



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GRIP 1 Proposals						
S07 - Broomfield Suffolk Barham CP SK/E-120/012/0#1						
P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd
Scale at A3 1:2,500			Drawing No. MMD-354763-S07-GEN-001			



Current level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

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GRIP 1 Proposals

S08 - Stacpool Suffolk Needham Market CP SK/W-121/033/0						
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P1	16/10/2015	For Information	WC	-	SJP	JAS
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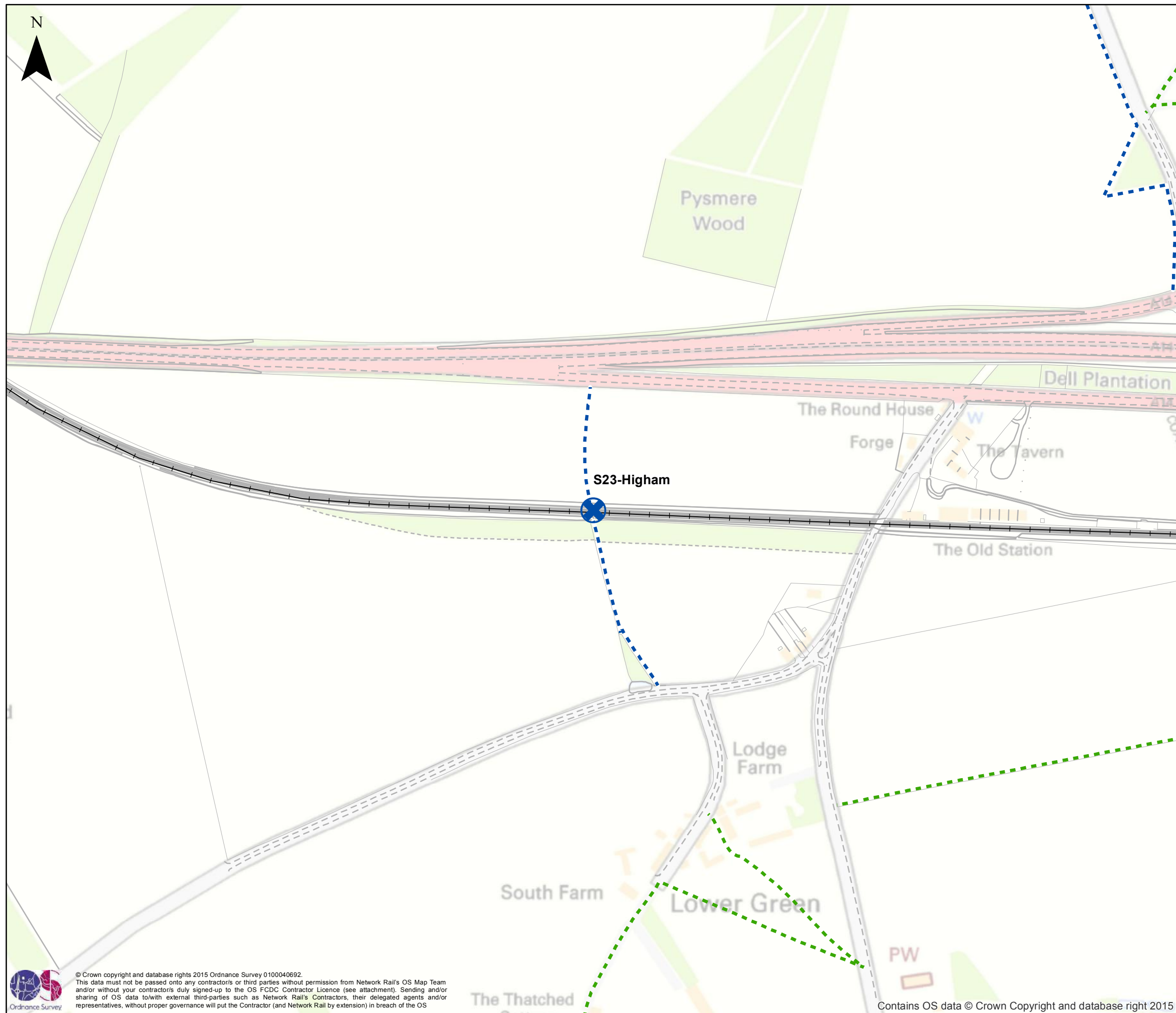
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Scale at A3
1:6,000

Drawing No.
MMD-354763-S08-GEN-001



Overview



Current level crossing

Right of way/highway symbology by type

■ ■ ■ Footpath

— ■ — Bridleway

■ ■ ■ Restricted byway

+++ Byway open to all traffic

◆◆◆◆ Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

Creation

 Extinguishment

 Use of existing

 Change of status

 No change to existing status



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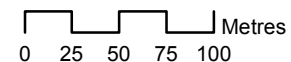
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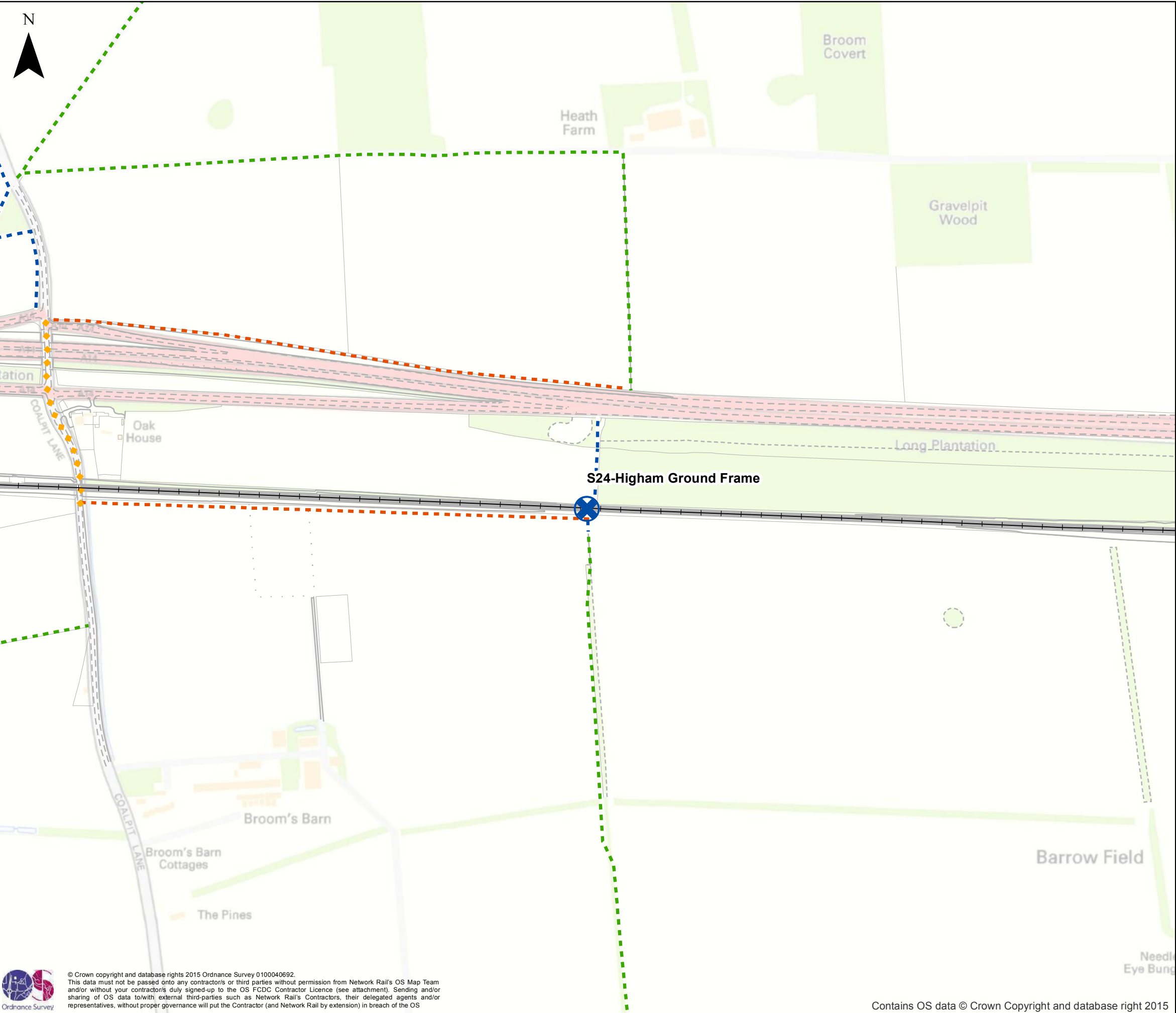
S23 - Higham
Suffolk
Higham CP
SK/W-316/001/0#2 and SK/W-316/001/0#3

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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:4,000

Drawing No.	MMD-354763-S23-GEN-001
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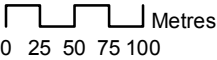




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Overview



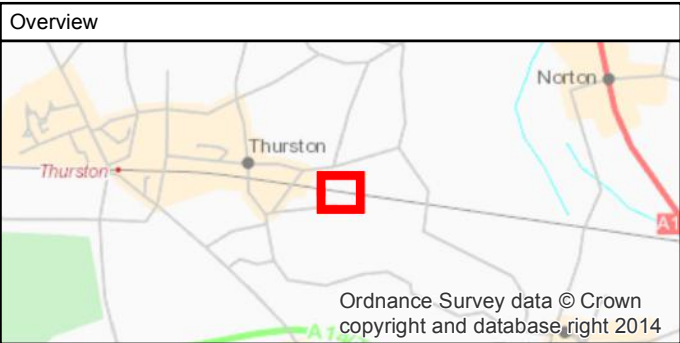
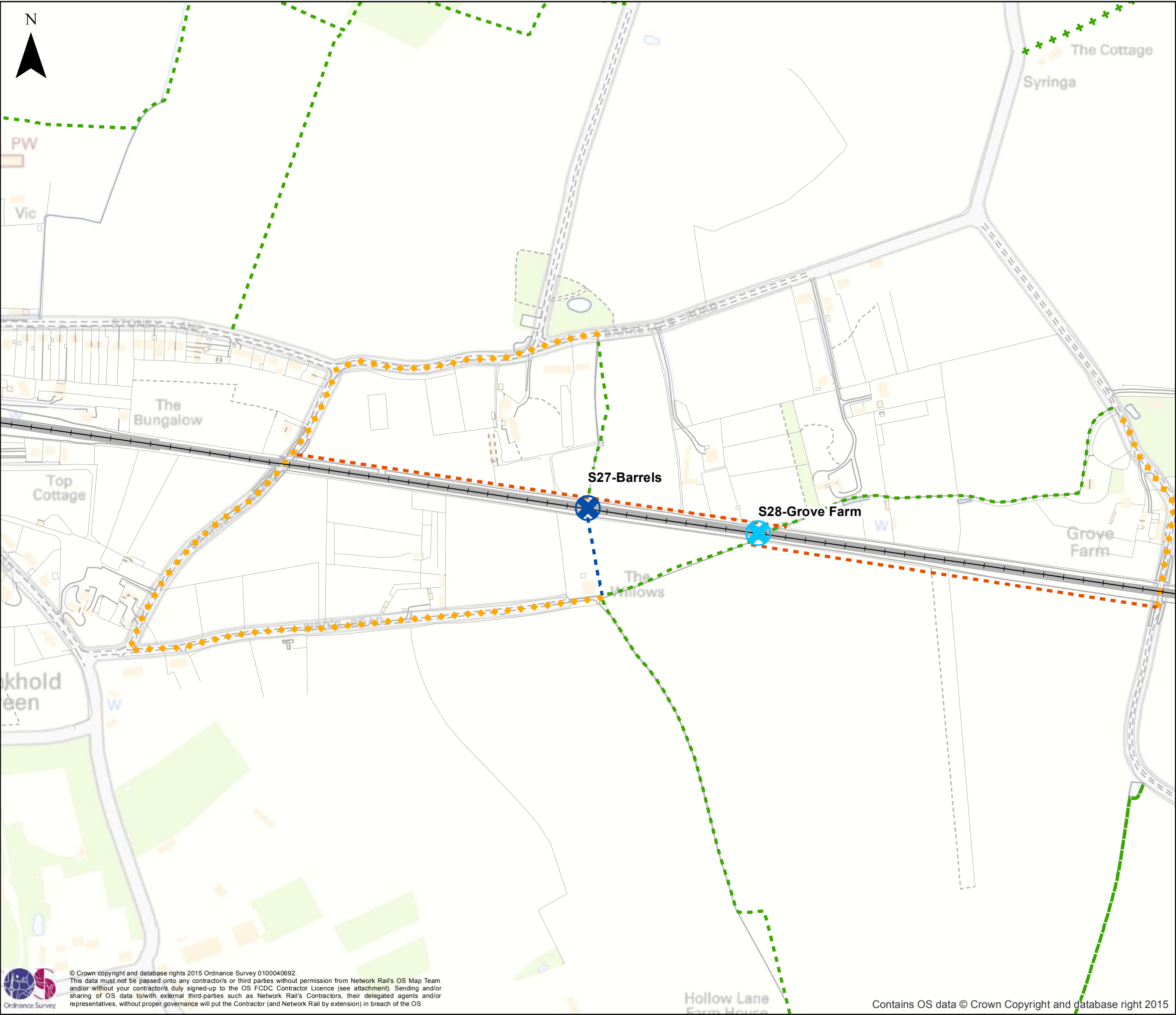
- ⊗ Current level crossing
- Right of way/highway symbology by type
- Footpath
 - . - Bridleway
 - ▬ Restricted byway
 - + + + Byway open to all traffic
 - ◆◆◆◆ Highway (only shown where a change of use is proposed)
- Right of way/highway symbology by proposed status
- Creation
 - Extinguishment
 - Use of existing
 - Change of status
 - No change to existing status



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GRIP 1 Proposals

S24 - Higham Ground Frame Suffolk Barrow CP SK/W-127/006/0#1 and SK/W-127/006/0#2						
P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd
Scale at A3 1:5,500			Drawing No. MMD-354763-S24-GEN-001			



Current level crossing

Other level crossing in study

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

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GRIP 1 Proposals

S27 - Barrels
Suffolk
Thurston CP
SK/W-523/005/0#1 and SK/W-523/005/0#3

P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:4,500

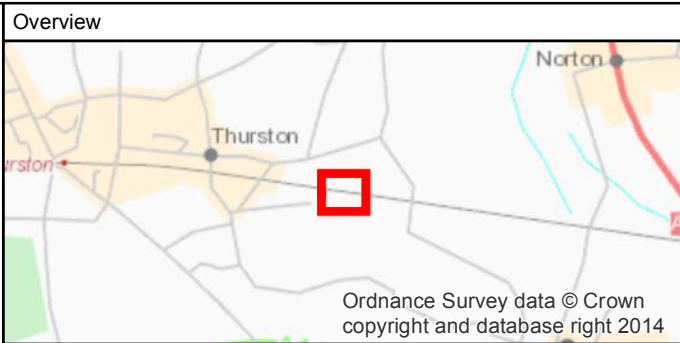
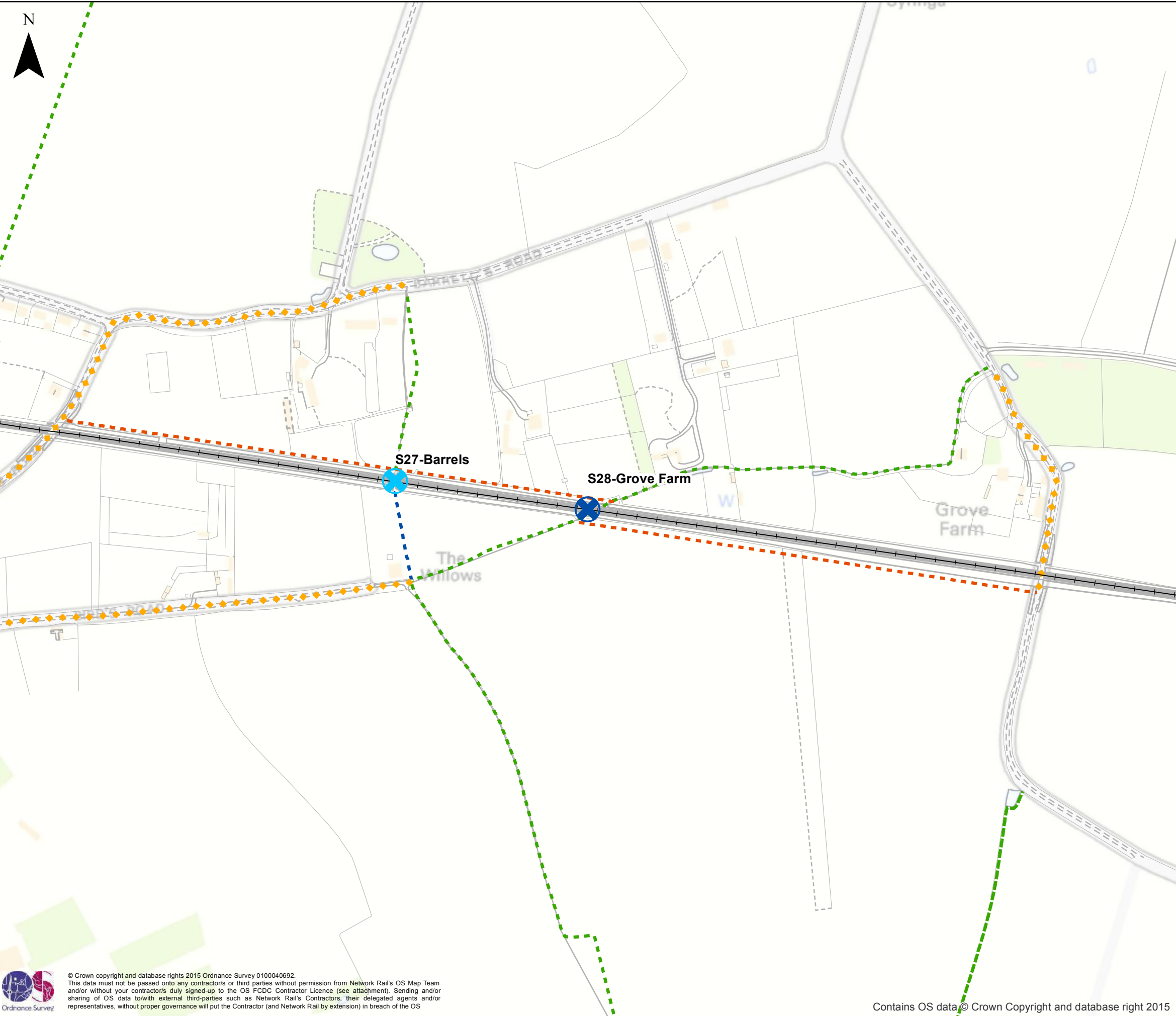
Drawing No.
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0 25 50 75 100 Metres

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Current level crossing

Other level crossing in study

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

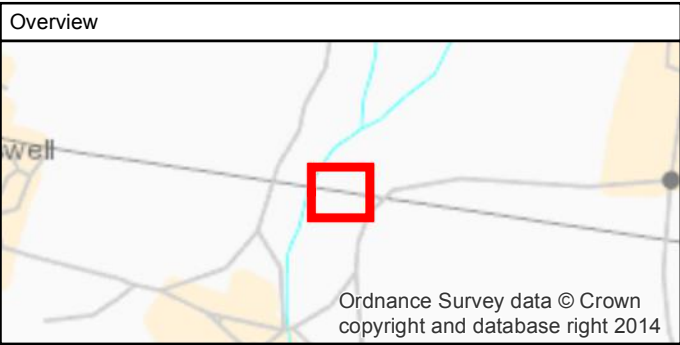
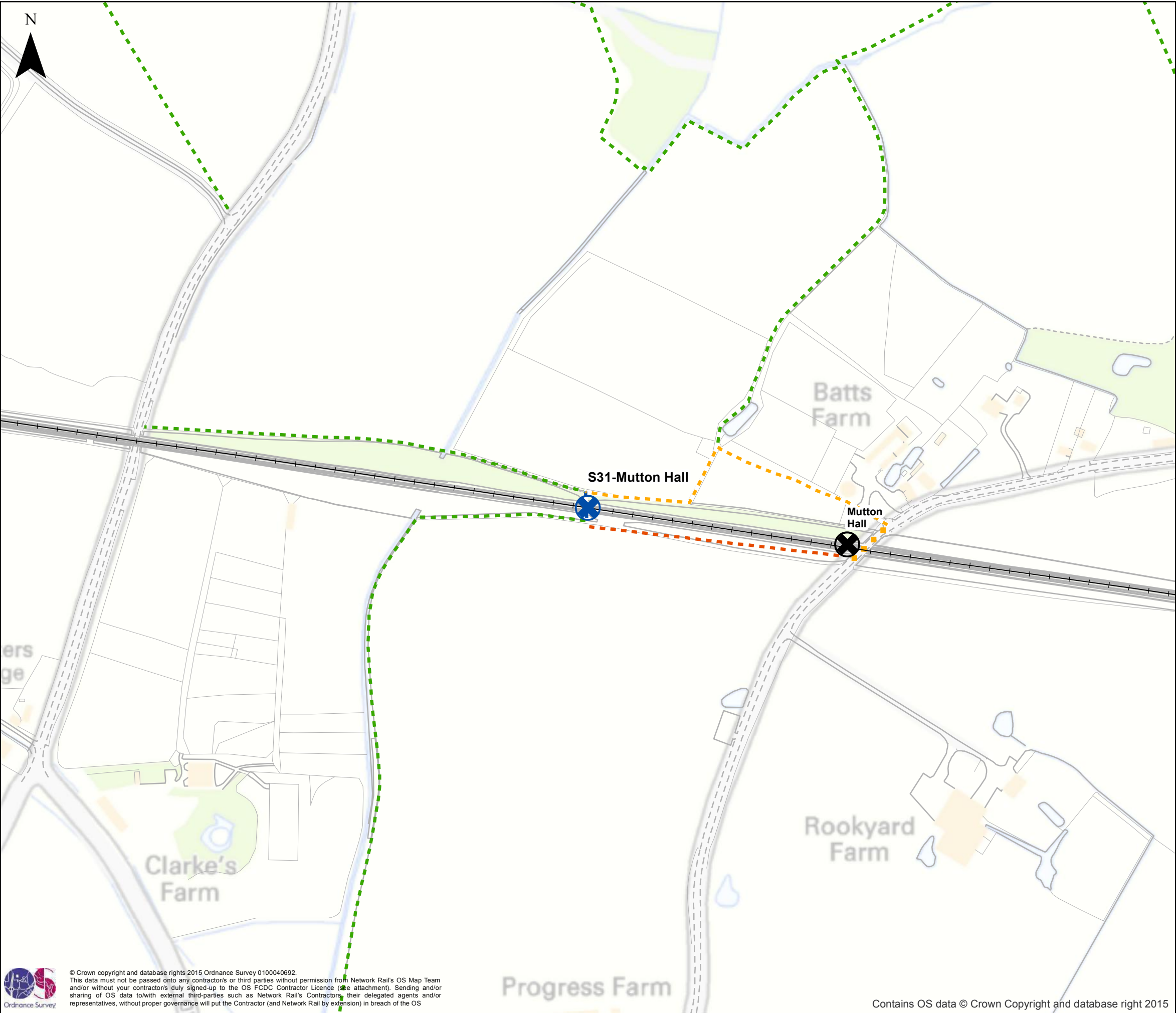
Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

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GRIP 1 Proposals

S28 - Grove Farm Suffolk Thurston CP SK W-523 011/0#1 and SK W-523 011/0#2						
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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd
Scale at A3 1:4,000			Drawing No. MMD-354763-S28-GEN-001			



Current level crossing

Other level crossing

Right of way/highway symbology by type

Footpath

Bridleway

Restricted byway

Byway open to all traffic

Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

Creation

Extinguishment

Use of existing

Change of status

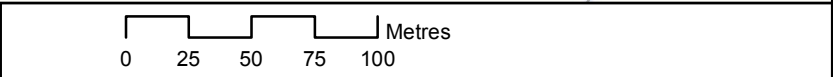
No change to existing status

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Leeds
LS10 1JR
United Kingdom
+44 (0)113 3946700

GRIP 1 Proposals

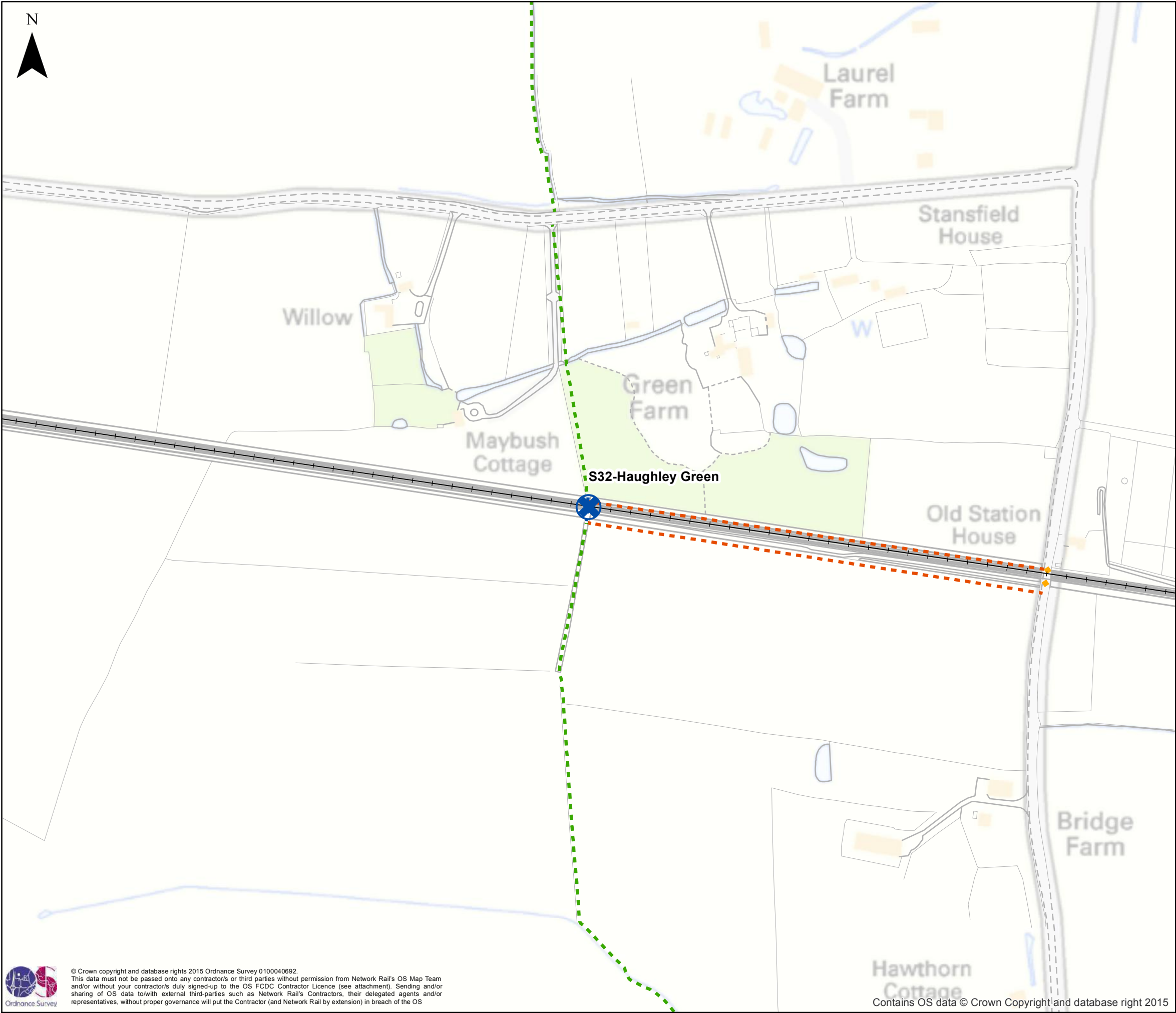
S31 - Mutton Hall
Suffolk
Wetherden CP

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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd



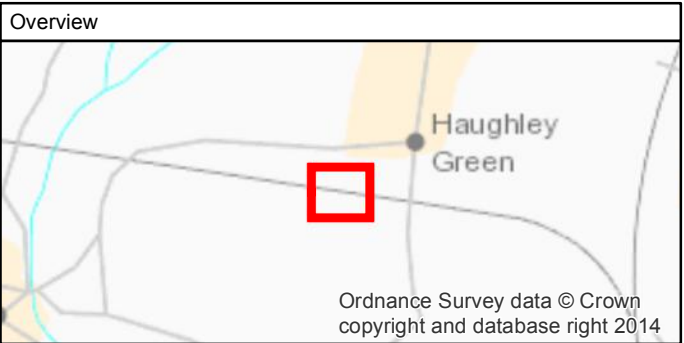
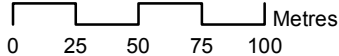
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Drawing No.
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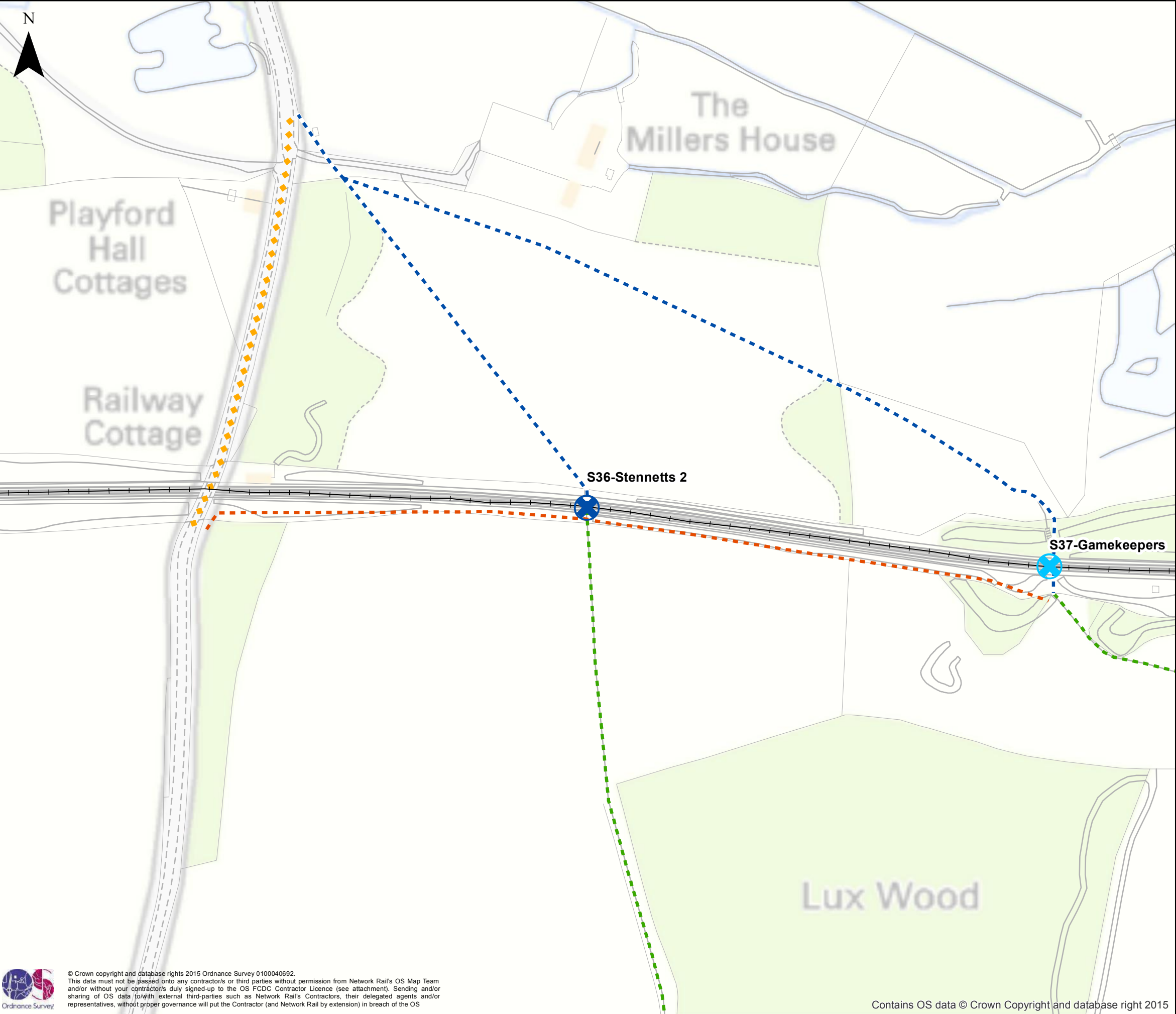
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- ⊗ Current level crossing
- Right of way/highway symbology by type
- Footpath
 - . - Bridleway
 - Restricted byway
 - + + + Byway open to all traffic
 - ◆◆◆◆ Highway (only shown where a change of use is proposed)
- Right of way/highway symbology by proposed status
- Creation
 - Extinguishment
 - Use of existing
 - Change of status
 - No change to existing status

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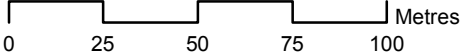
GRIP 1 Proposals						
S32 - Haughley Green Suffolk Haughley CP SK W-297 001/0#1 and SK W-297 001/0#2						
P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd
Scale at A3 1:3,000			Drawing No. MMD-354763-S32-GEN-001			



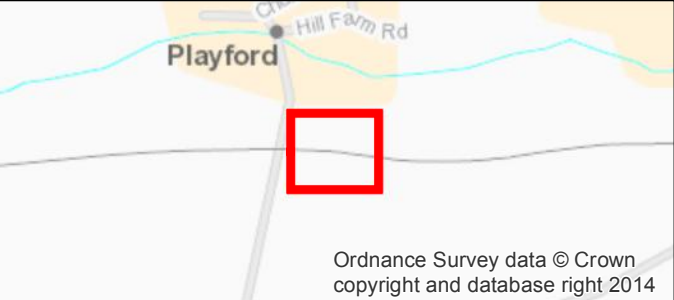
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Overview



Current level crossing

Other level crossing in study

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status



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United Kingdom
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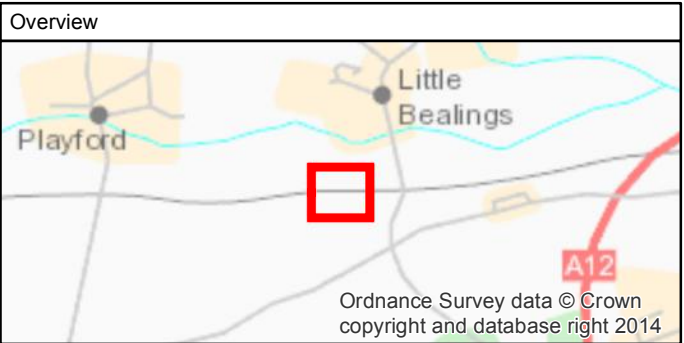
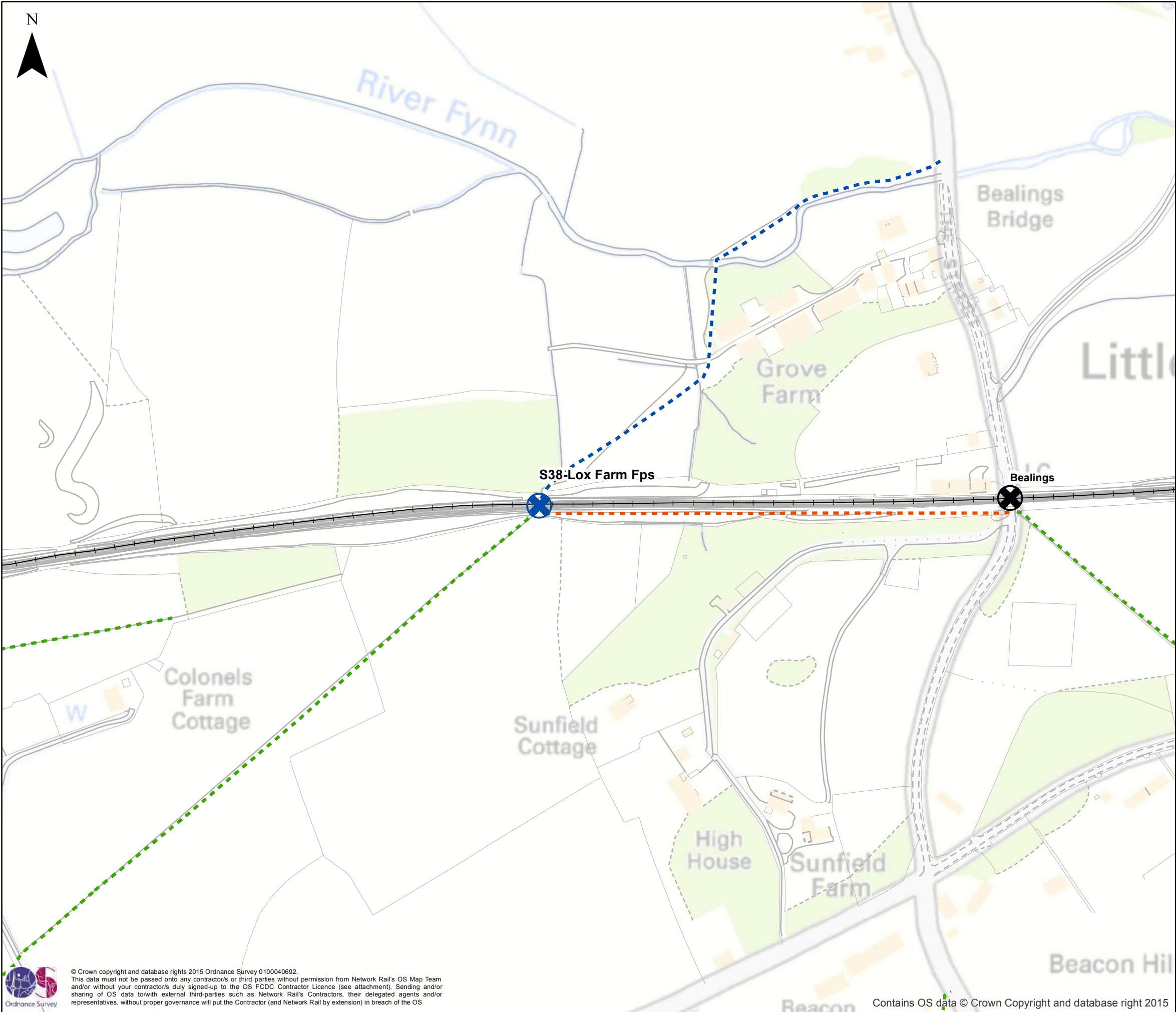
GRIP 1 Proposals

S36 - Stennetts 2
Suffolk
Playford CP
SK/E-431/013/0

P2	03/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:2,000

Drawing No.
MMD-354763-S36-GEN-001



Current level crossing

Other level crossing

Right of way/highway symbology by type

Footpath

Bridleway

Restricted byway

Byway open to all traffic

Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

Creation

Extinguishment

Use of existing

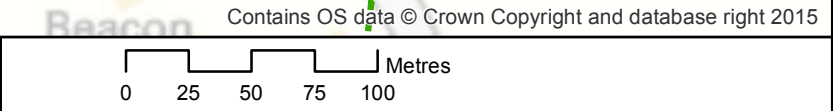
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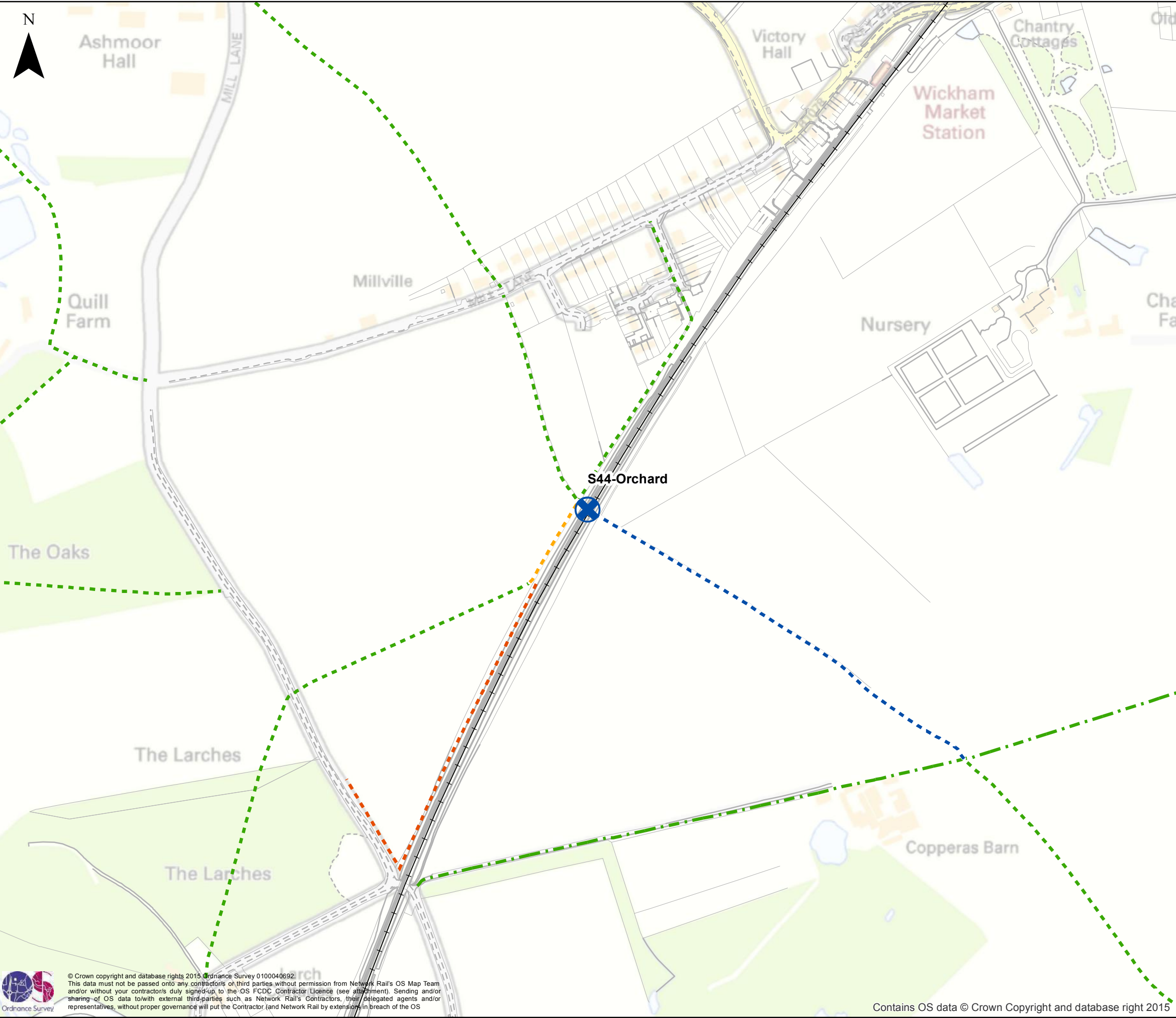
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GRIP 1 Proposals

S38 - Lox Farm Fps Suffolk Little Bealings CP SK/E-369/018/0						
P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd



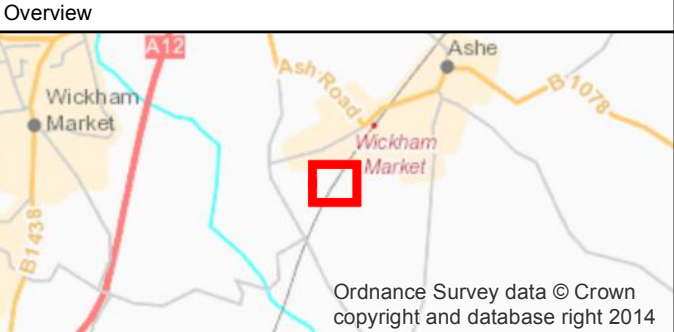
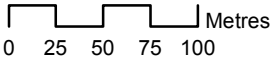
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- Current level crossing
- Right of way/highway symbology by type
- Footpath
 - Bridleway
 - Restricted byway
 - Byway open to all traffic
 - Highway (only shown where a change of use is proposed)
- Right of way/highway symbology by proposed status
- Creation
 - Extinguishment
 - Use of existing
 - Change of status
 - No change to existing status



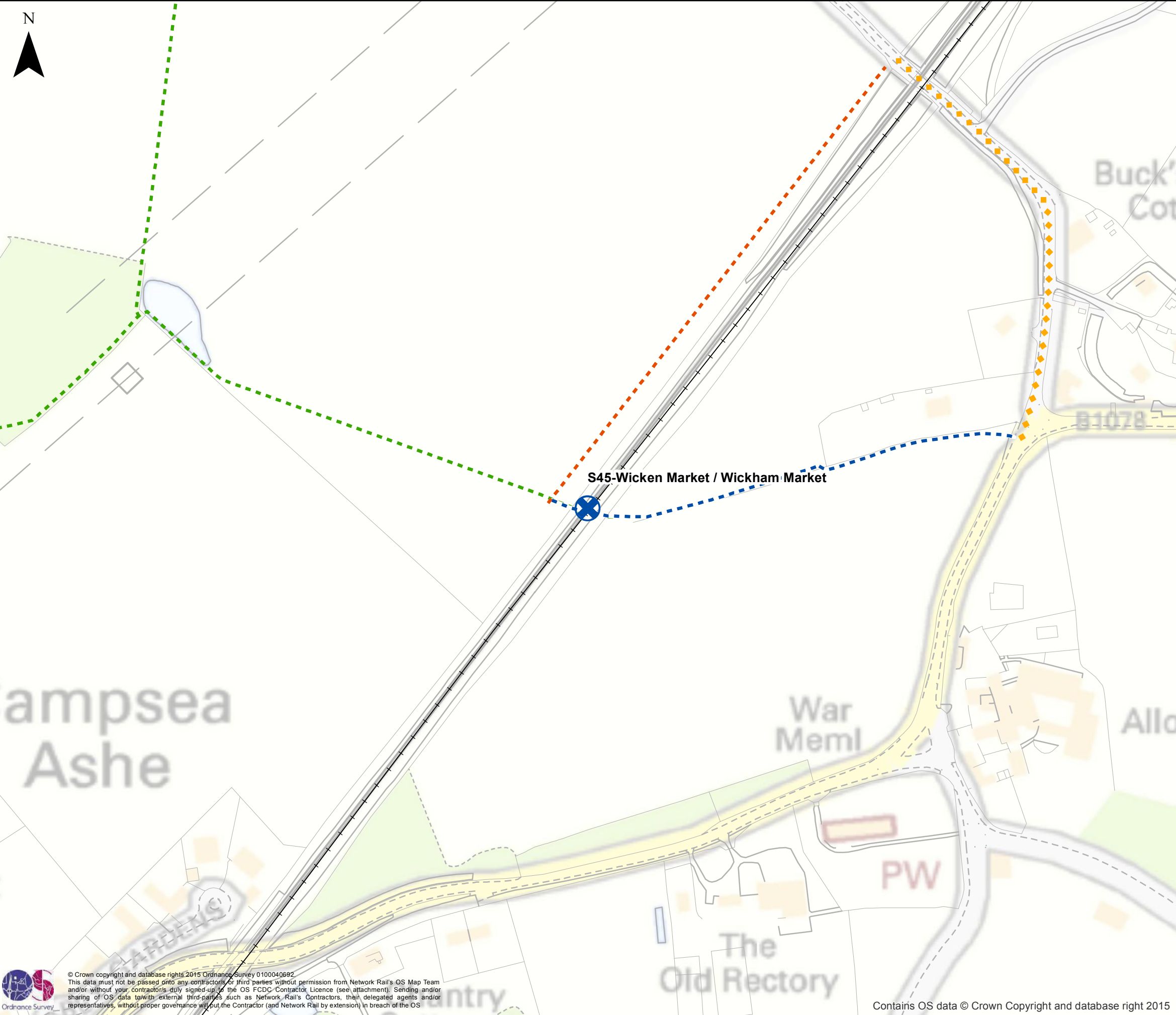
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GRIP 1 Proposals

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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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Drawing No.
MMD-354763-S44-GEN-001



Current level crossing

Right of way/highway symbology by type

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- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

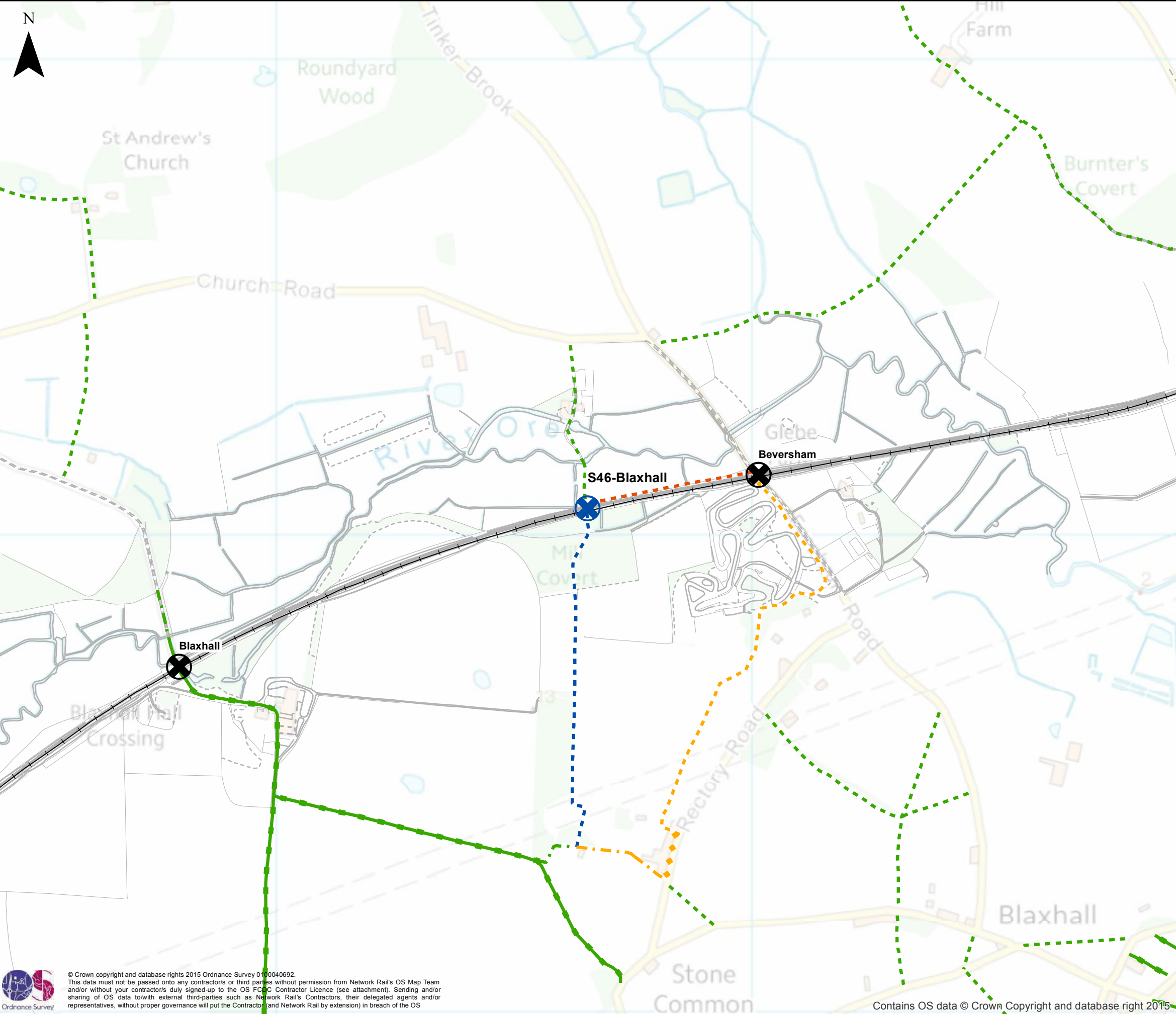
Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

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GRIP 1 Proposals

S45 - Wicken Market / Wickham Market Suffolk Campsey Ash CP SK/E-178/020/0 and SK/E-178/022/0#1						
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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd



Current level crossing

Other level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

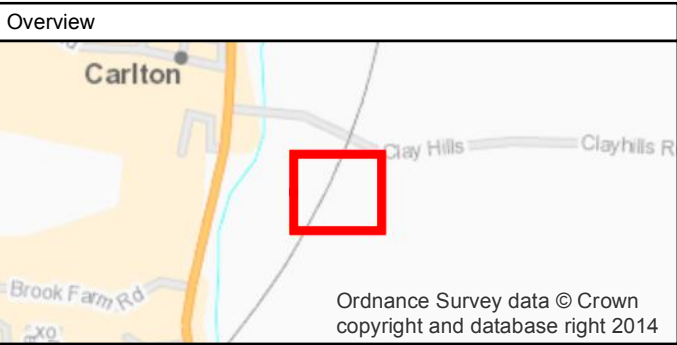
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GRIP 1 Proposals

S46 - Blaxhall
Suffolk
Blaxhall CP
SK/E-141/037/0

P2	04/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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Current level crossing

Right of way/highway symbology by type

- Footpath
- . - Bridleway
- Restricted byway
- + + + Byway open to all traffic
- ◆◆◆◆ Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

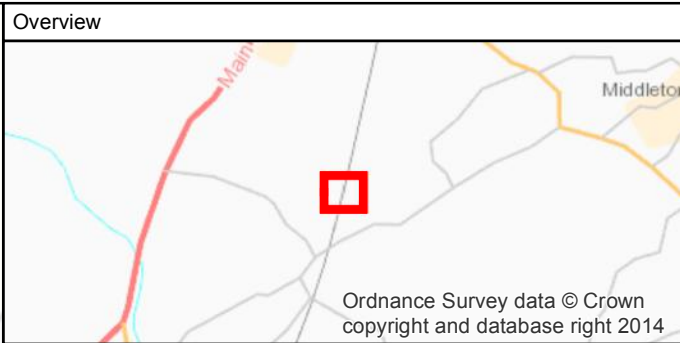
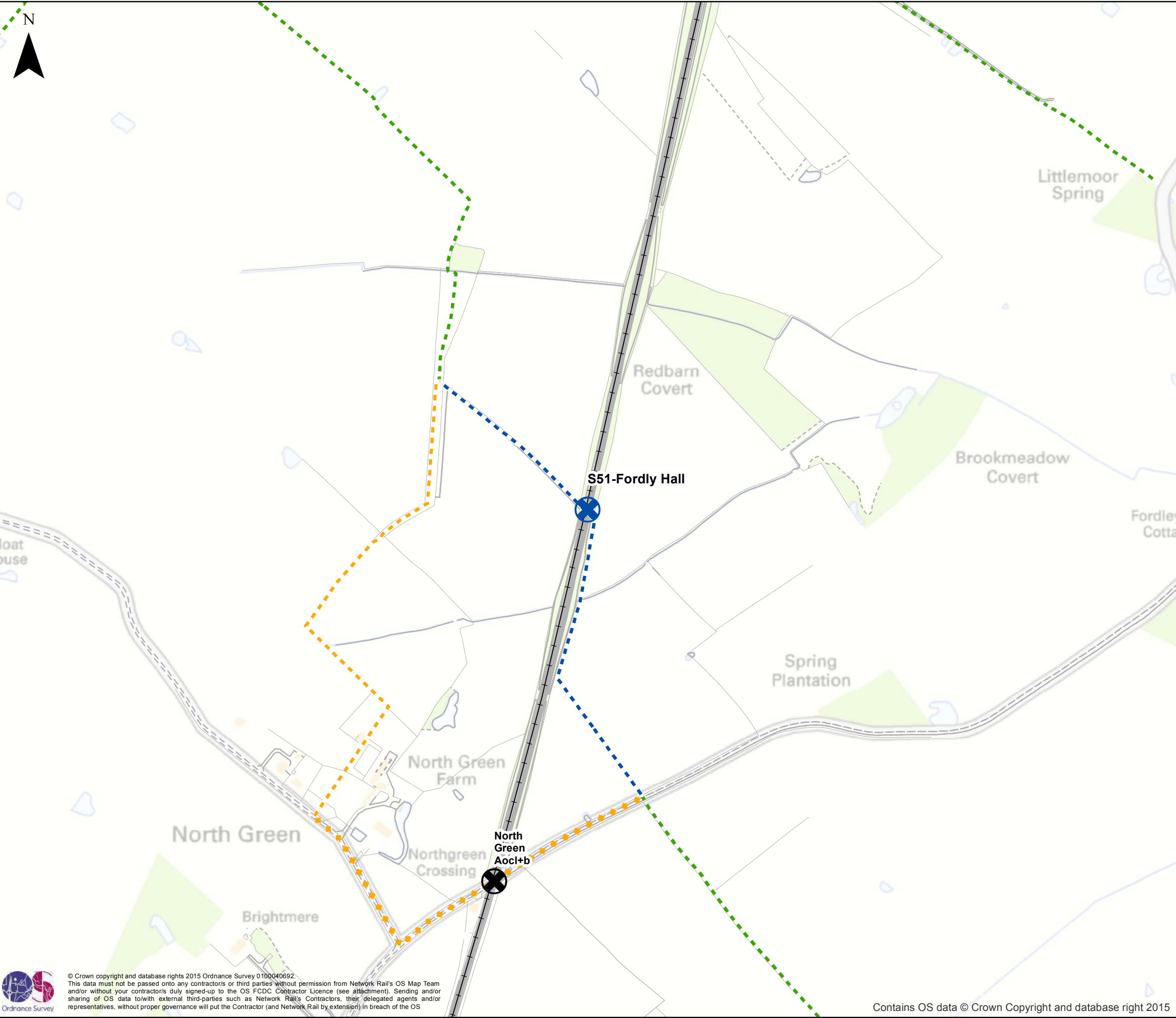
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S48 - Saxmundham
Suffolk
Saxmundham CP
SK/E-460/001/0

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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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Legend

Current level crossing

Other level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

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GRIP 1 Proposals

S51 - Fordly Hall
Suffolk
Middleton CP
SK/E-396/022/0#2

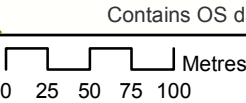
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Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

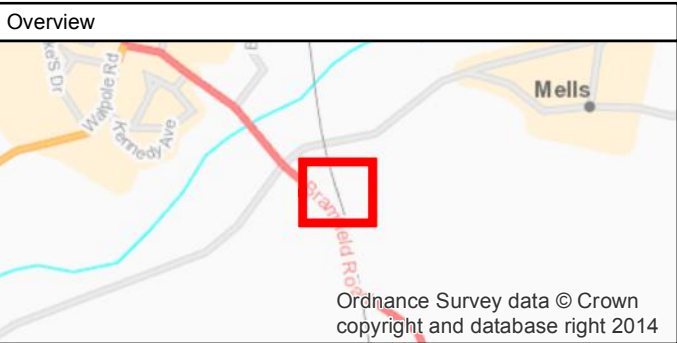
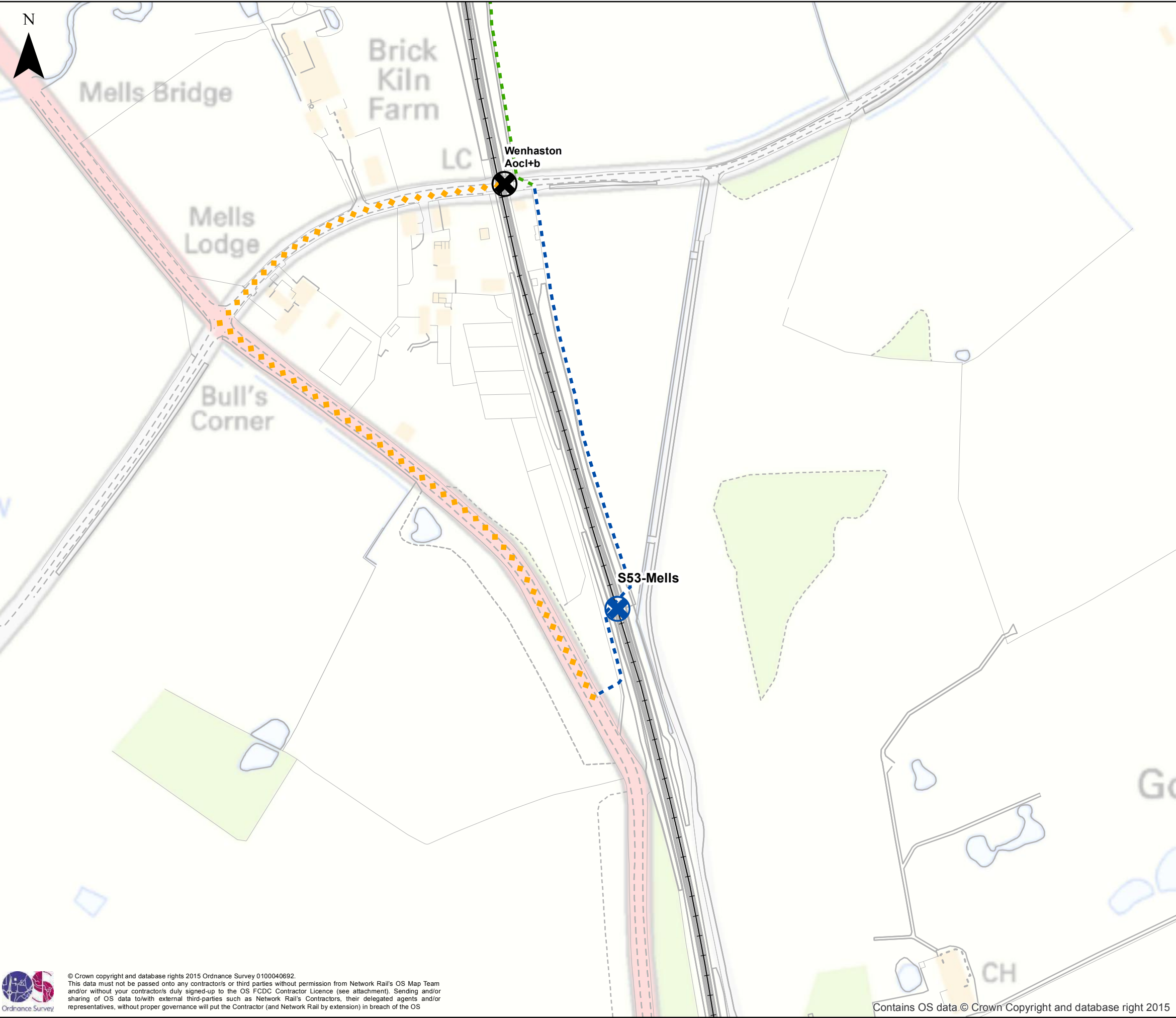
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Current level crossing

Other level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

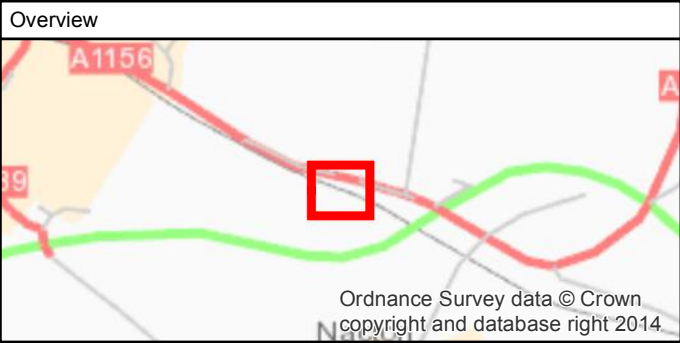
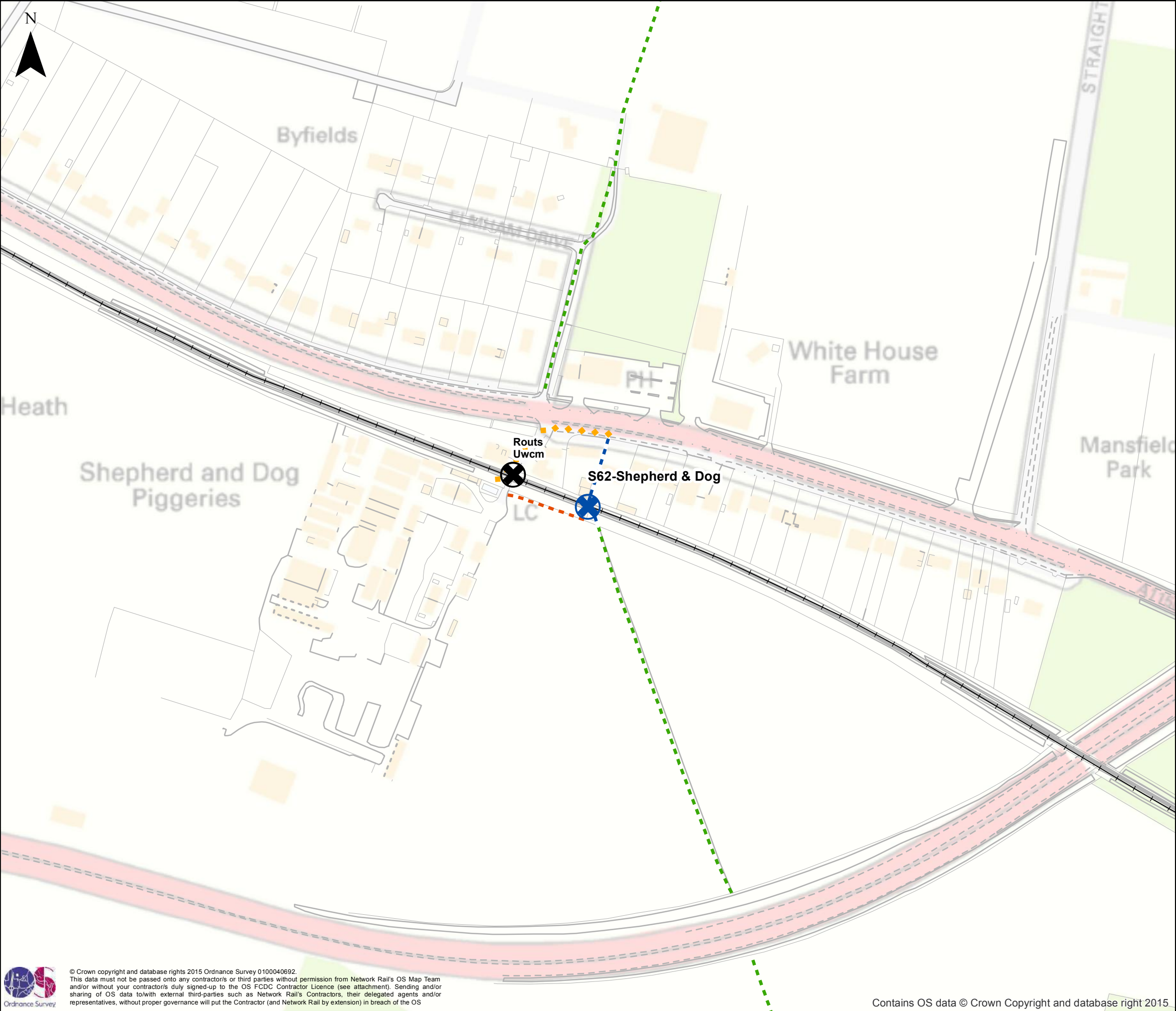
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GRIP 1 Proposals

S53 - Mells
Suffolk
Wenhaston with Mells Ham*
SK/E-546/008/0

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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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Current level crossing

Other level crossing

Right of way/highway symbology by type

Footpath

Bridleway

Restricted byway

Byway open to all traffic

Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

Creation

Extinguishment

Use of existing

Change of status

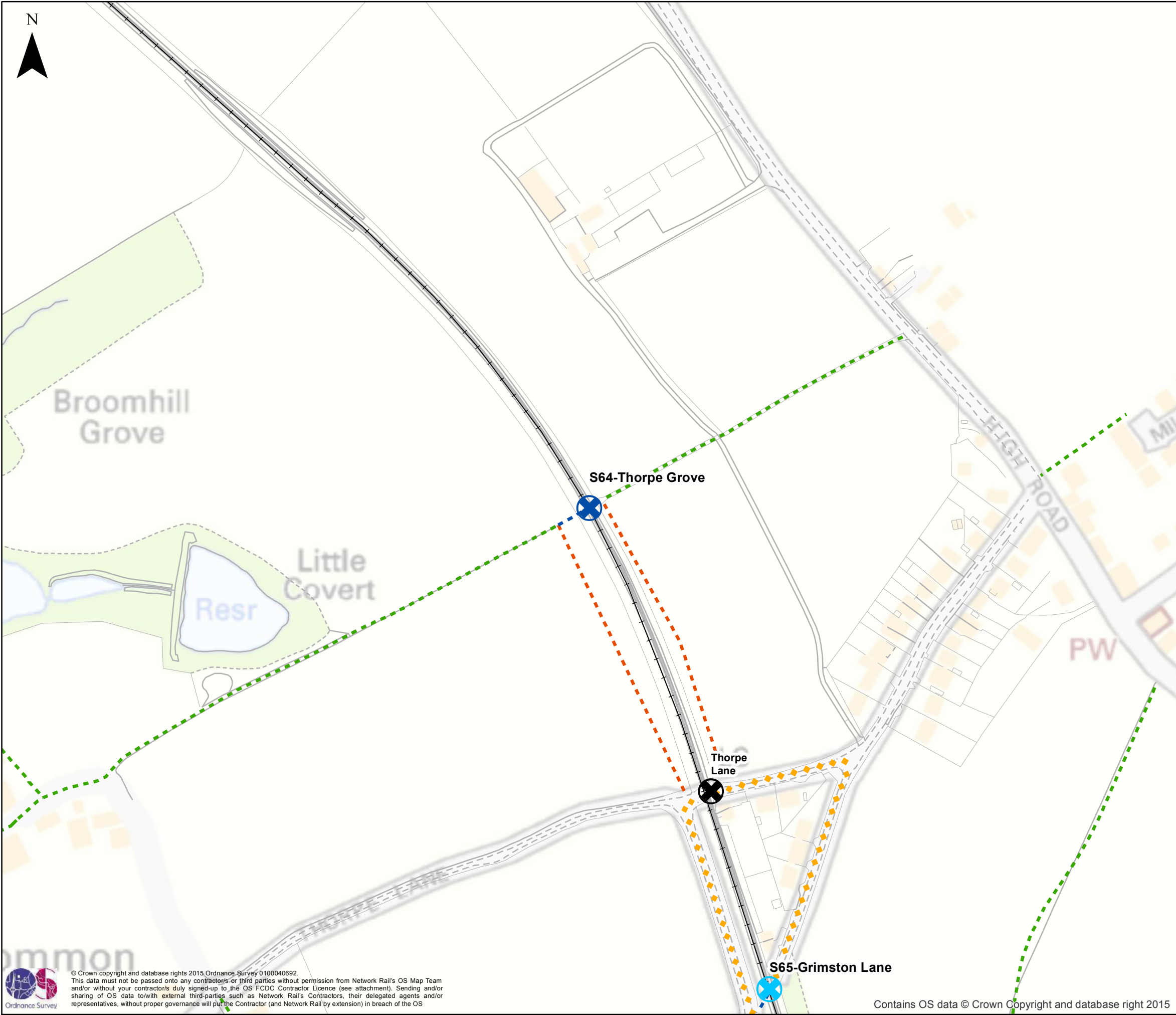
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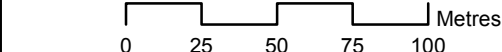
S62 - Shepherd & Dog
Suffolk
Purdis Farm CP
SK/E-405/001/0#1

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P1	16/10/2015	For Information	WC	-	SJP	JAS
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Overview

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Current level crossing

Other level crossing in study

Other level crossing

Right of way/highway symbology by type

Footpath

Bridleway

Restricted byway

Byway open to all traffic

Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

Creation

Extinguishment

Use of existing

Change of status

No change to existing status

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United Kingdom
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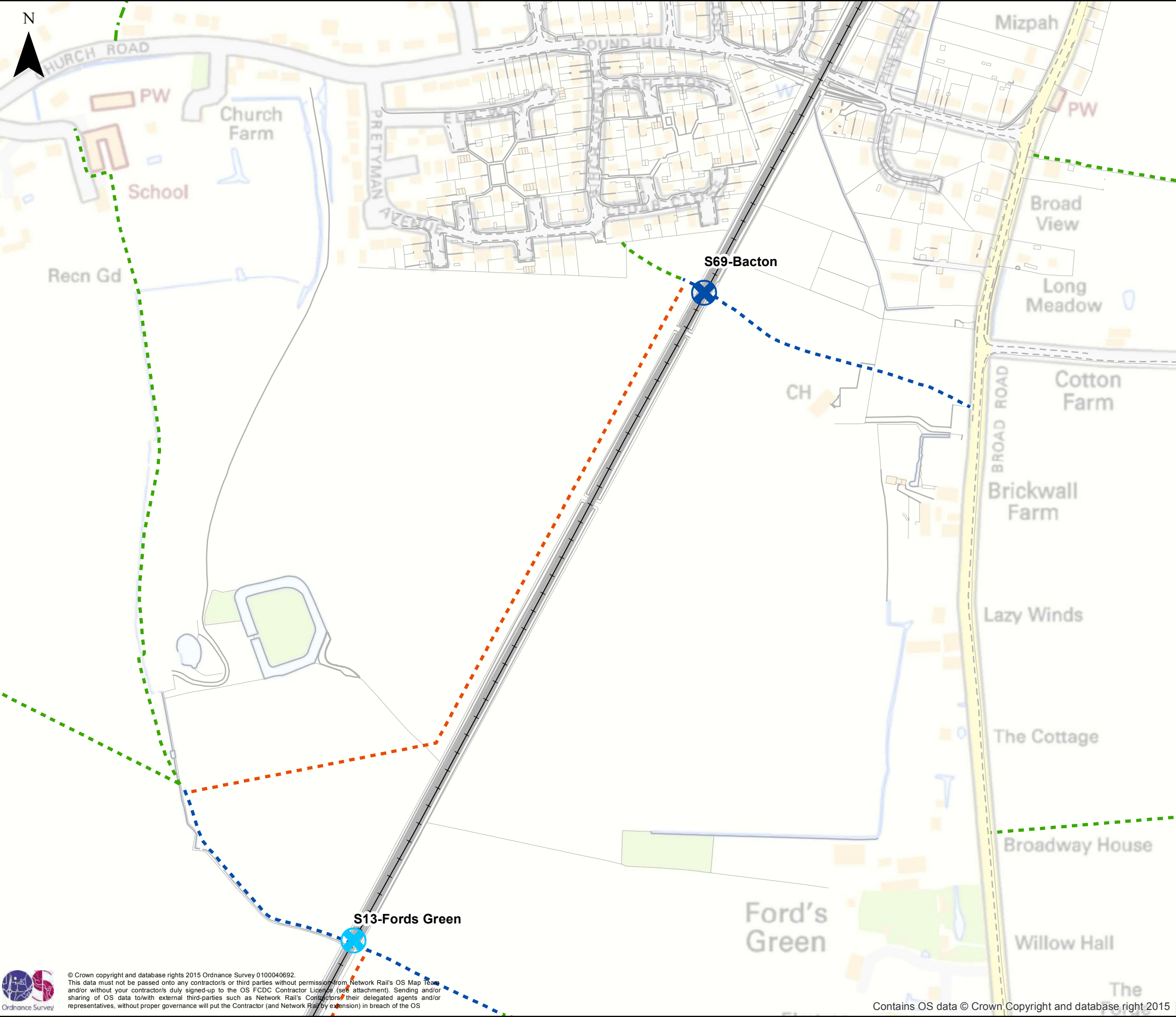
GRIP 1 Proposals

S64 - Thorpe Grove
Suffolk
Trimley St. Martin CP
SK/E/527/001/0

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Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

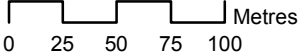
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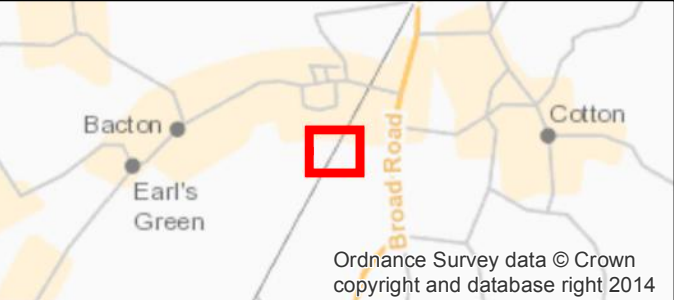



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Overview








 Current level crossing

 Other level crossing in study

Right of way/highway symbology by type

-  Footpath
-  Bridleway
-  Restricted byway
-  Byway open to all traffic
-  Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

-  Creation
-  Extinguishment
-  Use of existing
-  Change of status
-  No change to existing status



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S69 - Bacton
Suffolk
Bacton CP

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Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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Transport & Works Act Order (TWAO) Anglia Route GRIP 1 Review

Suffolk Stage1 Road Safety Audit

Report Number 354763/RPT219

Revision A

December 2015



Transport & Works Act Order (TWAO) Anglia Route GRIP 1 Review

Suffolk Stage1 Road Safety Audit

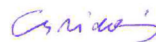
December 2015

Network Rail

Infrastructure Projects, Buildings & Civils, Hudson House, Toft Green, York, YO1 6HP

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
A	19/11/2015	A J Coleman	T J Blaney	C S Ridding	First Draft



Information class: Standard

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1 Introduction

Network Rail is carrying out feasibility studies to explore options for the closure of level crossings throughout Suffolk, as part of their on-going commitment to deliver a safer, more efficient and reliable railway. Mott MacDonald is considering Network Rail's GRIP 0 Solution to enable the closure of level crossings.

This report describes a series of Stage 1 Road Safety Audits carried out on highway works associated with proposed level crossing closures throughout Suffolk. The scheme proposals currently consist of indicative (high level) diversion routes as the result of closures and no formal highway works have been designed at this stage. Therefore this report considers potential road safety problems as a result of the proposed routes and their interaction with the highway. A detailed description of the proposed diversion routes at each location can be read in the respective individual level crossing review reports.

The audits took place at the Birmingham office of Mott MacDonald and consisted of a detailed examination of the submitted documentation and drawings listed in **Appendix A**.

A visit to each site was completed on either Tuesday 3rd November 2015 between 14:00 and 15:20, during which the weather conditions were cloudy and dry, or on Wednesday 4th November 2015 between 07:50 and 08:10 during which the weather was raining and the road surface was wet.

It is confirmed that this is a Stage 1 Road Safety Audit and that the audit was undertaken upon completion of the feasibility design. It is also confirmed that the audit was carried out in accordance with the Highways England Departmental Standard HD19/15.

The Audit Team consisted of:

Andrew Coleman BA (Hons), MCHIT, MSoRSA (Team Leader)

Mott MacDonald

T Blaney BSc (Hons), CMILT, MCIHT, MSoRSA (Team Member)

Mott MacDonald

No attempt has been made to comment on the justification of the scheme or the appropriateness of the diversion routes. Consequently the auditors accept no responsibility for the design or construction of the scheme. All of the issues raised in this report are considered to be required for action. The comments contained in the report are based on safety related concerns and as such the design engineer will need to consider carefully how to respond to each of the issues. The Designer's response to the audit should be kept on file for future reference.

No Personal Injury Accident data has been provided and therefore has not been reviewed as part of this audit. Pedestrian or traffic flows are also not known to the Audit Team.

A Key Plan indicating the location of any identified safety related issues is provided in **Appendix B**.

2 Items Raised at this Stage 1 Audit

This section describes road safety related issues identified by the Audit Team that are associated with the scheme as presented in **Appendix A**.

2.1 S02 – Brantham High Bridge

The Audit Team did not identify any road safety related issues associated with the scheme.

2.2 S03 – Buxton Wood

2.2.1 Buxton Wood Problem 001

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.

Figure 2.1: Bramford Road looking west.



Source: Mott MacDonald

Recommendation

It is recommended that an area of hard-standing is provided at the edge of the carriageway and vegetation clearance is undertaken to provide suitable intervisibility between drivers and pedestrians. A safe transition should also be provided between the footpath and the hard-standing.

2.3 S04 – Island

The Audit Team did not identify any road safety related issues associated with the scheme.

2.4 S06 – Daines Mayhew

2.4.1 Daines Mayhew Problem 001

Location: B1113 Bramford Road.

Summary: Risk of vehicle collisions with pedestrians.

The B1113 Bramford Road is a busy road with a 50mph speed limit which provides a link to the A14 at Junction 52. The diversion route guides pedestrians along the southern side of Bramford Road which features a vehicle restraint system (VRS) within the verge to protect not only the railway line but also the steep embankment to the south. The verge in front of the VRS has insufficient width to accommodate pedestrians and there is also insufficient width behind the barrier due to trees and the embankment slope. It is likely that pedestrians directed along this route will walk within the carriageway at risk of collisions with high speed vehicles.

Figure 2.2: Bramford Road looking south west.



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway or footpath is provided behind the VRS (away from the carriageway) to enable pedestrians to continue without walking within the carriageway. If this is not feasible, an alternative route should be identified.

2.5 S07 – Broomfield

2.5.1 Broomfield Problem 001

Location: Pesthouse Lane.

Summary: Risk of pedestrian trip injuries.

The diversion route will utilise an existing footpath which is bisected by Pesthouse Lane. At the footpath interface with the carriageway a vehicle restraint system (VRS) is present and creates a hazard for pedestrians. Steel edges of VRS can be sharp and there is a risk of pedestrians injuring themselves as they negotiate the VRS.

Figure 2.3: Pesthouse Lane looking south east.



Source: Mott MacDonald

Recommendation

It is recommended that a route to the north behind the barrier be provided to avoid the need for pedestrians to negotiate the VRS. The existing footpath crossing would also benefit from a route behind the barrier.

2.5.2 Broomfield Problem 002

Location: Pesthouse Lane.

Summary: Risk of pedestrian collisions with large vehicles.

The diversion route guides pedestrians to cross Pesthouse Lane which provides access to a quarry and therefore carries a high proportion of large vehicles. The high kerbs present a trip hazard to pedestrians and although not normally considered an issue for footpath routes, the high proportion of large vehicles increases the risk of serious or fatal injuries should a pedestrian trip and fall in front of a large vehicle.

Figure 2.4: Pesthouse Lane at footpath interface.



Source: Mott MacDonald

Recommendation

It is recommended that a dropped kerb crossing point is provided to reduce the risk of pedestrians tripping.

2.6 S08 – Stacpool

The Audit Team did not identify any road safety related issues associated with the scheme.

2.7 S23 – Higham

The Audit Team did not identify any road safety related issues associated with the scheme.

2.8 S24 – Higham Ground Frame

2.8.1 Higham Ground Frame Problem 001

Location: Coalpit Lane j/w A14 Eastbound Entry.

Summary: Risk of pedestrian trip type accidents.

The diversion route guides pedestrians to cross the A14 Eastbound 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.

Figure 2.5: A14 Eastbound entry slip road.



Source: Mott MacDonald

Recommendation

It is recommended that a dropped kerb crossing point is provided to reduce the risk of pedestrians tripping. This can be positioned at the safest location to guide pedestrians to the safest crossing location.

2.8.2 Higham Ground Frame Problem 002

Location: Coalpit Lane j/w A14 Westbound Exit.

Summary: Risk of pedestrian trip type accidents.

The diversion route guides pedestrians to cross the A14 Westbound exit slip road. Vehicles were observed to be travelling fast when approaching the give way line and turning out of the slip road which may lead to pedestrians rushing to cross. Pedestrians crossing the slip road with haste 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 and an informal footpath provided to guide pedestrians to the crossing point, which can be positioned at the safest crossing location.

2.8.3 Higham Ground Frame Problem 003

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.

Figure 2.6: Coalpit Lane south of the A14.



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway or footpath is provided to enable pedestrians to continue without walking within the carriageway.

2.9 S27 – Barrels

The Audit Team did not identify any road safety related issues associated with the scheme.

2.10 S28 – Grove Farm

The Audit Team did not identify any road safety related issues associated with the scheme.

2.11 S31 – Mutton Hall

The Audit Team did not identify any road safety related issues associated with the scheme.

2.12 S32 – Haughley Green

The Audit Team did not identify any road safety related issues associated with the scheme.

2.13 S36 – Stennetts 2

The Audit Team did not identify any road safety related issues associated with the scheme.

2.14 S38 – Lox Farm Fps

The Audit Team did not identify any road safety related issues associated with the scheme.

2.15 S44 – Orchard

The Audit Team did not identify any road safety related issues associated with the scheme.

2.16 S45 – Wickham Market

The Audit Team did not identify any road safety related issues associated with the scheme.

2.17 S46 – Blaxhall

The Audit Team did not identify any road safety related issues associated with the scheme.

2.18 S48 – Saxmundham

The Audit Team did not identify any road safety related issues associated with the scheme.

2.19 S51 – Fordly Hall

The Audit Team did not identify any road safety related issues associated with the scheme.

2.20 S53 – Mells

2.20.1 Mells Problem 001

Location: A144 Bramfield Road.

Summary: Risk of vehicle collisions with pedestrians.

The A144 Bramfield Road is a busy road which links Halesworth to Bramfield and the A12 further south. The diversion route guides pedestrians along Bramfield Road which has no grass verge suitable for pedestrians who will be forced to walk within the carriageway. The section of Bramfield Road used for the diversion route 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.

Figure 2.7: Bramfield Road looking south.



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway or footpath is provided to enable pedestrians to continue without walking within the carriageway. If this is not feasible, an alternative route should be identified.

2.21 S62 – Shepherd & Dog

The Audit Team did not identify any road safety related issues associated with the scheme.

2.22 S64 – Thorpe Grove

The Audit Team did not identify any road safety related issues associated with the scheme.

3 Audit Team Statement

I certify that this audit has been carried out in accordance with the Highways England Departmental Standard HD 19/15.

Audit Team Leader

A J Coleman BA (Hons), MCIHT, MSoRSA

Signed:



Date: 17th November 2015

Road Safety Engineer
Mott MacDonald
35 Newhall Street
Birmingham
B3 3PU

Audit Team Member

T J Blaney BSc (Hons), CMILT, MCIHT, MSoRSA

Signed:



Date: 17th December 2015

Principal Road Safety Engineer
Mott MacDonald
35 Newhall Street
Birmingham
B3 3PU

Appendices

Appendix A. List of Submitted Documents	13
Appendix B. Key Plans	14

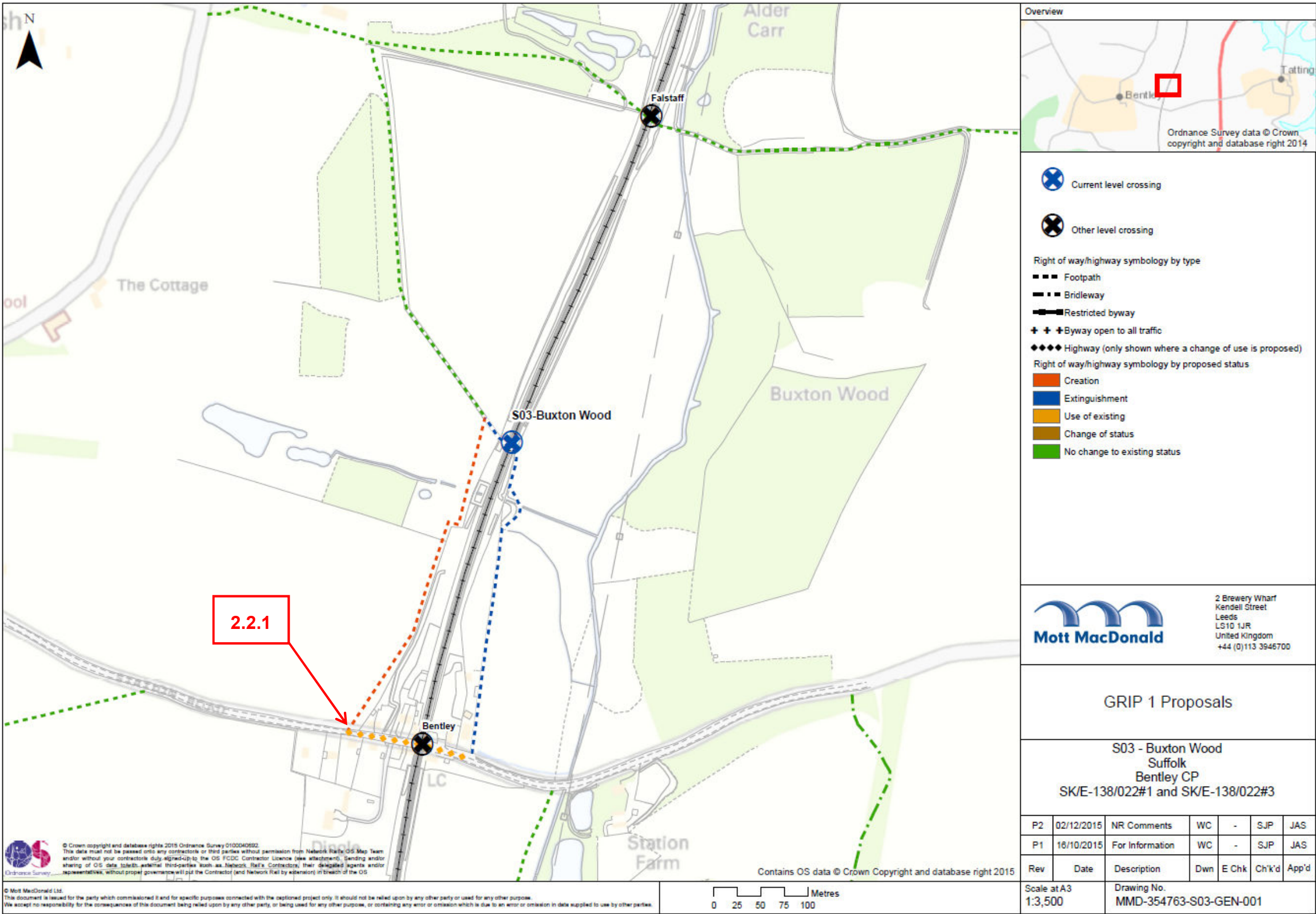
Appendix A. List of Submitted Documents

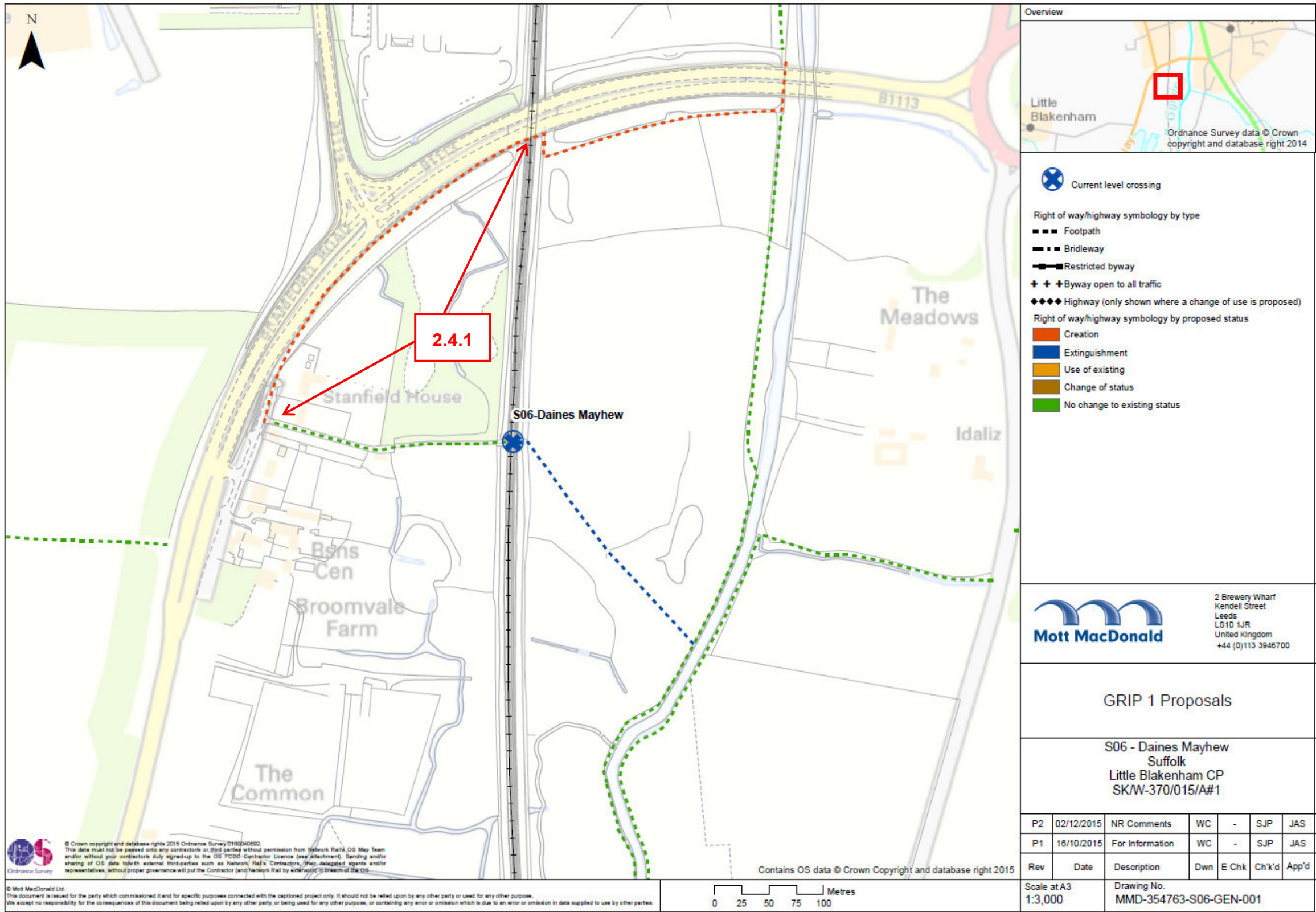
Table A.1: Drawings

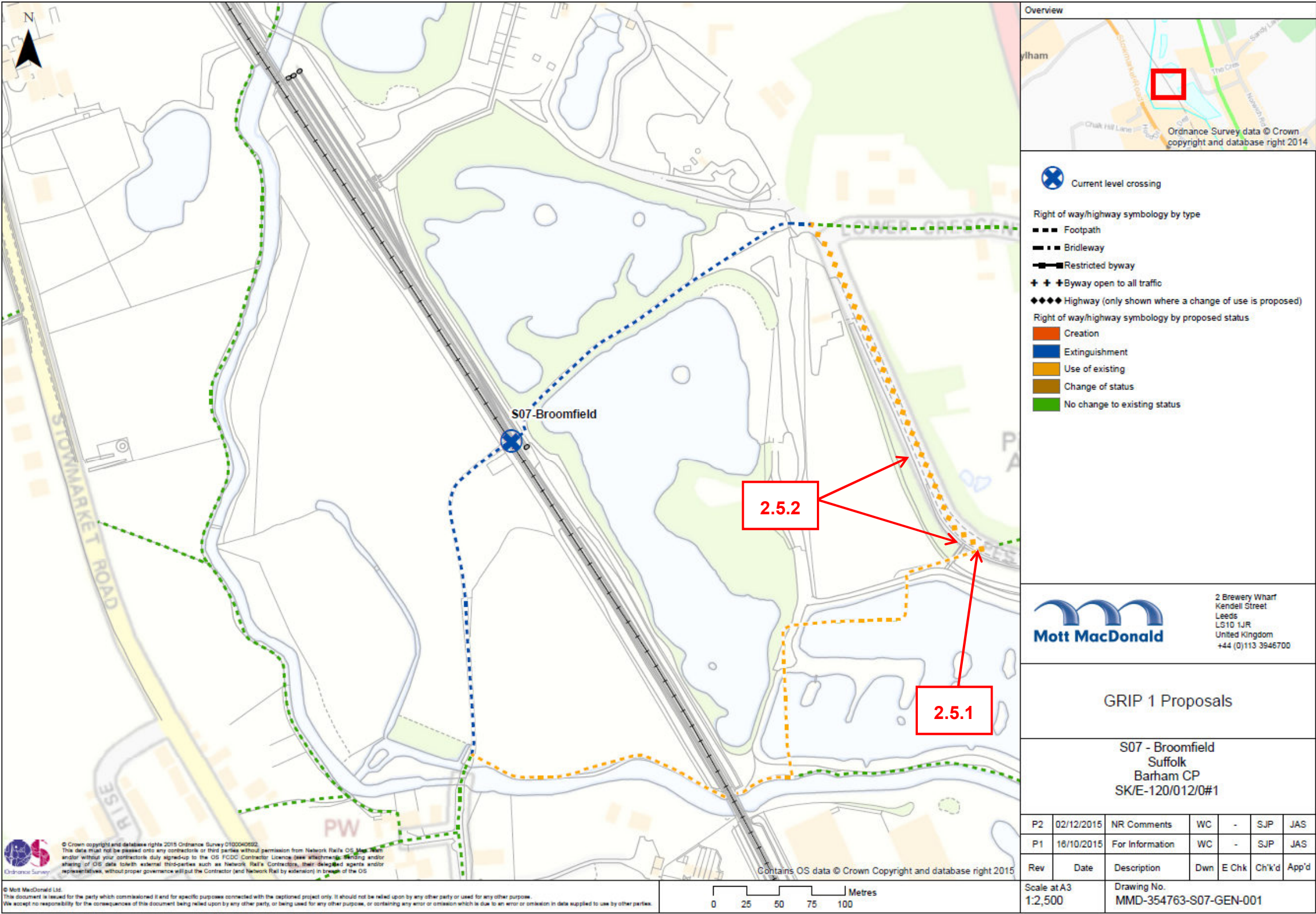
Drawing	Rev	Title
MMD-354763-S02-GEN-001	P2	Brantham High Bridge
MMD-354763-S03-GEN-001	P2	Buxton Wood
MMD-354763-S04-GEN-001	P2	Island
MMD-354763-S06-GEN-001	P2	Daines Mayhew
MMD-354763-S07-GEN-001	P2	Broomfield
MMD-354763-S08-GEN-001	P2	Stacpool
MMD-354763-S23-GEN-001	P2	Higham
MMD-354763-S24-GEN-001	P2	Higham Ground Frame
MMD-354763-S27-GEN-001	P2	Barrels
MMD-354763-S28-GEN-001	P2	Grove Farm
MMD-354763-S31-GEN-001	P2	Mutton Hall
MMD-354763-S32-GEN-001	P2	Haughley Green
MMD-354763-S36-GEN-001	P2	Stennetts 2
MMD-354763-S38-GEN-001	P2	Lox Farm Fps
MMD-354763-S44-GEN-001	P2	Orchard
MMD-354763-S45-GEN-001	P2	Wickham Market
MMD-354763-S46-GEN-001	P2	Blaxhall
MMD-354763-S48-GEN-001	P2	Saxmundham
MMD-354763-S51-GEN-001	P2	Fordly Hall
MMD-354763-S53-GEN-001	P2	Mells
MMD-354763-S62-GEN-001	P2	Shepherd & Dog
MMD-354763-S64-GEN-001	P2	Thorpe Grove

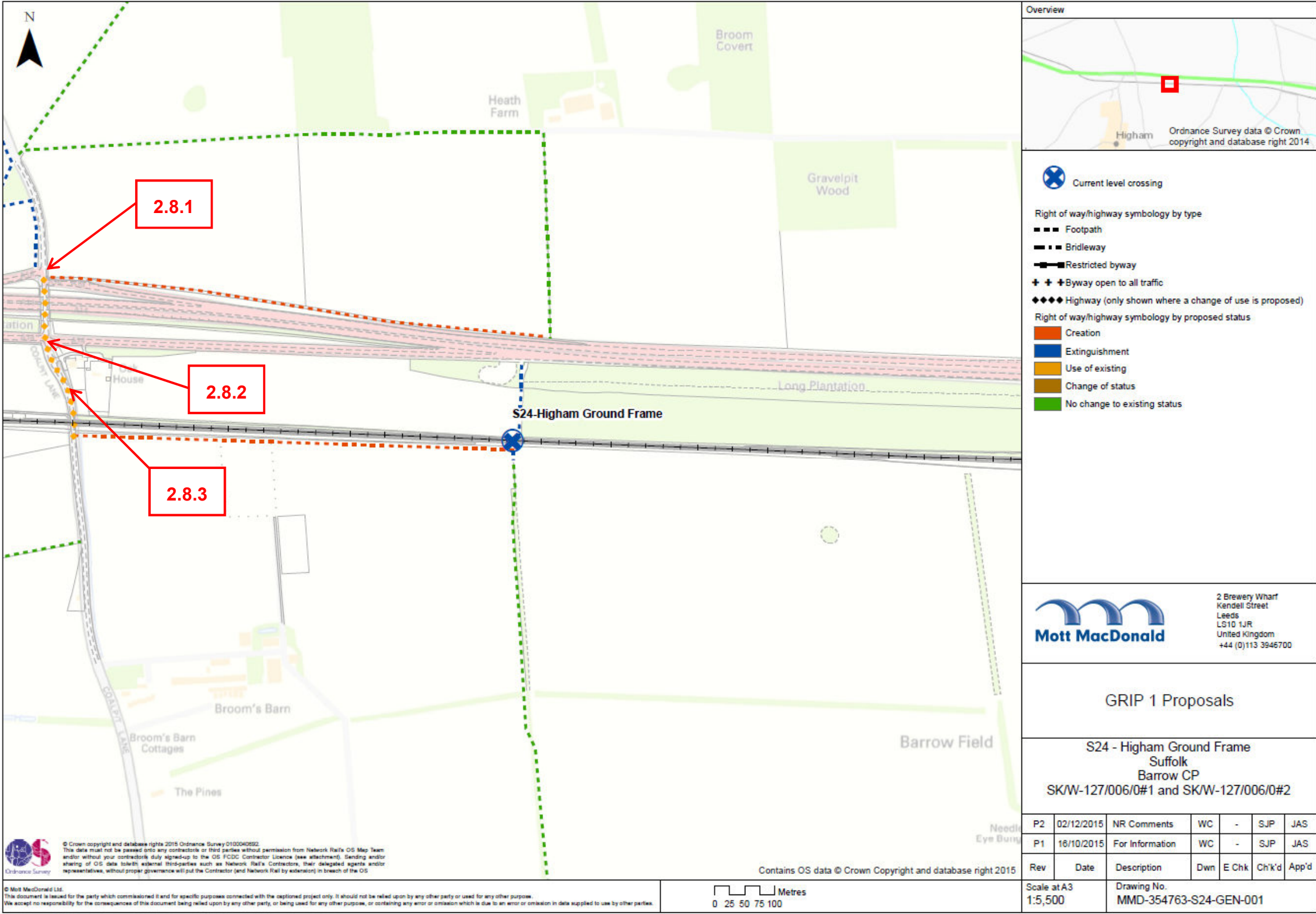
Source: Mott MacDonald, Sheffield

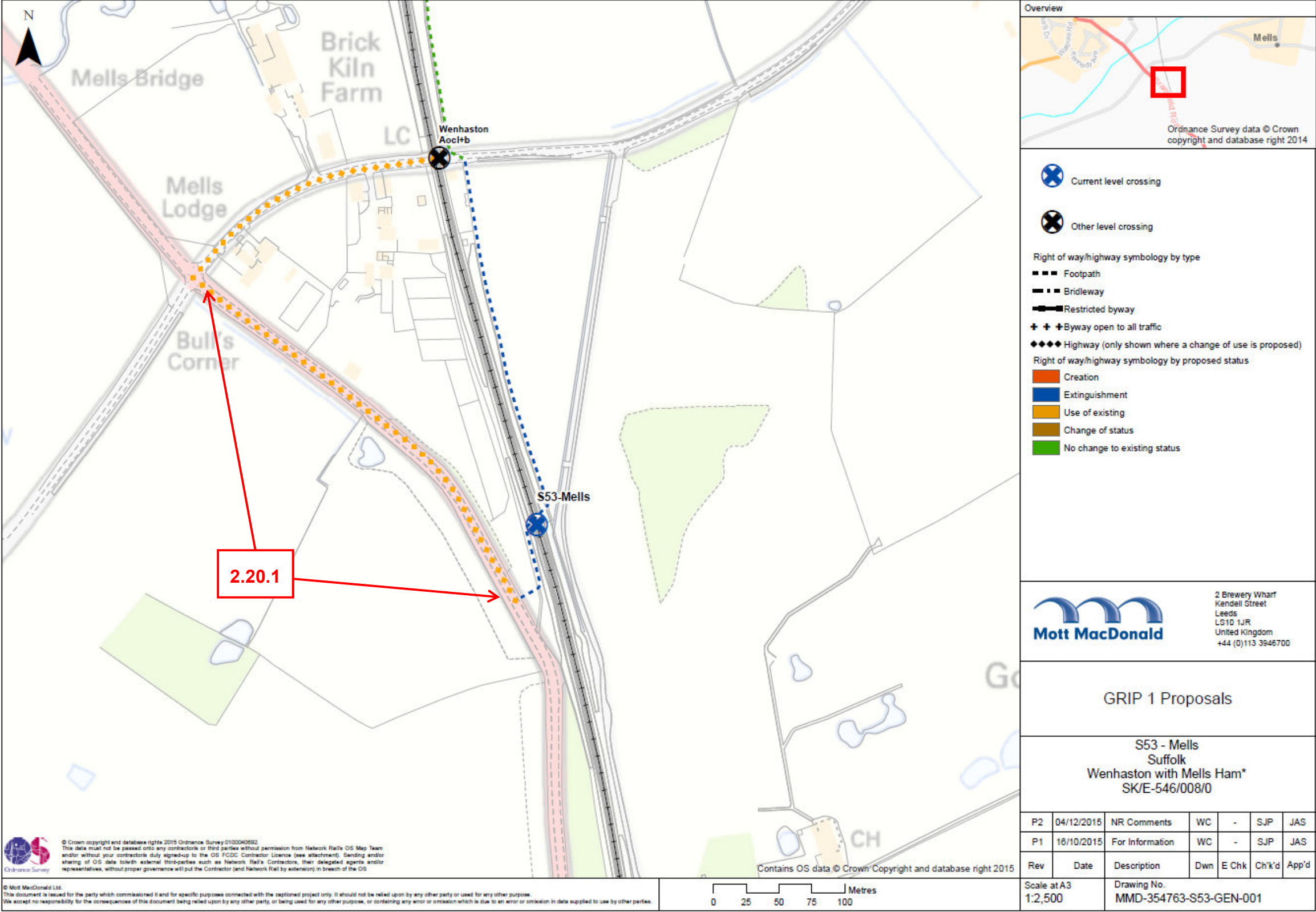
Appendix B. Key Plans











Stage 1 Road Safety Audit Brief

Anglia Level Crossing Reduction Strategy – Phase 1 & 2

July 2016

Prepared by: Daniel Weir

Mott MacDonald

On behalf of: Nicholas Eddy

Network Rail

AUTHORISATION SHEET

Project: Anglia Level Crossing Reduction Strategy

Report Title: Stage 1 Road Safety Audit Brief

PREPARED BY:

Name: Dan Weir

Signed:



Organisation: Mott MacDonald

Date: 19/07/16

APPROVED ON BEHALF OF THE OVERSEEING ORGANISATION BY:

Name: Nicholas Eddy

Signed:

Organisation: Network Rail

Date: 19/07/16

Road Safety Audit Brief

1. General details							
1.1 Highway improvement scheme name and road number				Anglia Level Crossing Reduction Strategy Multiple Roads (specified in description below)			
1.2 Type of scheme (e.g. new road scheme, junction improvement, traffic signs and road markings improvement, traffic calming scheme, etc.) The Anglia Level Crossing Reduction Strategy intends to reduce the risk that level crossings pose and have developed proposals to manage the possible closure or change of use of around 130 level crossings in Anglia across Cambridgeshire, Essex and Suffolk. The study intends to close level crossings by the means diverting people to nearby alternatives or creating new public rights of way to nearby infrastructure.							
1.1RSA stage (tick as appropriate)	1 ✓	2	1&2	3	Interim	4 (12 months)	4 (36 months)
1.2 Overseeing organisation project sponsor details Contact: Nicholas Eddy Commercial Scheme Sponsor Route Enhancements Network Rail Nicholas.Eddy@networkrail.co.uk				1.3 Design organisation details Contact: Jason Smith Mott MacDonald 2 Brewery Wharf, Kendell Street, Leeds LS10 1JR United Kingdom jason.smith@mottmac.com			
1.4 Police contact details (required for Stage 3 Road Safety Audits only) Not required at this Stage 1 Road Safety Audit.				1.5 Maintaining agent contact details Suffolk County Council			
1.6 Road Safety Audit team membership The RSA team will be made up of a Team Leader and one other member of staff selected according to availability. Tim Blaney (Audit Team Leader) Road Safety Auditor, Member of the Society of Road Safety Auditors Certificate of Competence in Accordance with IAN 152/11. Mott MacDonald, 35 Newhall Street, Birmingham, B3 3PU, United Kingdom Andy Coleman Road Safety Auditor, Member of the Society of Road Safety Auditors Certificate of Competence in Accordance with IAN 152/11. Mott MacDonald, 35 Newhall Street, Birmingham, B3 3PU, United Kingdom Rachael Collins BA (Hons), MSc Mott MacDonald, 111 Piccadilly, Manchester, M1 2HY							
1.7 Terms of reference This Stage 1 Road Safety Audit (RSA) is to be undertaken in accordance with the DMRB Standard HD 19/15, and the contents of this Road Safety Audit Brief.							

1. Scheme description / objective (provide a brief description of the scheme and its objectives)
<p>1.1 General (including scheme purpose and start date for construction)</p> <p>We have been working to reduce the risk that level crossings pose and have developed proposals to manage the possible closure or change of use of around 130 level crossings in Anglia across Cambridgeshire, Essex and Suffolk.</p> <p>We believe it's possible to close level crossings:</p> <ul style="list-style-type: none"> • with private rights only • by diverting people on existing public routes to a nearby alternative crossing of the railway exists • by providing a new public route to a nearby alternative crossing of the railway <p>We will also look to downgrade road level crossings to allow non-motorised users only. None of the crossings in this proposal involve closing public A or B roads.</p> <p>We recognise the importance of public rights of way and where possible we will maintain access to the countryside.</p> <p>Closing or modifying level crossings is likely to provide the following long term benefits:</p> <ul style="list-style-type: none"> • Improve the safety of level crossing users • Deliver a more efficient and reliable railway, which is vital in supporting the regional and UK economy • Reduce the ongoing operating and maintenance cost of the railway • Reduce delays to trains, pedestrians and other highway users • Improve journey time reliability for all railway, highway and other rights of way users <p>The study involves two rounds of public consultation that will then potentially feed into a public enquiry. Construction start date is set for works to commence 2019.</p>
<p>1.2 Design standards applied to the scheme design</p> <p>Anglia Level Crossing Reduction Strategy has been designed and under the process of the Transport and Works Act Order and current industry standards at the time of design.</p>
<p>1.3 Design speed</p> <p>It is not proposed create or amend any speeds limits on the roads that from part of the proposals.</p>
<p>1.4 Speed limits</p> <p>The speed limits at the level crossing closure proposals are as follows:-</p> <ul style="list-style-type: none"> • S01 – Factory Lane 30mph; • S02 – A137 National Speed Limit/30mph; • S04 – Church Road National Speed Limit; • S05 – The Street National Speed Limit; • S14 – Station Road 30mph; • S19 – Earlsford Road 30mph, Mellis Road National Speed Limit/30mph; • S20 – Earlsford Road 30mph, Mellis Road National Speed Limit/30mph; • S21 – Earlsford Road 30mph, Mellis Road National Speed Limit/30mph; • S24 – New Road National Speed Limit, Higham Road National Speed Limit; • S27 –Barrells Road National Speed Limit, Birds Road National Speed Limit; • S28 – Barrells Road National Speed Limit;

<ul style="list-style-type: none"> • S69 – Birch Avenue 30mph, Pound Hill 30mph, and B1113 Broad Road 40mph/30mph;
<p>1.5 Existing traffic flows / queues</p> <p>No traffic data is available at the moment, however traffic surveys and level crossing census surveys are being commissioned as part of the project and the data will be available at Stage 2.</p>
<p>1.6 Forecast traffic flows</p> <p>It is not anticipated that these proposals would generate or transfer significant volumes of traffic.</p>
<p>1.7 Non-motorised users (NMU) desire lines</p> <p>All existing Public Rights of Way (PROW), i.e. footpaths, cycle-ways and bridleways, in the vicinity of the level crossing closure proposals are shown on the attached plans.</p> <p>The proposal drawings indicate the existing user route and the proposed diversion routes.</p>
<p>1.8 Environmental constraints</p> <p>The proposals may involve small scale works either at the level crossing or along proposed or existing diversion routes. The assessments of the environmental impacts of these proposals are available separately if required.</p>
<p>2. Description of locality</p>
<p>2.1 General description</p> <p>Anglia Level Crossing Reduction Strategy project has 30 level crossings within the county of Suffolk. Of these 30 level crossing proposals, a prioritised list of 22 proposals was subject to a Stage 1 Road Safety Audit in November 2015 (note that one scheme subject to Nov 2015 audit has been subsequently withdrawn). Since then a further 12 audits have been identified because either new alternative solutions have been identified or the previous option has been amended since the previous audit.</p> <p>The purpose of this Stage 1 Road Safety Audit is to review the proposals at 12 level crossings which divert users along the public highway including any associated highway works within the county of Suffolk. At this stage, the scheme proposals consist of indicative (high level) diversion routes as the result of closures and no formal highway works have been designed. Therefore this road safety audit is to consider potential road safety problems as a result of the proposed routes and their interaction with the highway.</p> <p>The level crossing closure proposals are summarised below:-</p> <ul style="list-style-type: none"> • S01 – 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. • S02 – 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 existing verge, footway, road and existing road bridge on the A137 to cross the railway. • S04 – Users would be diverted on new footpaths either side of the railway which provide a link to Church Road to the north and footpaths to the south. The diversion also uses the existing road and a bridge over the railway on Church Road. • S05 – Users would be diverted north on a new footpath in farm fields alongside The Street. The diversion also uses the existing road and a bridge over the railway on The Street. • S14 – Users would follow the existing right of way north to the existing byway bridge over the railway that provides a link to Station Road and use the road/road verges to continue onwards. • S19 – Vehicle drivers would need to use the Mellis road level crossing to the north and farm traffic would be diverted along Rectory Road and Mellis Road. Pedestrian users can continue

<p>to use the level crossing.</p> <ul style="list-style-type: none"> • S20 – The proposal is to make a new farm track from Rectory Road for access to the property on the east side. This would be in private farm land and farm traffic would be diverted along Rectory Road and Mellis Road. • S21 – Users would need to cross the railway by using the Mellis road level crossing to the north. This diversion uses the footway on Mellis Road as well as rural roads without footways and existing footpaths • S24 – 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 • S27 – 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 (Barrells Road) • S28 – Barrells 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 Barrells Road (east) • 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.
<p>2.2 Relevant factors which may affect road safety</p> <p>The following factors have been identified that may affect road safety:</p> <ul style="list-style-type: none"> • Non-motorised users are being diverted to alternative level crossings or grade separated crossings where they may be exposed to live traffic by:- <ul style="list-style-type: none"> ○ walking along existing footways; ○ walking in existing grassed verges; or ○ walking in the carriageway on rural roads. • The interface of NMU's and agricultural vehicles on the PROWs; and • The access points off the public highway for occasional use by large agricultural vehicles.
<p>3. Personal injury collision analysis (provide personal injury collision data covering both the extent of the scheme and the adjoining sections of highway)</p>
<p>3.1 Summary of personal injury collision data (a minimum of the most recent 36 months available)</p> <p>No personal injury collision data is available at the moment, however the information will be available at Stage 2.</p>
<p>3.2 Personal injury collision details</p> <p>See above</p>
<p>4. Departures and relaxations from standards (including details of their status – approved or pending) plus any Design Strategy Records produced for improvements to existing motorways and trunk roads.</p>
<p>4.1 General</p> <p>No departures from standards.</p>

5. Previous Road Safety Audit Reports, Road Safety Audit Response Reports, and Exception Reports			
5.1 Stage 1 Stage 1 Road Safety were undertaken in November.			
5.2 Exception Reports Not applicable – no exception reports were prepared following the Stage 1 Audits.			
6. Strategic decisions – items outside the scope of this RSA			
6.1 General N/A			
7. List of included documents and drawings			
7.1 Documents GRIP 1 Feasibility reports available on request.			
7.2 Drawings The following figures, plans, information and drawings are provided: <ul style="list-style-type: none"> 12 Scheme Proposal Plans 			
8. Checklist (tick all that are included and provide reasons for those that are not included)			
8.1 Road Safety Audit Brief including description of scheme objectives	✓ (Section 1.1)	8.2 Site location plan	✓
8.3 Scale layout plans	✓	8.4 Construction / typical details	✗ The scheme is not that developed
8.5 Previous Road Safety Audit Reports	✓	8.6 Previous Road Safety Audit Response Reports	✗ None prepared
8.7 Road Safety Audit Exception Reports	✗ Not applicable	8.8 Departures and relaxation from standards	✗ None (section 4)
8.9 Traffic signal staging	✗ Not applicable	8.10 Personal injury collision data	✗ Not available at the moment
8.11 Personal injury collision plot	✗ Not available at the moment	8.12 Traffic counts	✗ Not available at the moment
8.13 Speed surveys	✗ Not available at the moment	8.14 NMU desire lines and volumes	✓
8.15 NMU Context and Audit Report	✗ None prepared	8.16 Items outside the scope of the RSA/ strategic decisions	✓ (Section 6)

8.17 Other factors that may impact on road safety	✓ (Section 2.2)	8.18 Design speeds/ speed limits	✗ Design Speeds not applicable ✓ Speed limits (Section 1.4)
8.19 Design standards used	✓ (Section 1.2)	8.20 Adjacent land uses	✗ Multiple sites with various land uses including agricultural

Road Safety Audit Brief approved by:
(The Project Sponsor)

Nicholas Eddy
Commercial Scheme Sponsor
Route Enhancements
Network Rail

Nicholas.Eddy@networkrail.co.uk

Summary CV

Tim Blaney

Profile

A Road Safety Engineer with a background in development control and road safety engineering work.

Has eleven years' experience in all aspects of road safety engineering and has worked in the UK and internationally. Undertaken 87 audits in the last 12 months as either an Audit Team Leader or Member and approximately 670 in total on a variety of schemes, including junction improvements, major maintenance, airport forecourts and safety improvements.

Experience and skills

Mott MacDonald, Principal Road Safety Engineer – Integrated Transport Division (2004 – present)

Currently team leader of the Road Safety Teams in the Manchester and Birmingham offices.

HD19/15 and SQA-0170 qualified Road Safety Audit Team Leader.

Selected projects

Nottingham Express Transit Phase Two

Responsible for overseeing the completion of Stage 2 and Stage 3 Road Safety Audits for the Beeston and Clifton extensions to the Nottingham tram system.

A63 Castle Street, Hull

Team Leader for a Stage 1 Safety Audit on a scheme to introduce a grade separated junction on a section of the A63 as it passes through Hull.

OVT Oost Safety Analysis, Utrecht, Netherlands

As part of a multi-national team of experts, provided road safety input into a safety assessment of proposals for a new bus / tram interchange.

Crossrail, Old Oak Common

Completed a Stage 1 Road Safety Audit on new access arrangements for Old Oak Common maintenance depot as part of the Crossrail scheme.

Midland Metro Tram, City Centre, Centenary Square and Eastside Extensions

RSA Team Leader responsible for the organisation and completion of Stage 1

and Stage 2 Road Safety Audits for various extensions to the Midland Metro.

Victoria Station Upgrade

Responsible for the completion of Road Safety Reviews and Audits on traffic management arrangements in the vicinity of London Victoria Station during the completion of construction work.

NMU Related Road Safety Audits

Have experience of completing Non-Motorised User audits as well as road safety audits on a variety of NMU related schemes including:

- Sovereign Harbour Cycle Routes
- Bedlinog Square Shared Space
- East London Line Cycleway
- Bryn Glas Escape Routes
- Hunts Grove NMU Audit
- ECML Level Crossing Closures

ECML and East Anglia Level Crossings

Undertaken numerous safety audits and NMU audits for the closure of level crossings on a number of railway lines in East Anglia and on the East Coast.

Tottenham Hale Bus Station

RSA Team Leader for changes to the road layout to Tottenham Hale Gyratory and the provision of a new bus interchange.

Medway Dynamic Bus Station, Chatham

Responsible for providing road safety advice on the design of a new dynamic bus station in Chatham.

Bath and North East Somerset Road Safety Audits

Undertaken numerous safety audits of varying stages for the local authority. These have ranged from junction improvement schemes to traffic calming. A number of these have been associated with bus route improvement including bus gates and park and ride schemes.

Great Western Electrification

Responsible for undertaking road safety audits for numerous road bridges along the Great Western Main Line that require modification for the electrification of the route.



Position

Principal Road Safety Engineer

Year of birth

1983

Nationality

British

Language

English – mother tongue

Qualifications

BSc (Hons) Human and Physical Geography

Road Safety Engineering Course (CRASH@Aston)

Highways Agency Road Safety Audit Certificate of Competence

Profession membership

Chartered Member of the Institute of Logistics and Transport

Member of the Chartered Institution of Highways and Transportation

Member of the Society of Road Safety Auditors

CSCS Card holder – Yellow (Site visitor - Registration No. 04989485)

Highways Agency Motorway Pass (N3Q7GP4TIY7CZ, Epiry 10-Apr-19)

Key skills

HD 19/15 and SQA-0170 qualified Road Safety Audit Team Leader.

Proficient in the completion of Accident Investigation Studies and safety reviews.



Supplementary Information for HD19

The following details provide evidence that the above Road Safety Audit Team member meets the minimum recommended requirements HD19/15 for the purposes of undertaking the Road Safety Audits upon the Highways England Motorway and Trunk Road network in the UK.

1. Training - Recognised Structured training in Road Safety Engineering or Collision Investigation

Profile	Duration (Days)	Date (Days)	Organiser (Days)
CRASH@Aston	10	Jun-2006	Aston University
Non-motorised User Audit	2	Dec-2008	Aston University
Certificate of Competency in Road Safety Audit (Highways Agency approved)	2	May-2011	TMS Consultancy
Total 14 Days			

Note: Formal Training does not include seminars, conferences, exhibitions and the like.

2. Experience - Example of Five Road Safety Audits undertaken in the last 24 months as either Team Leader, Team Member or Observer.

Scheme Name Client	Date	Audit Team Role	Audit Stage
Capacity improvements at signallised junction Windle Island, St Helens - St Helens MBC	Nov-2014	Leader	1/2
A590 Quebec Street Signalisation – Highways England	Nov-2015	Leader	2
Dalton Gate Junction Signalisation – Cumbria County Council	Jan-2016	Member	2
Motorway to Motorway Ramp Metering M6 to M62 – Highways England	Jan-2016	Leader	Interim 2
Garrison Roundabout, hamburger roundabout upgrade – Highways England	Mar-2016	Member	Stage 2

Undertaken 182 RSAs in past 24 months (87 in past 12 months)

Note: 'Full Road Safety Audit Record' of all audits undertaken available upon request.

3. Continued Professional Development (CPD) record for last 12 months, in the field of Road safety Engineering, Collision Investigation or Safety Audit.

Profile	Duration (Days)	Date	Organiser
PTRC Evening Lectures - Road Safety Audits	1	09/12/2015	PTRC
Safe Way to Work	0.25	02/06/2016	Mott MacDonald
Personal Reading - SoRSA Conference 2016 Presentations	0.25	22/06/2016	CIHT
Safety Wheel Training	0.5	27/06/2016	Mott MacDonald
Total 2.0			

Andrew J Coleman

Profile

Has 10 years' experience in Road Safety Engineering and 9 years' experience in the field of Collision Investigation.

A qualified HD19/15 Road Safety Audit Team Leader with a background in road safety engineering work. Have completed over 50 audits in the last 12 months as either an Audit Team Leader or Member and approximately 1500 in total on a variety of schemes in the UK, Europe and the Middle East. A Member of the Society of Road Safety Auditors and possesses the Highways England approved Certificate of Competency for Road Safety Auditors.

Has experience in carrying out road safety audits, cycle audits, NMU audits, Mobility audits, road safety assessments, site safety assessments, junction assessments and report writing. Also have experience in the use of various software packages including KeyACCIDENT, ARCADY, PICADY, LINSIG and Microsoft Office.

Experience and skills

Mott MacDonald (2014 – present)
Integrated Transport Division

TMS Consultancy (2006 – 2014)
Integrated Transport Division

Selected projects

Road Safety Audits

Undertaking Road Safety Audits as Audit Team Leader or Member on a variety of schemes in the UK, Europe and the Middle East, including motorway schemes, motorway service areas, dual carriageways, single carriageway bypasses, road realignment, major signal and roundabout junctions, new development access roads, safer routes to school schemes and cycle, mobility and NMU audits.

Local Network Management Schemes, Area 10

Undertook an analysis of accidents for selected schemes and reported recommendations for engineering measures to address and improve accident performance. A full financial assessment measuring the potential improvements with BCR analysis was also carried out for each scheme.

Route Safety Reports, Area 10

Review of the road safety situation on numerous routes in Lancashire comparing the latest accident data with historical accident data to determine the route's performance. A detailed analysis of road safety issues identified from the last 5 years data was completed with a summary of potential schemes and areas for further investigation. The effectiveness of previously completed works/ initiatives along the route was also monitored.

M40 Accident Investigation

Accident investigation of the M40 between junctions 5 and 7 in Buckinghamshire, based on accident data highlighted by the annual road safety monitoring report. Provided recommendations for safety improvements.

A21 Tonbridge to Pembury, NMU Audit

Team Leader for the detailed design stage NMU Audit of the A21 dualling scheme between Tonbridge and Pembury in Kent. The 3.5km parallel NMU route is predominantly off line and features grade separated crossings and a crossing of an at-grade roundabout junction.

West Midlands Authorities SLS Traffic Accidents

Responsible for producing the Annual Accident Data Report to the West Midlands Authorities making comparisons to national data and presenting areas for improvements.

Tram Scheme Road Safety Audits

Road Safety Auditor of several tram major schemes including Midland Metro, Nottingham Express Transit and Dublin Luas.

Contra Flow Cycle Facilities, Camden, London

Road Safety Assessor of proposals to permit cycle use of a contra flow cycle lane along the A40 High Holborn in the London Borough of Camden. Concern was raised regarding high volumes of illegal cycle use within a very busy and narrow contra flow bus lane with recommendations to improve safety presented.



Position

Road Safety Engineer

Year of birth

1983

Nationality

British

Language

English – mother tongue

Dutch - moderate

Qualifications

BA (hons) 2005

RoSPA AIP Certificate 2007

Certificate of Competency in Road Safety Audit (Compliant to EU Directive 2008/96/EC, HE approved)

CSCS Card holder – Yellow (Site visitor - Registration No. 03141299)

Highways England Motorway Pass (Q86DEIRNPBFM2, Epiry 24-Apr-19)

Profession membership

Member of Chartered Institution of Highways and Transportation (MCIHT)

Member of Society of Road Safety Auditors (MSoRSA)

Key skills

Collision Investigation

Road Safety Audit

Road Safety Scheme Design

Supplementary Information for HD19

The following details provide evidence that the above Road Safety Audit Team member meets the minimum recommended requirements of HD19/15 for the purposes of undertaking the Road Safety Audits upon the Highways England Motorway and Trunk Road network in the UK.

1. Training - Recognised Structured training in Road Safety Engineering or Collision Investigation

Profile	Duration (Days)	Date (Days)	Organiser (Days)
RoSPA Accident Investigation & Prevention Certificate	10	Aug-2007	RoSPA (TMS Consultancy)
Introduction to Road Safety Audit	3	Dec-2007	TMS Consultancy
TD 19/06 Road Restraint Systems	2	Oct-2008	Aston University
Advanced Road Safety Audit	2	Feb -2011	TMS Consultancy
Non-motorised User Audit	2	Apr-2012	TMS Consultancy
Certificate of Competency in Road Safety Audit (Highways England approved)	2	Oct-2012	TMS Consultancy
Total 21 Days			

Note: Formal Training does not include seminars, conferences, exhibitions and the like.

2. Experience - Sample of Road Safety Audits undertaken in the last 24 months as either Team Leader or Team Member .

Scheme Name Client	Date	Audit Team Role	Audit Stage
Modified priority cross road junction A64 Barton Hill, Yorkshire – Highways England	September 2015	Leader	2
Proposed link road to motorway junction M58 Pemberton Link Road, Wigan – Wigan Council	October 2015	Leader	3
Motorway to motorway metering M6 to M62 – Highways England	January 2016	Member	3
New dual carriageway signalised junctions Aberdeen Exhibition & Conference Centre - Henry Boot Developments	May 2016	Leader	2
Redesign of signal junctions with cycle lanes & pedestrian crossings Tameside Interchange – Ashton MBC	May 2016	Member	2

Note: Please request separate 'Full Road Safety Audit Record' for details of all audits undertaken in last 12 months.

3. Continued Professional Development (CPD) record for last 12 months, in the field of Road safety Engineering, Collision Investigation or Safety Audit.

Profile	Duration (Days)	Date (Days)	Organiser (Days)
SoRSA Conference, Birmingham	2	20-June-2016	CIHT
Total 2 Days			

Road Safety Audit CV



Name	Rachael Collins
Audit Team Position	Team Member
Contact Email address	rachael.collins@mottmac.com

Continued Professional Development Record		
CPD / Training Title (<i>last 12 months</i>)	Date	Duration
Introduction to Road Safety and Road Safety Auditing – Course tutor assisting with the provision of a 1 day introduction to road safety engineering.	May-15	1 Day
SoRSA Conference – variety of presentations relating to road safety engineering and auditing.	Jun-15	1 Day
Road Safety Audit – Highways England Approved CoC	Apr-16	2 Day

Qualifications		
Qualification Name & Awarding Body	Post Nominal	Date
Highways Agency Motorway Pass (X9SNZN7TEUQBY, Expiry 17-Dec-19)		2014
Construction Skills Certification Scheme (CSCS): Yellow (Site visitor - Registration No. 05180437)		2014
MSc European Traffic & Transportation, The Nottingham Trent University	MSc	2002
RoSPA AIP (Accident Investigation & Prevention)		1999
BSc Hons Geography, University of Staffordshire	BSc (Hons)	1998

Record of Recent Safety Audits (<i>some examples from the last 12 months</i>)		
Scheme / Details	Date	Role
A49, Ludlow, David Tucker Associates	June 2015	Member
<i>Stage 1 Safety Audit on a scheme to introduce a site access off the A49 in Ludlow.</i>		
Colwyn Bay Promenade Phase 2 – Conwy County Borough	June 2015/Oct 2015	Member
<i>Stage 1 & Stage 2 Road Safety Audits of the proposed improvements to the promenade in Colwyn Bay. This is an extension of improvements already made to a section of the promenade that have been previously completed and audited. The scheme includes highway realignment, the provision of improved parking, pedestrian crossing facilities and a shared-space promenade for cyclists and pedestrians.</i>		
Chandag Road, Bath – Bath and North East Somerset	August 2015	Member
<i>A Stage 2 Road Safety of road safety improvements including the provision of a Zebra crossing outside Wellsway School, the installation and upgrade of uncontrolled crossings and the provision of In/OUT signing at Chandag Road Shops.</i>		
Daltongate, Ulverston – Cumbria County Council	Sept 2015	Member
<i>A series of Stage 1 Road Safety Audit on proposed junction modification works. The scheme involves the addition of a new arm to an existing junction and its signalisation to include pedestrian crossing facilities. The scheme also includes localised road widening and kerb re-alignments.</i>		
Mill Street, Llangollen	November 2015	Member
<i>A Stage 3 Road Safety Audit for a new medical centre accessed off Mill Street. The scheme includes a new access, PUFFIN crossing and footway improvements, minor highway works and relocation of 30mph. A Stage 1/2 was previously completed in December 2014.</i>		

Career Summary (including experience and key dates)

Rachael is Senior Road Safety Engineer based within Mott MacDonalds Northern road safety team. She is a Road Safety Auditor with over 10 years experience in road safety engineering and in the field of collision investigation, having completed over 350 Road Safety audits over her career. Rachael is a qualified HD 19/15 Road Safety Audit Team Member.

Rachael has a vast range of experience in transport engineering and planning but specialises in accident investigation & prevention (AIP) and undertaking of road safety audits.

Rachael began her career at TMS Consultancy in 1998 where she gained a wide experience in areas including Junction and Transport Assessments, Safer Routes to Schools, site surveys, parking assessments, Local Safety schemes, Accident Investigation and undertook over 300 Road Safety Audits at various stages and of various scheme sizes. During her time at TMS Rachael attended the RoPSA 10 AIP Course.

In 2003 Rachael joined Mott MacDonalds Transport Planning Team carrying out a combination of road safety engineering and AIP work and Junction and Transport Assessments. During this time Rachael was responsible for the Altrincham Road Safety Team and continued to undertake Road Safety Audits as Team Leader. During this time she also undertook a secondment to Stockport Council working on numerous Local Safety Schemes.

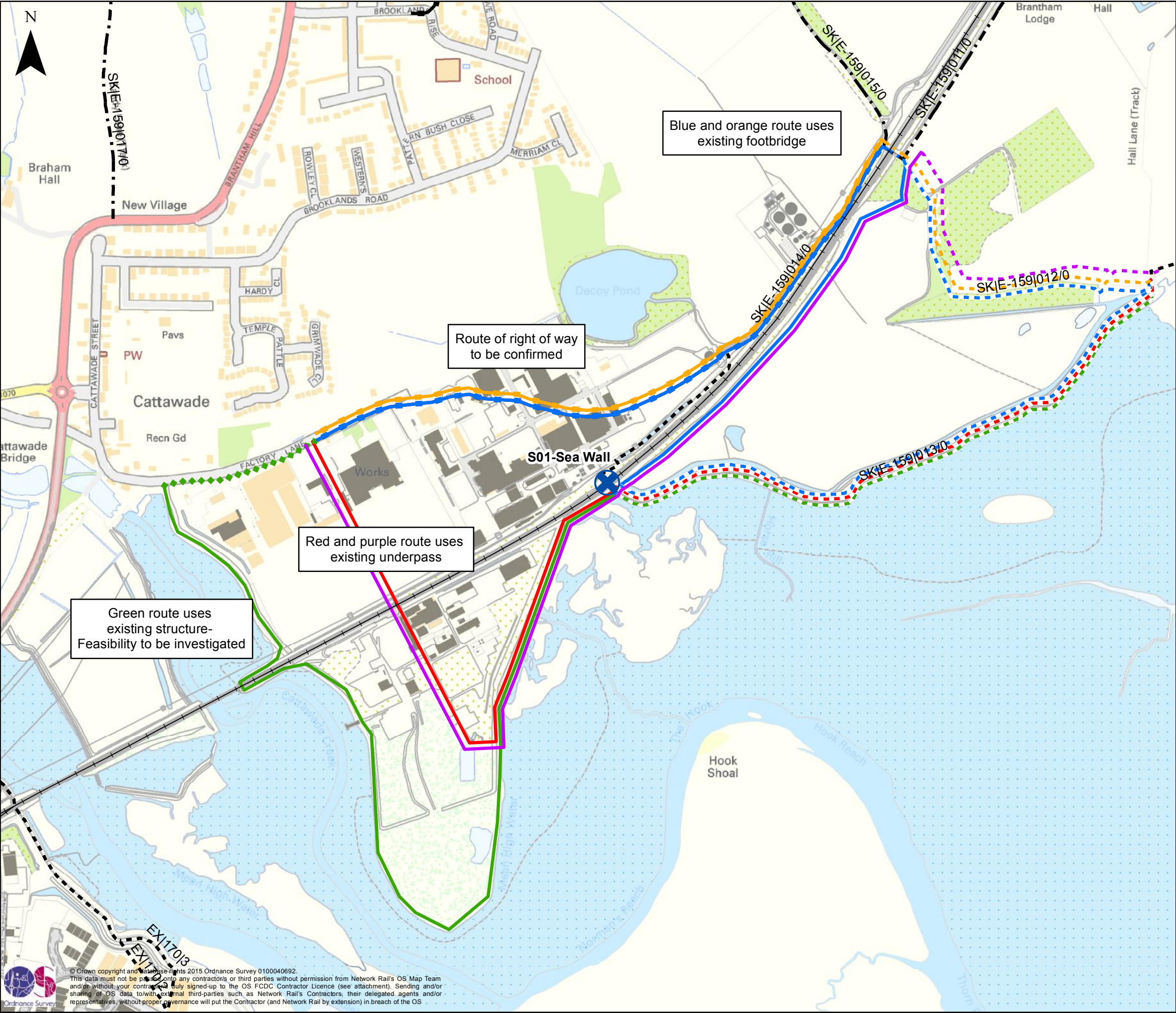
In 2009 Rachael took a career break but re-joined Mott MacDonald in 2014 and is currently a Senior Road Safety Engineer within the Northern Road Safety Team. She is a qualified Team Member having completed 30 audits in the last 12 months at stages 1 to 4 on varying size schemes throughout the UK, many of which include non-motorised user (NMU) elements. Experience also includes the undertaking of NMU audits. Since returning to Mott MacDonald she has worked on numerous Area 10 Projects including the completion of Route Safety Reports and the feasibility of cycling schemes. Rachael continues to build upon her AIP experience to identify road safety issues and subsequently the generation of mitigation measures. She is proficient in the use of KeyACCIDENT.


Statement of Fact: *I confirm that the information given above is a true and accurate reflection of my experience and training and that I meet the requirements as defined in HD 19/15.*

Name:

Rachael Collins

Signature:



 Level crossing being discussed

Alternative Options

- Red Route
- Blue Route
- Green Route
- Orange Route
- Purple Route

A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
 - Bridleway
 - Restricted byway
 - Byway open to all traffic
 - Highway (where used)
- If this line is in a colour, this denotes use by a route option (see above).



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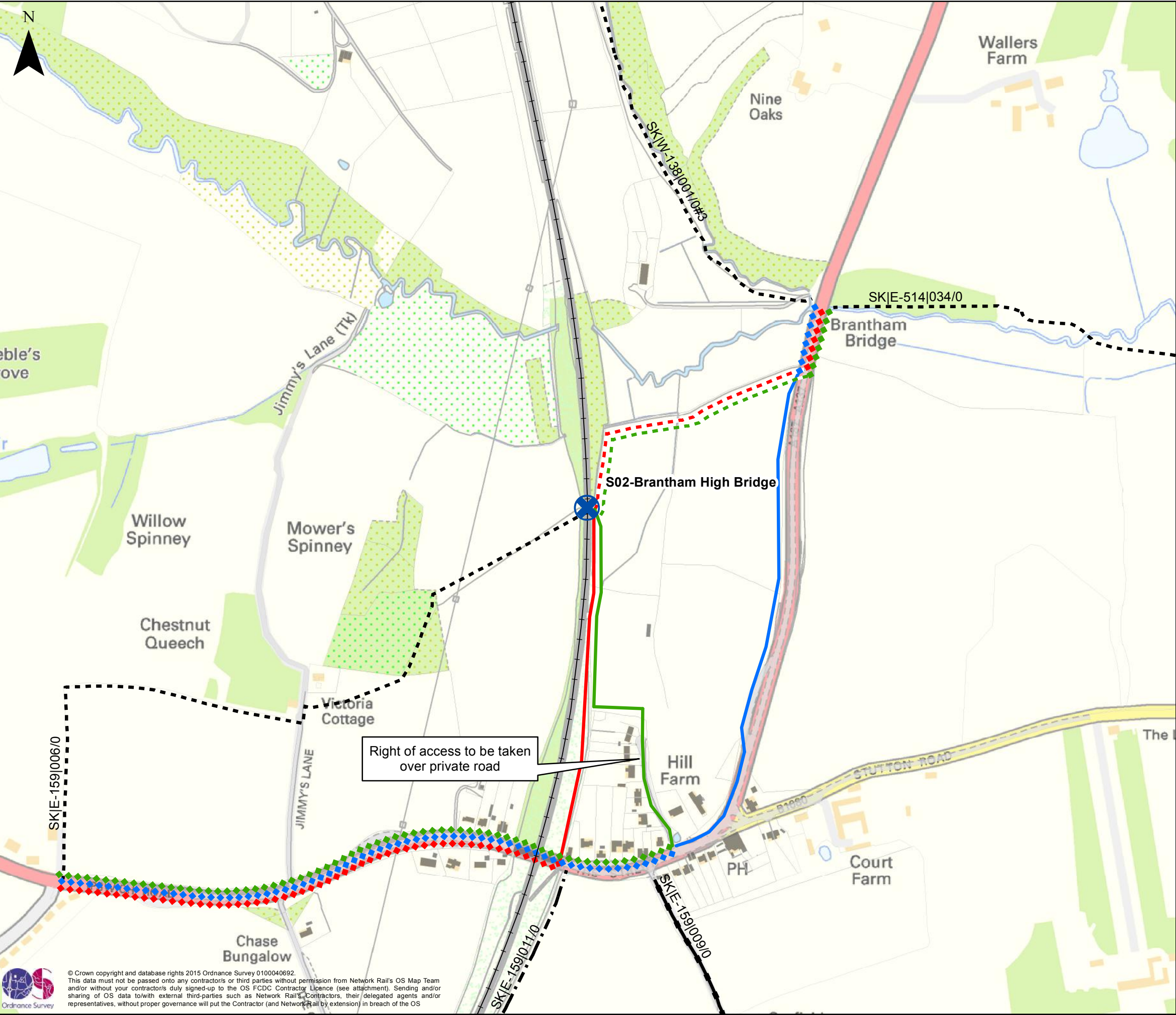
Anglia LX Consultation Stage 1

S01 - Sea Wall
Suffolk
Brantham CP

P3	08/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:6,500

Drawing No.
MMD-367516-S01-GEN-002



 Level crossing being discussed

Alternative Options

 Red Route

 Blue Route

 Green Route

A solid line indicates a proposed new Public Right of Way (type to be determined).

Other line types using the above route option colours indicate use of existing Public Rights of Way.


Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

 Footpath

 Bridleway

 Restricted byway

 Byway open to all traffic

 Highway (where used)

If this line is in a colour, this denotes use by a route option (see above).



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Anglia LX Consultation Stage 1

**S02 - Brantham High Bridge
Suffolk
Brantham CP**

P3	08/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

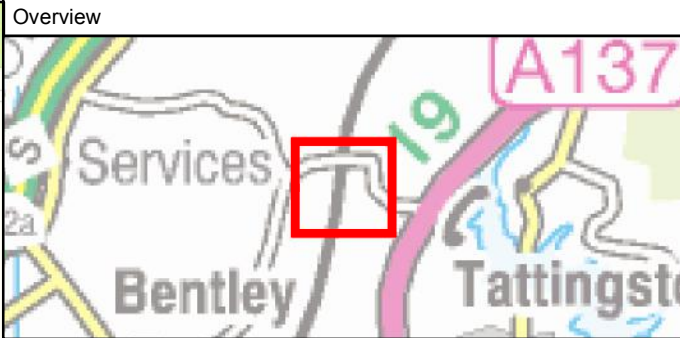
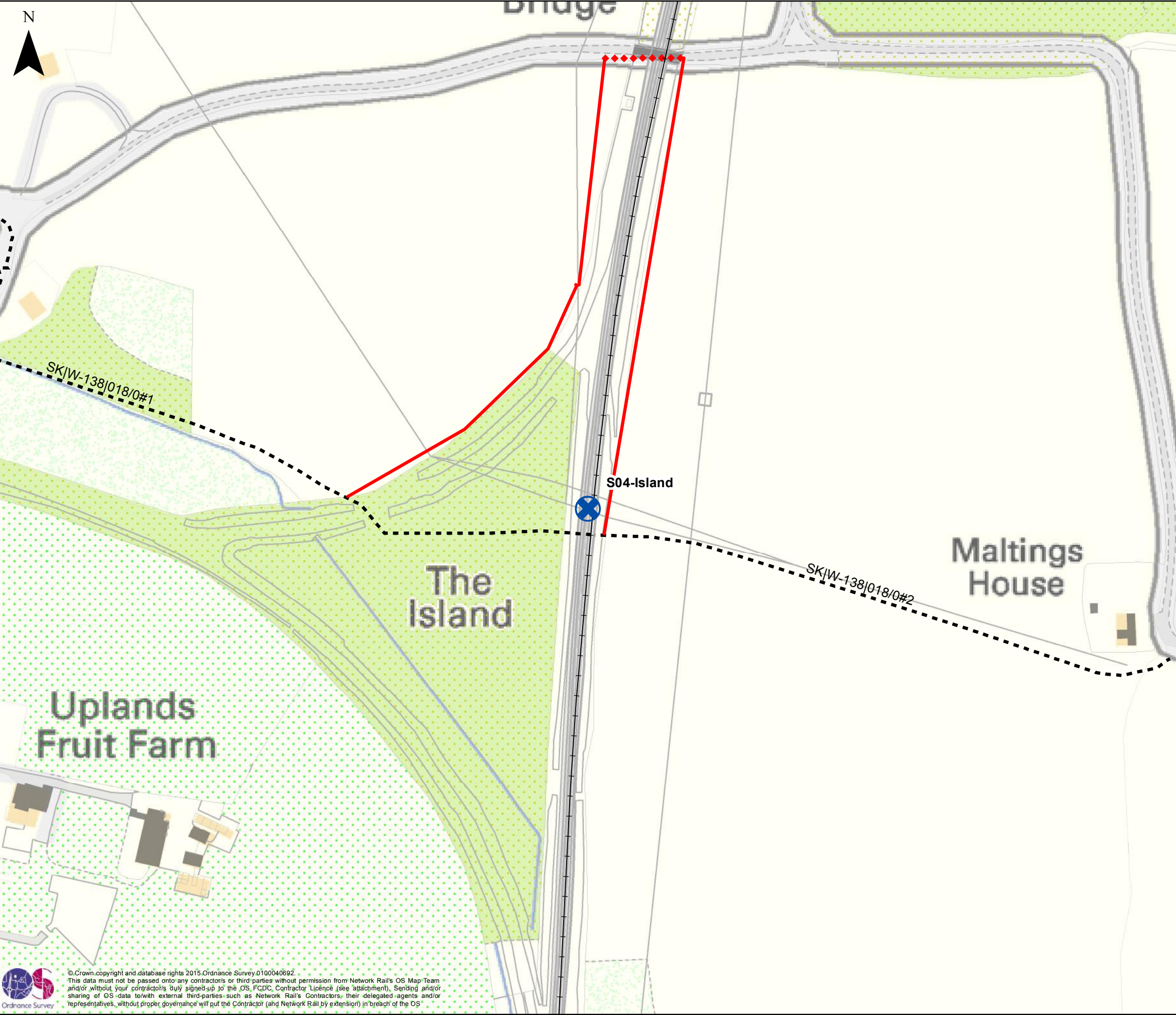
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MMD-367516-S02-GEN-002

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0 25 50 75 100 Metres



Level crossing being discussed

Alternative Options

Red Route

A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
 - Bridleway
 - Restricted byway
 - Byway open to all traffic
 - Highway (where used)
- If this line is in a colour, this denotes use by a route option (see above).



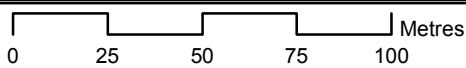
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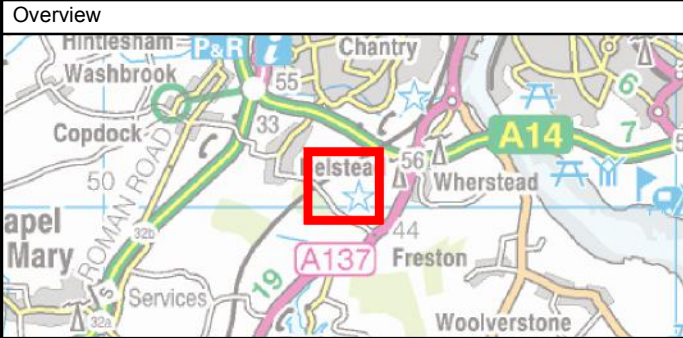
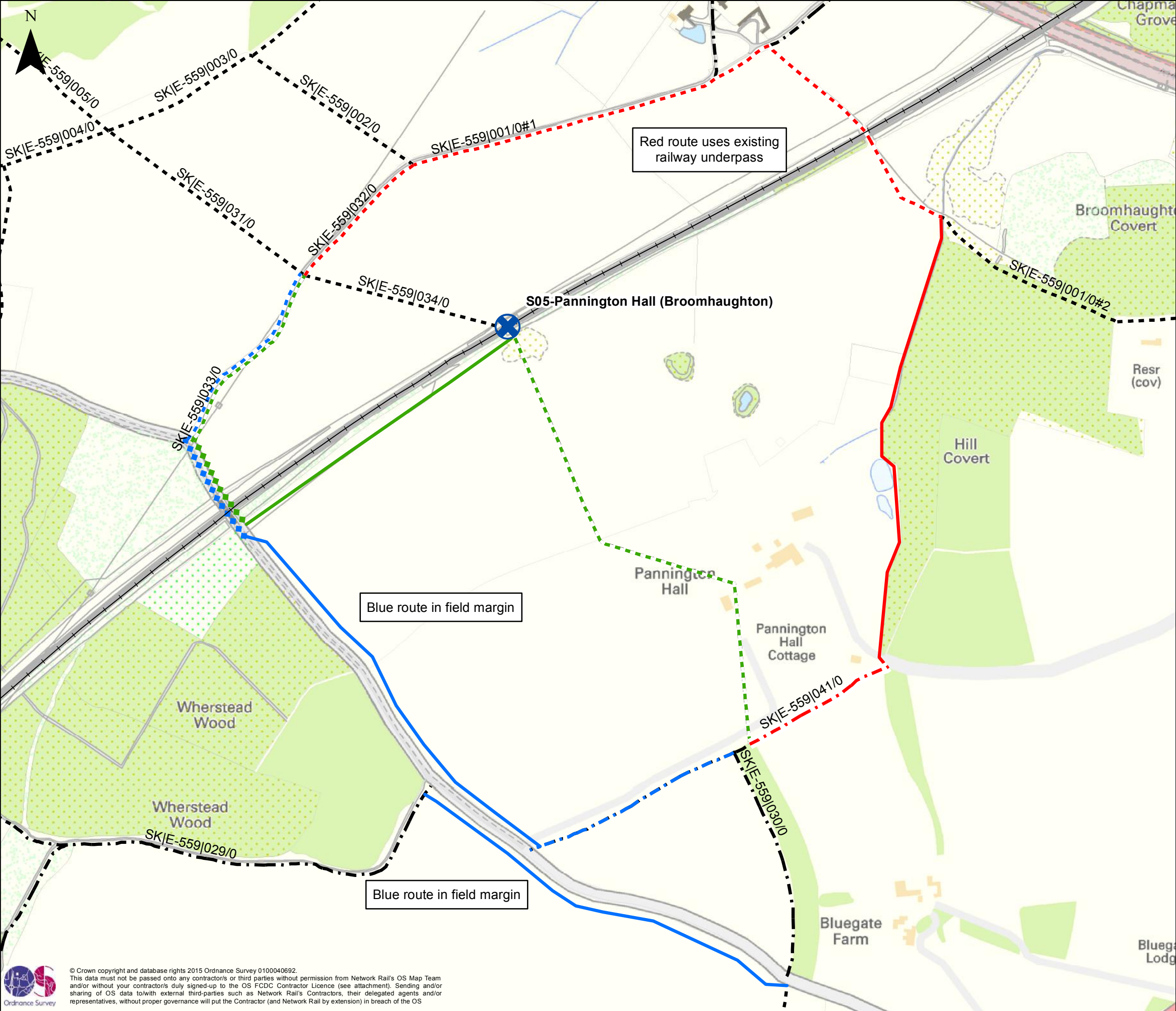
Anglia LX Consultation Stage 1


S04 - Island Suffolk Bentley CP						
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P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:2,000

Drawing No.
MMD-367516-S04-GEN-002





 Level crossing being discussed

Alternative Options

 Red Route

 Blue Route

 Green Route

A solid line indicates a proposed new Public Right of Way (type to be determined).

Other line types using the above route option colours indicate use of existing Public Rights of Way.

Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

 Footpath

 Bridleway

 Restricted byway

 Byway open to all traffic

 Highway (where used)

If this line is in a colour, this denotes use by a route option (see above).



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Anglia LX Consultation Stage 1

S05 - Pannington Hall (Broomhaughton) Suffolk Wherstead CP


P3	08/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

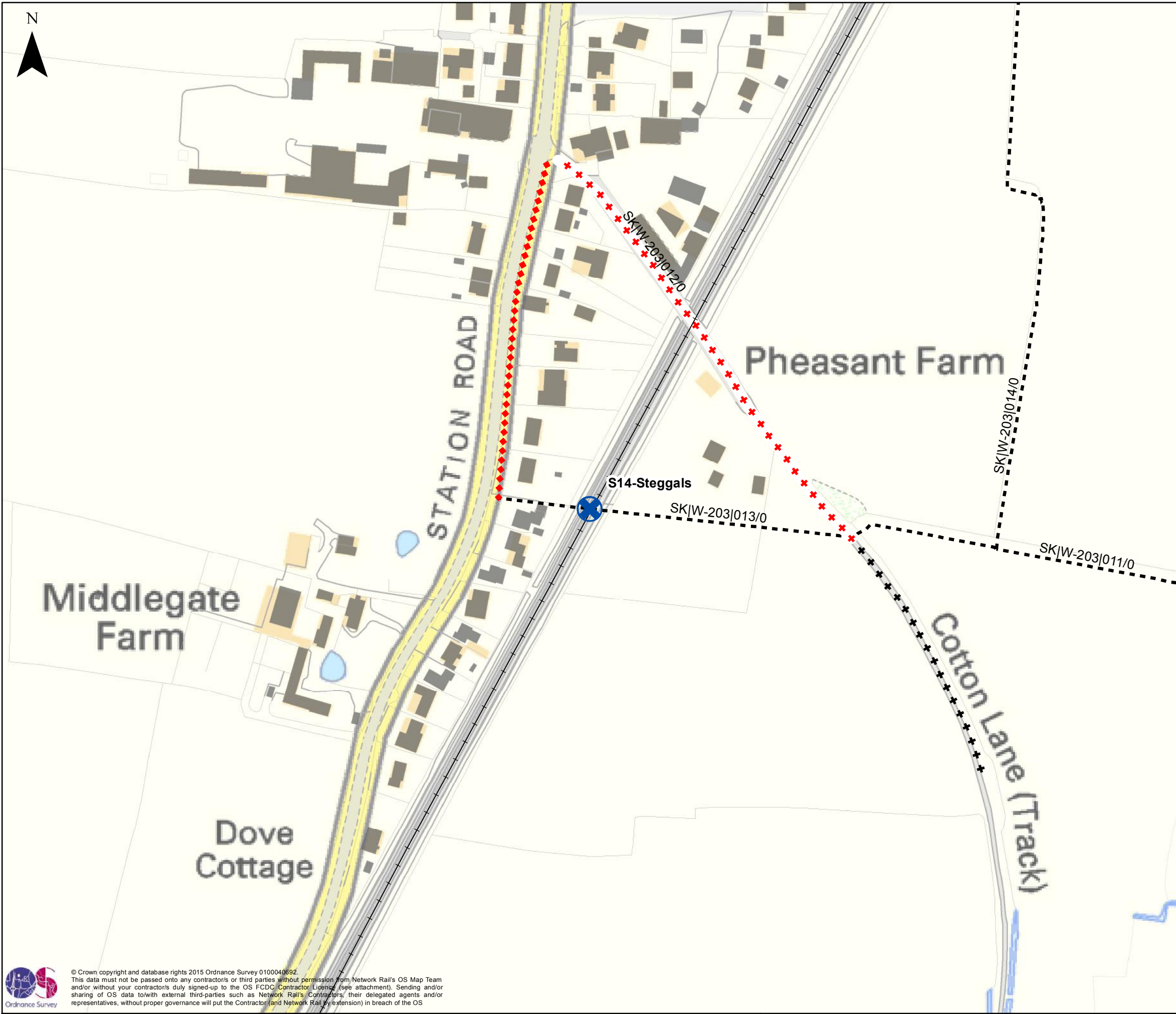
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 Metres
0 25 50 75 100



Level crossing being discussed

Alternative Options

Red Route

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Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
 - Bridleway
 - Restricted byway
 - Byway open to all traffic
 - Highway (where used)
- If this line is in a colour, this denotes use by a route option (see above).



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S14 - Steggals
Suffolk

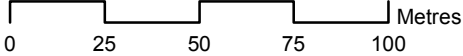
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Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

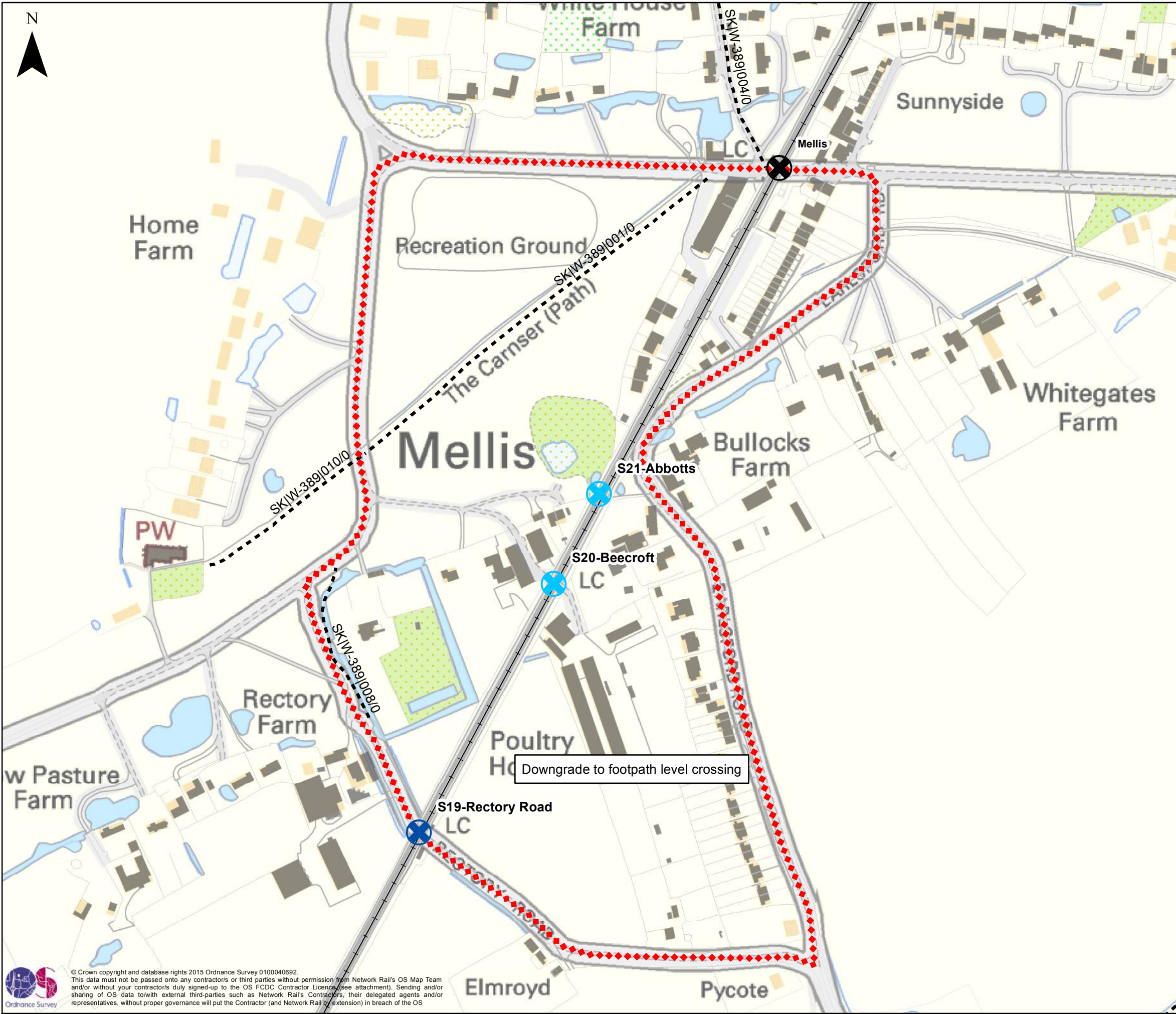
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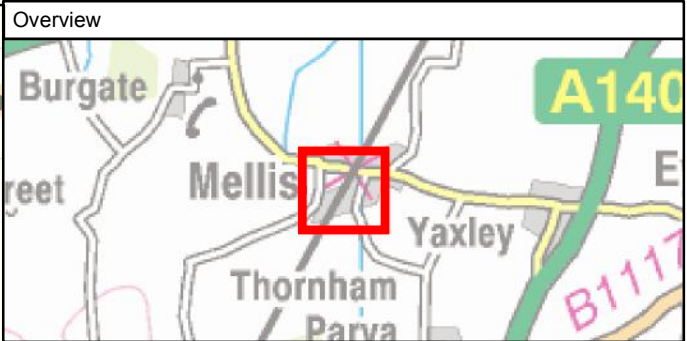
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- Level crossing being discussed
- Other level crossing in the project
- Other level crossings

Alternative Options

Red Route

Blue Route

A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (where used)
If this line is in a colour, this denotes use by a route option (see above).



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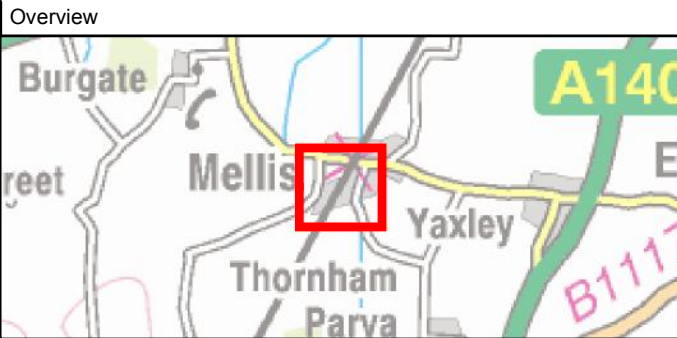
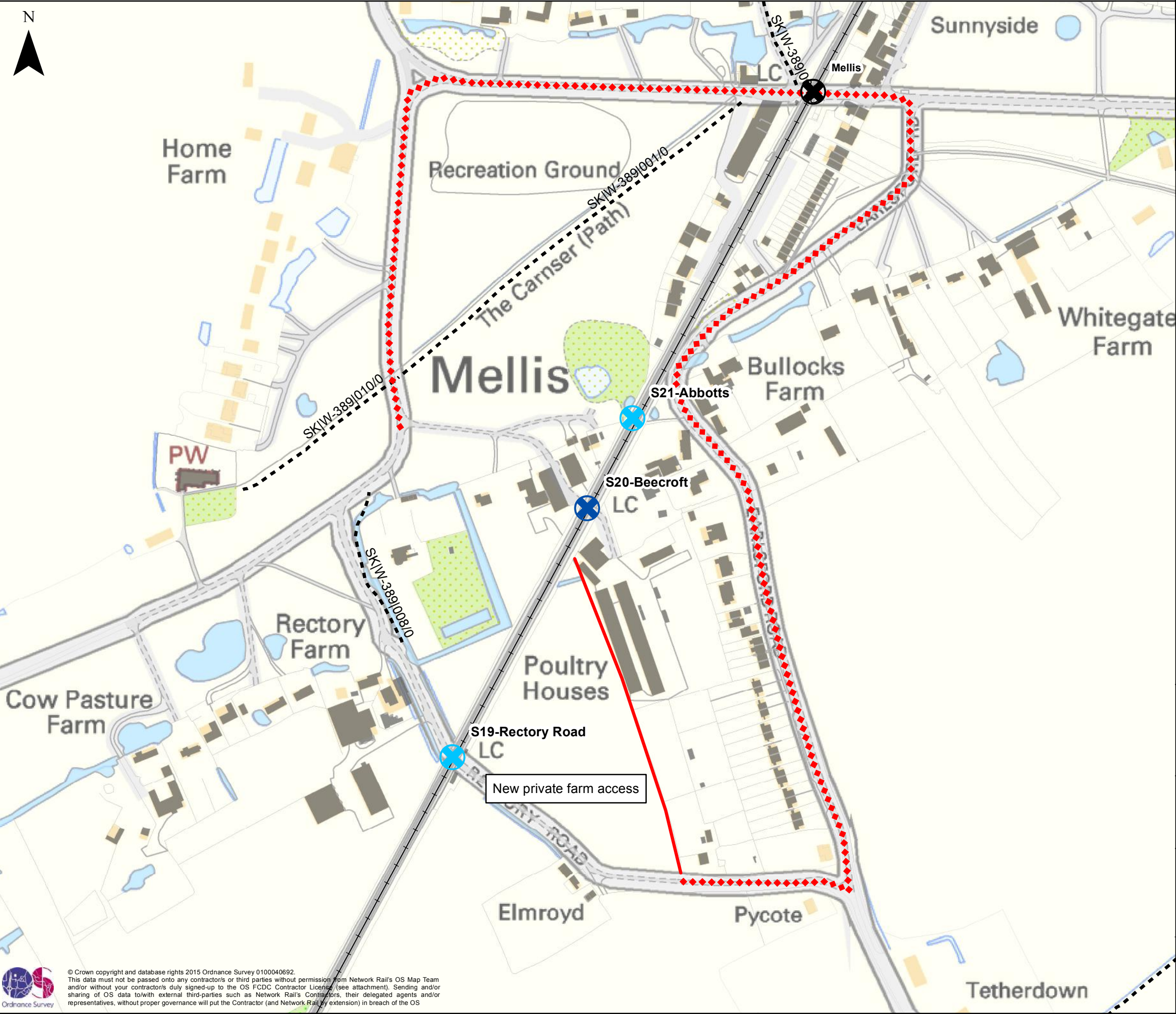
Anglia LX Consultation Stage 1

S19 - Rectory Road
Suffolk
Mellis CP

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P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:3,000

Drawing No.
MMD-367516-S19-GEN-002



- Level crossing being discussed
- Other level crossing in the project
- Other level crossings

Alternative Options

Red Route

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Existing Public Rights of Way

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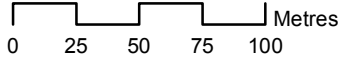
Anglia LX Consultation Stage 1

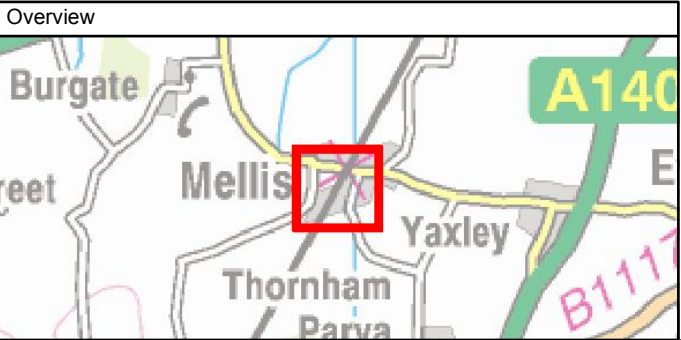
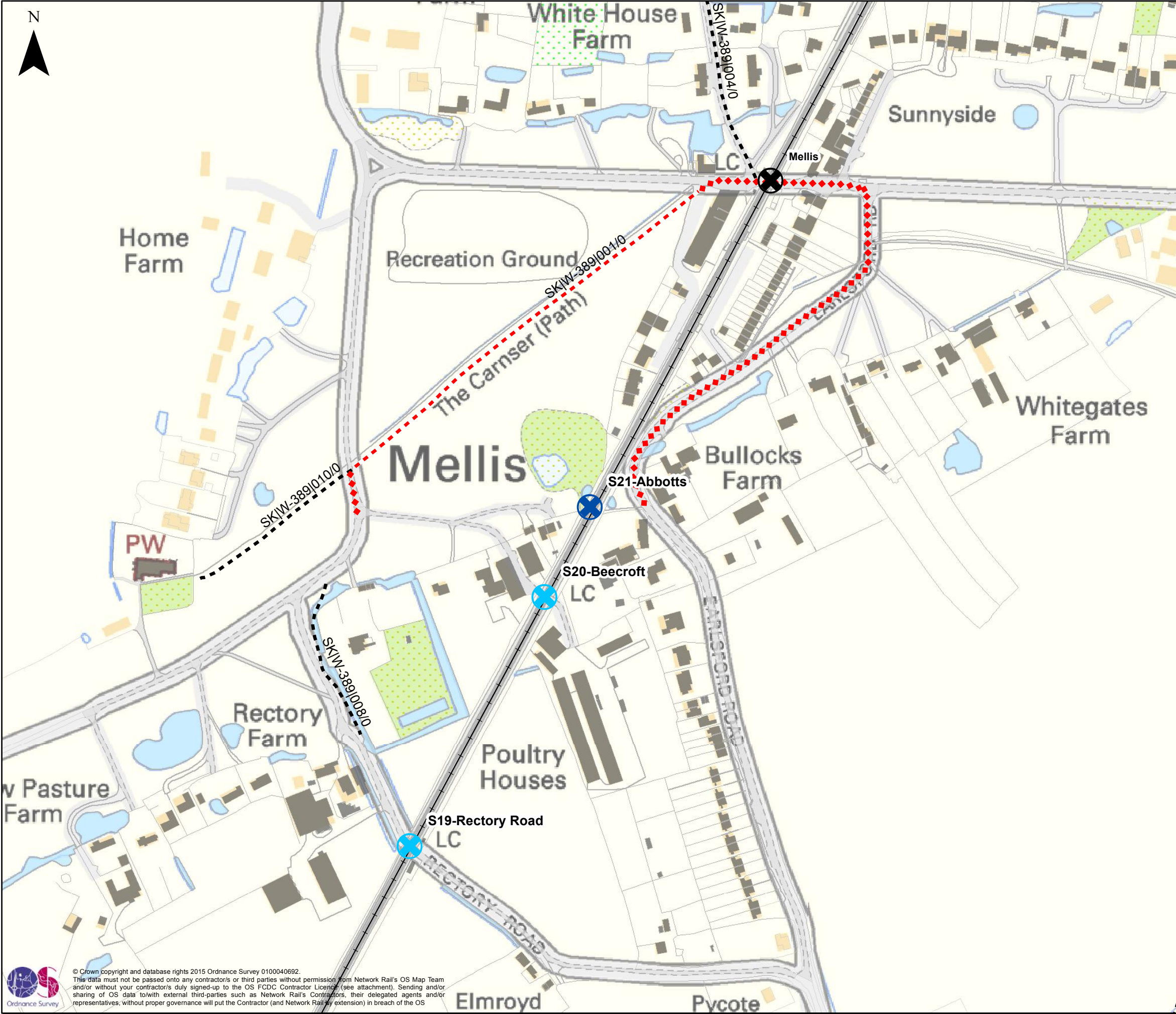
S20 - Beecroft
Suffolk
Mellis CP

P3	07/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:3,000

Drawing No.
MMD-367516-S20-GEN-002





- Level crossing being discussed
- Other level crossing in the project
- Other level crossings

Alternative Options

Red Route

A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
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 - Restricted byway
 - Byway open to all traffic
 - Highway (where used)
- If this line is in a colour, this denotes use by a route option (see above).



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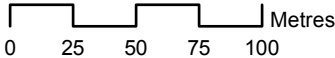
Anglia LX Consultation Stage 1

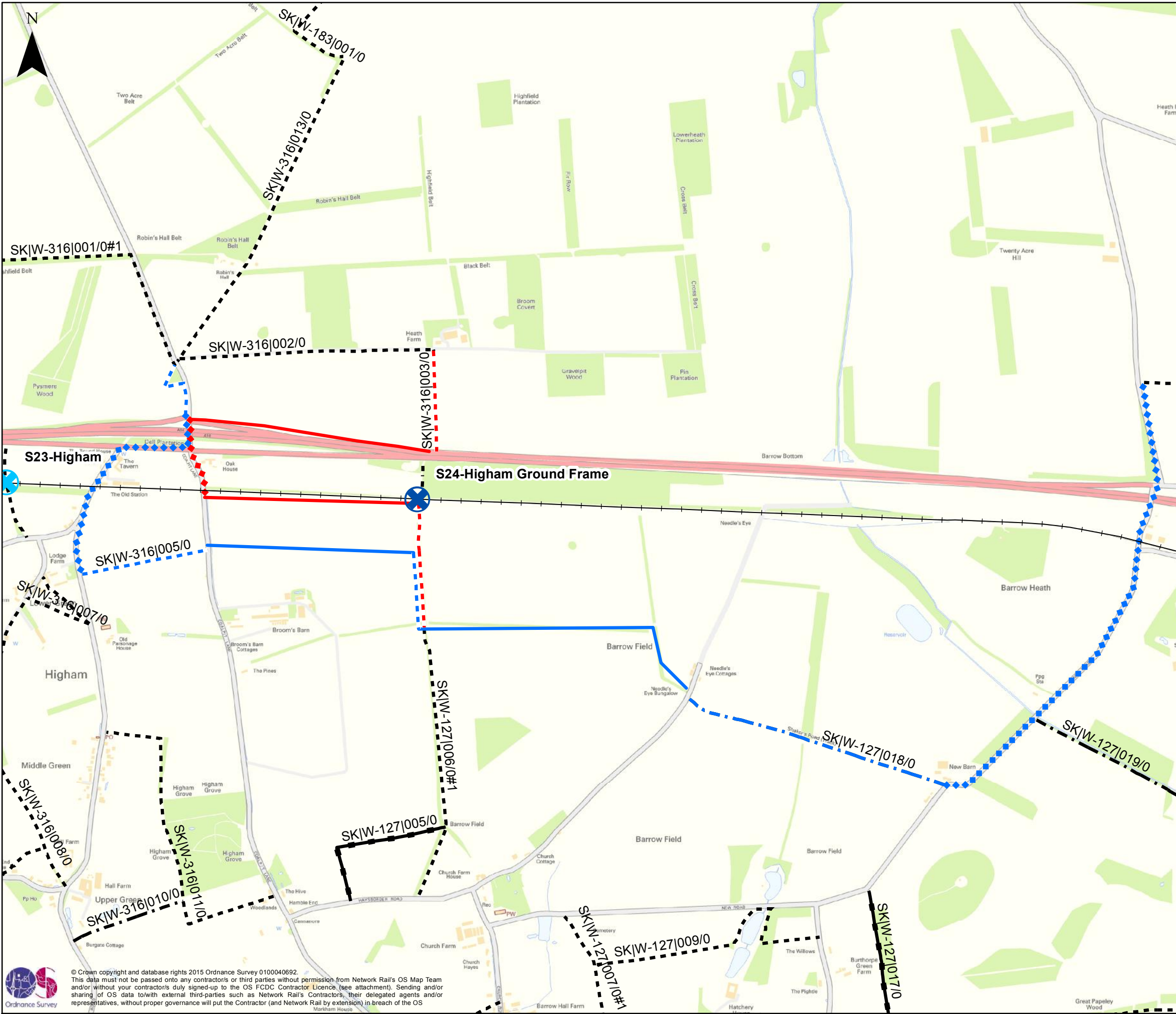
S21 - Abbots
Suffolk
Mellis CP

P3	14/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:3,000

Drawing No.
MMD-367516-S21-GEN-002





- Level crossing being discussed
- Other level crossing in the project

Alternative Options

- Red Route
- Blue Route

A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
 - Bridleway
 - Restricted byway
 - Byway open to all traffic
 - Highway (where used)
- If this line is in a colour, this denotes use by a route option (see above).



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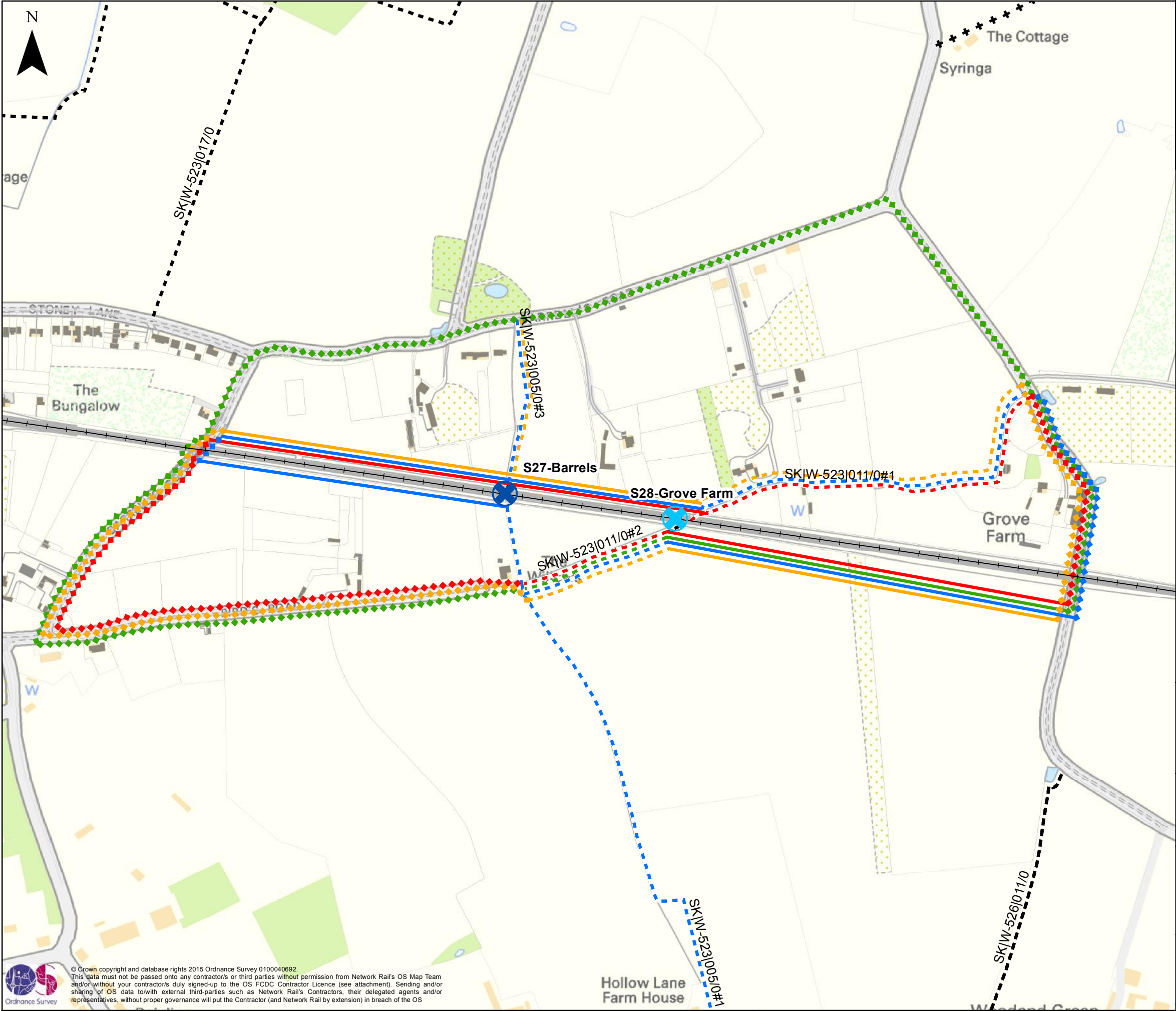
S24 - Higham Ground Frame
Suffolk
Barrow CP

P3	07/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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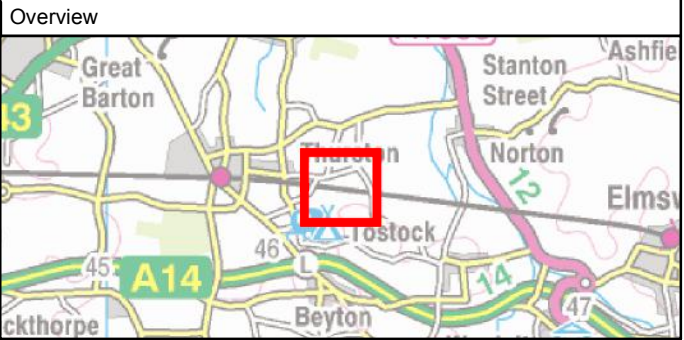
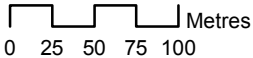
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- Level crossing being discussed
- Other level crossing in the project

Alternative Options

- Red Route
- Blue Route
- Green Route
- Orange Route

A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (where used)
If this line is in a colour, this denotes use by a route option (see above).



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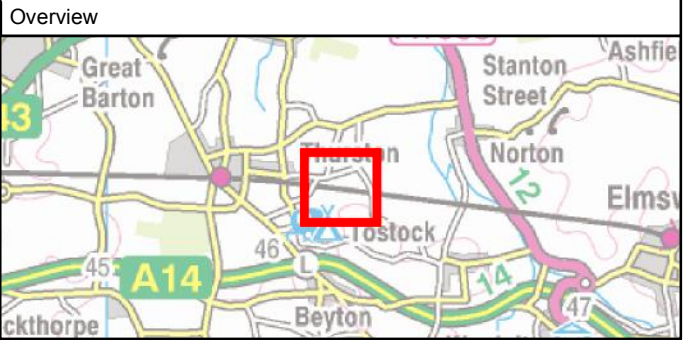
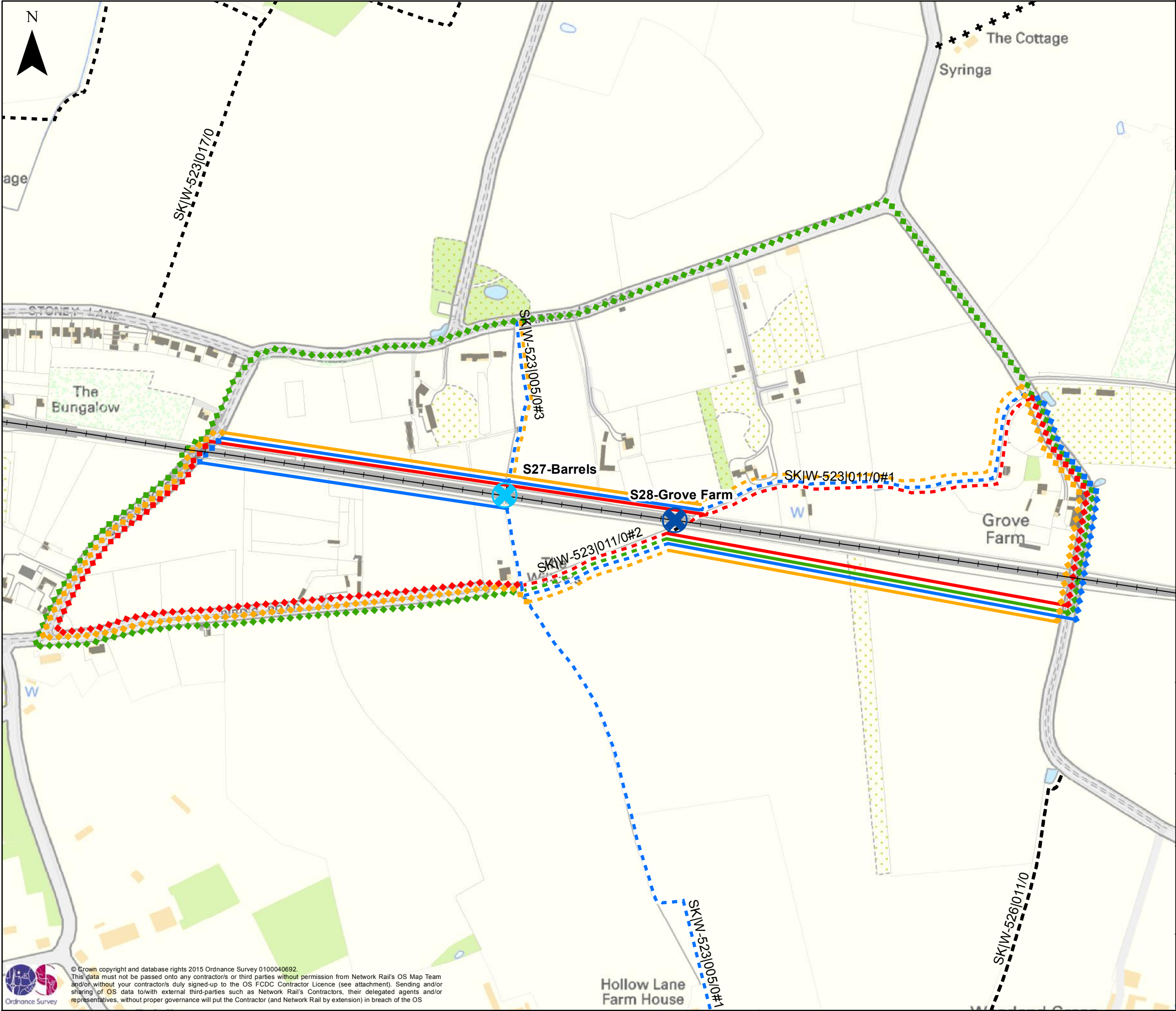
Anglia LX Consultation Stage 1

S27 - Barrels
Suffolk
Thurston CP

P3	07/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:4,500

Drawing No.
MMD-367516-S27-GEN-002



- Level crossing being discussed
 - Other level crossing in the project
- A solid line indicates a proposed new Public Right of Way (type to be determined).
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- If this line is in a colour, this denotes use by a route option (see above).



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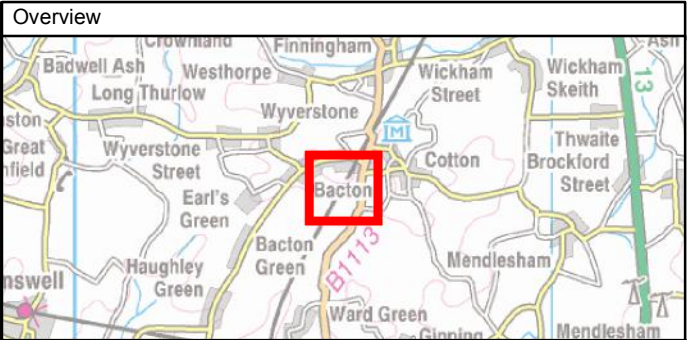
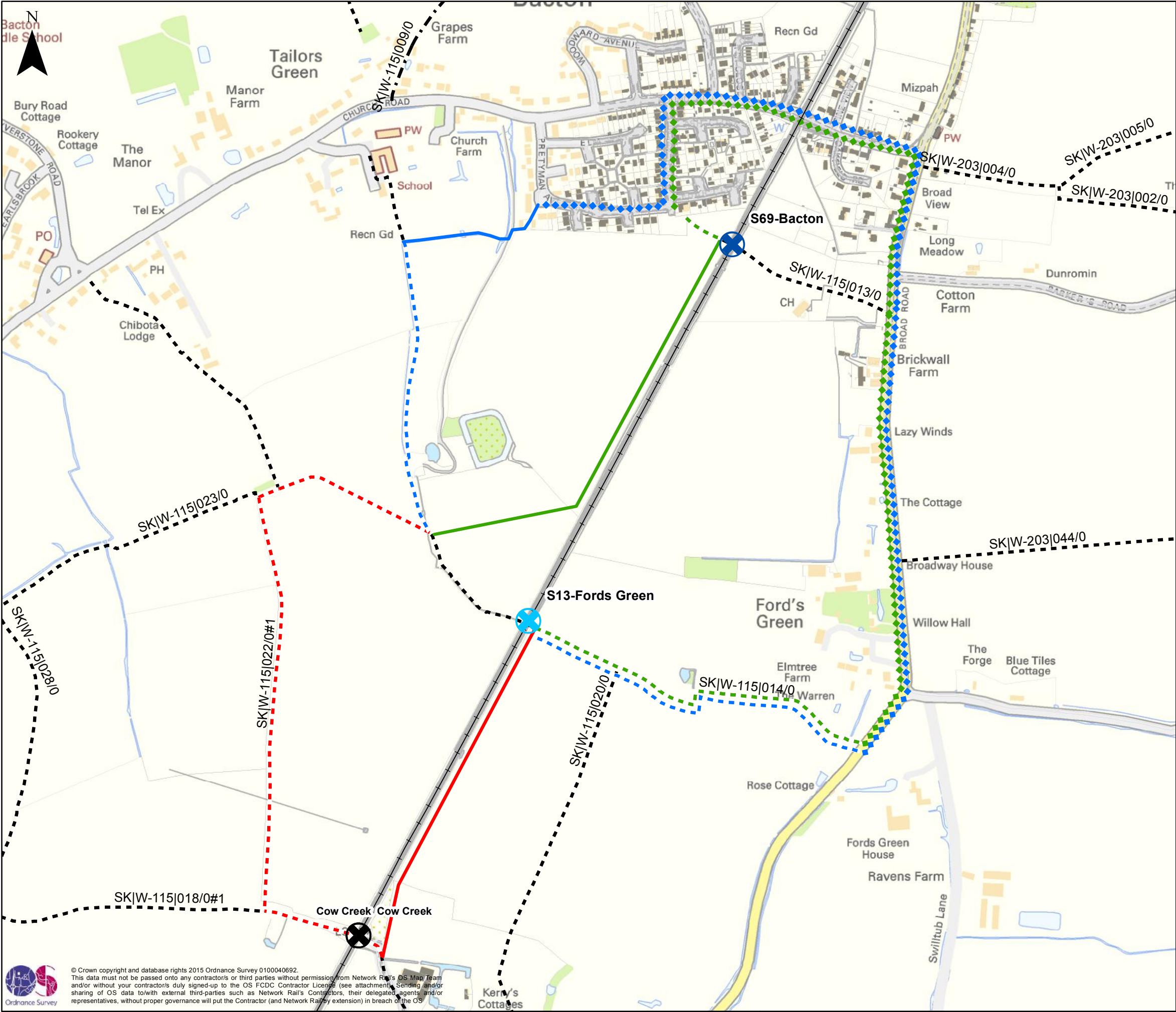
Anglia LX Consultation Stage 1

S28 - Grove Farm
Suffolk
Thurston CP

P3	07/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:4,500

Drawing No.
MMD-367516-S28-GEN-002



- Level crossing being discussed
- Other level crossing in the project
- Other level crossings

Alternative Options

- Red Route
- Blue Route
- Green Route

A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (where used)

If this line is in a colour, this denotes use by a route option (see above).



2 Brewery Wharf
Kendell Street
Leeds
LS10 1JR
United Kingdom
+44 (0)113 3946700

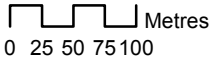
Anglia LX Consultation Stage 1

S69 - Bacton
Suffolk
Bacton CP

P3	08/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:6,000

Drawing No.
MMD-367516-S69-GEN-002





Transport & Works Act Order (TWAO) Anglia Route GRIP 2 Review

Suffolk Stage1 Road Safety Audit

Report Number 367516/RPT015

Revision A

August 2016



Transport & Works Act Order (TWAO) Anglia Route GRIP 2 Review

Suffolk Stage1 Road Safety Audit

August 2016

Network Rail

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
A	08/08/2016	R J Collins / T J Blaney	A J Coleman	J A Castle	First Draft
B	17/10/2016	T Blaney	S J Tilbrook	J Smith	Response to DRN Comments

Information class: Standard

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2.6	S19 – Rectory Road	5
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1 Introduction

Network Rail is carrying out feasibility studies to explore options for the closure of level crossings throughout Suffolk, as part of their on-going commitment to deliver a safer, more efficient and reliable railway. Mott MacDonald is considering Network Rail's GRIP 0 Solution to enable the closure of level crossings.

This report describes a series of Stage 1 Road Safety Audits carried out on highway works associated with proposed level crossing closures throughout Suffolk. The scheme proposals currently consist of indicative (high level) diversion routes as the result of closures and no formal highway works have been designed at this stage. Therefore this report considers potential road safety problems as a result of the proposed routes and their interaction with the highway. A detailed description of the proposed diversion routes at each location can be read in the respective individual level crossing review reports.

The audits took place at the Birmingham office of Mott MacDonald and consisted of a detailed examination of the submitted documentation and drawings listed in **Appendix A**.

A visit to each site was completed on either Wednesday 20th July 2016 between 14:00 and 18:30, during which the weather was sunny and the road surface was dry or on Tuesday 26th July between 14:00 and 17:30 during which the weather conditions were sunny and the road surface was dry.

It is confirmed that this is a Stage 1 Road Safety Audit and that the audit was undertaken upon completion of the feasibility design. It is also confirmed that the audit was carried out in accordance with the Highways England Departmental Standard HD19/15.

The Audit Team consisted of:

Andrew Coleman BA (Hons), MCHIT, MSoRSA (Team Leader)

Mott MacDonald

T Blaney BSc (Hons), CMILT, MCIHT, MSoRSA (Team Member)

Mott MacDonald

Rachael Collins BA (Hons), MSc (Team Member)

Mott MacDonald

No attempt has been made to comment on the justification of the scheme or the appropriateness of the diversion routes. Consequently the auditors accept no responsibility for the design or construction of the scheme. All of the issues raised in this report are considered to be required for action. The comments contained in the report are based on safety related concerns and as such the design engineer will need to consider carefully how to respond to each of the issues. The Audit Report Response should be completed by the Design Team and kept on file for future reference.

An Audit Brief was submitted to the Audit Team, however, no Personal Injury Collision data was included and has therefore not been reviewed as part of this audit. Traffic flows and speed data were also not available to the Audit Team.

A previous Stage 1 Road Safety Audit (Document Ref: 354763/RPT220A) was undertaken in December 2015 on level crossing closure proposals within Suffolk. This included some sites that have been audited on this occasion and sites that have been re-audited due to the development of alternative route options or amendments to the previously audited route. The table below lists the level crossing proposals that have been subject to a stage 1 road safety audit and when the audits were undertaken.

Site	December 2015	August 2016
S01 – Sea Wall (Green Route)		✓
S02 – Brantham High Bridge	✓	
S02 – Brantham High Bridge (Blue Route)		✓
S03 – Buxton Wood	✓	
S04 – Island	✓	✓
S05 – Pannington		✓
S06 – Daines Mayhew	✓	
S07 – Broomfield	✓	
S08 – Stacpool	✓	
S14 – Steggalls		✓
S19 – Rectory Road		✓
S20 – Beecroft		✓
S21 – Abbotts		✓
S23 – Higham	✓	
S24 – Higham Ground Frame	✓	
S24 – Higham Ground Frame (Blue route)		✓
S27 – Barrels	✓	✓
S28 – Grove Farm	✓	✓
S31 – Mutton Hall	✓	
S32 – Haughley Green	✓	
S36 – Stennetts 2	✓	
S38 – Lox Farm Fps	✓	
S44 – Orchard	✓	
S45 – Wickham Market	✓	

Site	December 2015	July16
S46 – Blaxhall	✓	
S48 – Saxmundham	✓	
S51 – Fordly Hall	✓	
S53 – Mells	✓	
S62 – Shepherd & Dog	✓	
S64 – Thorpe Grove	✓	
S69 – Bacton (Blue route)		✓
S69 – Bacton (Green route)		✓

A Key Plan indicating the location of any identified safety related issues is provided in **Appendix B**.

2 Items Raised at this Stage 1 Audit

This section describes road safety related issues identified by the Audit Team that are associated with the scheme as presented in **Appendix A**.

2.1 S01 – Sea Wall (Green Route)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.2 S02 – Brantham High Bridge (Blue Route)

2.2.1 Problem

Location: A137.

Summary: Narrow road width may lead to conflict between pedestrians and vehicles.

It is proposed that pedestrians will walk along a section of the A137 where no footway or notable verge is present; pedestrians walking in the verge for extended periods of time may be vulnerable to trips and falls or choose to walk in the carriageway. A high volume of traffic was observed travelling at high speeds and visibility is restricted by the highway geometry and vegetation. These factors may result in collisions between pedestrians and vehicles.

Figure 2.1: Lack of verge or footway on A317.



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway is provided.

2.3 S04 – Island

The Audit Team did not identify any road safety related issues associated with the scheme.

2.4 S05 – Pannington

The Audit Team did not identify any road safety related issues associated with the scheme.

2.5 S14 – Steggalls

The Audit Team did not identify any road safety related issues associated with the scheme.

2.6 S19 – Rectory Road

The Audit Team did not identify any road safety related issues associated with the scheme.

2.7 S20 – Beecroft

The Audit Team did not identify any road safety related issues associated with the scheme.

2.8 S21 – Abbotts

The Audit Team did not identify any road safety related issues associated with the scheme.

2.9 S24 – Higham Ground Frame (Blue route)

2.9.1 Problem

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.

Figure 2.2: A14 Westbound entry slip road (looking east).



Source: Mott MacDonald

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.

2.9.2 Problem

Location: Higham Road.

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.

Figure 2.3: Higham Road looking east.



Source: Mott MacDonald

Recommendation

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

2.10 S27 – Barrels

The Audit Team did not identify any road safety related issues associated with the scheme.

2.11 S28 – Grove Farm

The Audit Team did not identify any road safety related issues associated with the scheme.

2.12 S69 – Bacton Blue and Green routes)

2.12.1 Problem

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.

Figure 2.4: Example of restricted verge on Broad Lane (looking south).



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway is provided to enable pedestrians to continue along Broad Road without walking within the carriageway.

3 Audit Team Statement

I certify that this audit has been carried out in accordance with the Highways England Departmental Standard HD 19/15.

Audit Team Leader

A J Coleman BA (Hons), MCIHT, MSoRSA

Signed:



Date: 8th August 2016

Road Safety Engineer
Mott MacDonald
35 Newhall Street
Birmingham
B3 3PU

Audit Team Member

T J Blaney BSc (Hons), CMILT, MCIHT, MSoRSA

Signed:



Date: 8th August 2016

Principal Road Safety Engineer
Mott MacDonald
35 Newhall Street
Birmingham
B3 3PU

Audit Team Member

R J Collins BA (Hons), Msc

Signed:



Date: 8th August 2016

Senior Road Safety Engineer
Mott MacDonald
9 Portland Street
Manchester
M1 3BE

Appendices

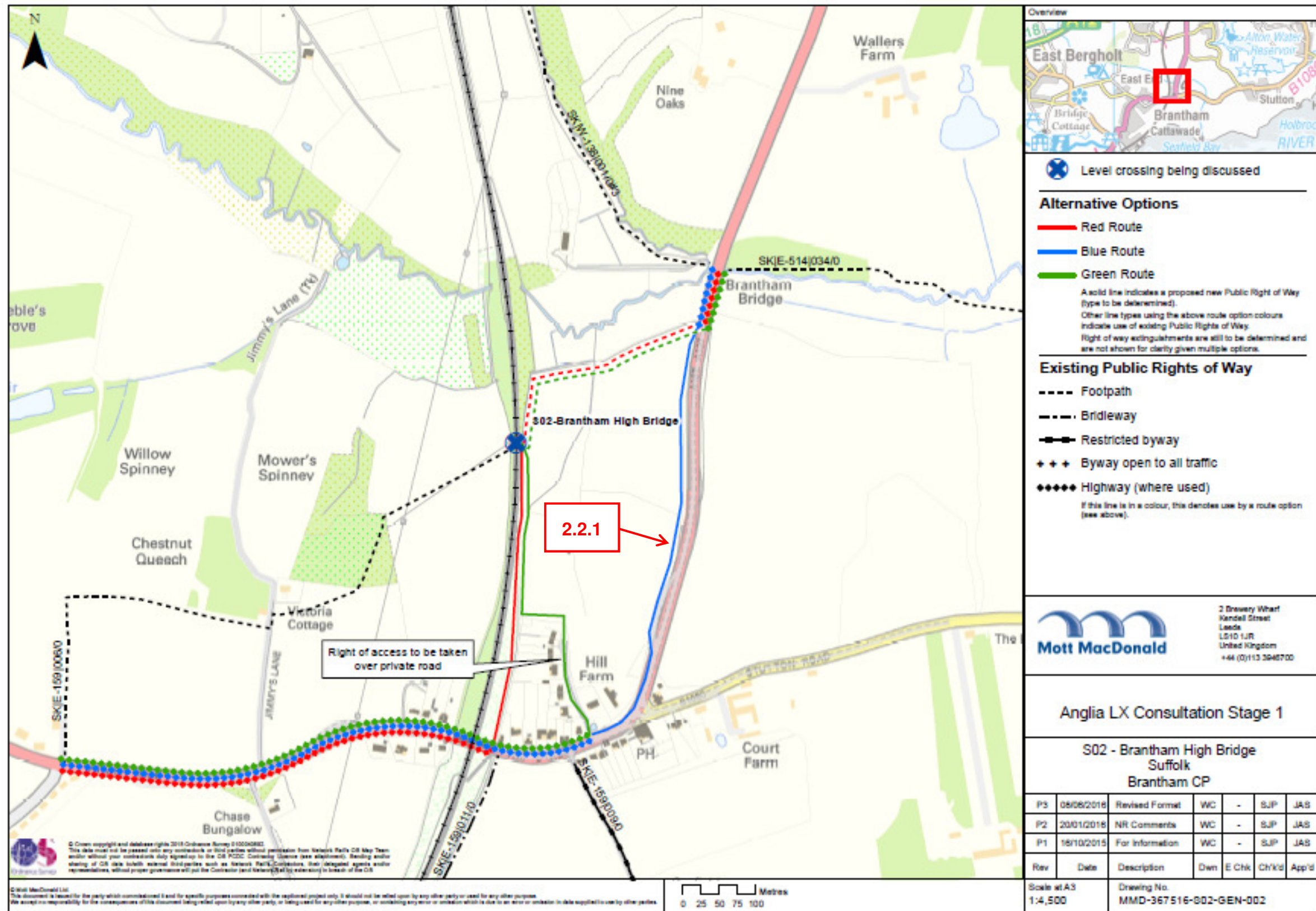
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Appendix A. List of Submitted Documents

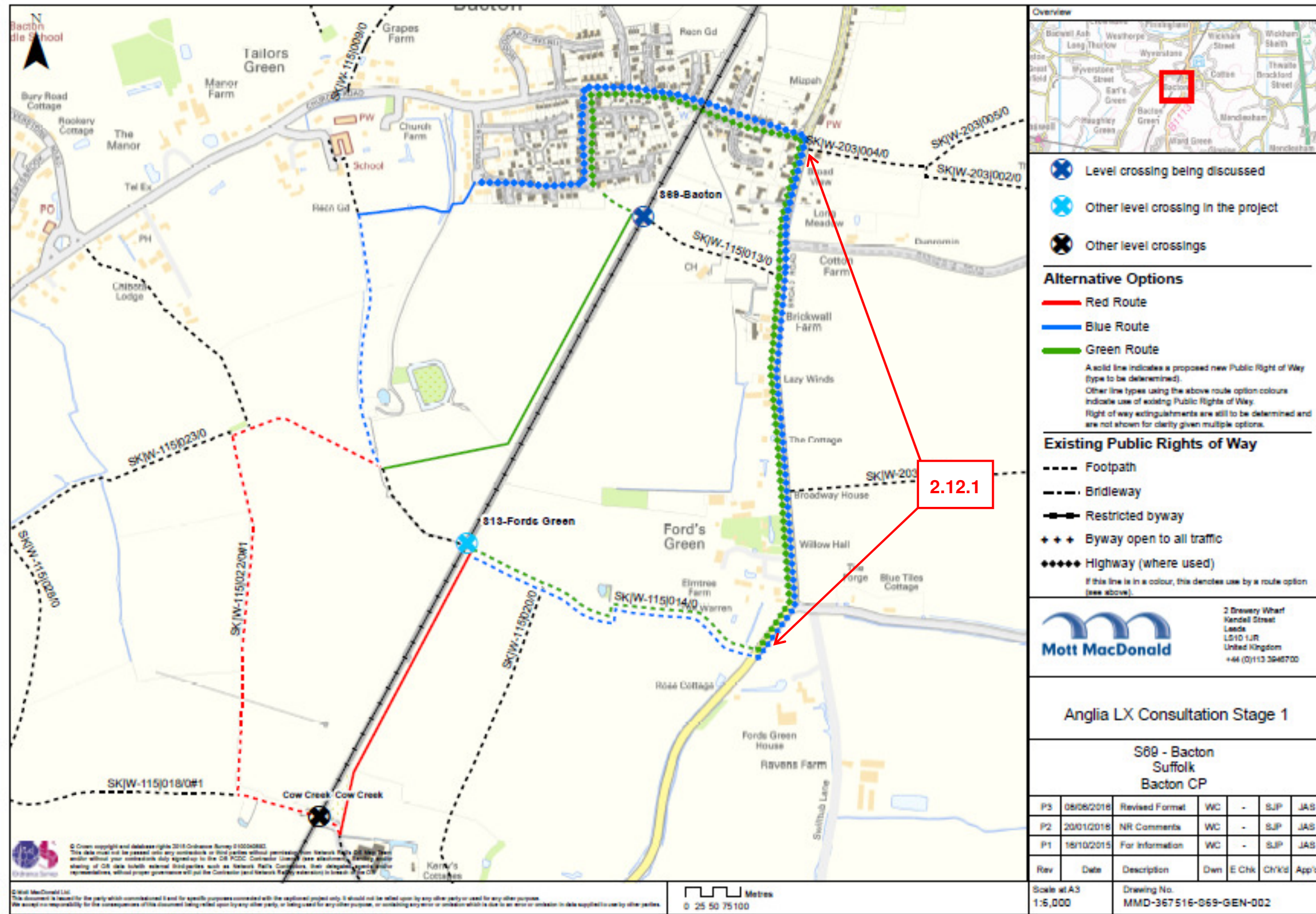
Table A.1: Drawings

Drawing	Rev	Title
MMD-367516-S01-GEN-002	P3	Sea Wall
MMD-367516-S02-GEN-002	P3	Brantham High Bridge
MMD-367516-S04-GEN-002	P3	Island
MMD-367516-S05-GEN-002	P3	Pannington
MMD-367516-S14-GEN-002	P3	Steggalls
MMD-367516-S19-GEN-002	P3	Rectory Road
MMD-367516-S20-GEN-002	P3	Beecroft
MMD-367516-S21-GEN-002	P3	Abbotts
MMD-367516-S24-GEN-002	P3	Higham Ground Frame
MMD-367516-S27-GEN-002	P3	Barrels
MMD-367516-S28-GEN-002	P3	Grove Farm
MMD-367516-S69-GEN-002	P3	Bacton

Source: Mott MacDonald, Sheffield









Transport & Works Act Order (TWAO) Anglia Route GRIP 2 Review

Suffolk Stage 1 Road Safety Audit Response Report

Report Number 367516/RPT020

Revision B

November 2016

Transport & Works Act Order (TWAO) Anglia Route GRIP 2 Review

Suffolk Stage 1 Road Safety Audit Response Report

November 2016

Network Rail

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
A	09/09/2016	Wahiba Jennane	Steve Price	Sue Tilbrook	First Draft
B	08/11/2016	Wahiba Jennane	Steve Price	Sue Tilbrook	Response to comments

Information class: Standard

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1 Introduction

This document is Mott MacDonald design team's response to independent Stage 1 Road Safety Audits (RSA) undertaken in December 2015 and August 2016 on Network Rail's level crossing closure proposals in Suffolk.

A Stage 1 Road Safety Audit was undertaken in December 2015 and its findings are reported in Document Ref: 354763/RPT220A. A second Stage 1 Road Safety Audit was undertaken in August 2016 and its findings are reported in Document Ref: 367516/RPT015B.

It should be noted that some crossings proposals that were audited in December 2015 were removed from the project prior to Grip stage 2. Where a particular solution has been discounted or a proposal has been removed from the project due to a road safety issue, it is noted in the design team response in section 2 of this report. Some level crossing closure proposals in Suffolk were audited twice due to the development of alternative option or amendments to the previously audited option. The table below lists the level crossing proposals that have been subject to a stage 1 road safety audit and when the audits were undertaken.

Site	December 2015 (Grip 1)	August 2016 (Grip 2)
S01 – Sea Wall (Green Route)		✓
S02 – Brantham High Bridge	✓	
S02 – Brantham High Bridge (Blue Route)		✓
S03 – Buxton Wood	✓	
S04 – Island	✓	✓
S05 – Pannington		✓
S06 – Daines Mayhew	✓	
S07 – Broomfield	✓	
S08 – Stacpool	✓	
S14 – Steggalls		✓
S19 – Rectory Road		✓
S20 – Beecroft		✓
S21 – Abbots		✓
S23 – Higham	✓	
S24 – Higham Ground Frame	✓	
S24 – Higham Ground Frame (Blue route)		✓
S27 – Barrels	✓	✓
S28 – Grove Farm	✓	✓
S31 – Mutton Hall	✓	
S32 – Haughley Green	✓	
S36 – Stennetts 2	✓	
S38 – Lox Farm Fps	✓	
S44 – Orchard	✓	
S45 – Wickham Market	✓	

Site	December 2015 (Grip 1)	August 2016 (Grip 2)
S46 – Blaxhall	✓	
S48 – Saxmundham	✓	
S51 – Fordly Hall	✓	
S53 – Mells	✓	
S62 – Shepherd & Dog	✓	
S64 – Thorpe Grove	✓	
S69 – Bacton (Blue route)		✓
S69 – Bacton (Green route)		✓

Network Rail is carrying out feasibility studies to explore options for the closure of level crossings throughout Anglia as part of their on-going commitment to deliver a safer, more efficient and reliable railway.

The road safety audit reports considered the proposed level crossing closures throughout Suffolk. The scheme proposals consisted of indicative (high level) diversion routes as the result of closures and no formal highway works were designed at this stage. Therefore the road safety audit reports considered potential road safety problems as a result of the proposed routes and their interaction with the highway. A detailed description of the proposed diversion routes at each location can be read in the respective individual level crossing review reports.

2 Items Raised at the Stage 1 Road Safety Audit

This section describes road safety related issues identified by the Audit Team.

2.1 S01 – See Wall (Green Route – August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.2 S02 – Brantham High Bridge (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.3 S02 – Brantham High Bridge (Blue Route – August 2016)

2.3.1 Problem

Location: A137.

Summary: Narrow road width may lead to conflict between pedestrians and vehicles.

It is proposed that pedestrians will walk along a section of the A137 where no footway or notable verge is present; pedestrians walking in the verge for extended periods of time may be vulnerable to trips and falls or choose to walk in the carriageway. A high volume of traffic was observed travelling at high speeds and visibility is restricted by the highway geometry and vegetation. These factors may result in collisions between pedestrians and vehicles.

Figure 2.1: Lack of verge or footway on A317.



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway is provided.

Design Team Response

Agreed – provision of a footway would be considered in this location, however, the blue route scheme was not progressed and the alternative option without problems was taken forward as the preferred option.

2.4 S03 – Buxton Wood (GRIP 1 – December 2015)

2.4.1 Problem

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.

Figure 2.2: Bramford Road looking west.



Source: Mott MacDonald

Recommendation

It is recommended that an area of hard-standing is provided at the edge of the carriageway and vegetation clearance is undertaken to provide suitable intervisibility between drivers and pedestrians. A safe transition should also be provided between the footpath and the hard-standing.

Design Team Response

Agreed – Due to insufficient carriageway width and to remove the need to Compulsory Purchase Order (CPO) land required to construct the necessary measures, the route was dropped in favour of an alternative alignment without road safety audit issues.

2.5 S04 – Island (December 2015 / August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.6 S05 – Pannington (August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.7 S06 – Daines Mayhew (GRIP 1 – December 2015)

2.7.1 Problem

Location: B1113 Bramford Road.

Summary: Risk of vehicle collisions with pedestrians.

The B1113 Bramford Road is a busy road with a 50mph speed limit which provides a link to the A14 at Junction 52. The diversion route guides pedestrians along the southern side of Bramford Road which features a vehicle restraint system (VRS) within the verge to protect not only the railway line but also the steep embankment to the south. The verge in front of the VRS has insufficient width to accommodate pedestrians and there is also insufficient width behind the barrier due to trees and the embankment slope. It is likely that pedestrians directed along this route will walk within the carriageway at risk of collisions with high speed vehicles.

Figure 2.3: Bramford Road looking south west.



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway or footpath is provided behind the VRS (away from the carriageway) to enable pedestrians to continue without walking within the carriageway. If this is not feasible, an alternative route should be identified.

Design Team Response

Agreed – Due to the prohibitive works required, this proposal was withdrawn and this level crossing has been removed from the project.

2.8 S07 – Broomfield (GRIP 1 – December 2015)

2.8.1 Problem

Location: Pesthouse Lane.

Summary: Risk of pedestrian trip injuries.

The diversion route will utilise an existing footpath which is bisected by Pesthouse Lane. At the footpath interface with the carriageway a vehicle restraint system (VRS) is present and creates a hazard for pedestrians. Steel edges of VRS can be sharp and there is a risk of pedestrians injuring themselves as they negotiate the VRS.

Figure 2.4: Pesthouse Lane looking south east.



Source: Mott MacDonald

Recommendation

It is recommended that a route to the north behind the barrier be provided to avoid the need for pedestrians to negotiate the VRS. The existing footpath crossing would also benefit from a route behind the barrier.

Design Team Response

Agreed – However this proposal was dropped in favour of an alternative off-road route utilising a track within an amenity area.

2.8.2 Problem

Location: Pesthouse Lane.

Summary: Risk of pedestrian collisions with large vehicles.

The diversion route guides pedestrians to cross Pesthouse Lane which provides access to a quarry and therefore carries a high proportion of large vehicles. The high kerbs present a trip hazard to pedestrians and although not normally considered an issue for footpath routes, the high proportion of large vehicles increases the risk of serious or fatal injuries should a pedestrian trip and fall in front of a large vehicle.

Figure 2.5: Pesthouse Lane at footpath interface.



Source: Mott MacDonald

Recommendation

It is recommended that a dropped kerb crossing point is provided to reduce the risk of pedestrians tripping.

Design Team Response

Agreed – However this proposal was dropped in favour of an alternative off-road route utilising a track within an amenity area.

2.9 S08 – Stacpool (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.10 S14 – Steggalls (August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.11 S19 – Rectory Road (August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.12 S20 – Beecroft (August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.13 S21 – Abbots (August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.14 S23 – Higham (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.15 S24 – Higham Ground Frame (GRIP 1 – December 2015)

2.15.1 Problem

Location: Coalpit Lane j/w A14 Eastbound Entry.

Summary: Risk of pedestrian trip type accidents.

The diversion route guides pedestrians to cross the A14 Eastbound 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.

Figure 2.6: A14 Eastbound entry slip road.



Source: Mott MacDonald

Recommendation

It is recommended that a dropped kerb crossing point is provided to reduce the risk of pedestrians tripping. This can be positioned at the safest location to guide pedestrians to the safest crossing location.

Design Team Response

Agreed – A crossing point will be provided.

2.15.2 Problem

Location: Coalpit Lane j/w A14 Westbound Exit.

Summary: Risk of pedestrian trip type accidents.

The diversion route guides pedestrians to cross the A14 Westbound exit slip road. Vehicles were observed to be travelling fast when approaching the give way line and turning out of the slip road which may lead to pedestrians rushing to cross. Pedestrians crossing the slip road with haste 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 and an informal footpath provided to guide pedestrians to the crossing point, which can be positioned at the safest crossing location.

Design Team Response

Agreed – A crossing point will be provided.

2.15.3 Problem

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.

Figure 2.7: Coalpit Lane south of the A14.



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway or footpath is provided to enable pedestrians to continue without walking within the carriageway.

Design Team Response

Agreed – Due to insufficient space to provide footway facilities this proposal was dropped in favour of a more suitable route which utilises the bridge on Higham Lane to cross the railway.

2.16 S24 – Higham Ground Frame (Blue route – August 2016)

2.16.1 Problem

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.

Figure 2.8: A14 Westbound entry slip road (looking east).



Source: Mott MacDonald

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.

Design Team Response

Agreed – Due to insufficient space to provide footway facilities this proposal was dropped in favour of a more suitable route which utilises the bridge on Higham Lane to cross the railway.

2.16.2 Problem

Location: Higham Road.

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.

Figure 2.9: Higham Road looking east.



Source: Mott MacDonald

Recommendation

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

Design Team Response

Agreed – A footway is to be provided.

2.17 S27 – Barrels (December 2015 / August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.18 S28 – Grove Farm (December 2015 / August 2016)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.19 S31 – Mutton Hall (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.20 S32 – Haughley Green (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.21 S36 – Stennetts 2 (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.22 S38 – Lox Farm Fps (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.23 S44 – Orchard (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.24 S45 – Wickham Market (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.25 S46 – Blaxhall (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.26 S48 – Saxmundham (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.27 S51 – Fordly Hall (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.28 S53 – Mells (GRIP 1 – December 2015)

2.28.1 Problem

Location: A144 Bramfield Road.

Summary: Risk of vehicle collisions with pedestrians.

The A144 Bramfield Road is a busy road which links Halesworth to Bramfield and the A12 further south. The diversion route guides pedestrians along Bramfield Road which has no grass verge suitable for pedestrians who will be forced to walk within the carriageway. The section of Bramfield Road used for the diversion route 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.

Figure 2.10: Bramfield Road looking south.



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway or footpath is provided to enable pedestrians to continue without walking within the carriageway. If this is not feasible, an alternative route should be identified.

Design Team Response

Agreed – However this scheme has been withdrawn from the project.

2.29 S62 – Shepherd & Dog (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.30 S64 – Thorpe Grove (GRIP 1 – December 2015)

The Audit Team did not identify any road safety related issues associated with the scheme.

2.31 S69 – Bacton (Blue and Green routes – August 2016)

2.31.1 Problem

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.

Figure 2.11: Example of restricted verge on Broad Lane (looking south).



Source: Mott MacDonald

Recommendation

It is recommended that a suitable footway is provided to enable pedestrians to continue along Broad Road without walking within the carriageway.

Design Team Response

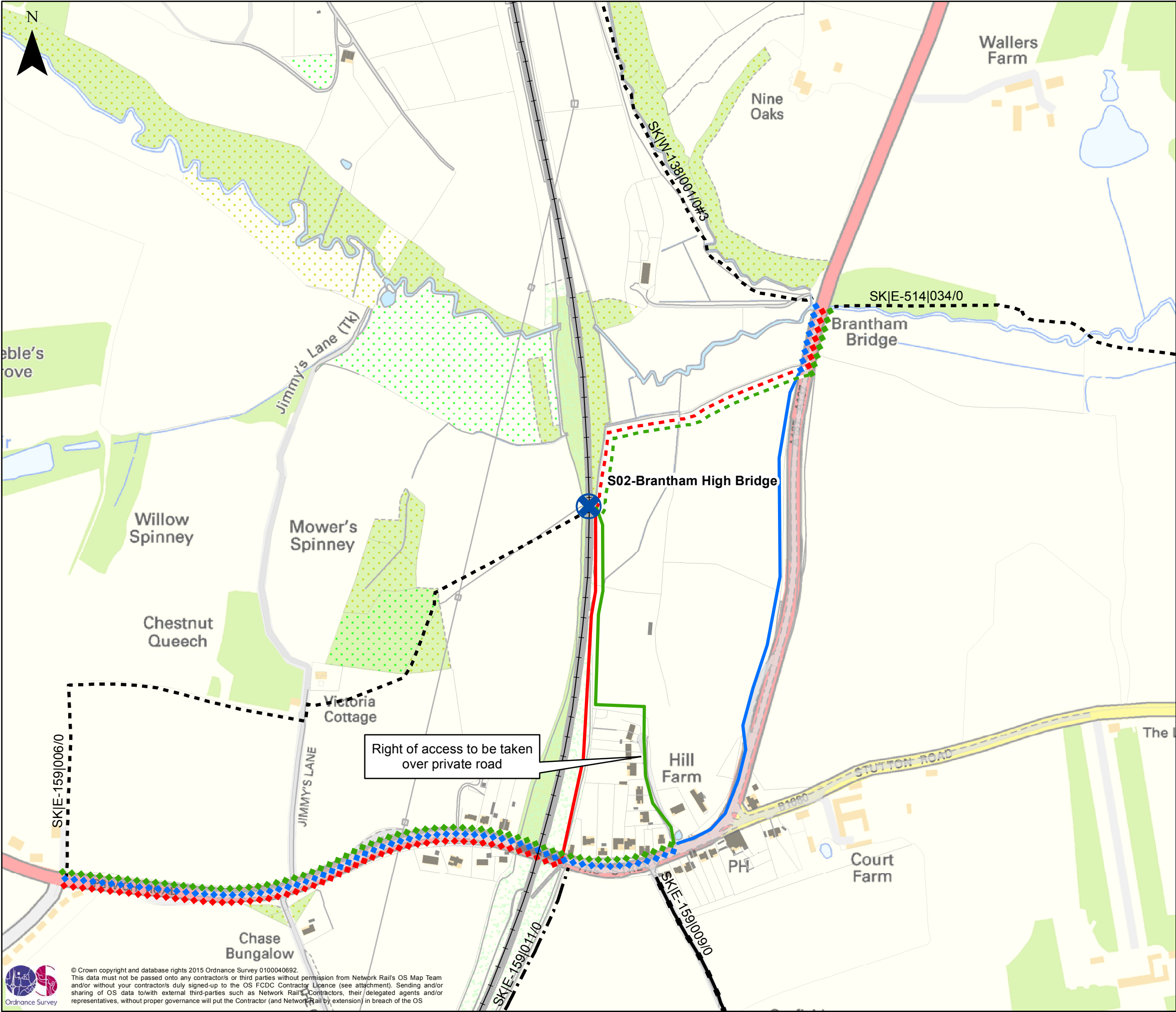
Agreed – Further consideration of footway provision will be given.

Appendices

Appendix A. Key Plans	18
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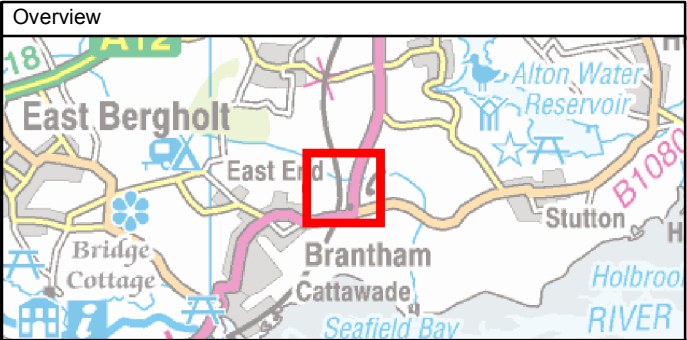
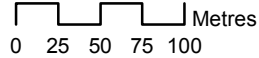
Appendix A. Key Plans

- A.1 MMD-367516-S02-GEN-002**
- A.2 MMD-354763-S03-GEN-001 GRIP 1**
- A.3 MMD-354763-S06-GEN-001 GRIP 1**
- A.4 MMD-354763-S07-GEN-001 GRIP 1**
- A.5 MMD-354763-S24-GEN-001 GRIP 1**
- A.6 MMD-367516-S24-GEN-002**
- A.7 MMD-354763-S53-GEN-001 GRIP 1**
- A.8 MMD-367516-S69-GEN-002**



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Level crossing being discussed

Alternative Options

Red Route

Blue Route

Green Route

A solid line indicates a proposed new Public Right of Way (type to be determined).

Other line types using the above route option colours indicate use of existing Public Rights of Way.

Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

Footpath

Bridleway

Restricted byway

Byway open to all traffic

Highway (where used)

If this line is in a colour, this denotes use by a route option (see above).



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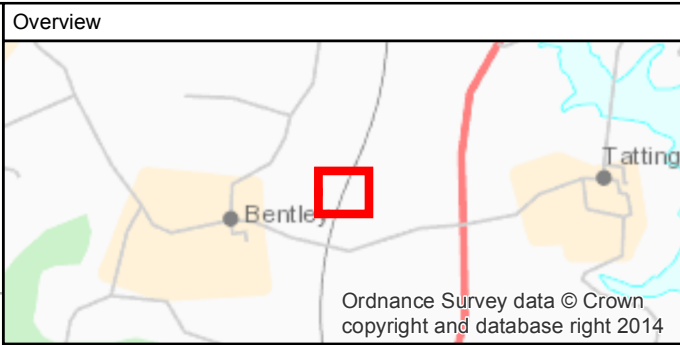
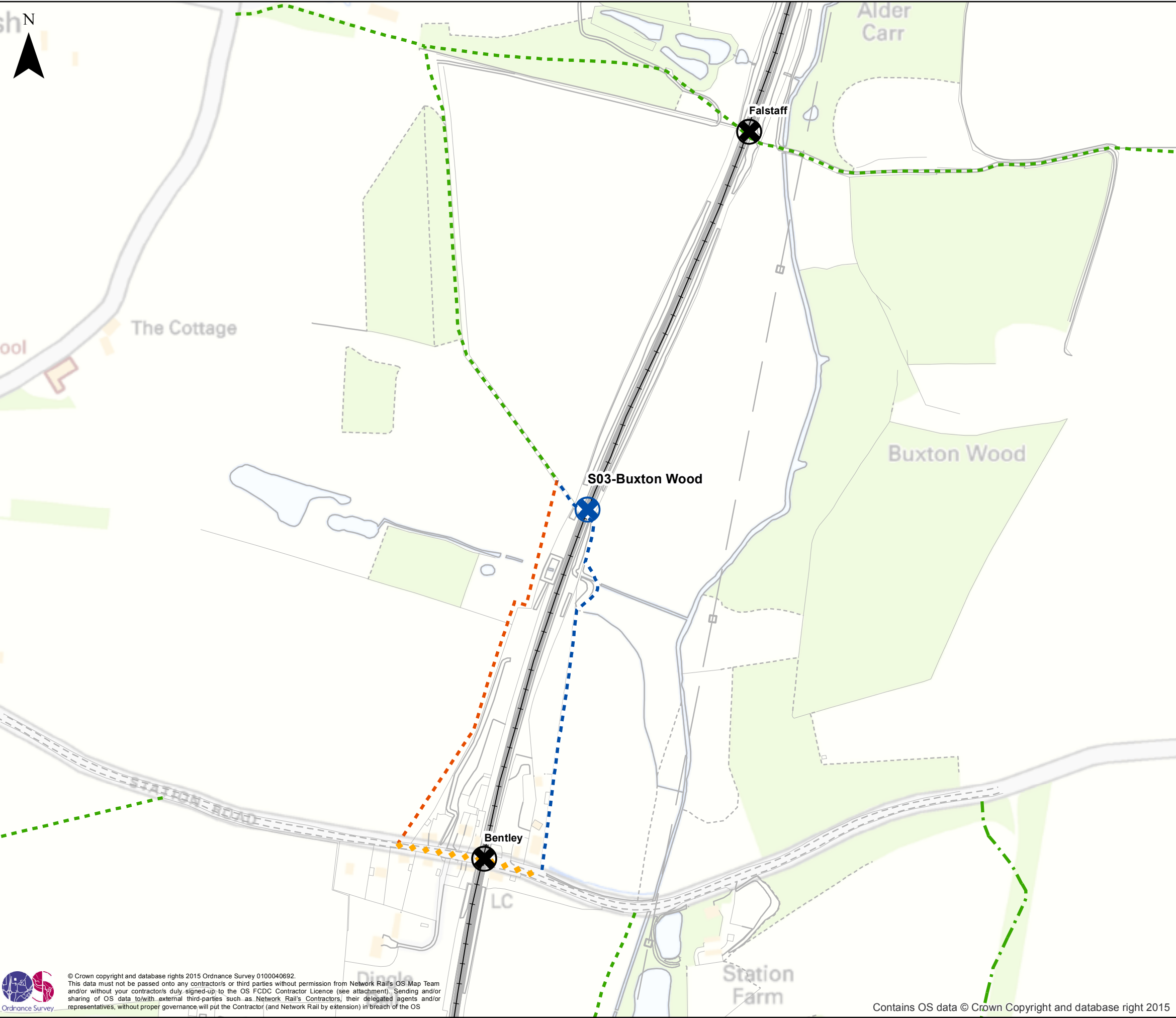
Anglia LX Consultation Stage 1

S02 - Brantham High Bridge Suffolk Brantham CP

P3	08/06/2016	Revised Format	WC	-	SJP	JAS
P2	20/01/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:4,500

Drawing No.
MMD-367516-S02-GEN-002



Current level crossing

Other level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

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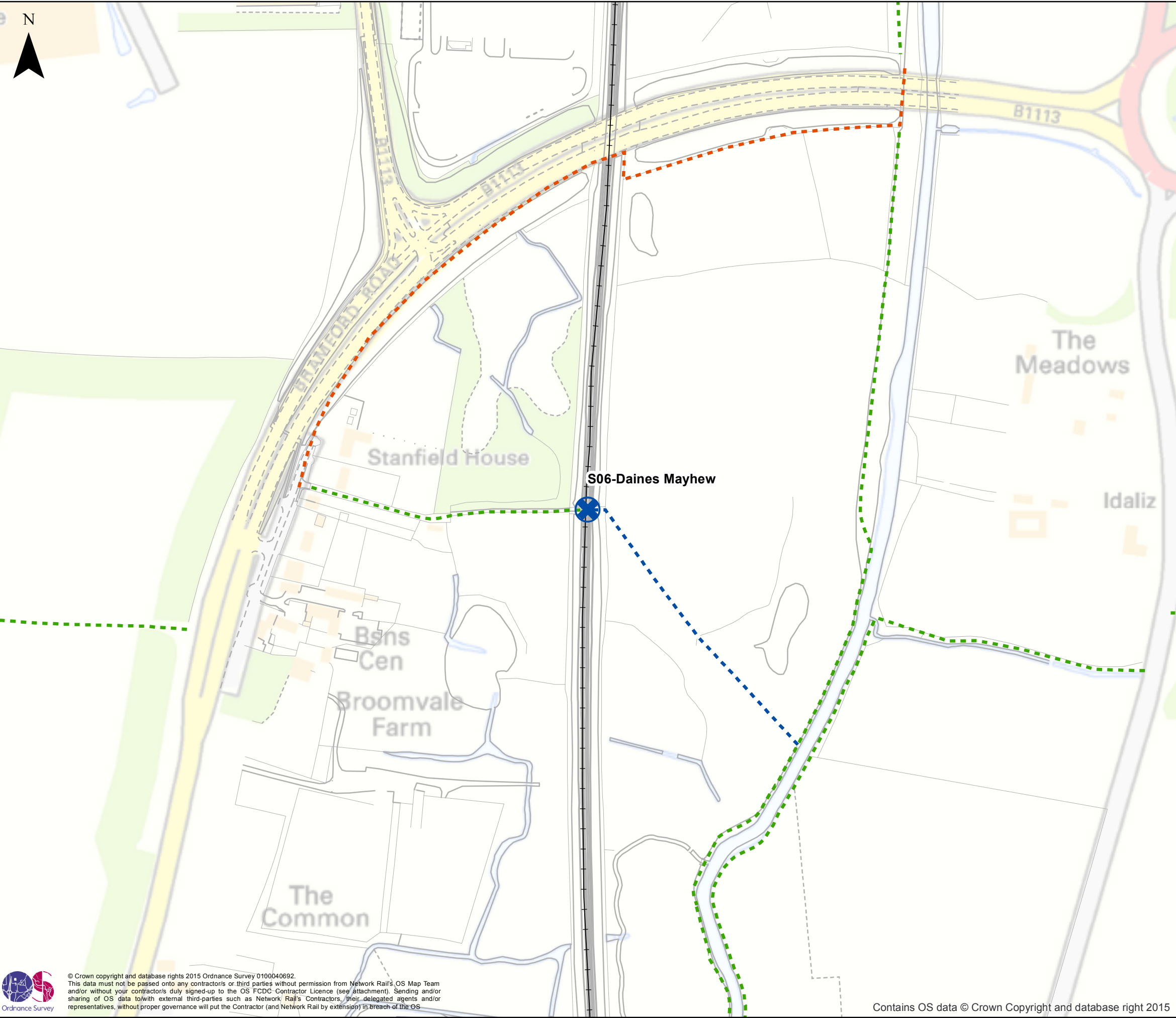
GRIP 1 Proposals

S03 - Buxton Wood
Suffolk
Bentley CP
SK/E-138/022#1 and SK/E-138/022#3

P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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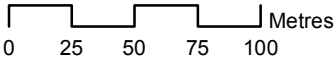
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Overview



Current level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status



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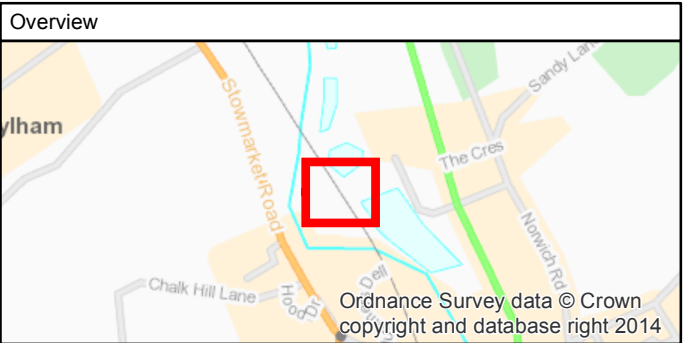
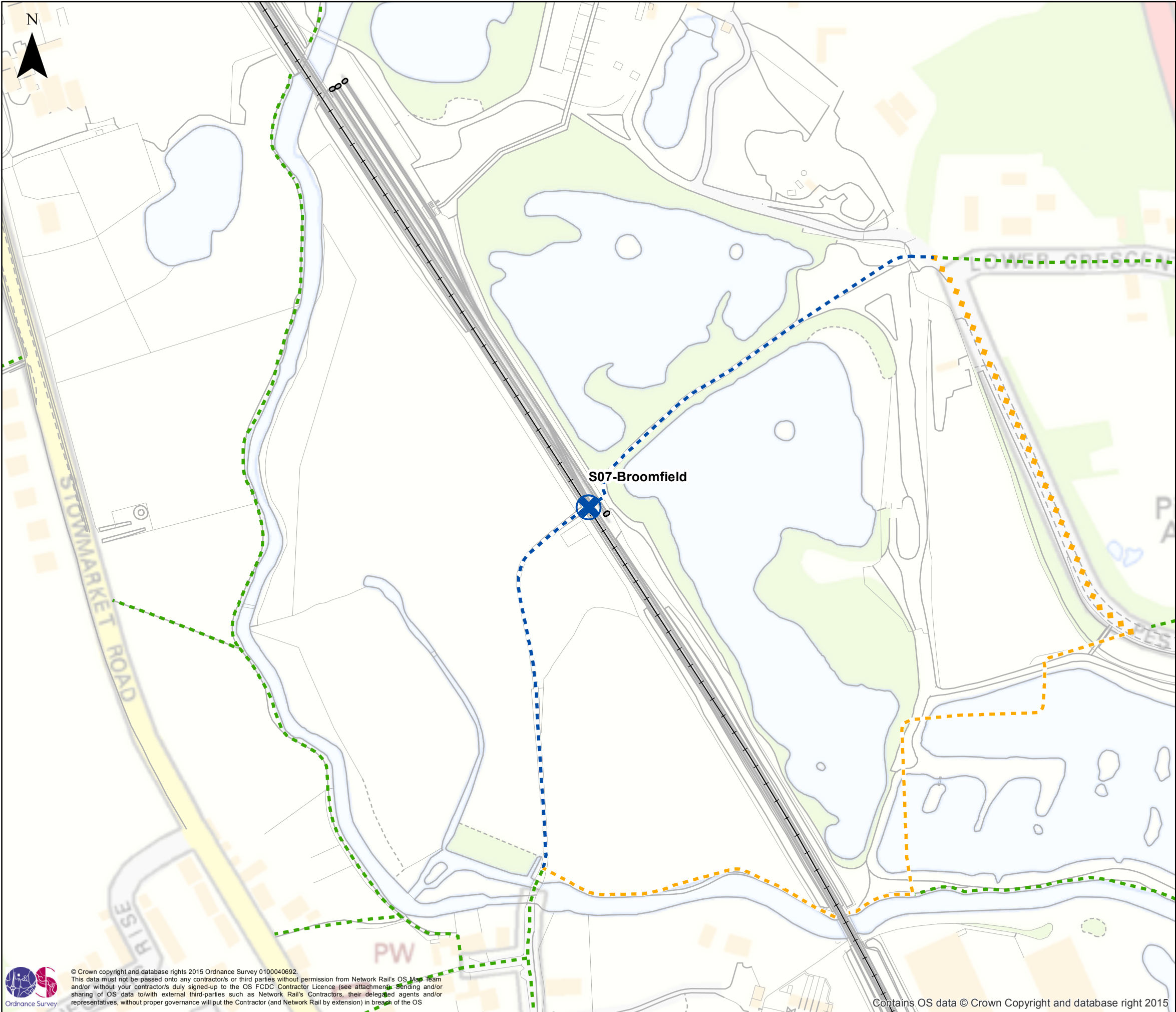
GRIP 1 Proposals

S06 - Daines Mayhew
Suffolk
Little Blakenham CP
SK/W-370/015/A#1

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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

Scale at A3
1:3,000

Drawing No.
MMD-354763-S06-GEN-001



Current level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

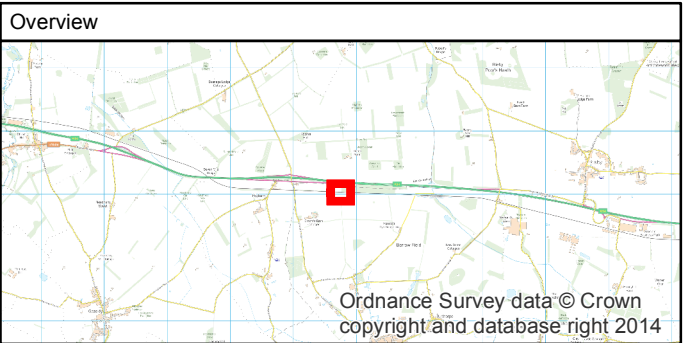
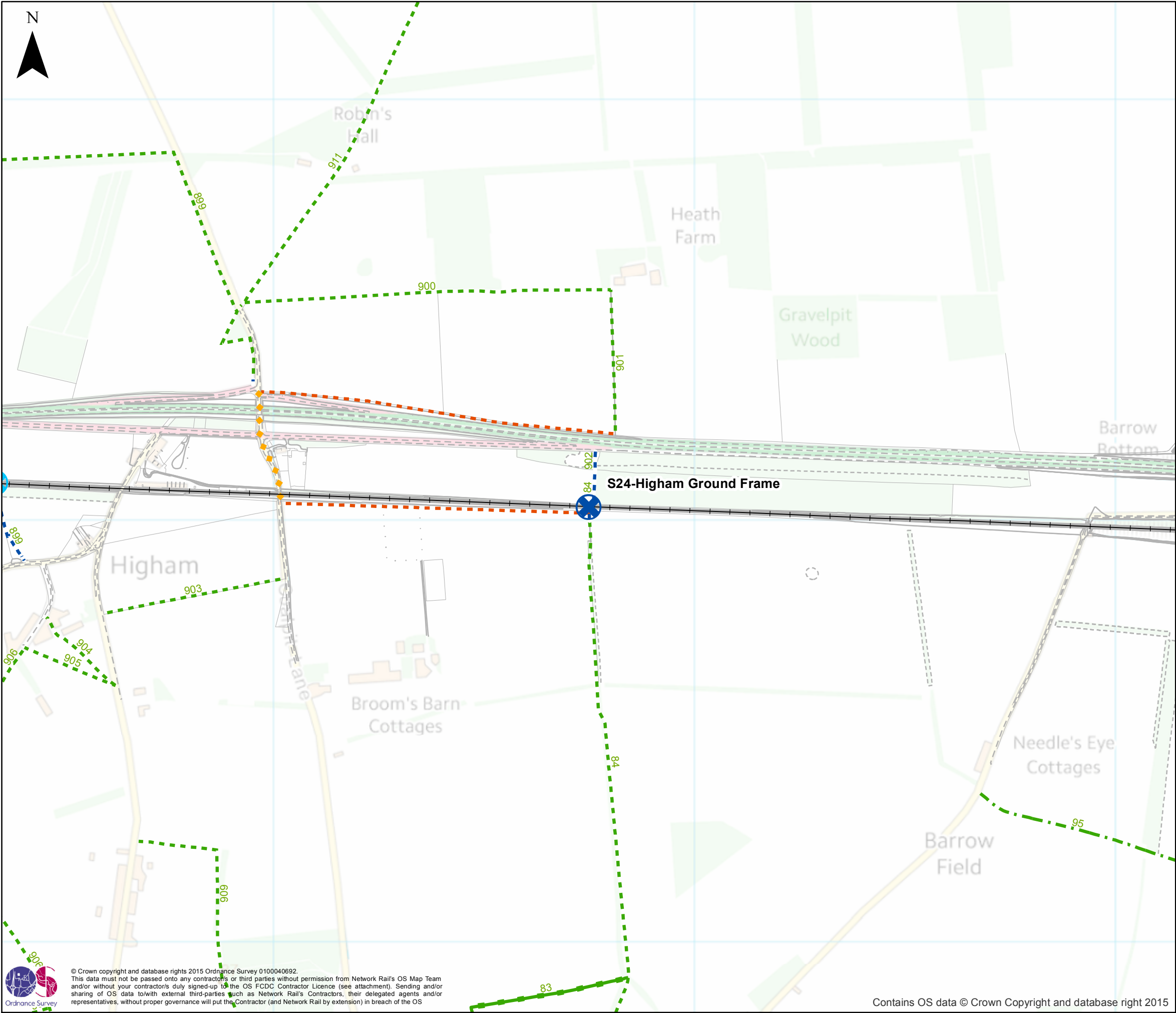
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GRIP 1 Proposals

S07 - Broomfield
Suffolk
Barham CP
SK/E-120/012/0#1

P2	02/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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Current level crossing

Other level crossing in study

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status

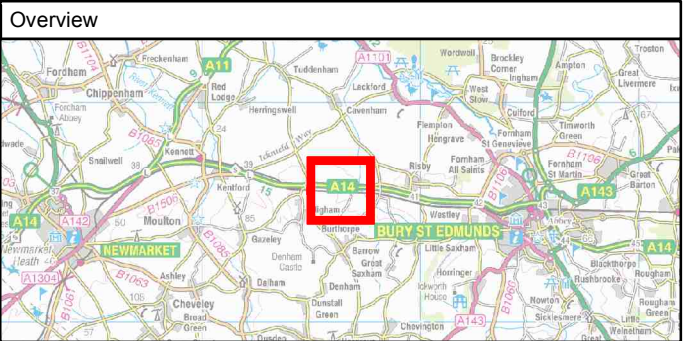
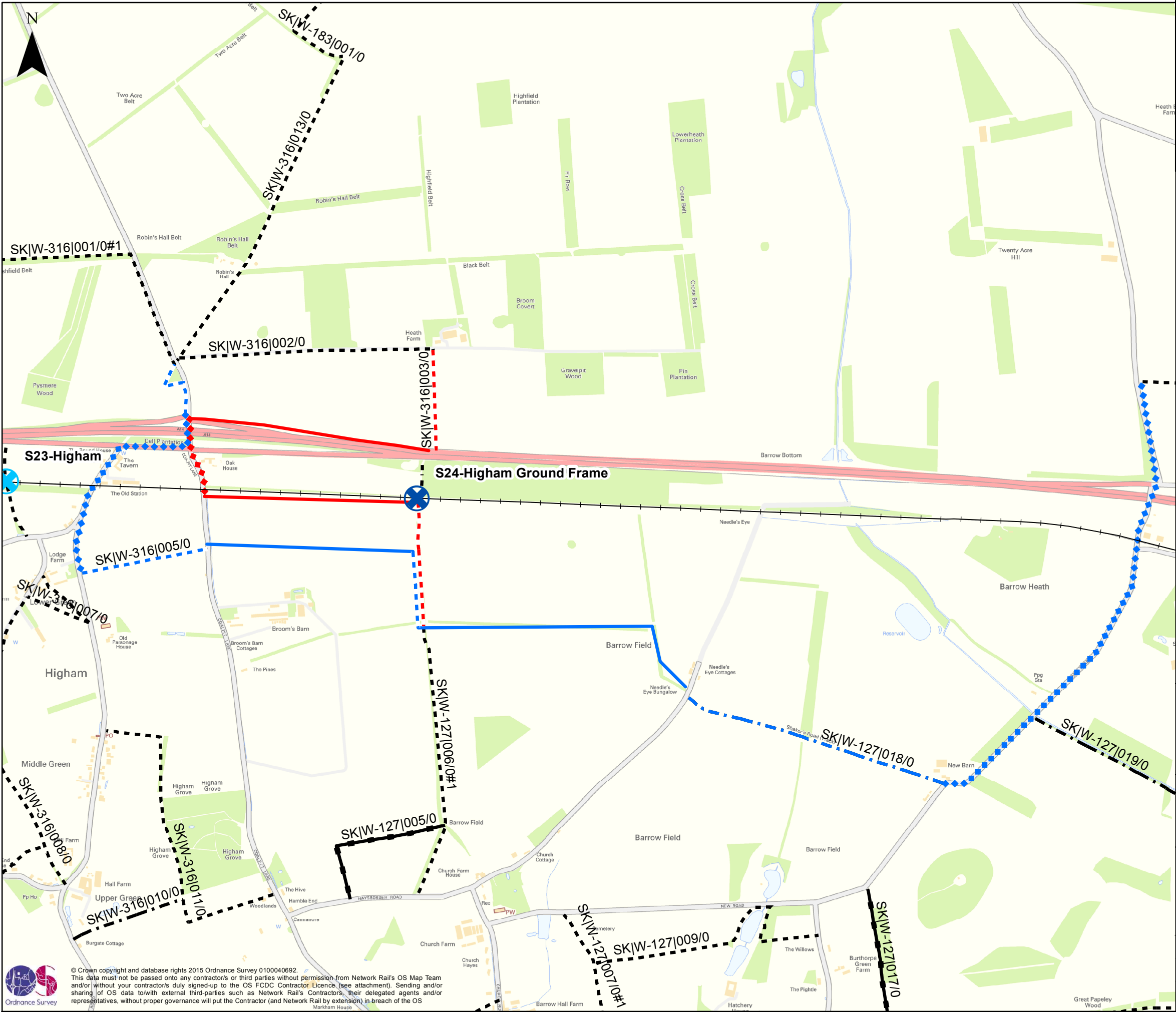
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GRIP 1 Proposals

S24 - Higham Ground Frame Suffolk Barrow CP

P2	15/02/2016	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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- Level crossing being discussed
- Other level crossing in the project

Alternative Options

- Red Route
 - Blue Route
- A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
 - Bridleway
 - Restricted byway
 - Byway open to all traffic
 - Highway (where used)
- If this line is in a colour, this denotes use by a route option (see above).



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S24 - Higham Ground Frame
Suffolk
Barrow CP

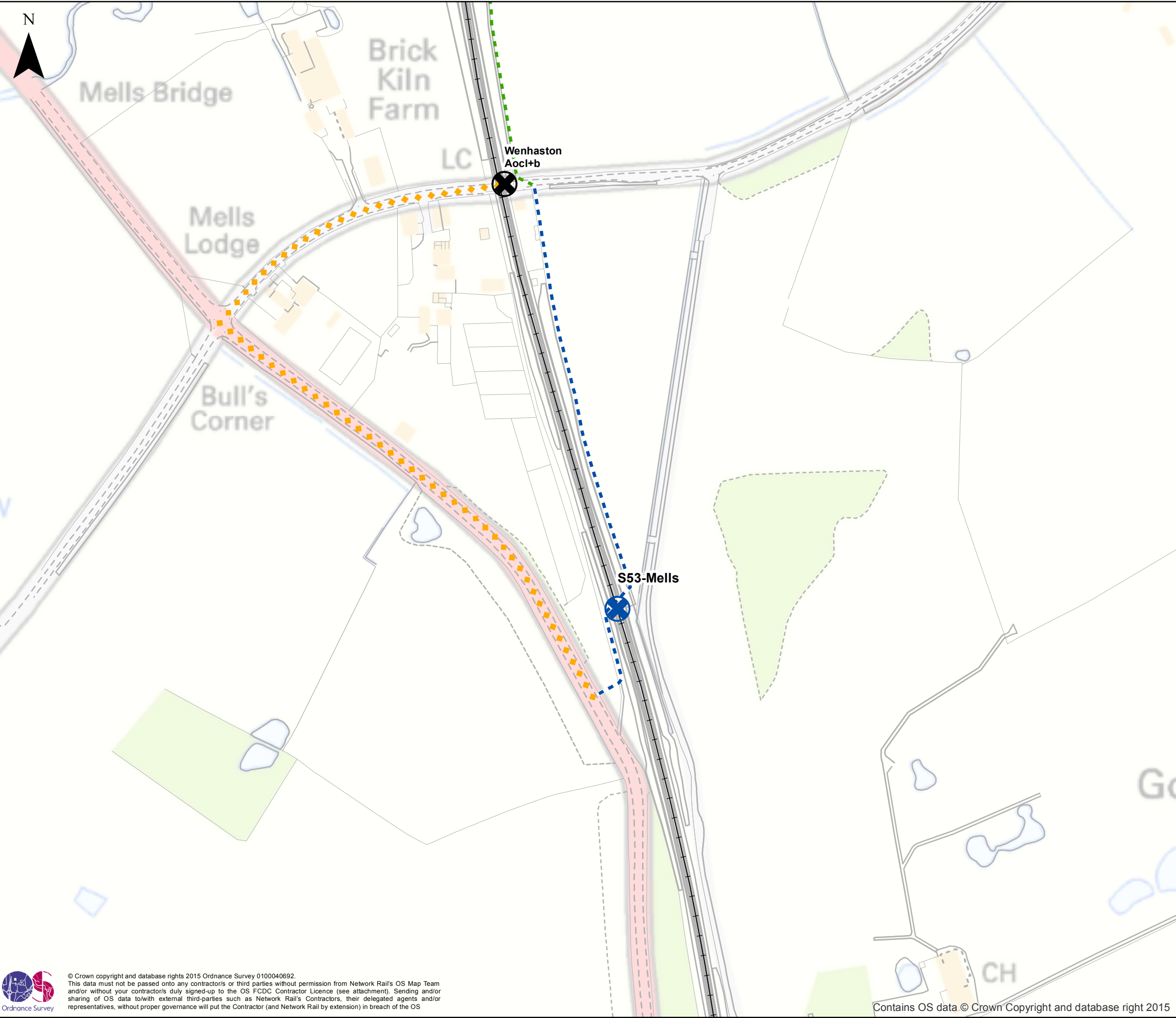
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P1	16/10/2015	For Information	WC	-	SJP	JAS
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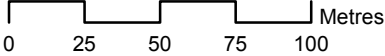
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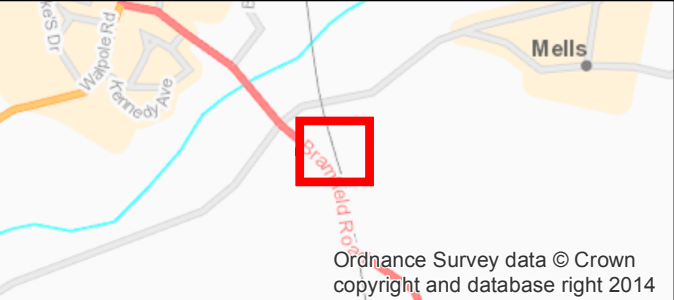
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Overview



- Current level crossing
- Other level crossing

Right of way/highway symbology by type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (only shown where a change of use is proposed)

Right of way/highway symbology by proposed status

- Creation
- Extinguishment
- Use of existing
- Change of status
- No change to existing status



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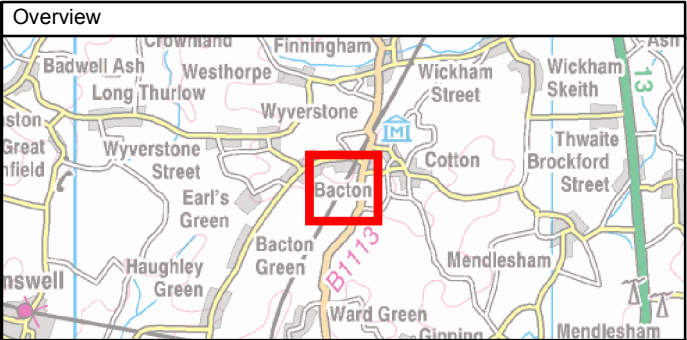
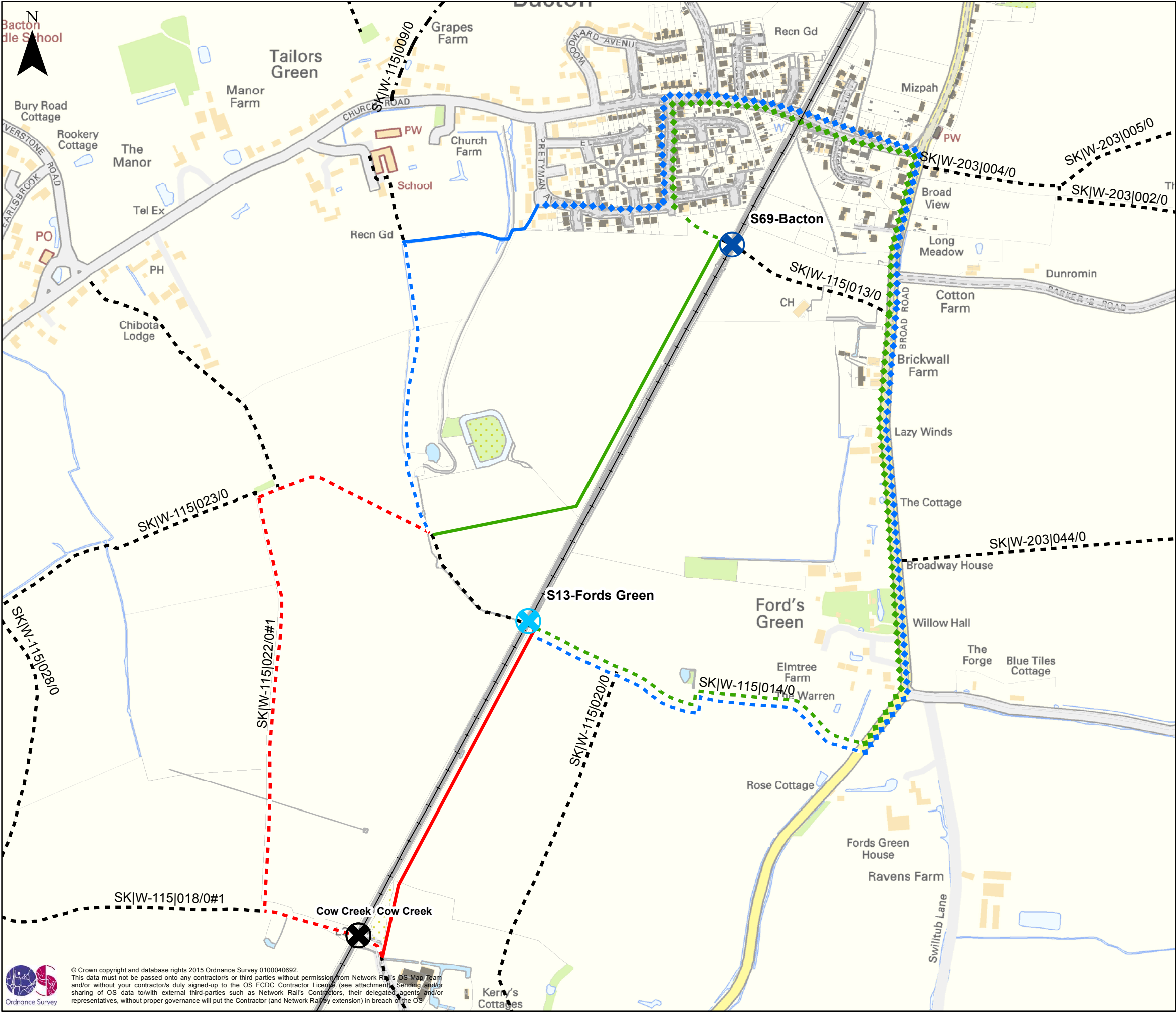
GRIP 1 Proposals

S53 - Mells
Suffolk
Wenhaston with Mells Ham*
SK/E-546/008/0

P2	04/12/2015	NR Comments	WC	-	SJP	JAS
P1	16/10/2015	For Information	WC	-	SJP	JAS
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Scale at A3
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Drawing No.
MMD-354763-S53-GEN-001



- Level crossing being discussed
- Other level crossing in the project
- Other level crossings

Alternative Options

- Red Route
- Blue Route
- Green Route

A solid line indicates a proposed new Public Right of Way (type to be determined).
Other line types using the above route option colours indicate use of existing Public Rights of Way.
Right of way extinguishments are still to be determined and are not shown for clarity given multiple options.

Existing Public Rights of Way

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (where used)

If this line is in a colour, this denotes use by a route option (see above).



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S69 - Bacton
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Bacton CP

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P1	16/10/2015	For Information	WC	-	SJP	JAS
Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd

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