TRANSPORT AND WORKS ACT 1992

TRANPORT AND WORKS (INQUIRIES PROCEDURE) RULES 2004

THE NETWORK RAIL (ESSEX AND OTHERS LEVEL CROSSING REDUCTION) ORDER

APPENDIX

TO PROOF OF EVIDENCE OF ANDREW KENNING

Document Reference	NR30/2

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Route Requirements Document
Essex Phase 1 & 2 TWAO – Mainline & Branchline

Route Requirements Document Template ref: NR/PSE/FRM/0240, Issue 03, 20th March 2014

Prepared by : Asset Engineer (level crossings)

..... Date: 11th February 2015
Andy Kenning

Checked by : Liability Negotiations Adviser

..... Date: 11th February 2015
Steve Day

Approved by : Sponsor

..... Date:
Sean Cronin

Accepted by : Route Enhancement Manager

..... Date: 12/2/15
Colin Conway

Optional Signatories

Endorsed by : Director of Route Asset Management

..... Date: 26/2/15
Eliane Algaard

Endorsed by : Level Crossing Manager WA

P.P. ..... Date: 26/02/15
Michael Doughty

Endorsed by : Level Crossing Manager GE

..... Date: 26/02/15
Shenel Bullock

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Document History

Issue	Date	Originator	Modification
1.0	11-02-15	Andy Kenning	Initial Issue

Endorsement

The information contained within this Route Requirements Document has been produced with the approval of the following Route Asset Managers:

Discipline	Name	Title	Signature	Date
Earthworks	Ian Payne	Senior Asset Engineer	Not required for this RRD as no gauging is involved.	n/a
E & P	Carl Hunt	Route Asset Manager		
Gauging	Steve Valentine	Senior Asset Engineer	Not required for this RRD as no gauging is involved.	n/a
Signalling	Mike Essex	Route Asset Manager		
Structures	Anthony Dewar	Route Asset Manager	Not required for this RRD as no gauging is involved.	n/a
Telecoms	Andy Coleman	Senior asset Engineer		
Track	Nigel Wilson	Route Asset Manager		

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1 Purpose

The purpose of this RRD is to further develop the opportunity to close level crossings on Anglia Route within the county of Essex RRD is to cover crossings that can be diverted or extinguished without the need to build bridges or large structures. These diversions or extinguishments shall be carried out using compulsory powers obtained by means of a Transport & Works Act Order.

1.1 Background Information

An over arching CRD has been produced to explain in detail the Anglia Route strategy for achieving a crossing reduction in CP5. This also explains the different phases of the strategy, separate RRDs are to be produced for each county.

1.2 Stakeholders

The following stakeholders have been identified:

Name	Role	Contact
Essex Council	Highway authority	Garry White garry.white@essexhighways.org Laurence Page laurence.page@essexhighways.org
Uttlesford	District Council	tbd
Brentwood	District Council	tbd
Epping Forest	District Council	tbd
Colchester Borough	District Council	tbd
Tendring	District Council	tbd
Office of Rail Regulator	Governing Body	Tom Wake 07798932452 Tom.Wake@orr.gsi.gov.uk
Environment Agency	Statutory consultee (flood risk etc.)	corperate.services@environment-agency.gov.uk
Natural England	Statutory consultee (environment)	consultations@naturalengland.org.uk
Steve Day	Liabilities Negotiations Advisor	07515624312
Katie Brown	Land Consents	07713301739
Hannah Briggs	Public Relations Manager	07850407340
Richard Schofield	Route Director (Anglia)	07880740567
Eliane Algaard	Director of Route Asset Management	07702913224
Carl Hunt	Route Asset Manager (E&P)	07733126578
Mike Essex	Route Asset Manager (Signalling)	07979540804
Nigel Wilson	Route Asset Manager (Track)	07767644024

Name	Role	Contact
Dave Flatman	Route Telecoms Engineer	07799864214
Wayne Underwood	Route Level Crossing Manager (WA)	07515621126
Bram Davenport	Level Crossing Manger	07808245673
Brendan Lister	Level Crossing Manger	07973524610
Sean Cronin	Sponsor	07825969553
The Ramblers	User Group (walkers)	Varies extensively by district
Sustrans	User Group (promoting non-motorised transport)	Nigel Brigham (Regional) nigel.brigham@sustrans.org.uk Kris Radley (Essex) kris.radley@sustrans.org.uk
Essex Bridleways Association	User Group (equestrians)	Julia Wilson juliawilson012@hotmail.co.uk Mick Brash mickbrash@tiscali.co.uk
Open Spaces Society	User Group (promoting access to land)	Christine Hunter christinehunter@oss.gov.uk
Auto Cycle Union	User Group (motor vehicles)	admin@acu.org.uk

2 General Description of the Route

2.1 Route Objectives (Problem Statement)

Closure difficulties

Public footpaths and bridleways can be closed by rail crossing diversion or extinguishment orders (expedient in the interests of public safety) or normal public path orders (diversion to make more commodious/better serve the landowner/not necessary). However, all of these are subject to challenge which can result in public inquiry, where success is not guaranteed. This is therefore a risky and time-consuming strategy. The legal costs of a basic application are around £3k–4k.

All pubic highways can be closed or downgraded by application to a magistrate's court, on the grounds that they are not needed for public use, or should be diverted. Again, this is risky as there is no guarantee magistrates will agree to make an Order. Cost of an application about £3k.

2.2 Route Definition

The best way to close public highways is through a Transport and Works Act Order. In that way, all proposed changes and consents can be consulted in advance, bridges provided where appropriate, and we can argue using the greater public benefit of improved rail services.

Some of the crossings listed in this remit are affected by proposed speed increases and some are subject to increased freight traffic. The proposed freight traffic will utilise trains up to 775metres in length, this causes problems when held at signals where the train may standback over level crossings.

There are a number of footpath crossings throughout Essex County which have the opportunity to be diverted or extinguished from crossing the railway line at grade to a grade separated crossing point.

Each crossing listed in section 2.3 shall have the following assessments carried out and providing that it can be achieved, the next assessment shall be carried out;

1. The diversion assessed for build ability based on the potential users and their physical abilities. This may be determined by other physical features along the footpath such as the presence of stiles or steps.
2. Diversity impact assessment needs to be carried out (to be completed by Network Rail team).
3. A brief design shall be produced to capture the alterations required.
4. Land clearance application made and approved.
5. The cost of each diversion shall be created against the design. These costs shall include recovery of all the current crossing assets (including whistle boards if fitted) and making good the boundary fencing to ensure there are no trespass issues following the diversion. Costs shall also include if any alterations required to the OLE (this shall be indicative at this stage, AIP shall be produced at GRIP3).
6. Environmental impact assessment for the impact of the diversion / extinguishment / downgrading.
7. Pre-Consultation for the diversion / extinguishment.
8. It is assumed that the diversions can be carried out within the Network Rail land ownership boundary. If not then land owner consent will be required for route of public path.
9. If land consents are required a land search shall be completed to identify the land owner/s.

2.3 Boundaries and Relationships

Strategic Route:	D
Route Number:	
Operating Route:	Anglia
ELR and Mileage:	BGK, LTN1, BRA, COC, TWN, FSS, WIS,
OS Ref:	
Asset Type:	Level Crossing
Asset Address (if applicable)**:**	

The crossings within this remit are as follows;

Phase 1 - Mainlines

Name	Location	Type	Status	Proposal
Old Lane	BGK 20m 71ch	FPS	Public Footpath	Extinguishment
Camps	BGK 21m 23ch	FPS	Public Footpath	Diversion
Sadlers	BGK 21m 45ch	FPS	Public Footpath	Diversion
Parndon Mill	BGK 22m 09ch	FPX	Public Footpath (Sleeping Dog)	Extinguishment

Name	Location	Type	Status	Proposal
Fullers End	BGK 35m 67ch	FPWM	Public Footpath	Diversion
Elsenham Emergency Hut	BGK 35m 63ch	FPO	Public Footpath	Extinguishment (Essex to create new)
Ugley Lane	BGK 37m 13ch	UWCT	Accommodation	Extinguishment
Henham	BGK 37m 72ch	FPS	Public Footpath	Diversion
Dixies	BGK 40m 59ch	FPG	Public Footpath	Extinguishment
Windmills	BGK 41m 26ch	FPS	Public Footpath	Extinguishment
Wallaces	BGK 42m 38ch	FPG	Private Footpath	Extinguishment
Littlebury Gate House	BGK 43m 60ch	FPG	Public Footpath	Diversion
Church Lane	LTN1 24m 68ch	CCTV	Public Road	Diversion
Parsonage Lane (Margaretting)	LTN1 25m 39ch	FPWM	Occupation & Public Footpath	Diversion of footpath, & extinguishment of all other rights
Maldon road	LTN1 26m 24ch	FPS	Public Footpath	Extinguishment
Borham	LTN1 32m 57ch	FPS	Public Bridleway	Extinguishment
Noakes	LTN1 32m 77ch	FPO	Public Footpath	Extinguishment
Potters	LTN1 40m 15ch	FPK	Public Footpath	Diversion
Snivillers	LTN1 40m 61ch	BW	Public Bridleway	Extinguishment
Hill House No.1	LTN1 43m 78ch	FPS	Public Footpath	Diversion
Great Domsey	LTN1 44m 26ch	FPS	Public Footpath	Diversion
Long Green	LTN1 45m 66ch	FPWM	Public Footpath	Diversion to Bridge[1]
Church No.1	LTN1 46m 06ch	FPS	Public Footpath	Extinguishment
Church No.2	LTN1 47m 43ch	FPS	Public Footpath	Diversion
Barbara Close	SSV 38m 21ch	FPW	Public Footpath	Extinguishment
Puddle Dock	FSS2 17m 17ch	FPS	Public Footpath	Diversion
Whipps Farm	FSS2 17m 45ch	FPS	Public Footpath	Diversion
Brown & Tawse	FSS2 18m 70ch	FPW	Public Footpath	Diversion
Ferry	FSS2 29m 29ch	FPW	Public Footpath	Diversion
Brickyard Farm	FSS2 29m 34ch	FPW	Public Footpath	Diversion
Woodgrange Close	FSS3 37m 12ch	FPW	Public Footpath	Extinguishment
Motorbike	TLL 32m 05ch	FPW	Public Footpath	Diversion

Phase 2 – Branchlines

Name	Location	Type	Status	Proposal
Cousins No.1	BRA 19m 07ch	FPS	Public Footpath	Diversion
Cranes No.1	BRA 20m 12ch	FPS	Public Footpath	Diversion
Cranes No.2	BRA 20m 51ch	FPS	Public Footpath	Extinguishment
Essex Way	BRA 21m 49ch	FPS	Public Footpath	Diversion
Battlesbridge	WIS 31m 20ch	FPW	Public Footpath	Diversion

[1] Finalising current arrangements

Name	Location	Type	Status	Proposal
Woodham Fen	WIS 33m 56ch	FPW	Public Footpath & Occupation	Diversion of footpath
Creaksea Place No.1	WIS 42m 42ch	FPW	Public Footpath	Diversion
Hunwick	COC 52m 68ch	FPS	Public Footpath	Extinguishment
Pagets	COC 56m 27ch	FPW	Public Footpath	Extinguishment
Sandpit	COC 57m 20ch	FPS	Public Footpath	Diversion
High Elm	COC 58m 32ch	FPS	Public Footpath	Diversion
Frating Abbey	COC 60m 21ch	FPS	Public Footpath	Diversion
Great Bentley Footpath	COC 60m 75ch	FPS	Public Footpath	Diversion
Lords No.1	COC 61m 07ch	FPS	Public Footpath	Diversion
Bluehouse	TWN 66m 78ch	FPS	Public Footpath	Diversion
Wheatsheaf	MAH 64m 50ch	FPK	Public Footpath	Diversion
Maria Street	MAH 70m47ch	FPW	Public Footpath	Extinguishment
Church House Farm	SUD 47m 50ch	FPS	Public Bridleway	Diversion
Thornfield Wood	SUD 50m 56ch	FPW	Public Footpath	Extinguishment
Golden Square	SUD 51m 27ch	FPS	Public Footpath	Diversion
Josselyns	SUD 52m 11ch	FPS	Public Footpath	Diversion
Bures	SUD 53m 36ch	FPS	Public Footpath	Diversion
Lamarsh Kings Farm	SUD 54m 41ch	FPS	Public Footpath	Diversion

2.4 Assumptions, Dependencies, Constraints & Risks

2.4.1 Assumptions

Reference	Details
A-ESSEX-1	That the diversionary routes are buildable
A-ESSEX-2	That funding will be made available for the diversions to be built
A-ESSEX-3	That the diversions can be carried out within the existing Network Rail land ownership
A-ESSEX-4	Any required land consents will be available

2.4.2 Dependencies

Reference	Details
D-ESSEX-1	That Liabilities are able to support the TWAO application

2.4.3 Constraints

Reference	Details
C-ESSEX-1	This requirement is to be restricted to the County of Essex.

C-ESSEX-2	This remit is not to cover the construction of large structures such as bridges or underpasses.

2.4.4 Risks

Reference	Details
R-ESSEX-1	Not all the diversionary route will be buildable
R-ESSEX-2	That there may be alternative proposals from external stakeholders
R-ESSEX-3	That the secretary of State for Transport will not sign off the order

2.5 Whole Life Cost Analysis

Whole Life Cost Modelling (WLCM) will be applied to the later phases. Phases 1&2 do not need WLCM produced for them provided that the over all cost is equal to or less than the risk reduction cost.

Alterations to the Overhead Line Equipment (OLE) shall be subject to a Cost Benefit Analysis to understand the benefit in altering the OLE wire heights. This is to compare the options of altering a crossing at a time, or waiting until either wire renewals, or other improvement projects.

2.6 Route Key Milestones and Configuration States

It is anticipated that Phase 1 & 2 crossings shall be identified by the end of CP5 year 1. During CP5 year 2 it is expected that Phase 1 & 2 crossings shall be developed into buildable solutions and costed. Key milestones would be;

- Conformation that the diversions are buildable
- Design for each diversion that is buildable
- Costs produced for each of the designed diversions

2.7 Route Acceptance Strategy

This scheme shall follow GRIP and acceptance for each stage shall be at each stage gate as shown in the project programme.

Once the diversions have been designed, consulted and costed they shall be presented to the Sponsor for acceptance and inclusion in the Transport & Works Order, before the completion of GRIP3. This will allow the Sponsor to ‘group’ projects into TWAO to keep costs down and provide a strategic approach to the TWAO application.

2.8 Route Security Assessment

Nothing identified at the time of writing.

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3 Route Requirements				
		3.1 Deliverables				
RR-EssexP1&P2-1101	RAM/Sponsor	The deliverables listed in Appendix A shall be produced and delivered at the required GRIP stage.	High	Deliverables listed in Appendix A are produced to the satisfaction of the RAM / Sponsors at the identified GRIP stages.	None identified	None
		3.2 Safety Requirements				
RR-EssexP1&P2-1121	CR-CP5LX-1101	The Scheme shall be delivered in accordance with the Common Safety Method (CSM)	High	- Preliminary System Definition - CSM Assessment Completed and Category assigned - CSM Deliverables completed id the scheme deemed to be “significant change”.	None identified	None
RR-EssexP1&P2-1122	CR- CP5LX -1102	The scheme shall be delivered in accordance with the CDM Regulations	High	- Personnel (posts) are designated and responsibilities discharged - Demonstrable evidence of compliance is provided	Construction (Design and Management) Regulations 1994	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
RR-EssexP1&P2-1123	CR- CP5LX -1103	All meetings in connection with this project shall have a standing agenda item of Safety at the beginning of each meeting.	High	Meeting agendas and minutes shall be held as part of the project documentation file.	None identified	None
RR-EssexP1&P2-1124	CR- CP5LX -1104	The closed level crossings shall be inaccessible to the public and appropriately fenced over.	High	Compliant to the Company standard for lineside fencing.	None identified	None
		3.3 General Scheme - Requirements				
RR-EssexP1&P2-1131	CR- CP5LX -1111	The Sponsor Instruction and Client Requirements Document Contents shall be adhered to.	High	Demonstrable evidence of compliance.	None identified	None
RR-EssexP1&P2-1132	CR- CP5LX -1112	The scheme shall be delivered in accordance with GRIP	High	Completed and approved GRIP stage gate at intervals laid down in the Sponsor Instruction.	None identified	None
RR-EssexP1&P2-1133	CR- CP5LX -1113	The diverted / extinguished rights of way shall be updated on the definitive maps for the county	High	Definitive map updated to show correct status.	None identified	None
RR-EssexP1&P2-1134	CR- CP5LX -1114	Design Guidance for Accessibility for Reduced Mobility shall be followed during early development and design.	High	All Accessibility requirements are provided (including step free access to new platforms and fire escape	None identified	Only used where access to a station is required

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
				arrangements). Where this is not possible mitigation measures and safe systems must be provided.		
RR-EssexP1&P2-1135	CR- CP5LX -1115	Governing act regarding equality. In relation to this project particular attention must be given to provide access for those with reduced mobility and sight.	High	Demonstrable evidence of compliance and inclusion in development and design.	None identified	None
RR-EssexP1&P2-1136	CR- CP5LX -1116	New footpath widths shall be 2metres wide as a minimum	High	New path to be of the minimum width.	None identified	None
RR-EssexP1&P2-1137	CR- CP5LX -1117	Any new bridleway paths shall be 3metres wide as a minimum	High	New path to be of the minimum width.	None identified	None
RR-EssexP1&P2-1138	CR- CP5LX -1118	Any footpath crossing that appears to have been abandoned shall be planned to be extinguished in phase 1 or phase 2.	High	No abandoned footpaths left on the Anglia Route.	None identified	None
RR-EssexP1&P2-1139	CR- CP5LX -1119	Any footpath / bridleway crossing that have a near and practical alternative crossing point that provides a better level of protection shall be diverted in phase 1 or phase 2.	High	No footpaths / bridleways are left remaining when there is a close by alternative crossing point.	None identified	None
RR-EssexP1&P2-1140	CR- CP5LX -1120	Any footpath / bridleway that can not be removed from the railway network in phase 1 or	Medium	Footpath / bridleways that were not extinguished or	None identified	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		phase 2 shall be developed for phase 3.		diverted are planned to be provided with a bridge.		
RR-EssexP1&P2-1141	CR- CP5LX -1123	Diversity Impact Assessment	High	Production of a report detailing the diversity impact of the proposed changes.	None identified	None
		3.4 Network Rail Asset Requirements E&P				
RR-EssexP1&P2-1201	CR-CP5LX-1171	Where a level crossing is being removed the Overhead Line Equipment (OLE) contact wires shall be adjusted to be as near to the nominal wire height of 4.7metres as practical.	Low	Contact wires are at the optimum height for that area of line.	A cost benefit analysis shall be applied to understand the operational benefits of altering the wire heights per crossing	That the current wire heights are compliant to standards (run-ins / run-outs).
RR-EssexP1&P2-1202	CR-CP5LX-1172	Where a level crossing is being removed and the current (OLE) contact wires arrangements are not compliant to standard, the wire heights shall be adjusted to be as near to the nominal wire height of 4.7metres as practical.	High	Contact wires are at the optimum height for that area of line.	Records of existing deficient wire heights (including run-in / run-outs)	
RR-EssexP1&P2-1203	CR-CP5LX-1173	Where new bridges are to be constructed they shall be bonded to the traction return where appropriate.	High	New structures are suitably bonded to be compliant to Network Rail company standards.	None identified	

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3.5 Network Rail Asset Requirements Signalling				
RR-EssexP1&P2-1211	CR-CP5LX-1182	Where crossings are removed that have telephones fitted the signallers display system (diagram, panel or VSCS) shall be updated to shown the removal.	High	Signallers display system updated to reflect the current state of the infrastructure.	None identified	None
RR-EssexP1&P2-1212	CR-CP5LX-1183	Where crossings are removed the Signalling RAM shall be informed so that a plan can be put in place to get them removed from the Signalling diagrams (if shown).	High	That it is recorded where footpath or UWCs are recovered and the Signalling RAM is presented with this information.	None identified	These alterations shall be managed by means of a records deficiency form and updated when the record is next worked on.
RR-EssexP1&P2-1213	CR-CP5LX-1184	Where whistle boards are to be removed, the Signalling RAM shall be informed so that a plan can be put in place to remove them from the signalling diagrams.	High	That it is recorded where whistle boards are recovered and the Signalling RAM is presented with this information.	None identified	These alterations shall be managed by means of a records deficiency form and updated when the record is next worked on.

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3.6 Network Rail Asset Requirements Track				
RR-EssexP1&P2-1221	CR-CP5LX-1191	Crossing deck (if fitted) shall be removed (including edge beams, if fitted) and track inspected to ensure that all the track components are still serviceable.	High	No evidence of crossing on site & track components signed as fit for purpose.	None identified	None
RR-EssexP1&P2-1222	CR-CP5LX-1192	Where a crossing deck has been removed sleeper spacing shall be checked and if required corrected with serviceable spares to match the existing assets.	Medium	Sleeper spacing matches that of the approaches and all track components are of the same type.	None identified	None
RR-EssexP1&P2-1223	CR-CP5LX-1193	Where level crossings have been removed the ballast shoulder and cribs shall be reinstated to provide suitable track support	High	Track support system shall be in accordance with Network Rail Company standard.	None identified	None
RR-EssexP1&P2-1224	CR-CP5LX-1194	Where signalling equipment has been involved and train detection is reduced, any redundant Insulated Rail Joints (IRJ) shall be removed from the track. If in Continuous Welded Rail the rail shall be stressed to Level 1 (if <36metres of new rail) or level 2 (if > 36metres).	High	Redundant IRJs removed and stressing certificates provided	None identified	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3.7 Network Rail Asset Requirements Telecoms				
RR-EssexP1&P2-1231	CR-CP5LX-1201	Where telephones are present they shall be recovered in working order and returned to be offered to the RCE and or NRT Central Stores (tie cabling shall be recovered and scraped).	High	Phones, posts, and bases removed including cabling.	None identified	None
RR-EssexP1&P2-1232	CR-CP5LX-1202	Where telephones are displayed on a telephone concentrator, these shall be removed from the system.	High	Telephone concentrator updated to reflect the current state of the infrastructure.	None identified	None
		3.8 Operational Requirements				
RR-EssexP1&P2-1241	CR-CP5LX-1231	Where whistle boards are to be removed these shall only be removed once published in the WON.	High	Whistle boards removed from the infrastructure.	None identified	None
RR-EssexP1&P2-1242	CR-CP5LX-1232	Where crossings to be removed are fitted with a phone, this shall only be done once it has been published in the WON.	High	Sectional Appendix updated to reflect the current state of the infrastructure.	None identified	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
RR-EssexP1&P2-1243	CR-CP5LX-1233	Where crossings to be removed are fitted with a phone, this shall only be done once Network Change has been done to remove them from the Sectional Appendix	High	Approved Network Change	None identified	None
		3.9 Performance Requirements				
RR-EssexP1&P2-1251	CR- CP5LX -1131	Any temporary TSR's that are in place as a result of the crossing having insufficient sighting shall be removed once the crossing is closed.	Medium	Removal of the TSR	Operational publications will detail where and what speeds are in force.	None
RR-EssexP1&P2-1252	CR- CP5LX -1132	Any operational restrictions regarding the standing of trains at signals due to the train blocking the footpath shall be removed.	Medium	Removal of local instruction	None identified	Only applicable to crossing where standage is an issue
RR-EssexP1&P2-1253	CR- CP5LX -1133	Where a PSR exists due to sighting requirements of a crossing that is being removed, the project shall investigate the potential of removing the PSR and increasing the line speed.	Low	Increase in line speed over the section of line where the crossing used to be located.	None identified	That the other railway infrastructure can withstand a speed increase.

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3.10 Environmental Requirements				
RR-EssexP1&P2-1261	CR-CP5LX-1141	Adherence to corporate policies in development, design and construction.	High	Production of the Environmental Impact Assessment for suitable crossings	None identified	None
		3.11 Reliability, Availability, Maintainability Requirements				
RR-EssexP1&P2-1281	CR-CP5LX-1161	Where crossings are closed; Ellipse shall be updated to remove the Maintenance Schedulable Tasks (MST) from the maintainers work bank. This shall cover all disciplines.	High	Ellipse data updated	None identified	None
RR-EssexP1&P2-1291	CR-CP5LX-1162	Where crossings are closed ALCRM is updated to show the crossing as closed and no longer part of the network.	High	ALCRM data updated	None identified	None
		3.12 Maintenance Requirements				
RR-EssexP1&P2-1301	CR-CP5LX-1151	Any roadway that is built to be used as a public highway shall be built to be adopted by the Highway Authority for on going maintenance	High	Adoption of the new roadway by the Highways Authority	None identified	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
RR-EssexP1&P2-1302	CR-CP5LX-1152	Where assets are removed from the railway the appropriate data base shall be update to reflect the current state of the railway. This shall include (but not limited to) such systems as Ellipse, GEOGIS.	High	Asset data records correctly showing the status of the assets.	None identified	None

Appendix A – Deliverables

See attached project characterisation spreadsheet detailing the project deliverables.

Appendix B – References

Anglia CP5 Level Crossing Reduction Strategy (CP5 Xing Reduction – Issue 1).

See pages 22 to 67 for maps of the crossings and their proposed alterations.

Appendix C - Glossary

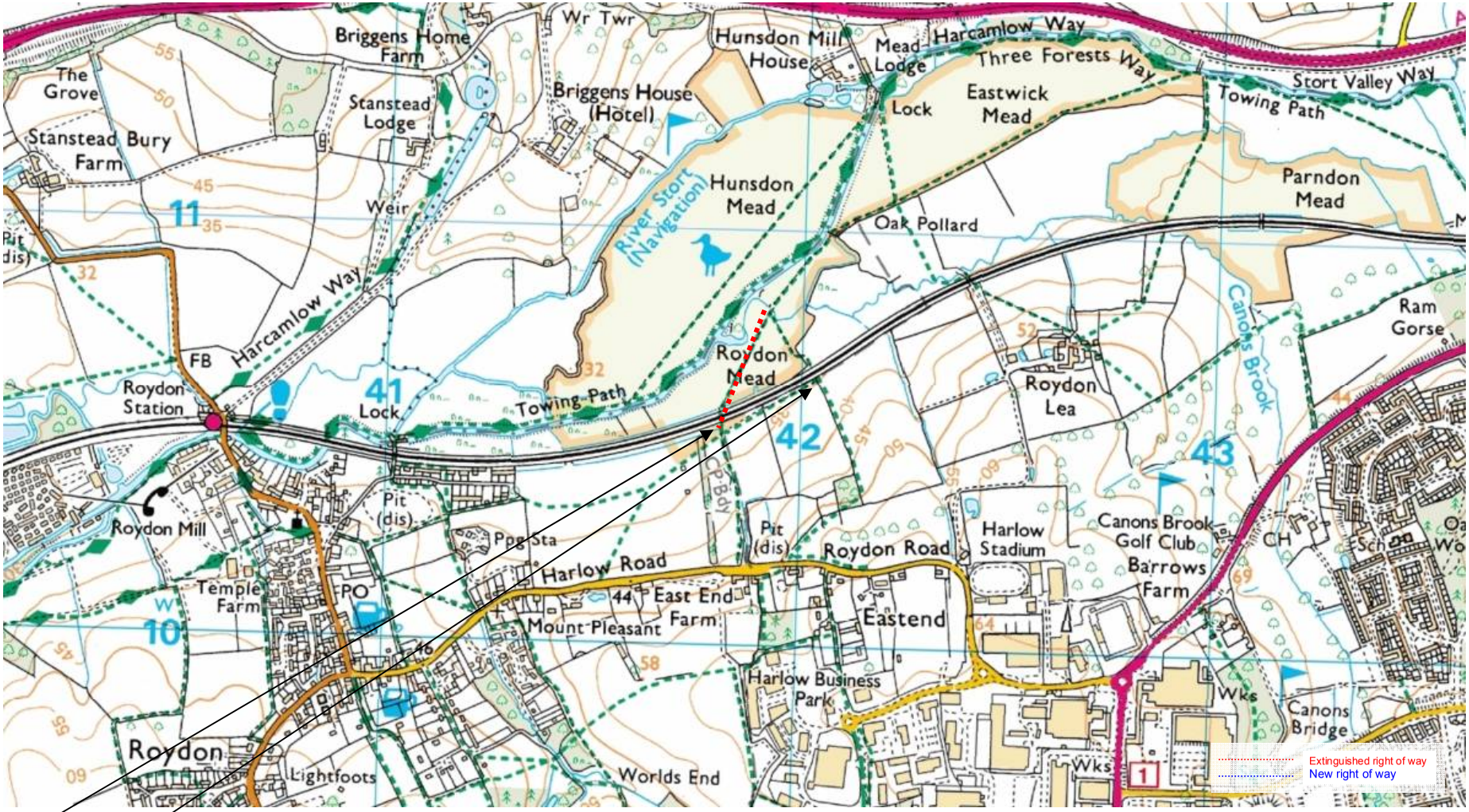
Abbreviation	Description
CRD	Client Requirements Document
DRRD	Detailed Route Requirements Document
IP	Infrastructure Projects
RAM	Route Asset Manager
RRD	Route Requirements Document
WLC	Whole Life Cost
TWAO	Transport & Works Act Order
PRoW	Public Right of Way
ALCRM	All level Crossings Risk Model
WON	Weekly Operating Notice
RCE	Route Communications Engineer
NRT	Network Rail Telecoms
OHLE	OverHead Line Equipment
VSCS	Video Screen Control System
IRJ	Insulated Rail Joint
TSR	Temporary Speed Restriction
PSR	Permanent Speed Restriction

Appendix D - Whole Life Cost Analysis

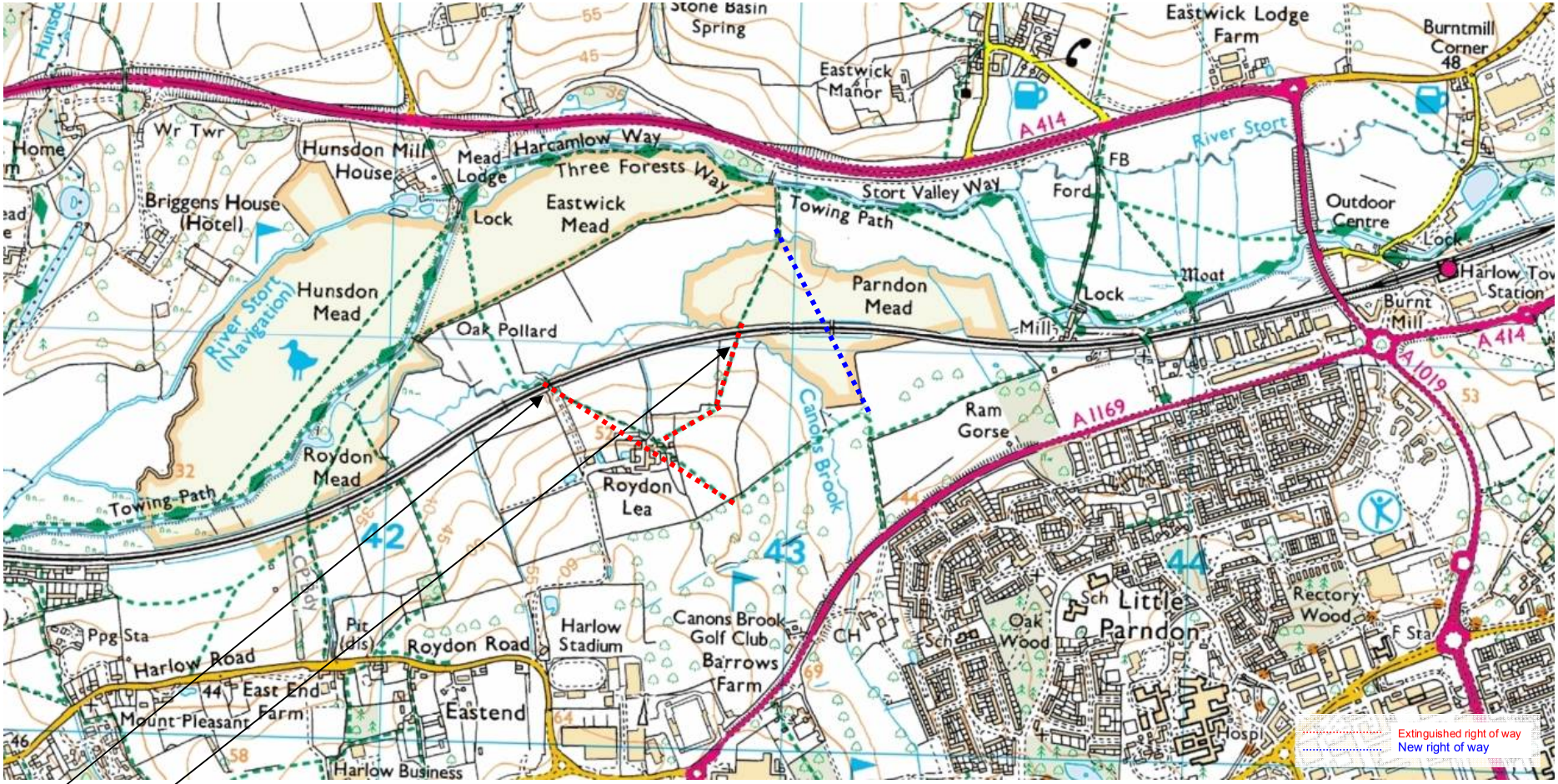
Not applicable to this phase.

Appendix E - Additional Information

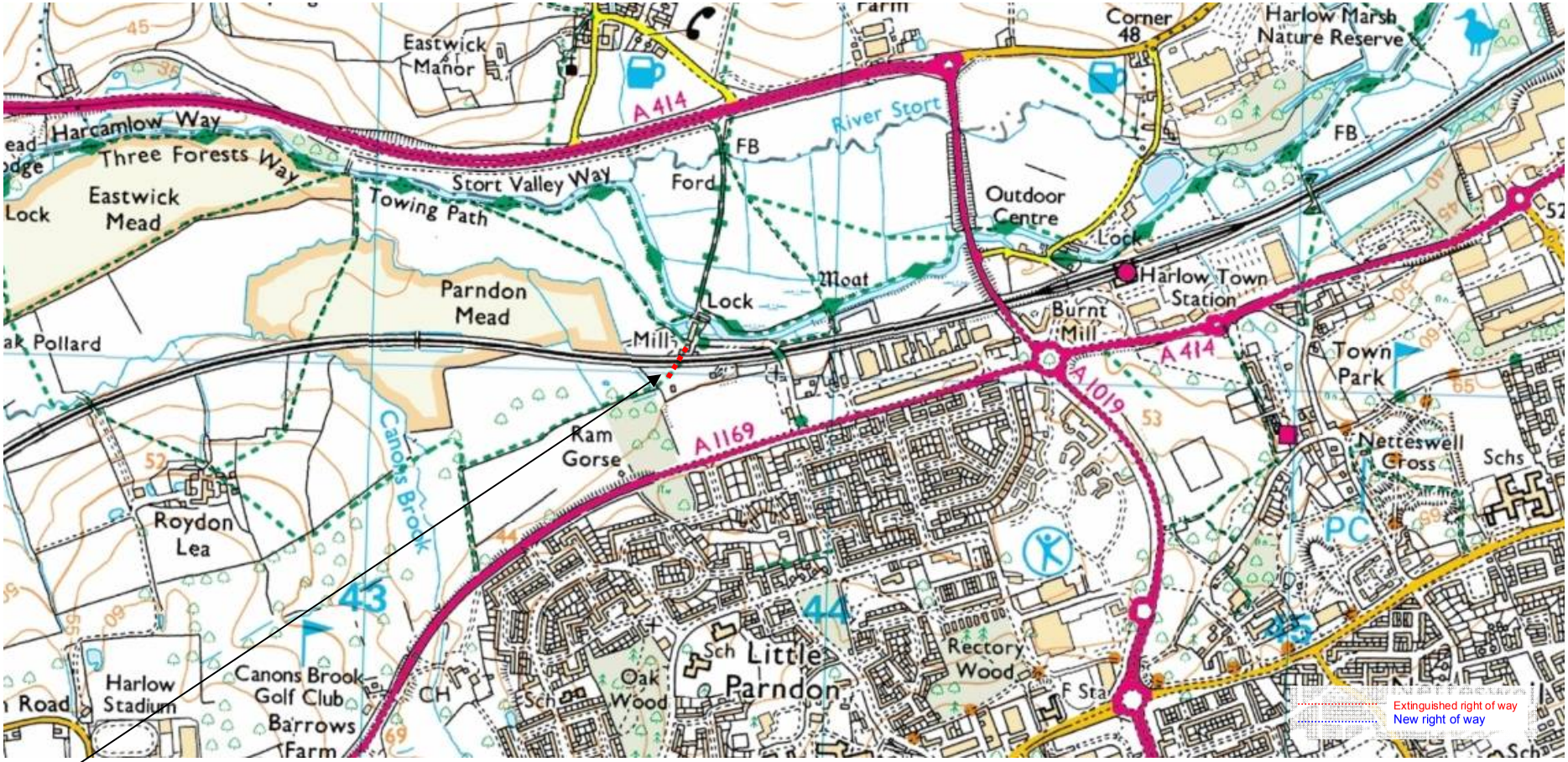
Nothing identified at the time of writing.



Old Lane Wildes

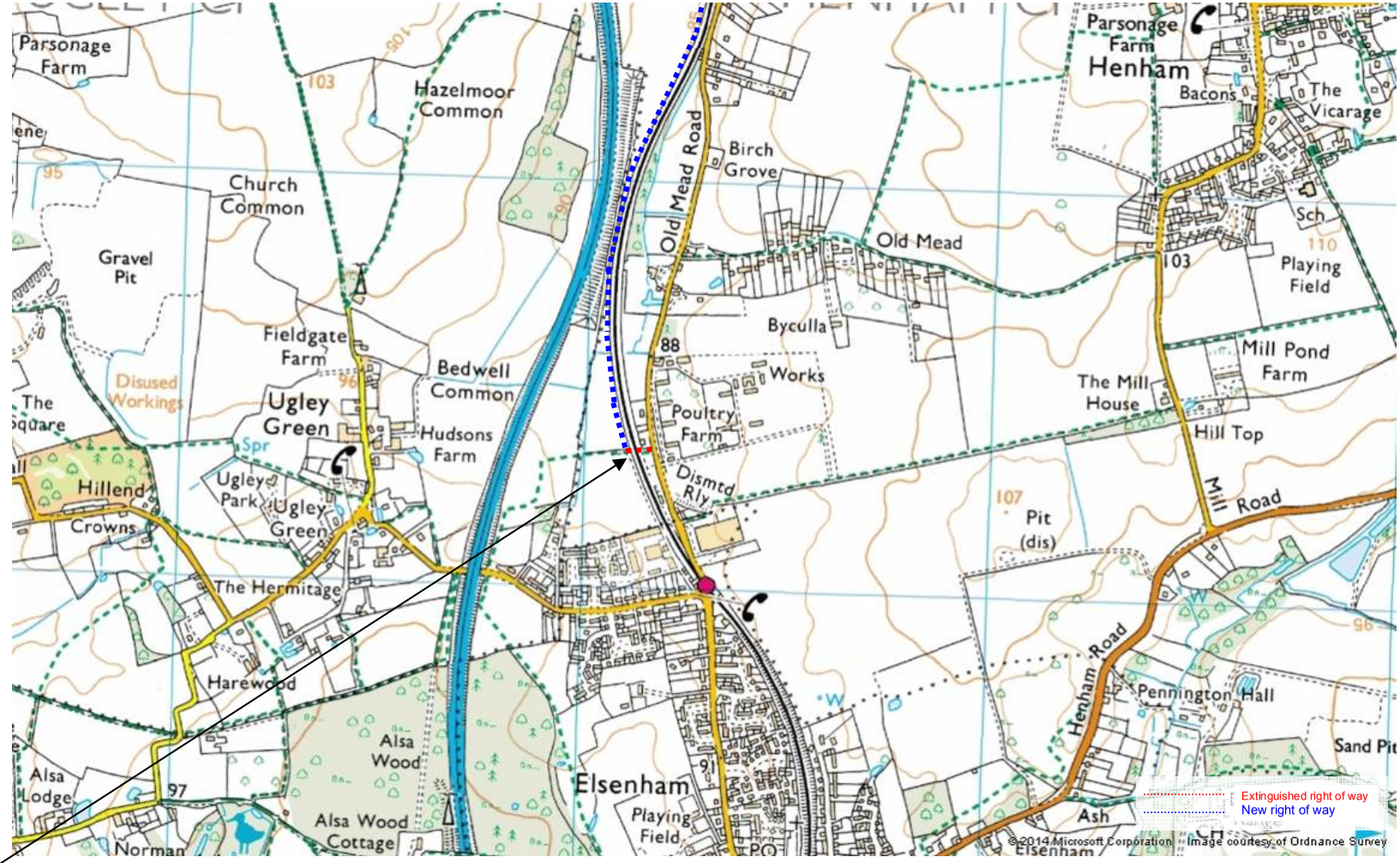


Camps Sadlers

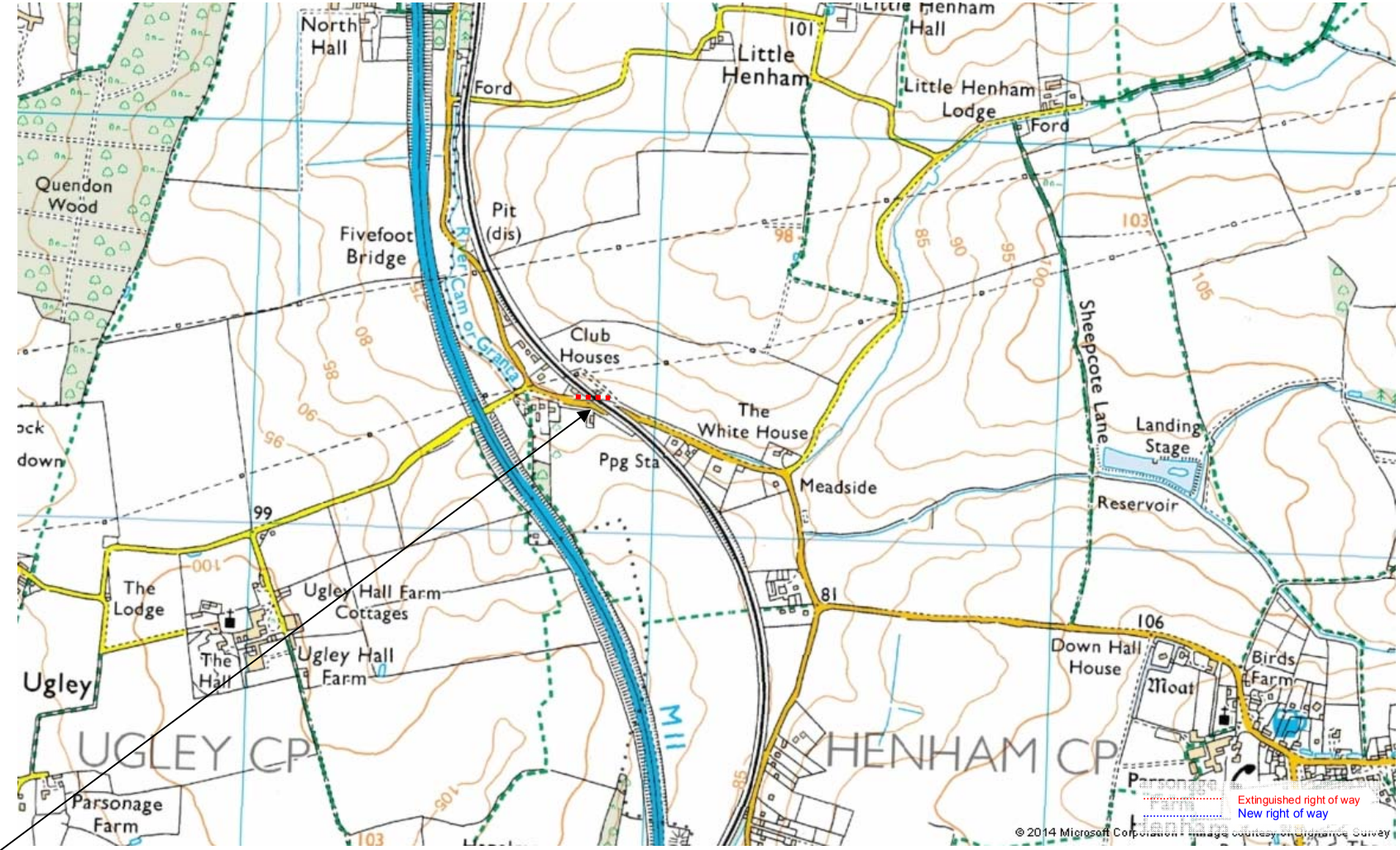


Parndons Mill

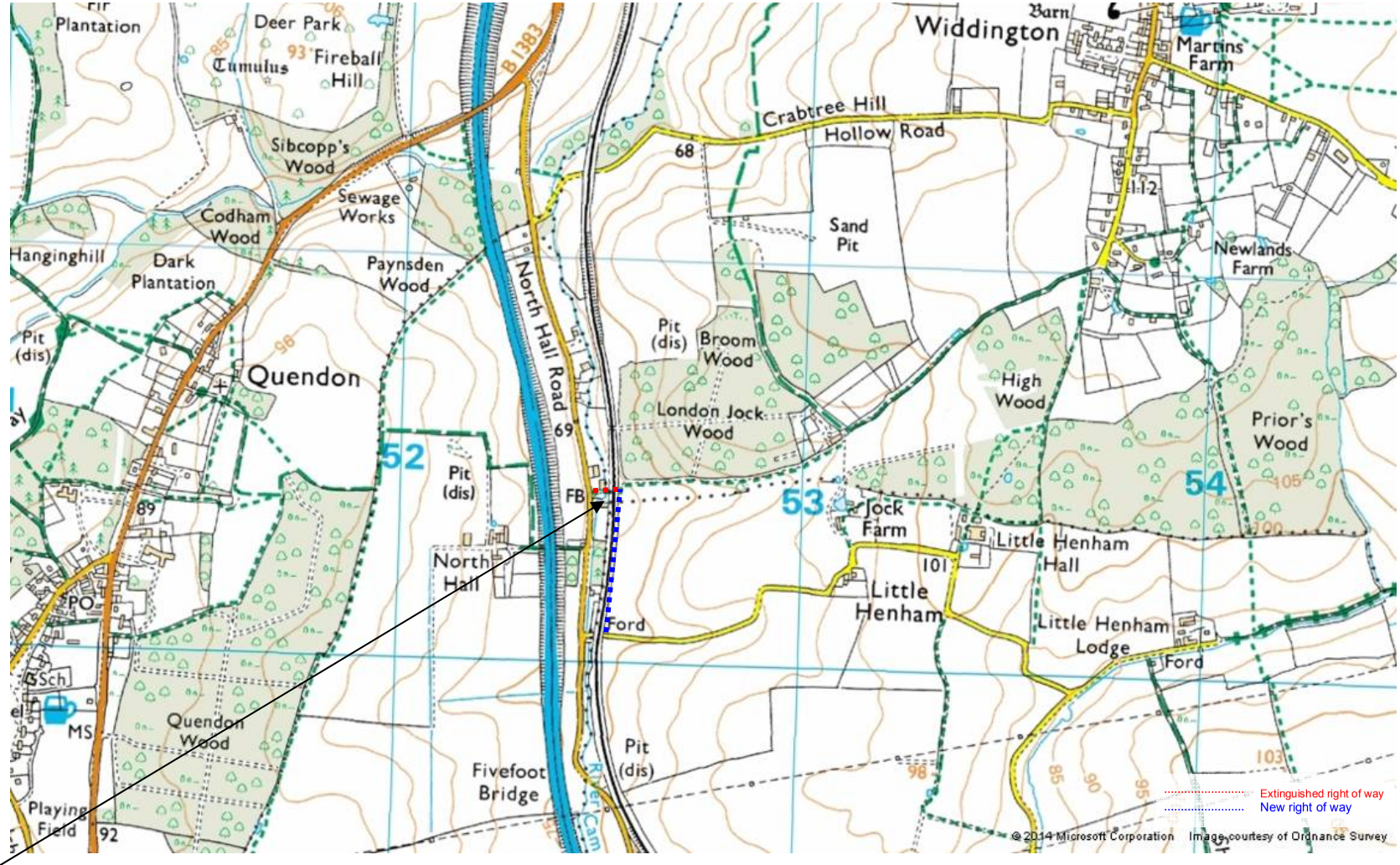
Fullers End (diversion to underbridge to the south)



Elsenham Emergency FP (link to edges (FP7 west of the line))

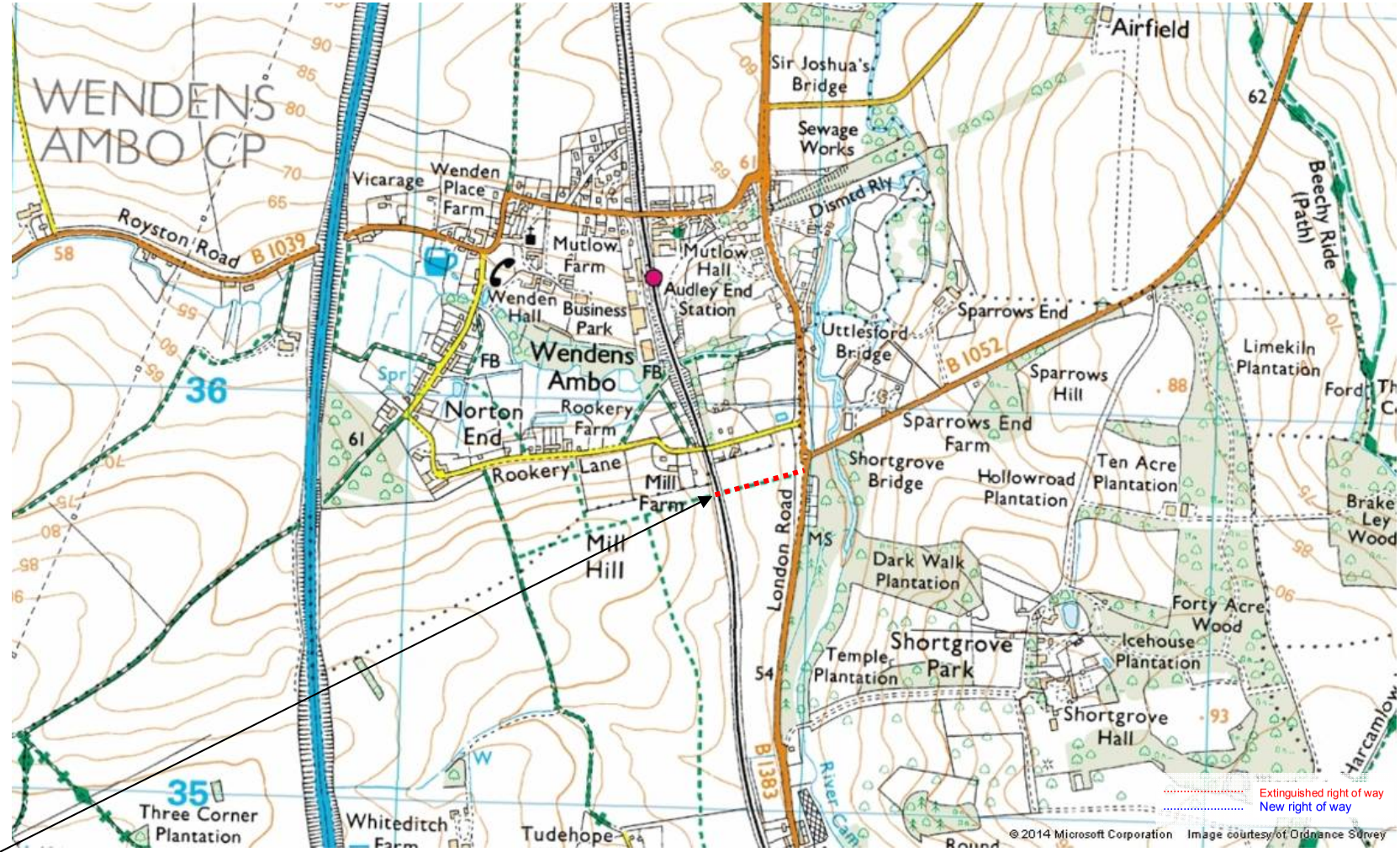


Ugley (extinguishment)

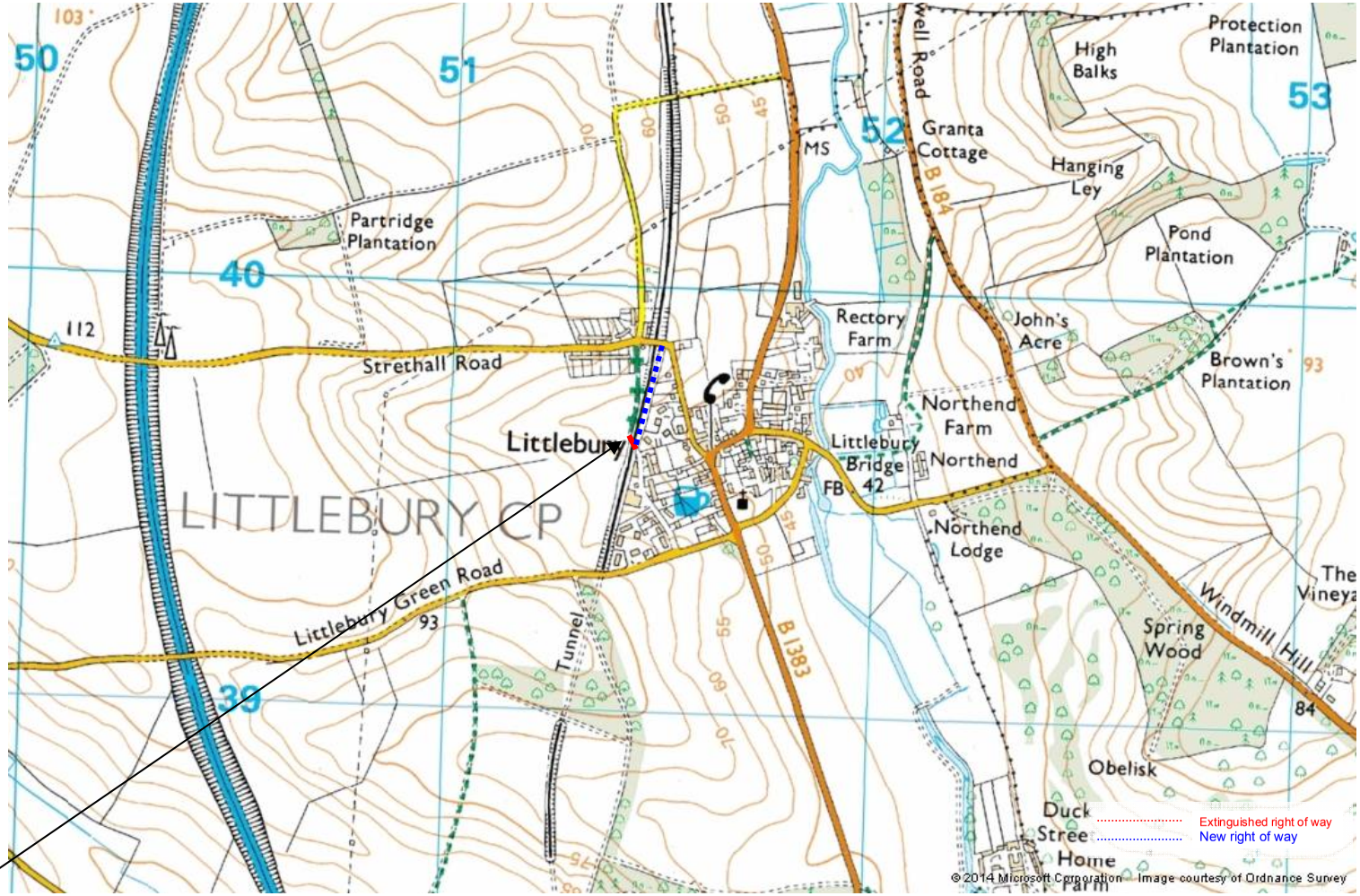


Henham fp (diversion to underbrdige)

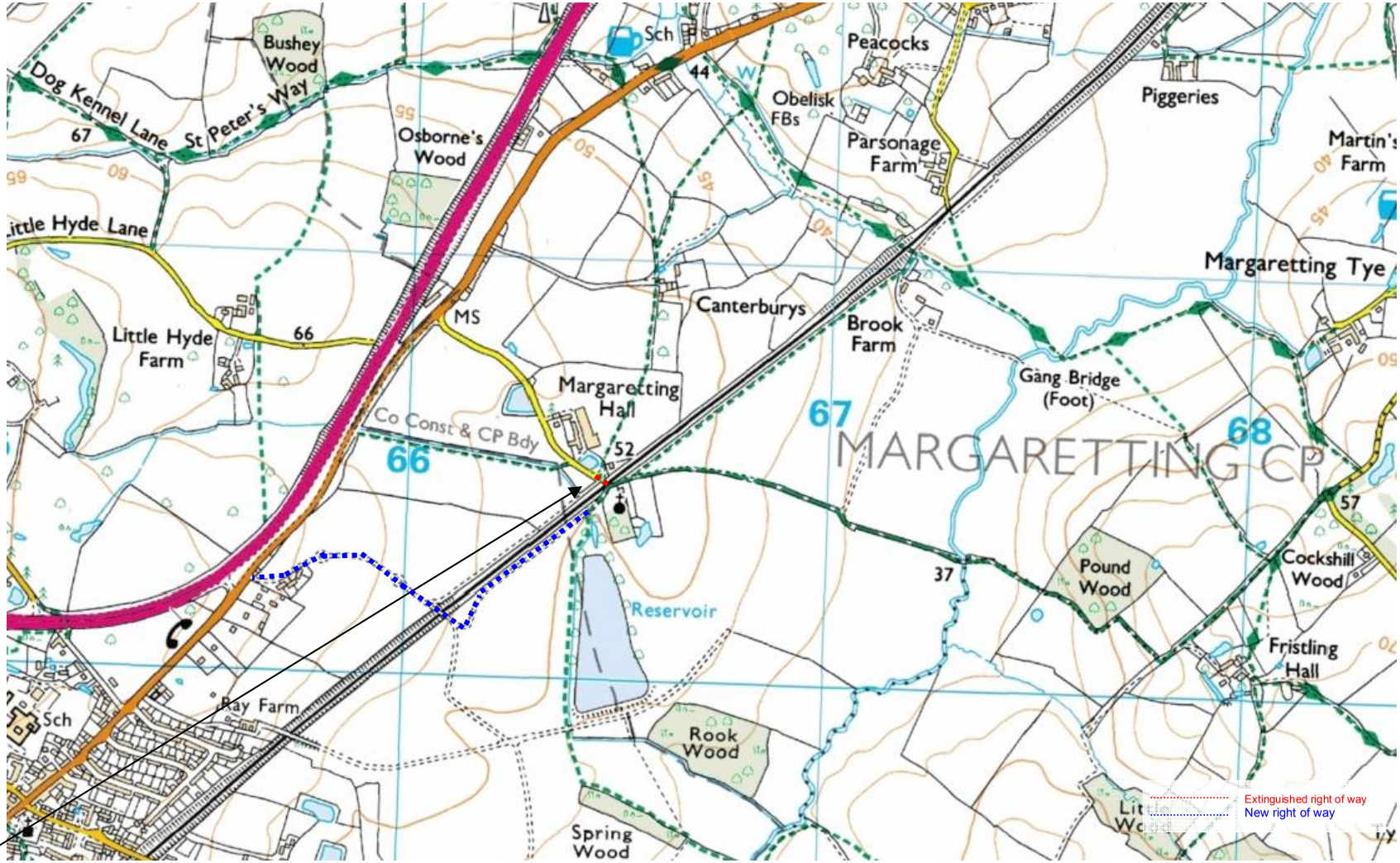
Dixies FP (extinguishment)



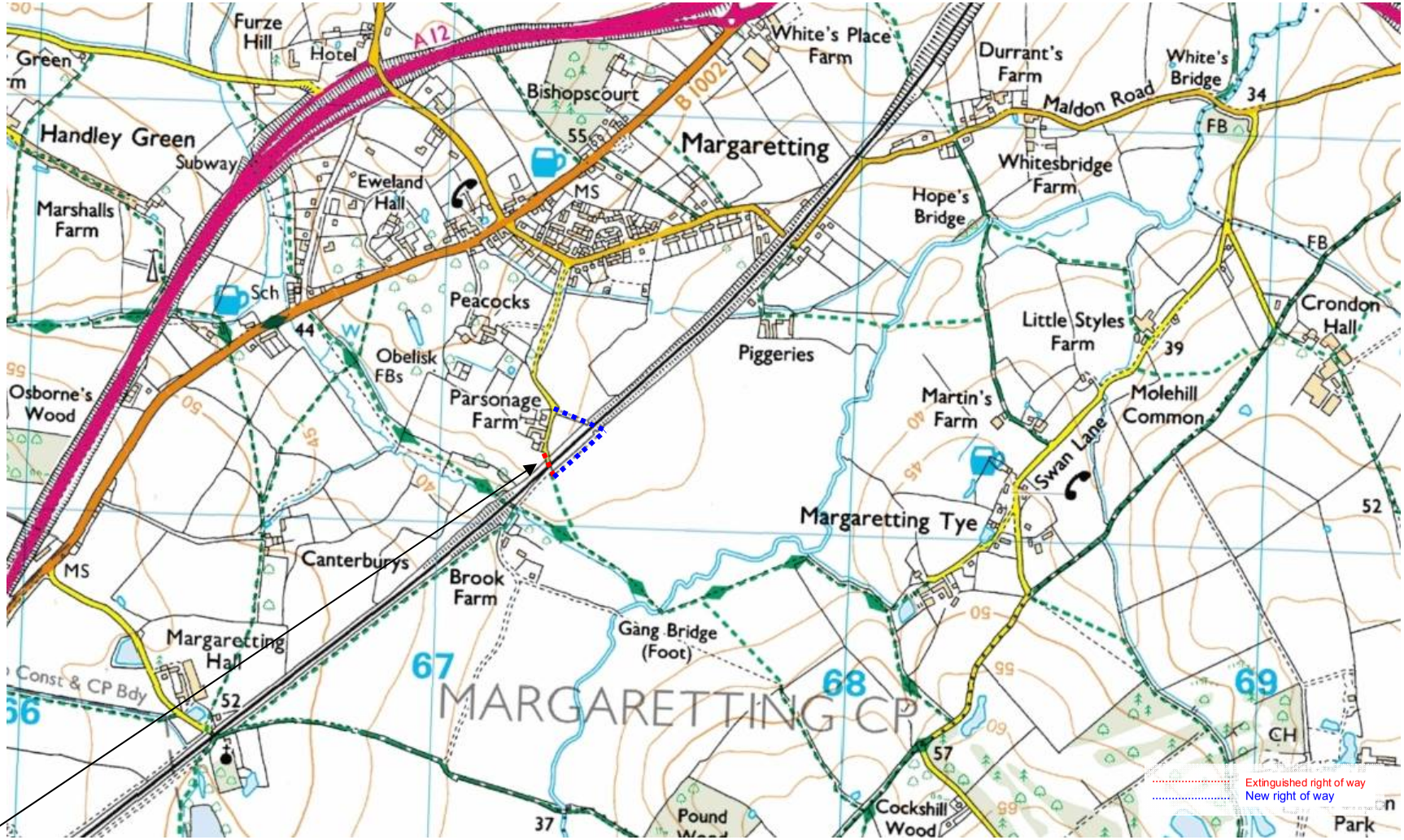
Windmills (diversion to Trees)



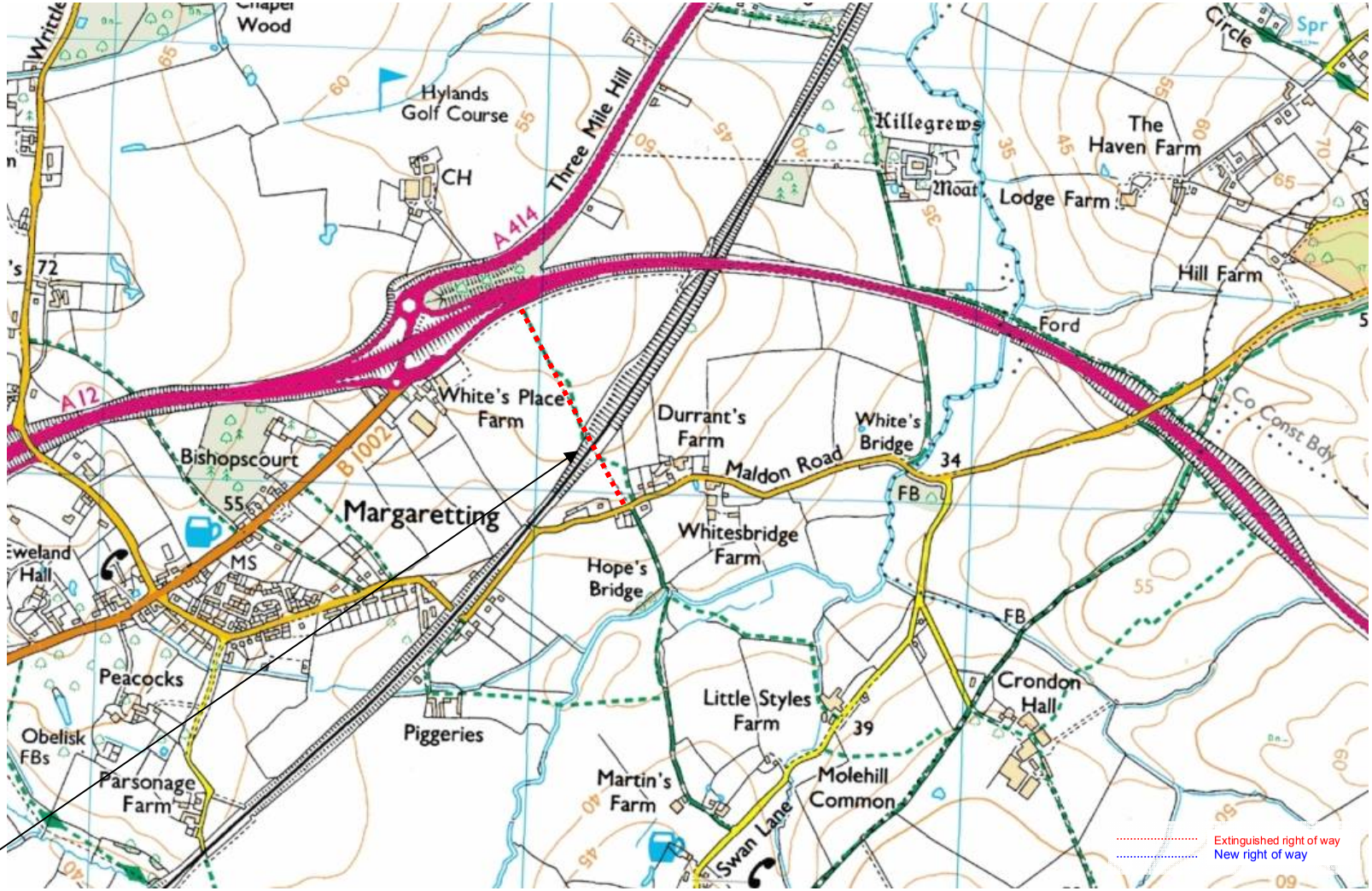
Littlebury Gate House (extinguishment or diversion on west side of line)


Bushey Wood
Dog Kennel Lane
St Peter's Way
Osborne's Wood
Sch
44
Peacocks
Obelisk FBs
Parsonage Farm
Piggeries
Martin's Farm
Little Hyde Lane
Little Hyde Farm
66
MS
Canterburys
Brook Farm
Margaretting Tye
Gang Bridge (Foot)
Margaretting Hall
Co Const & CP Bdy
52
67
68
MARGARETTING CP
57
37
Pound Wood
Cockshill Wood
Reservoir
Fristling Hall
Ray Farm
Sch
Rook Wood
Spring Wood
Extinguished right of way
New right of way

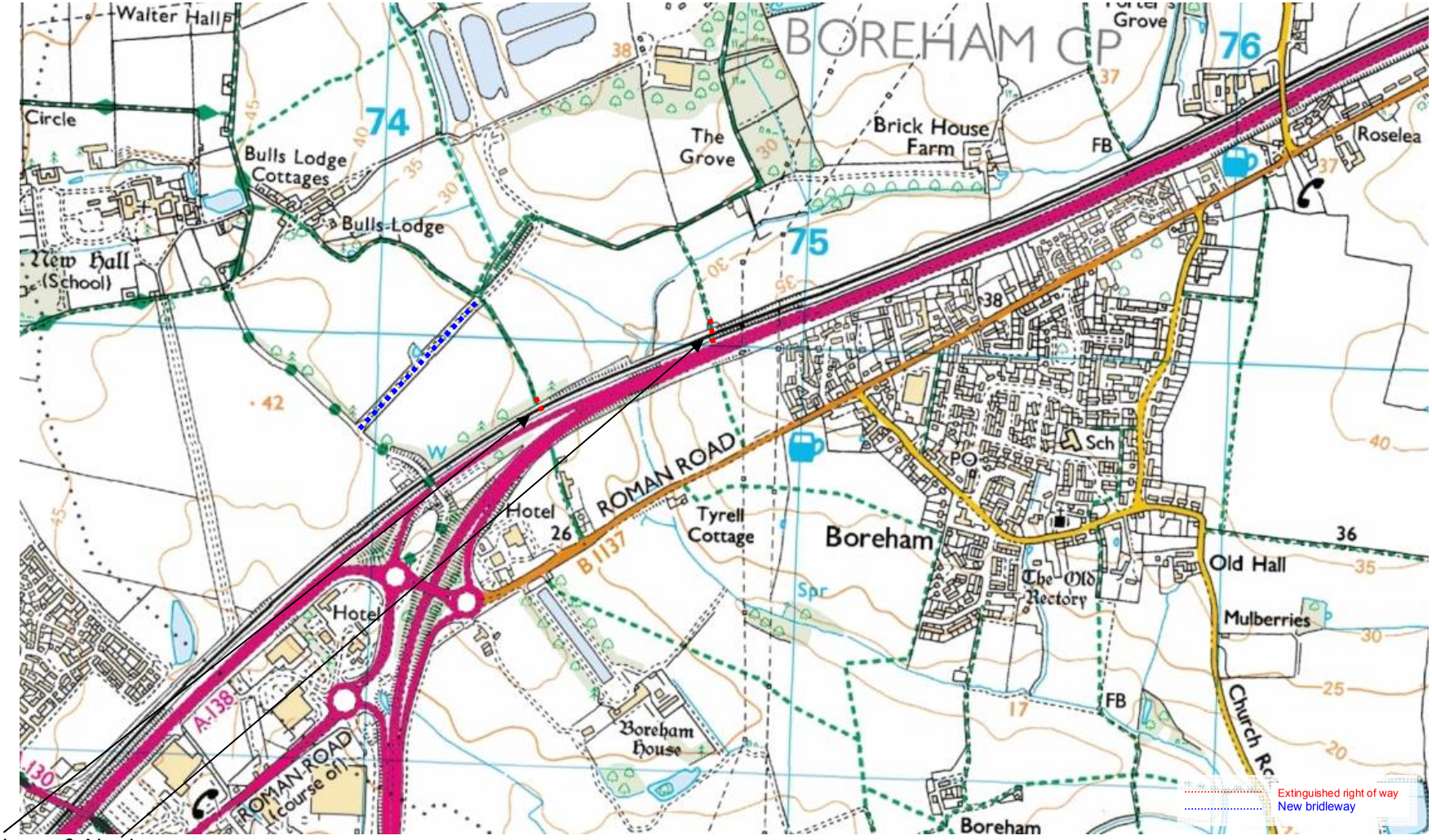
Church Lane



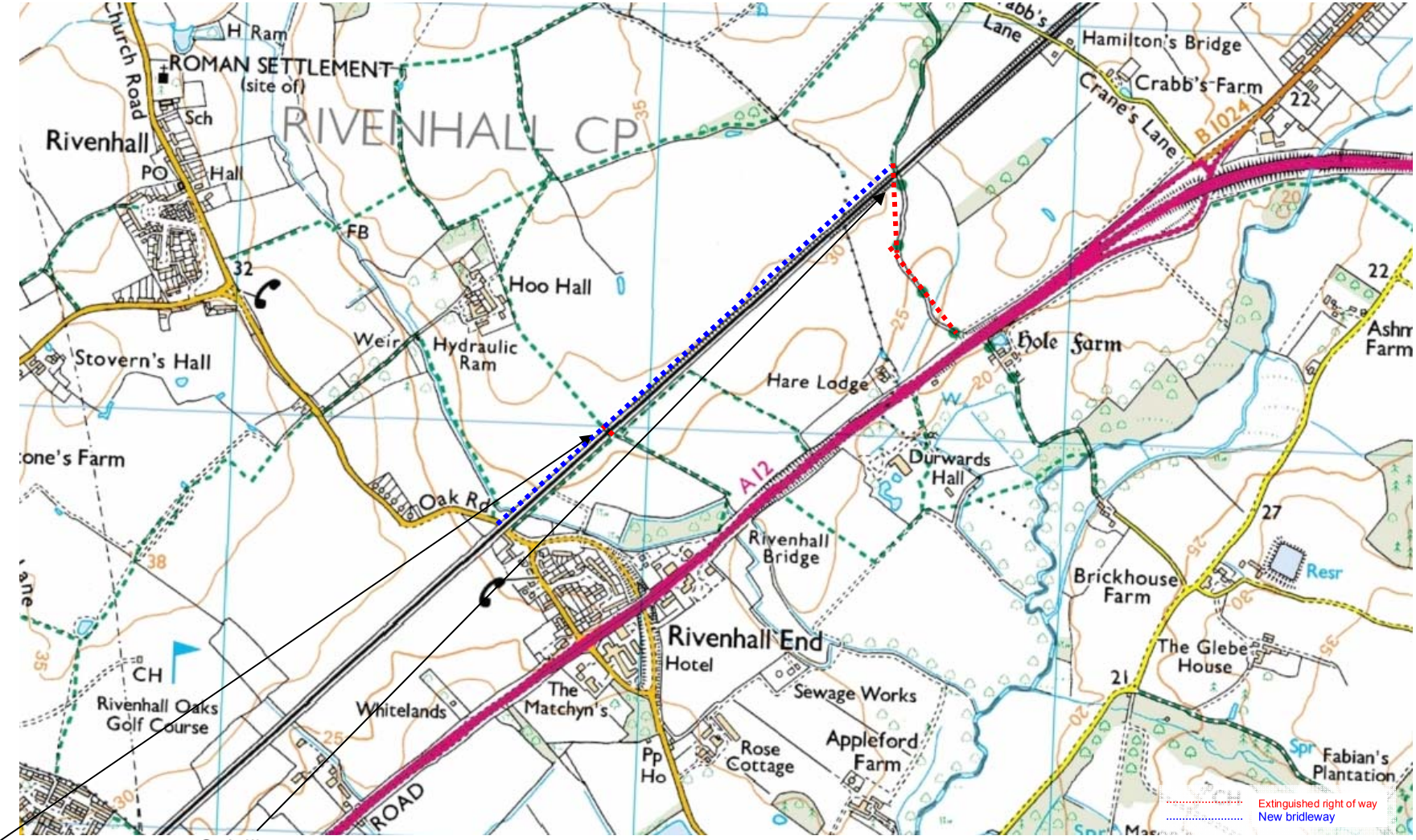
Parsonage Lane (diversion of public footpath to underbridge & extinguishment of all other rights (alt vehicular access from Church Lane))


Hylands Golf Course
CH
Three Mile Hill
A 414
Killegrews
Moat
The Haven Farm
Lodge Farm
Hill Farm
Ford
A 12
B 1002
White's Place Farm
Durrant's Farm
White's Bridge
Maldon Road
Bishopscourt
Margaretting
MS
Whitesbridge Farm
Hope's Bridge
Peacocks
Obelisk FBs
Parsonage Farm
Piggeries
Little Styles Farm
Crondon Hall
Martin's Farm
Molehill Common
Swan Lane
Co Const Bdy
Extinguished right of way
New right of way

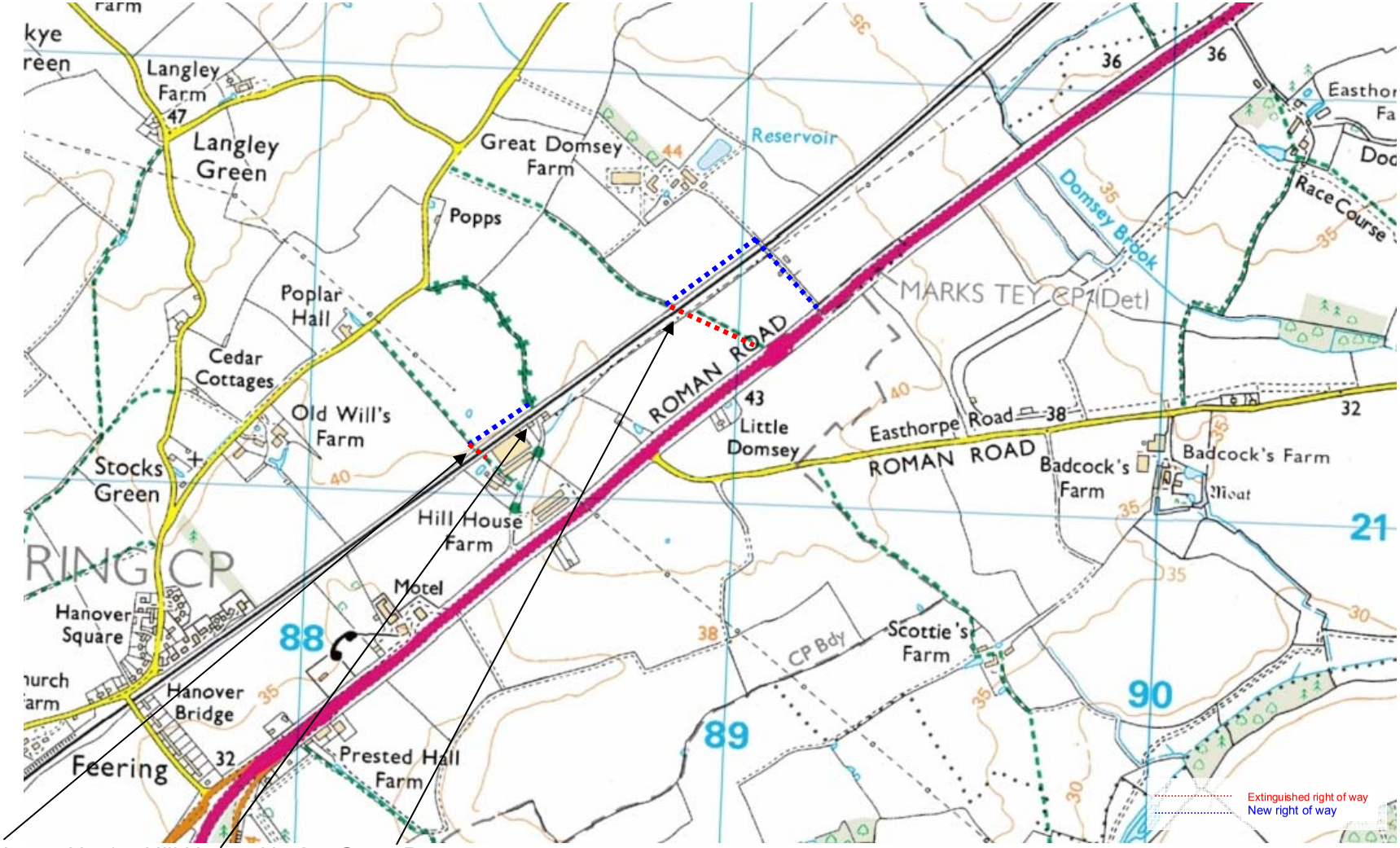
Maldon Road



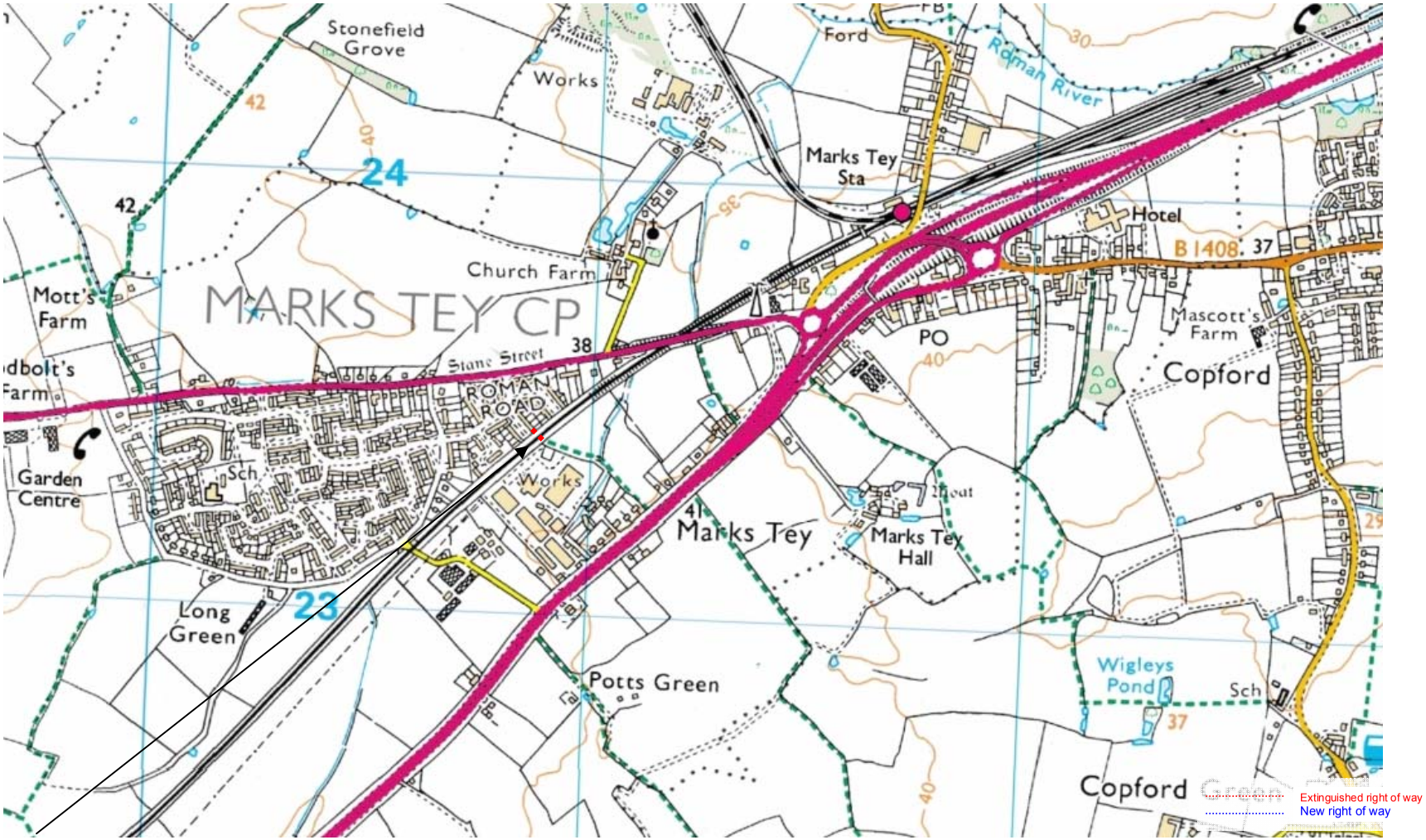
Borham & Noakes



Potters Snivillers



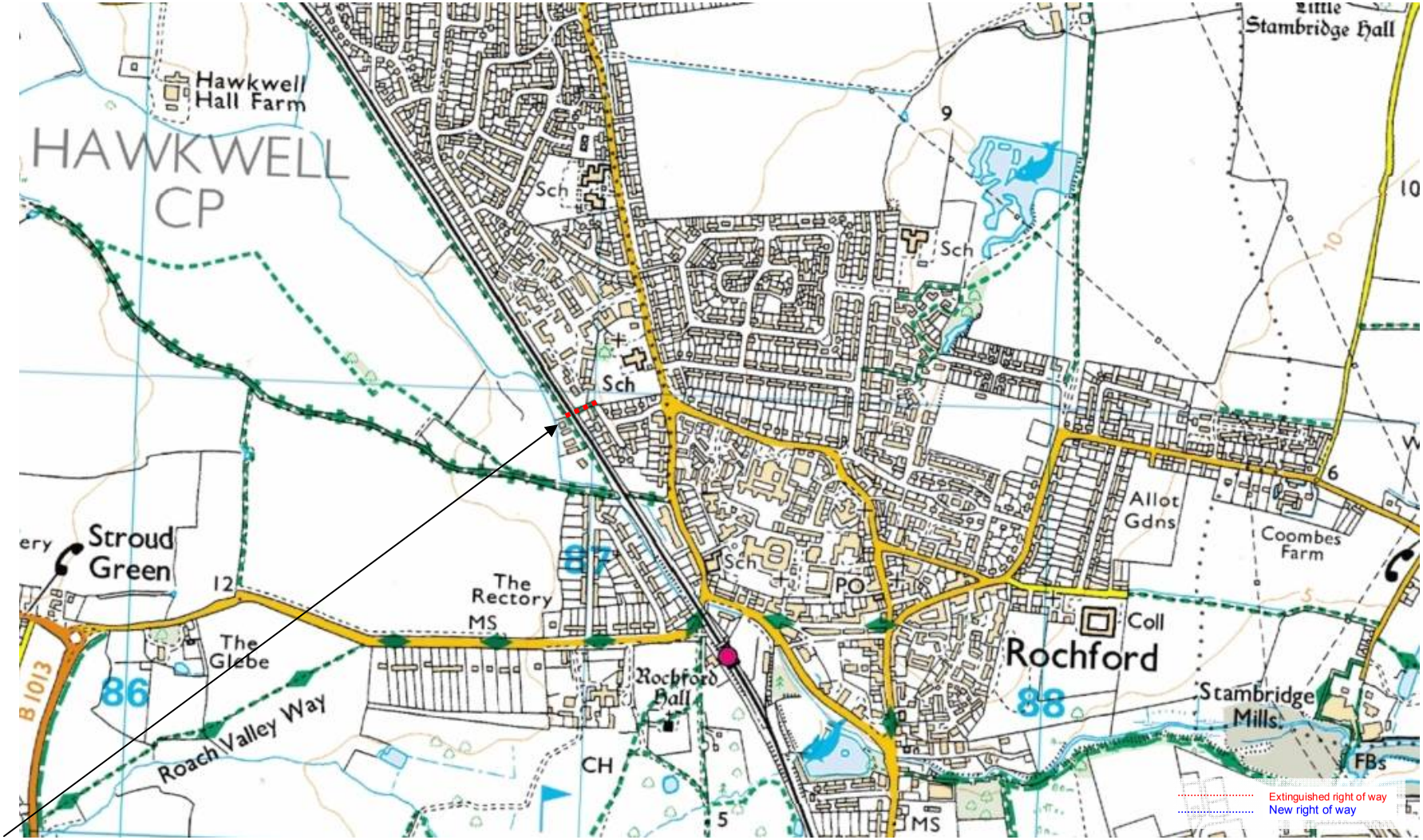
Hill House No.1, Hill House No.2, Great Domsey


Stonefield Grove
Works
Ford
Roman River
Marks Tey Sta
Hotel
B 1408
Church Farm
MARKS TEY CP
Mott's Farm
Stane Street
ROMAN ROAD
PO
Mascott's Farm
Copford
Garden Centre
Sch
Works
Marks Tey
Marks Tey Hall
Long Green
Potts Green
Wigleys Pond
Sch
Copford
Extinguished right of way
New right of way

Church 1

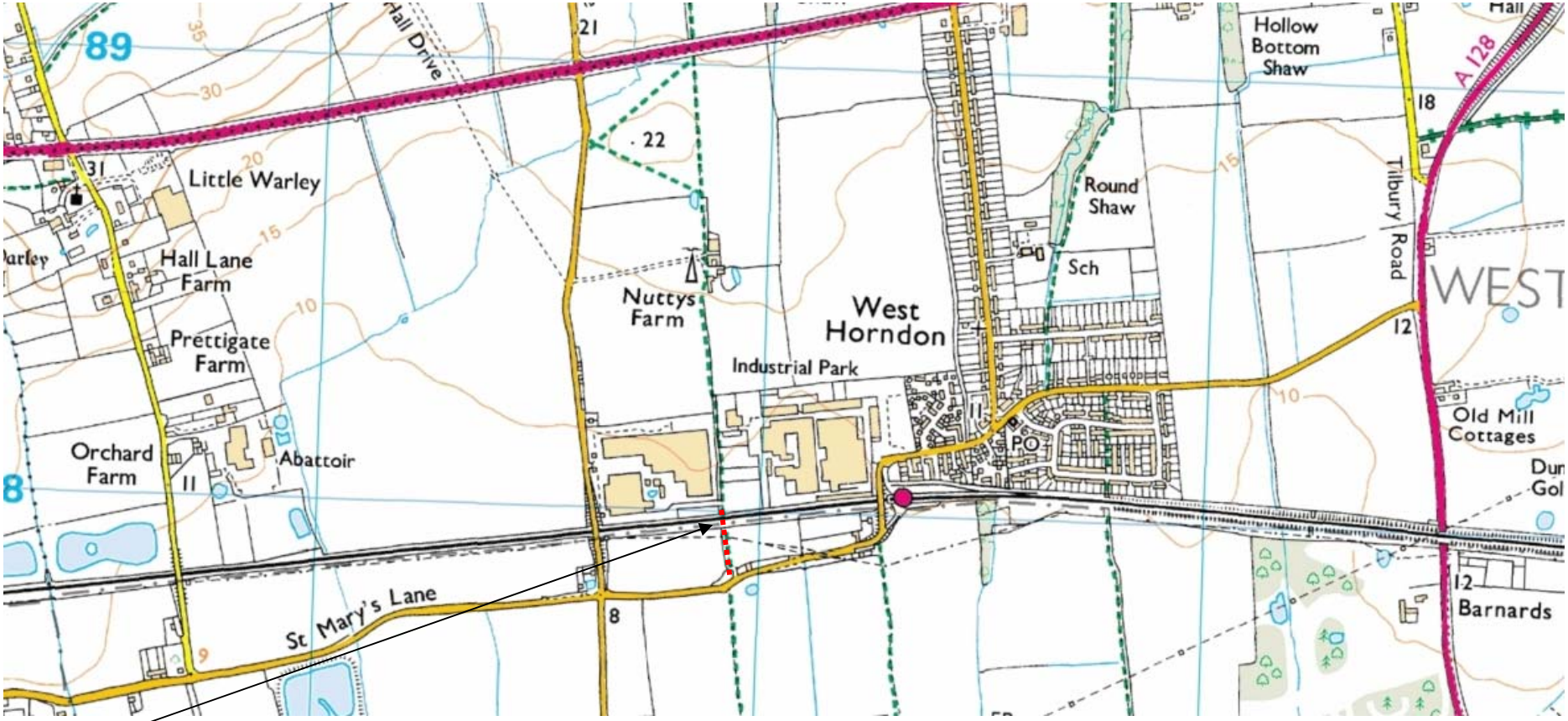
EIGHT ASH GREEN CP
Chippetts Farm
Aldham Hall
Hole Farm
Kemp's Farm
FB
Moat Farm
Moat
Abbots Hall Farm
Hotel
A12
Wyvern Farm
Roman River
Copford Place
PO
Collier Ho
Hotel
B 1408
Post Office
FBs
Quarry
Mascott's Farm
Copford
Hall Road
Gravelpit Wood
Church Lane
Extinguished right of way
New right of way

Church 2



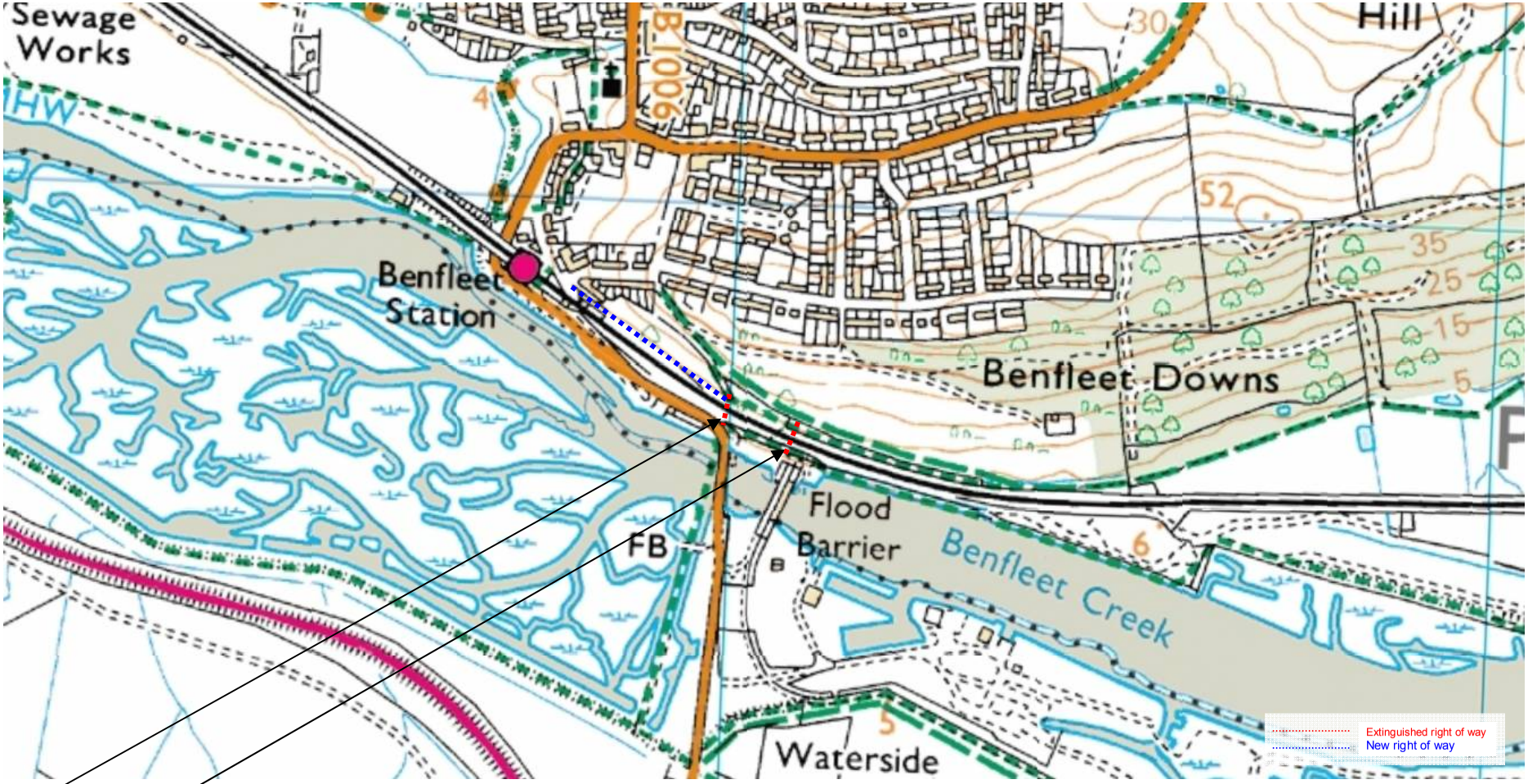
Barbara Close

Puddle Dock and Whipps Farm

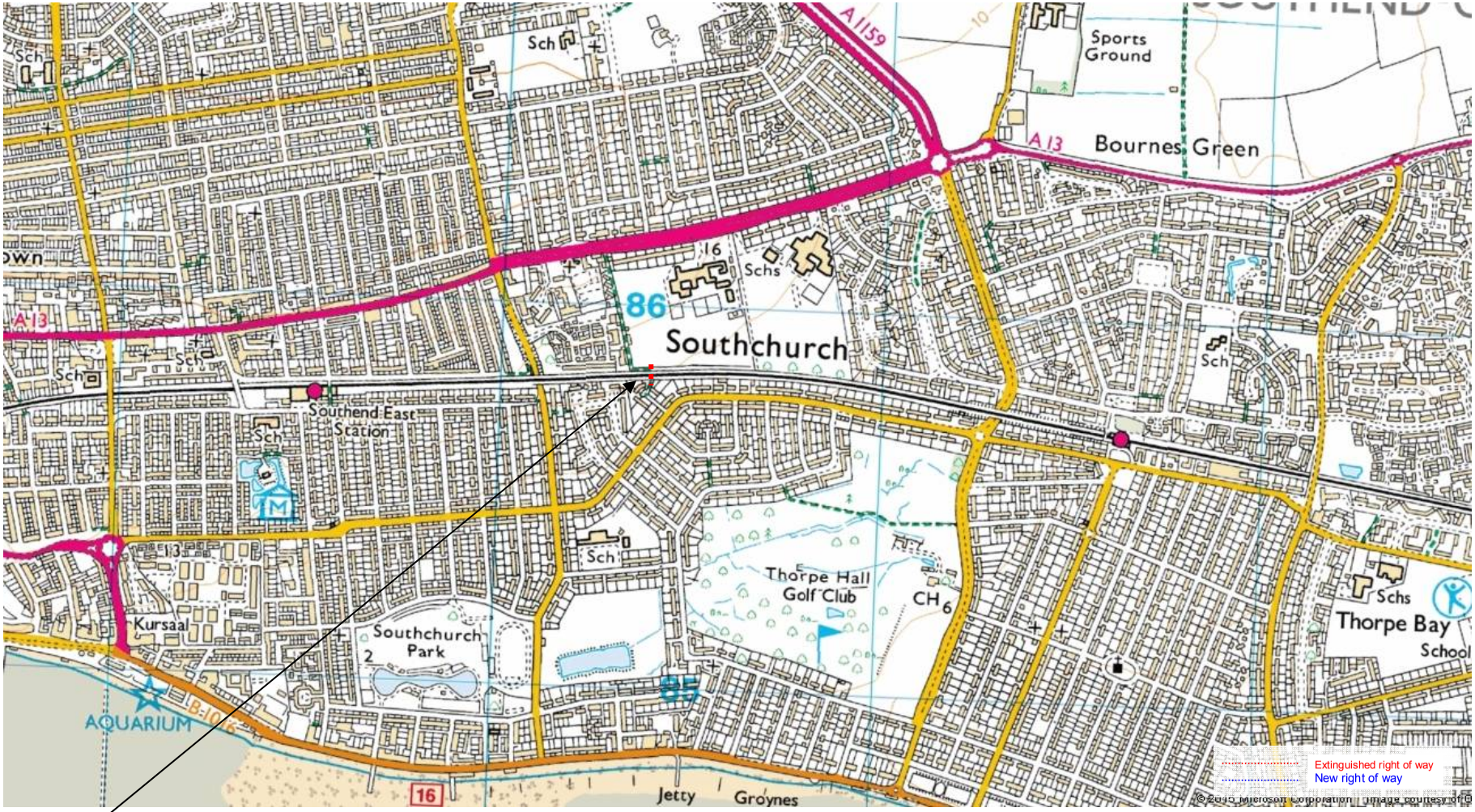


Brown & Tawes

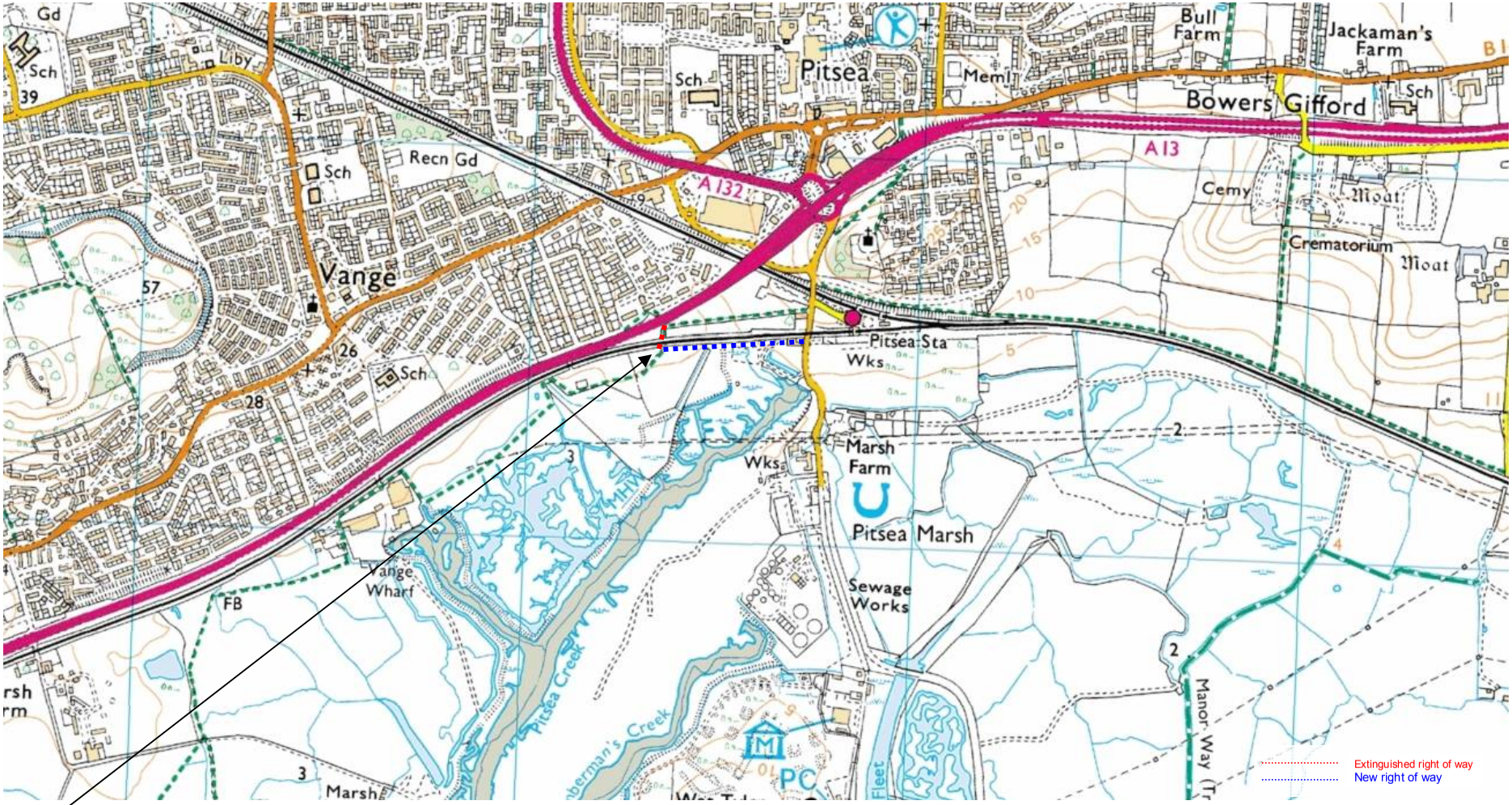
Extinguished right of way
New right of way



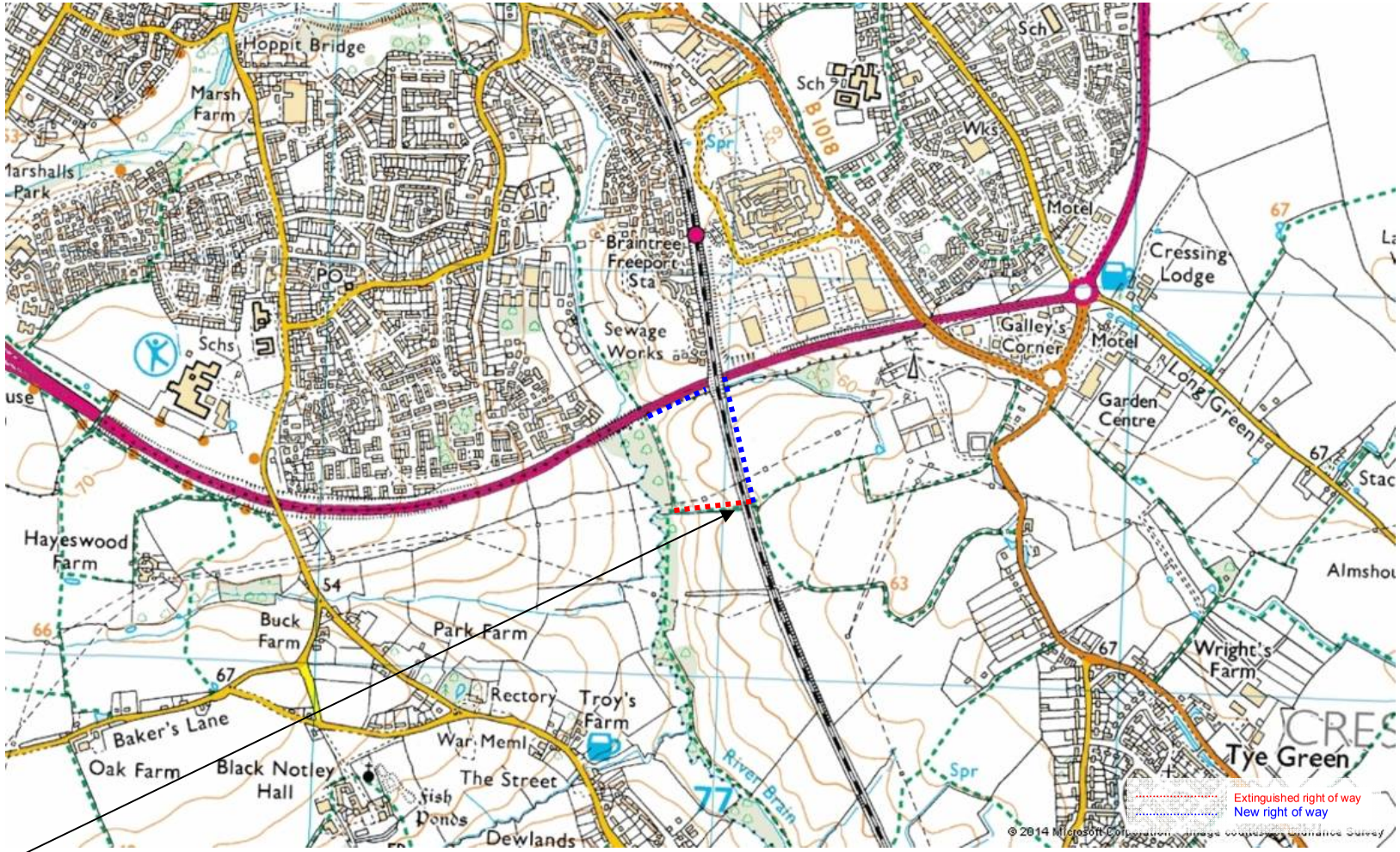
Ferry Brickyard Farm



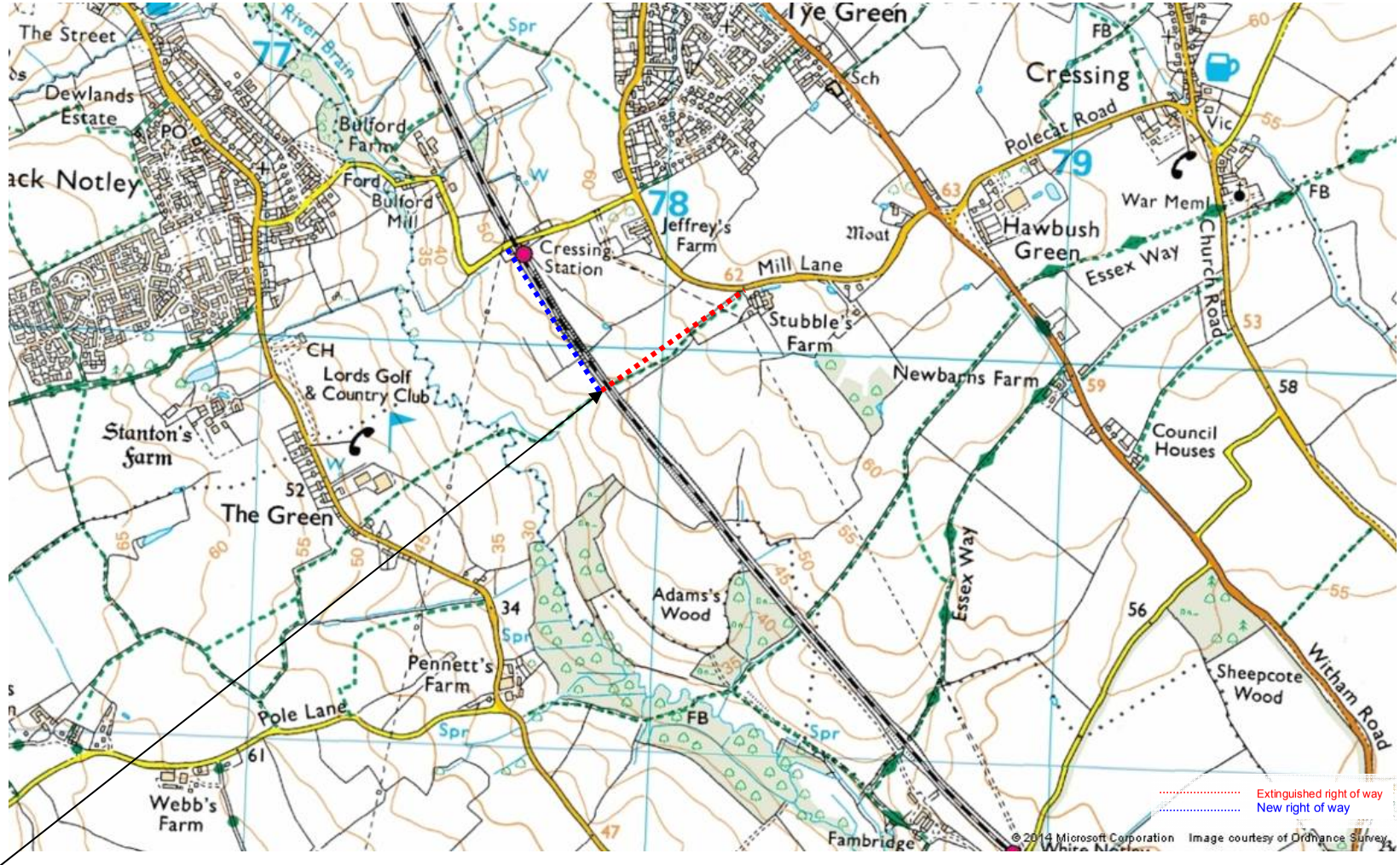
Woodgrange Close


Gd
Sch
39
Liby
Sch
Recn Gd
Vange
57
26
28
Sch
Sch
Pitsea
Meml
A132
Bull Farm
Jackaman's Farm
Bowers Gifford
Sch
A13
Cemy
Moat
Crematorium
Moat
Pitsea Sta
Wks
Wks
Marsh Farm
Pitsea Marsh
Sewage Works
Vange Wharf
FB
Pitsea Creek
Fleet
Manor Way
Marsh
PC
Extinguished right of way
New right of way

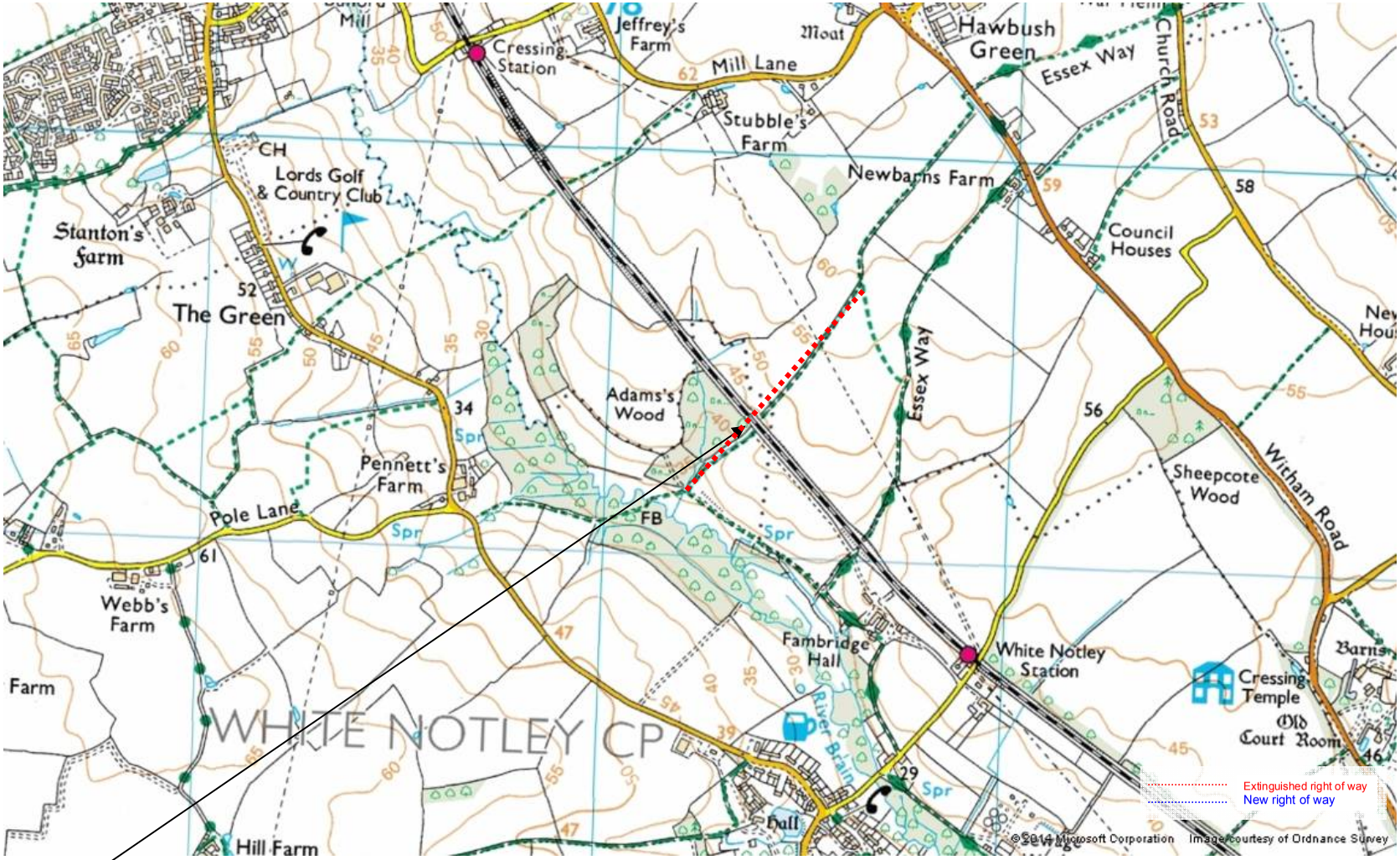
Motorbike



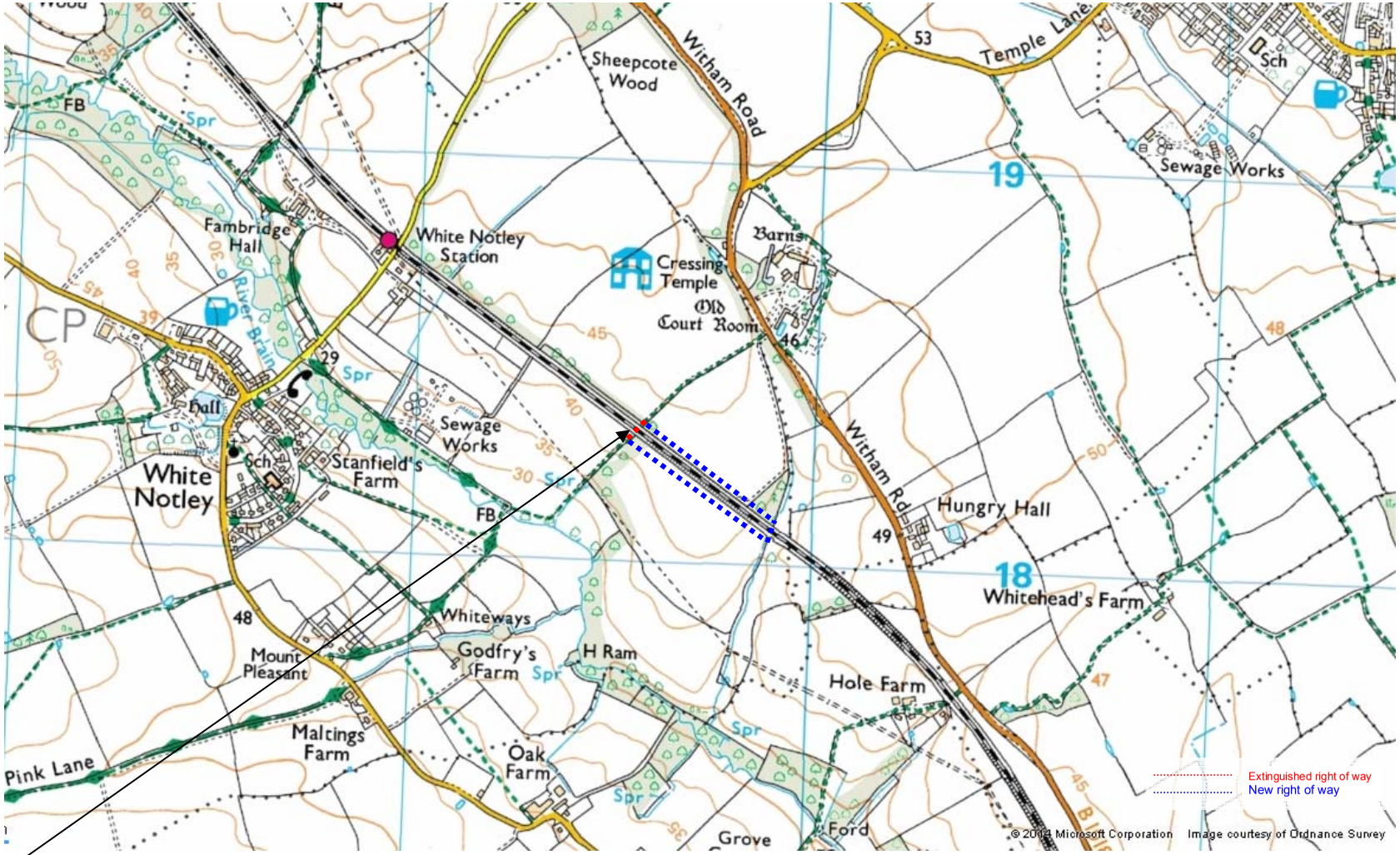
Cousins No.1 FP (diversion to A120 under bridge)


The Street
Dewlands Estate
PO
River Brain
77
Bulford Farm
Ford
Bulford Mill
Spr
Tye Green
Sch
Cressing
FB
Polecat Road
Vic
79
War Mem
Hawbush Green
Essex Way
Church Road
78
Jeffrey's Farm
Moat
Cressing Station
Mill Lane
Stubble's Farm
Newbarns Farm
Council Houses
CH
Lords Golf & Country Club
Stanton's Farm
52
The Green
Adams's Wood
34
Pennett's Farm
Pole Lane
61
Webb's Farm
Sheepcote Wood
Witham Road
56
58
53
Fambridge
Extinguished right of way
New right of way
© 2014 Microsoft Corporation Image courtesy of Ordnance Survey

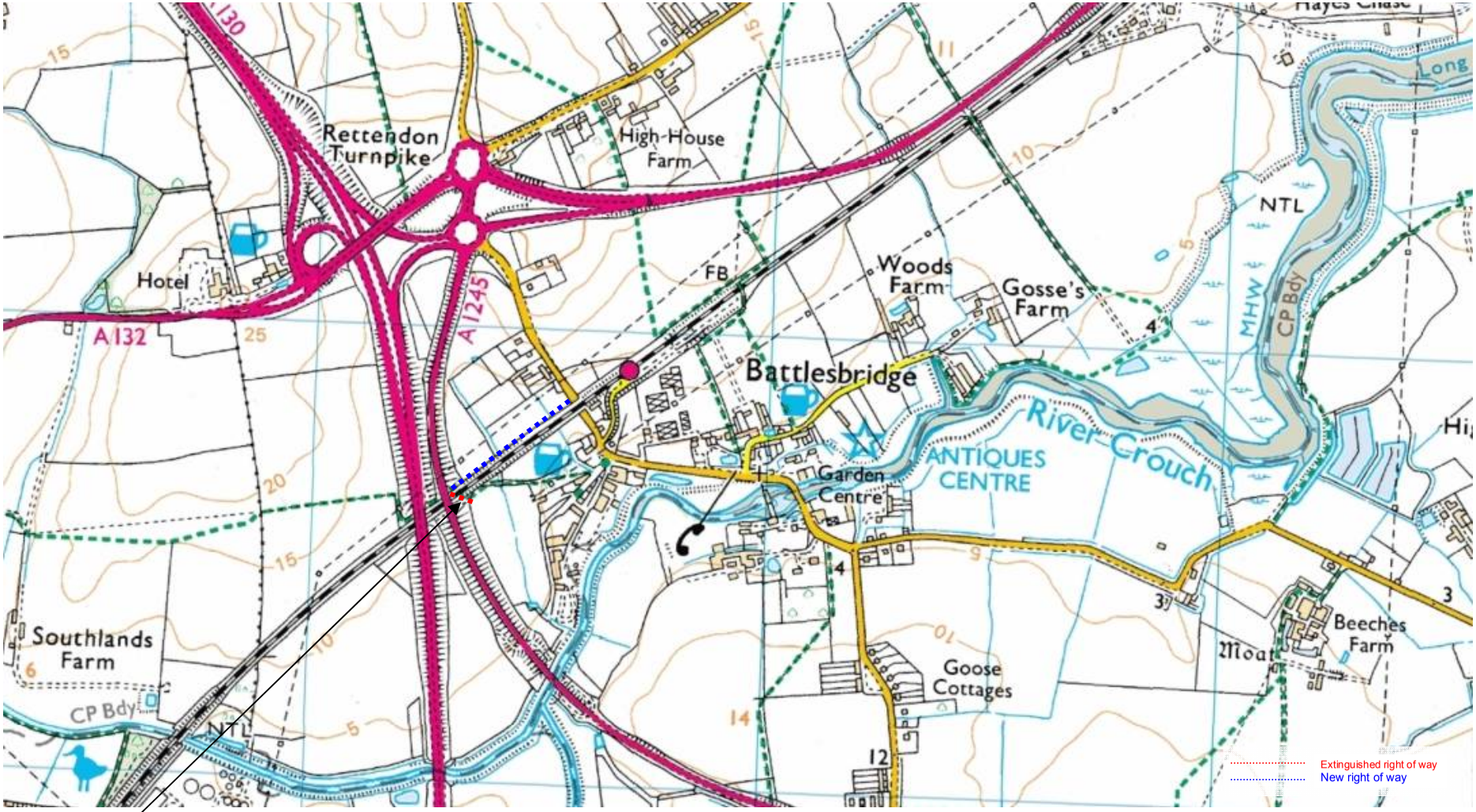
Cranes No.1



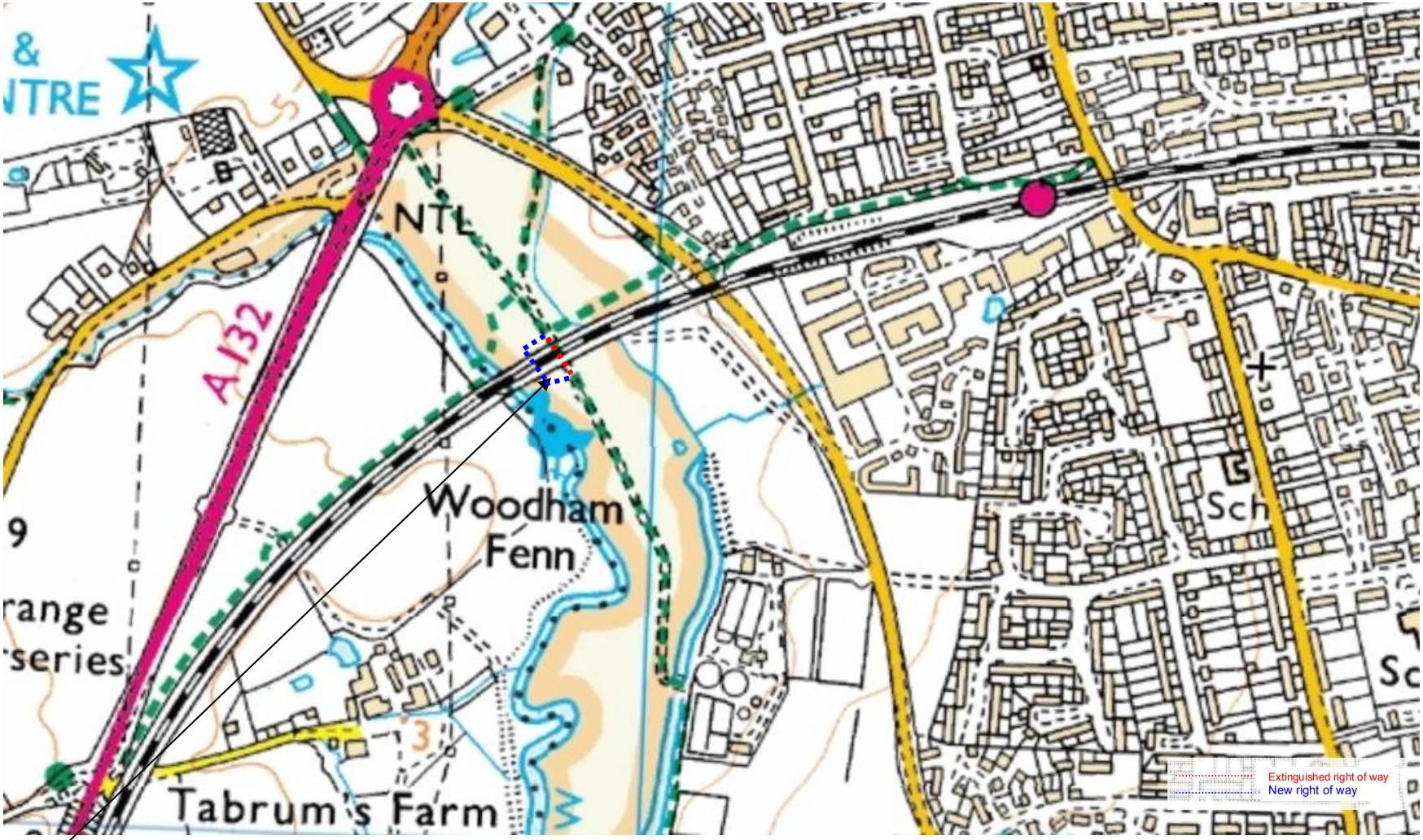
Cranes No.2 extinguishment



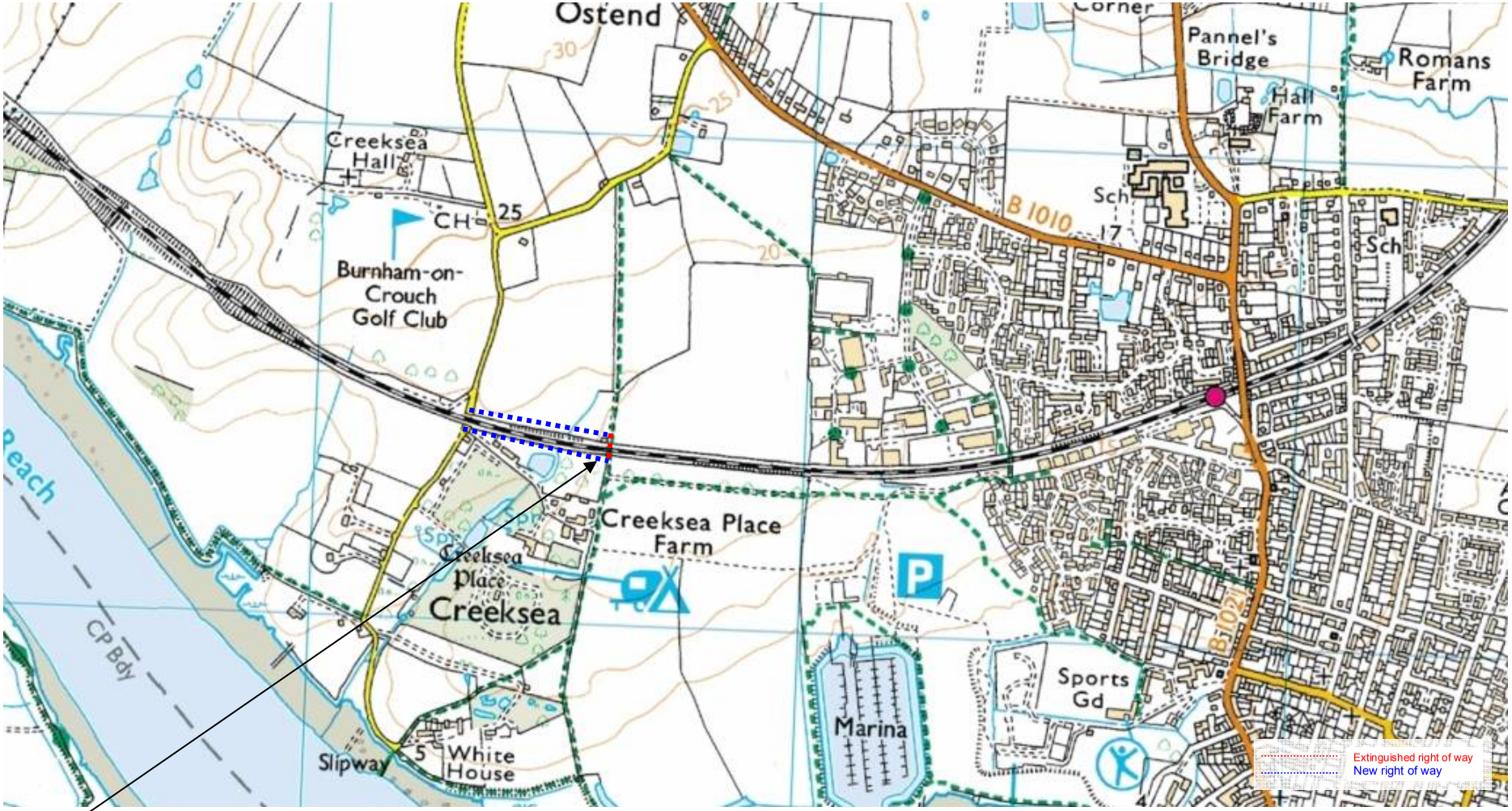
Essex Way FP (diversion to underbridge to the south)



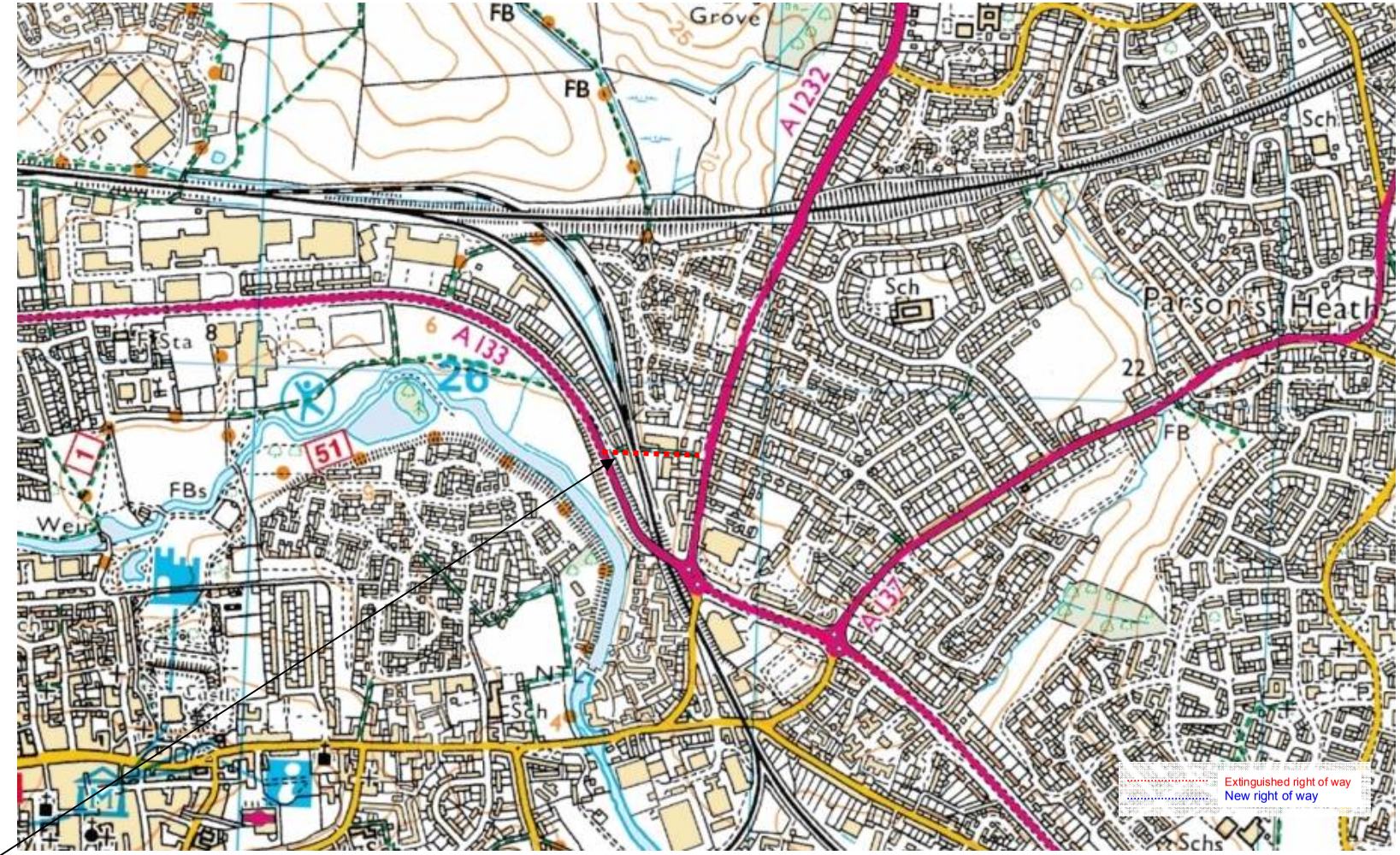
Battlesbridge


NTL
A132
Woodham
Fenn
Tabrum's Farm
Extinguished right of way
New right of way

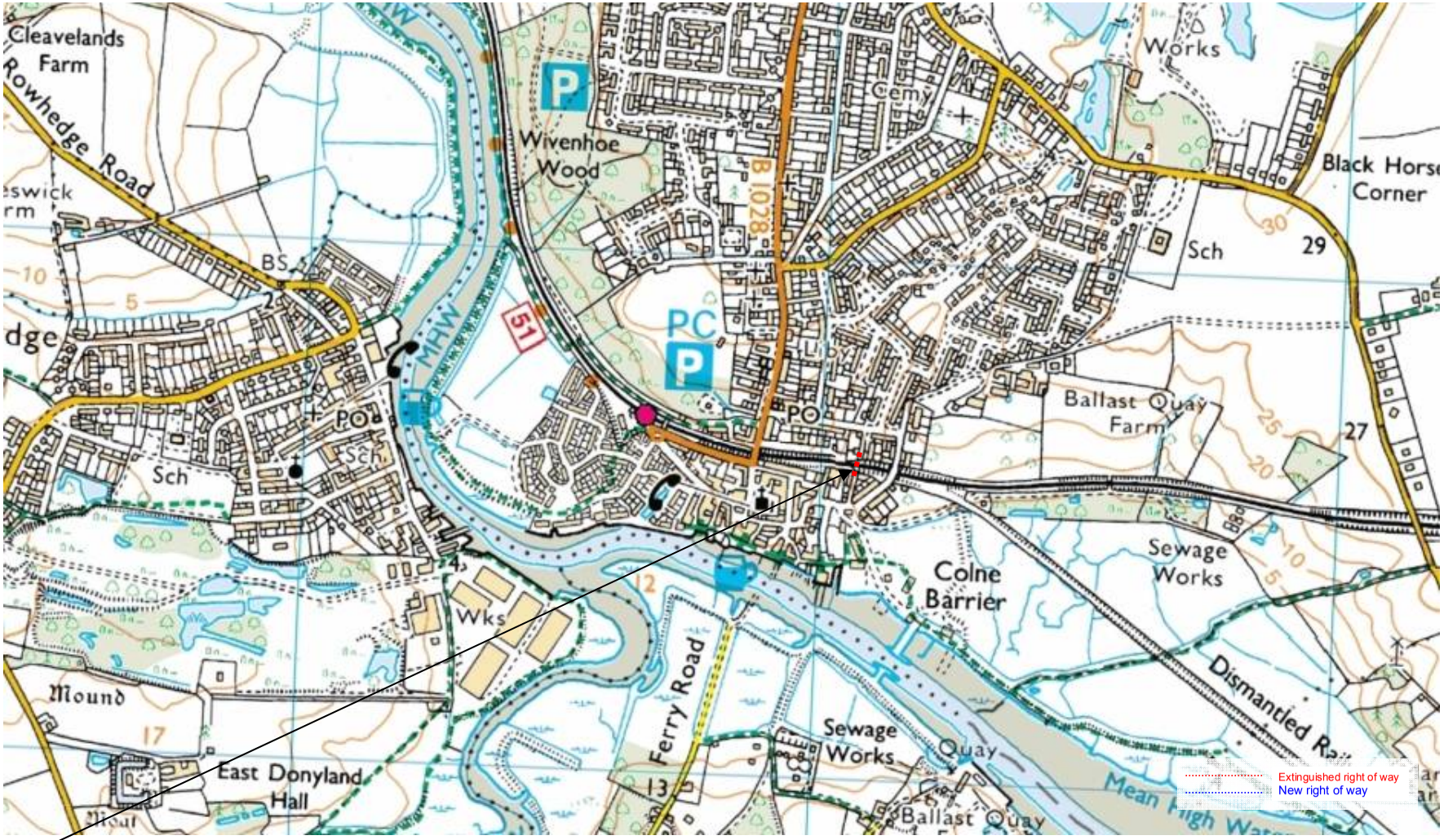
Woodham Fen



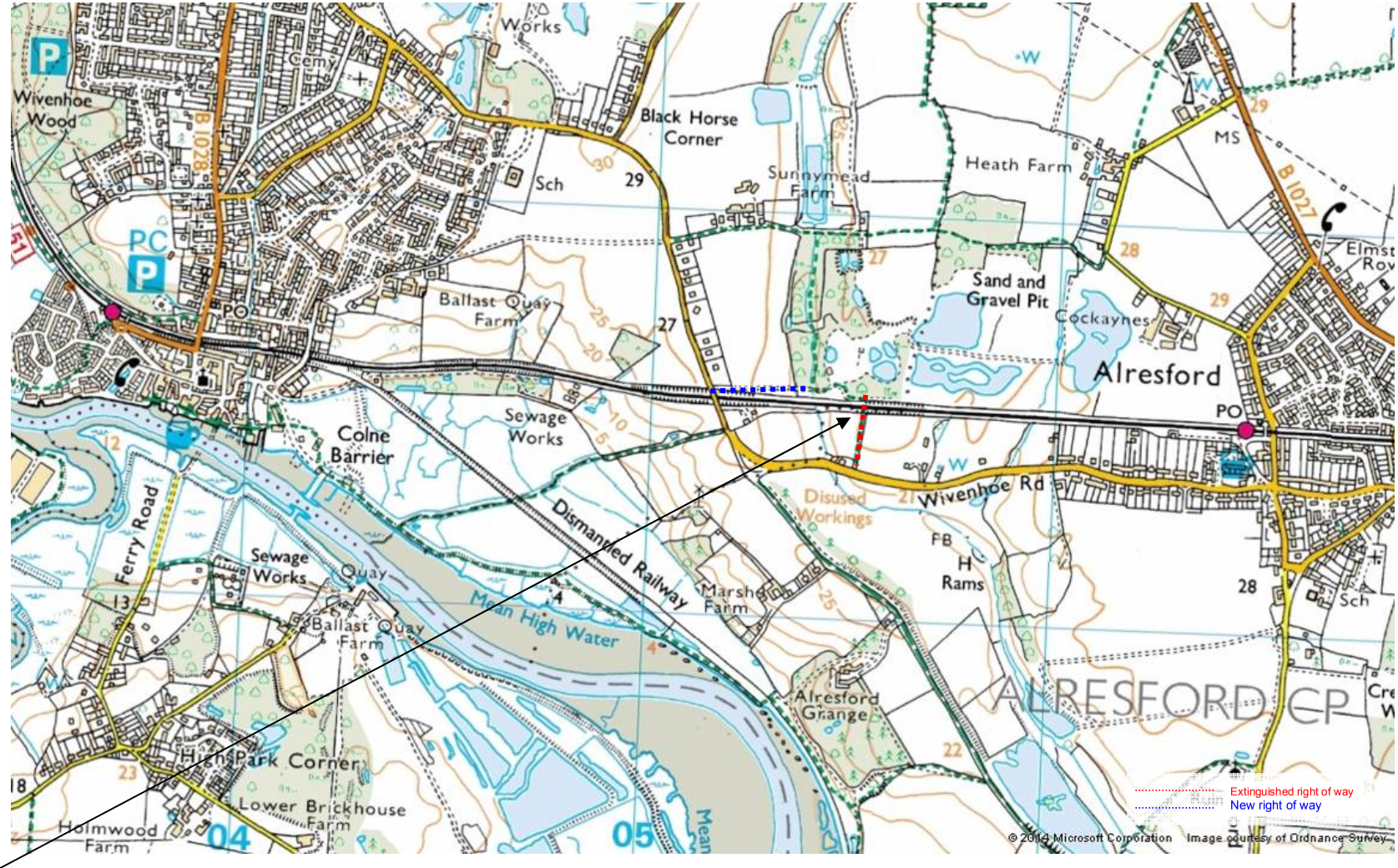
Creaksea Place 1


FB
Grove
FB
A1232
Sch
Sch
Parsons Heath
22
FB
A133
6
8
Sta
51
1
FBs
Weir
Castle
Sch
A137
Extinguished right of way
New right of way
Schs

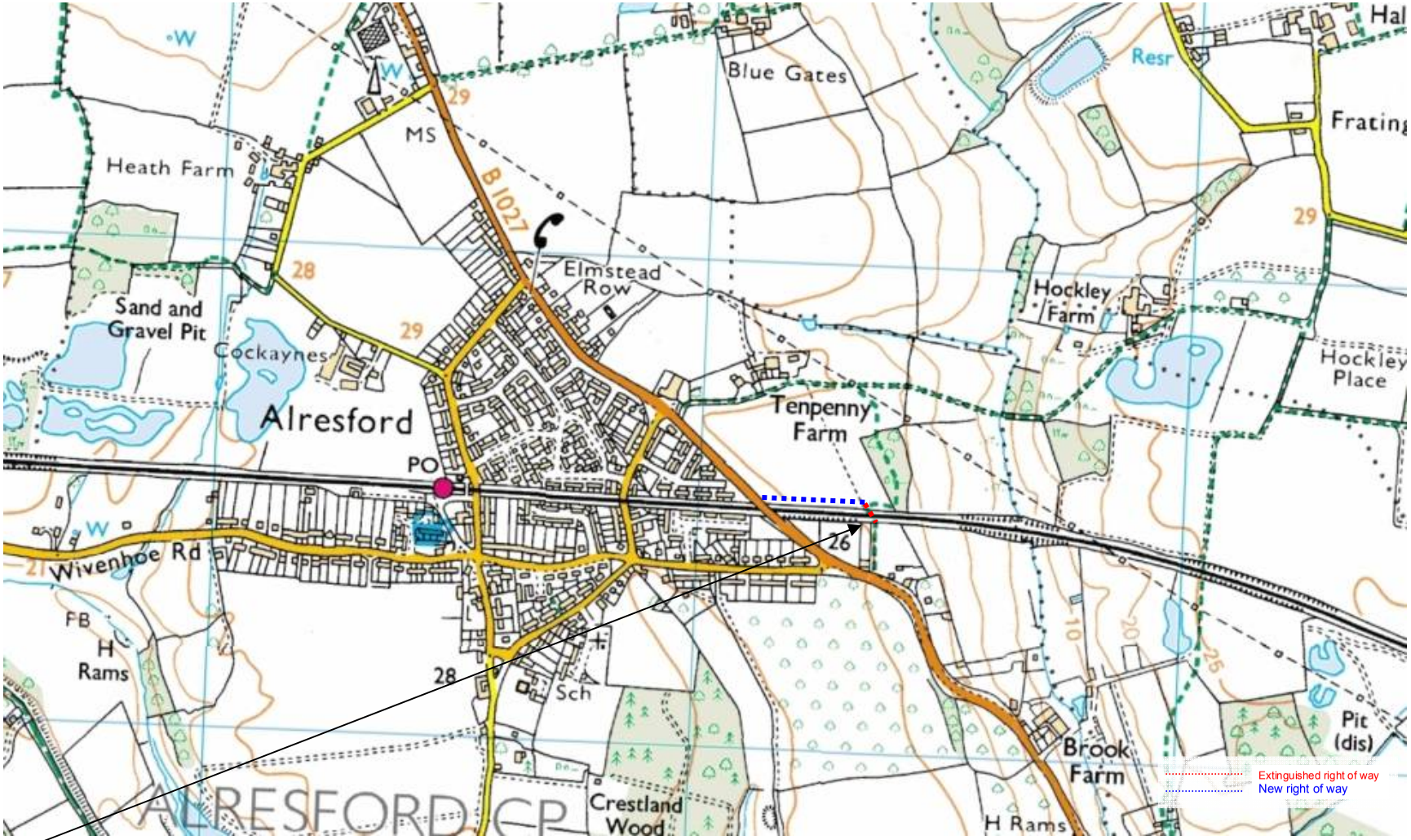
Hunwick


Cleavelands Farm
Rowhedge Road
Wivenhoe Wood
B 1028
Cemy
Works
Black Horse Corner
Sch
29
BS
MHW
51
PC
P
PO
Ballast Quay Farm
27
Sch
Sch
Colne Barrier
Sewage Works
Wks
Ferry Road
Mound
East Donyland Hall
Sewage Works
Quay
Ballast Quay
Dismantled Ra
Mean High Water
Extinguished right of way
New right of way

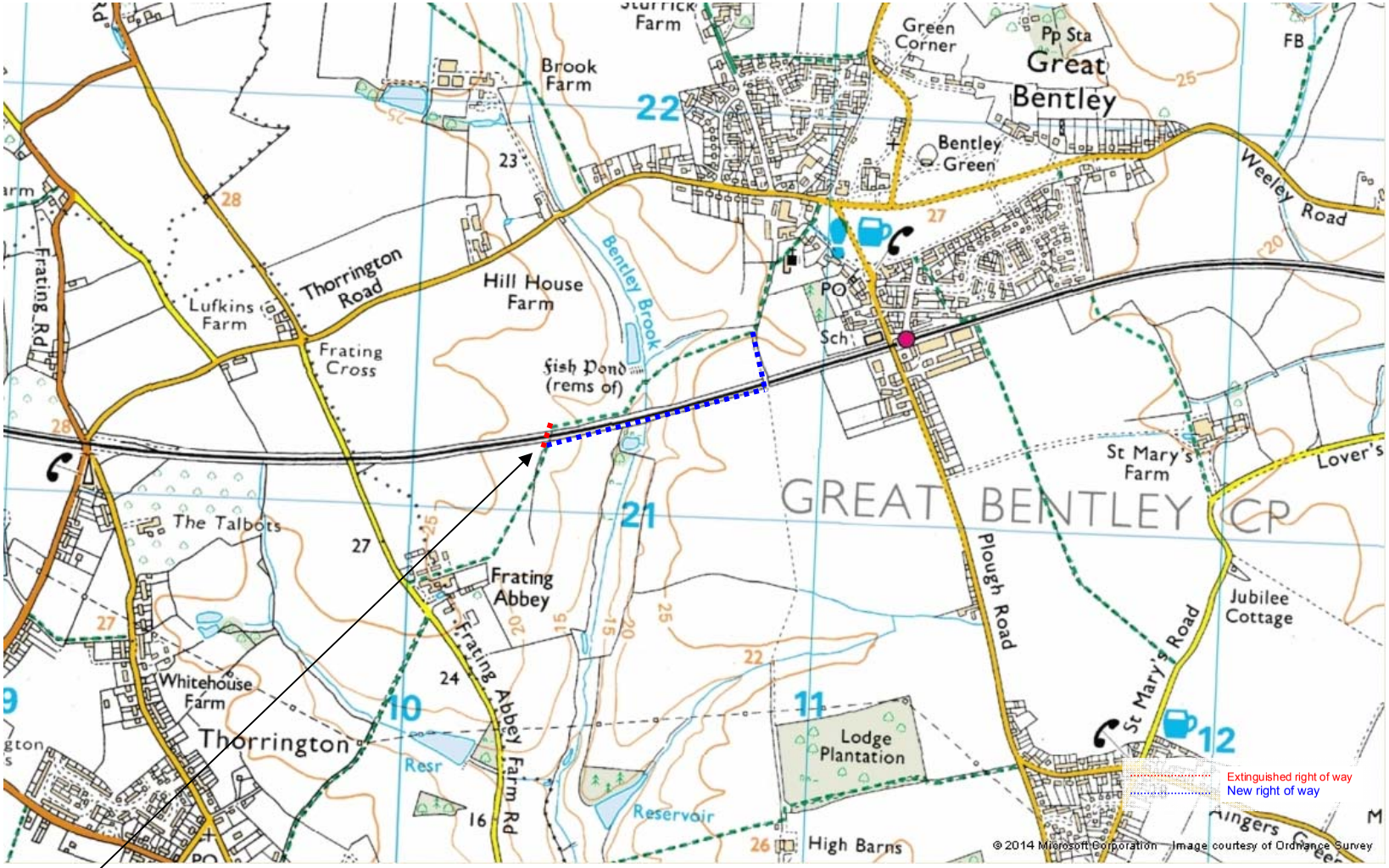
Pagets



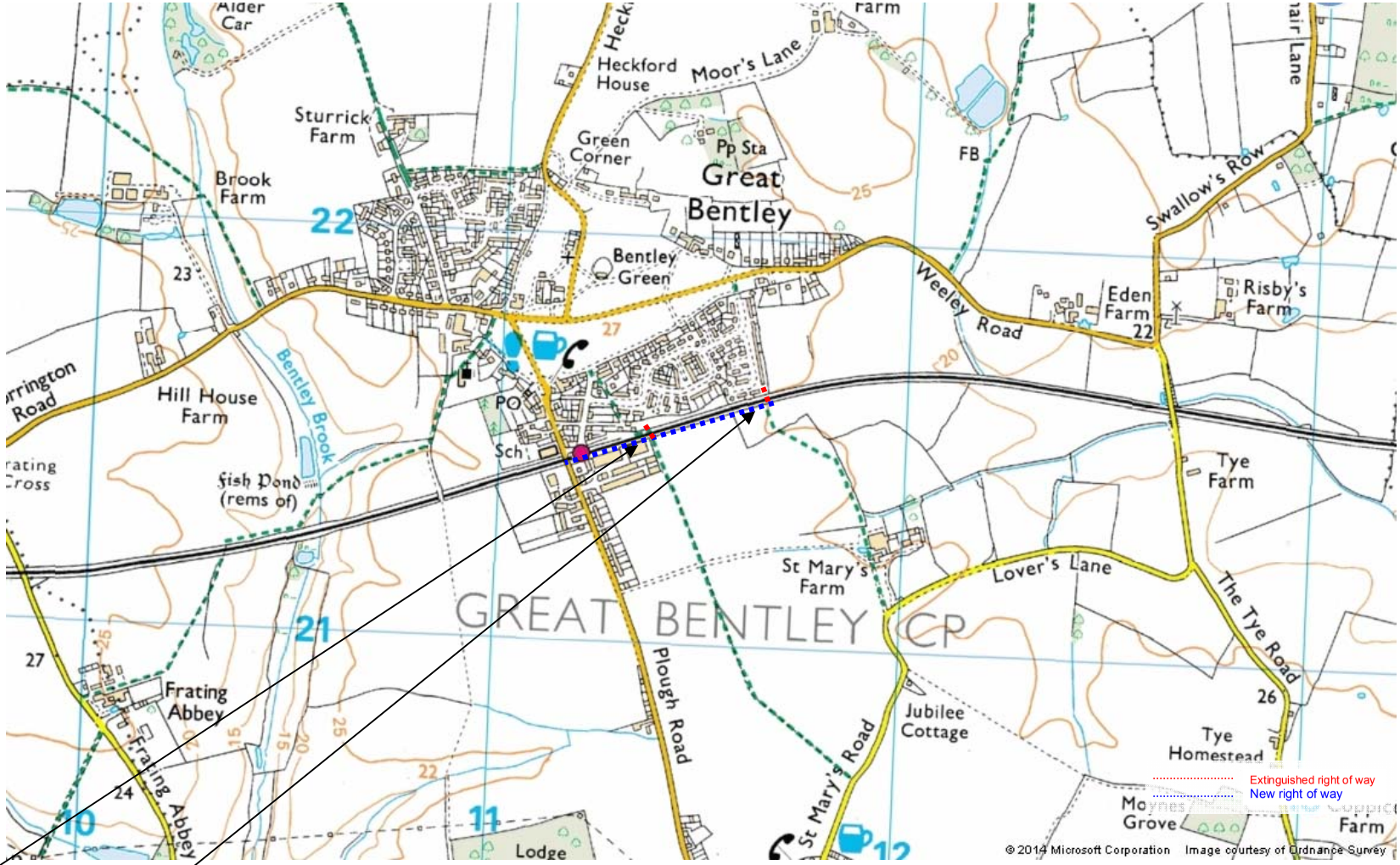
Sand pit (divert to road bridge to the west)


Blue Gates
Resr
Heath Farm
MS
B1027
Elmstead Row
Hockley Farm
Hockley Place
Sand and Gravel Pit
Cockaynes
Alresford
Tenpenny Farm
PO
Wivenhoe Rd
FB
H Rams
Sch
Brook Farm
Pit (dis)
Crestland Wood
H Rams
ALRESFORD CP
Extinguished right of way
New right of way

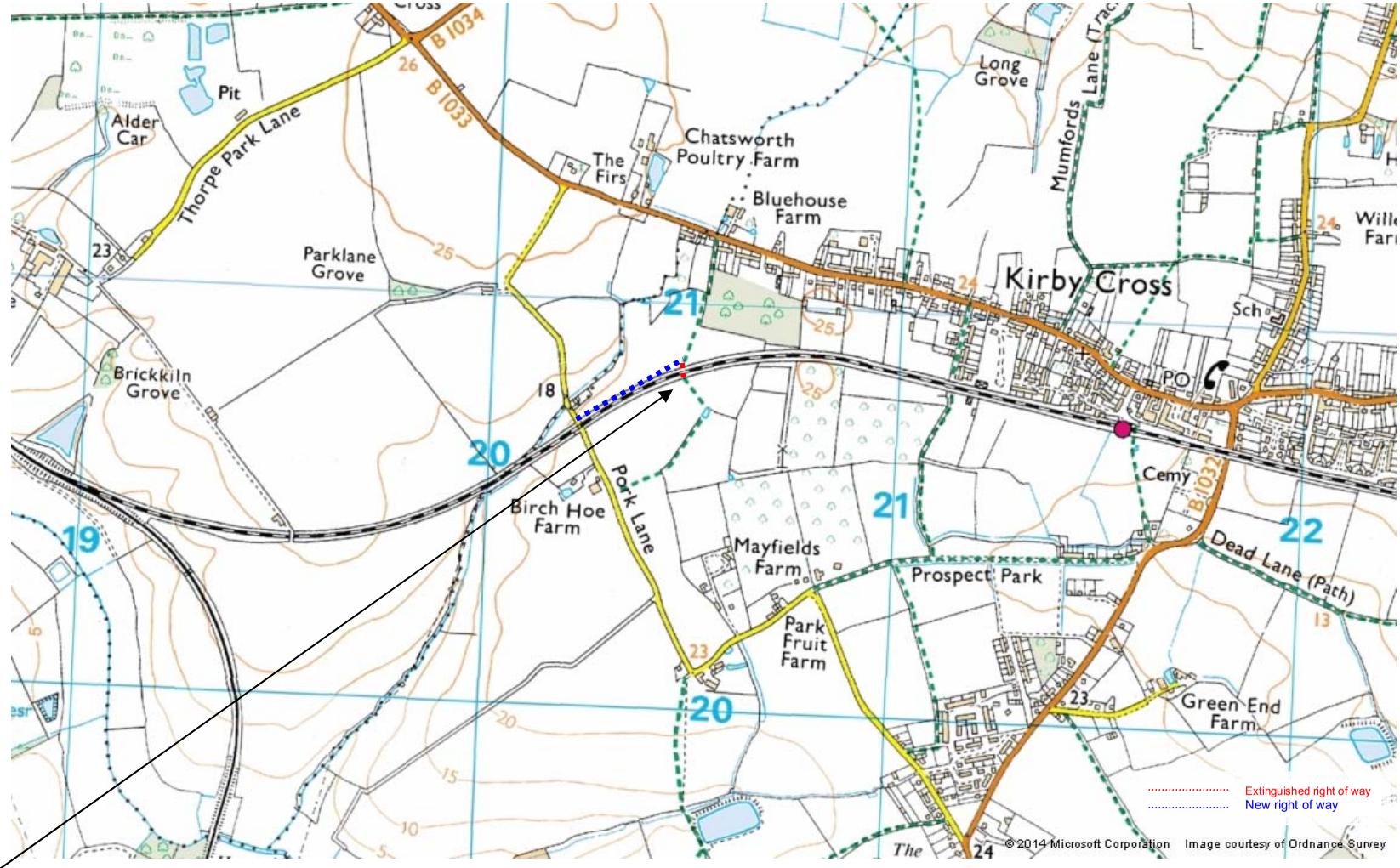
High Elm



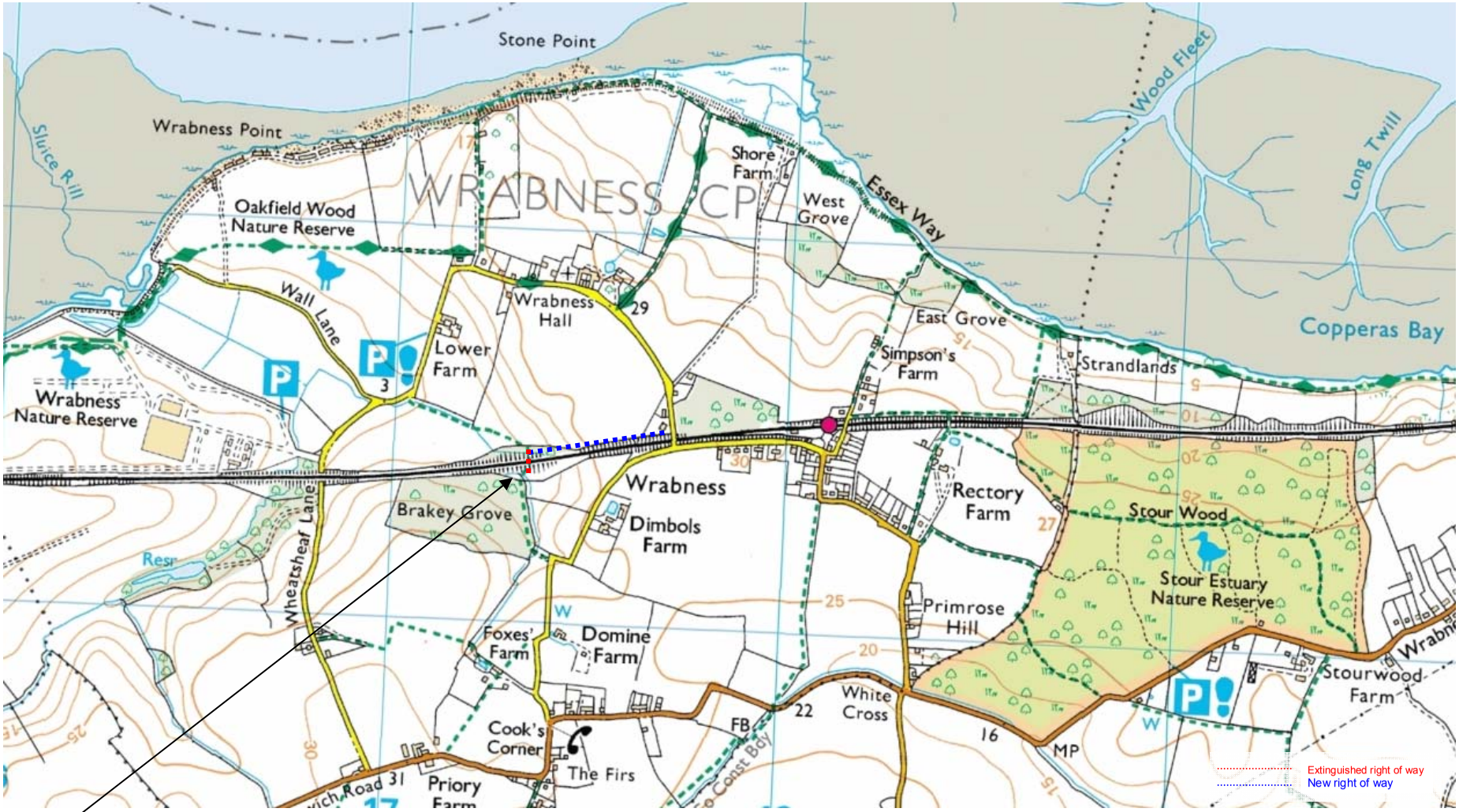
Frating Abbey (divert to overbridge to the East)



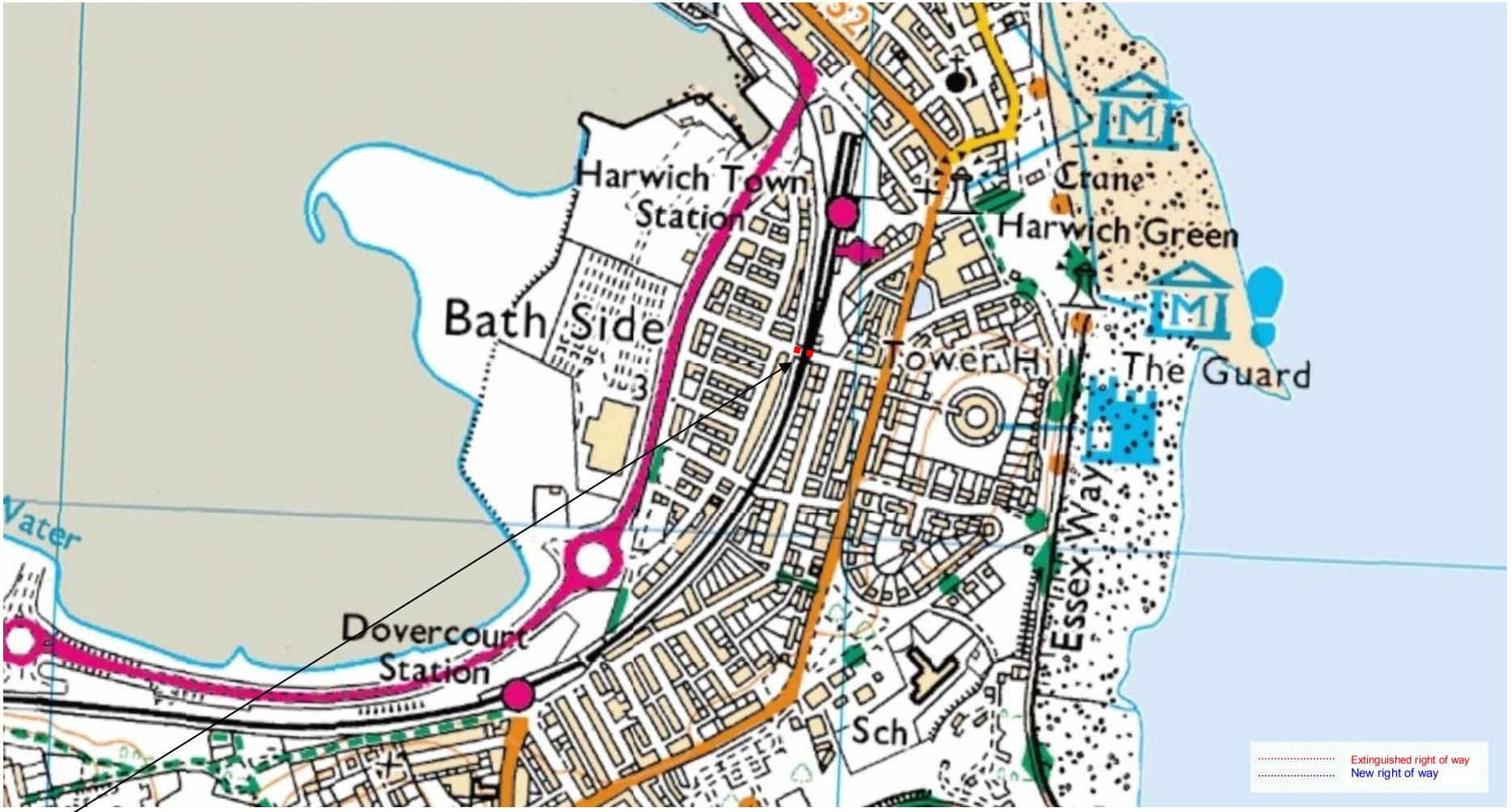
Great Bentley & Lords No.1



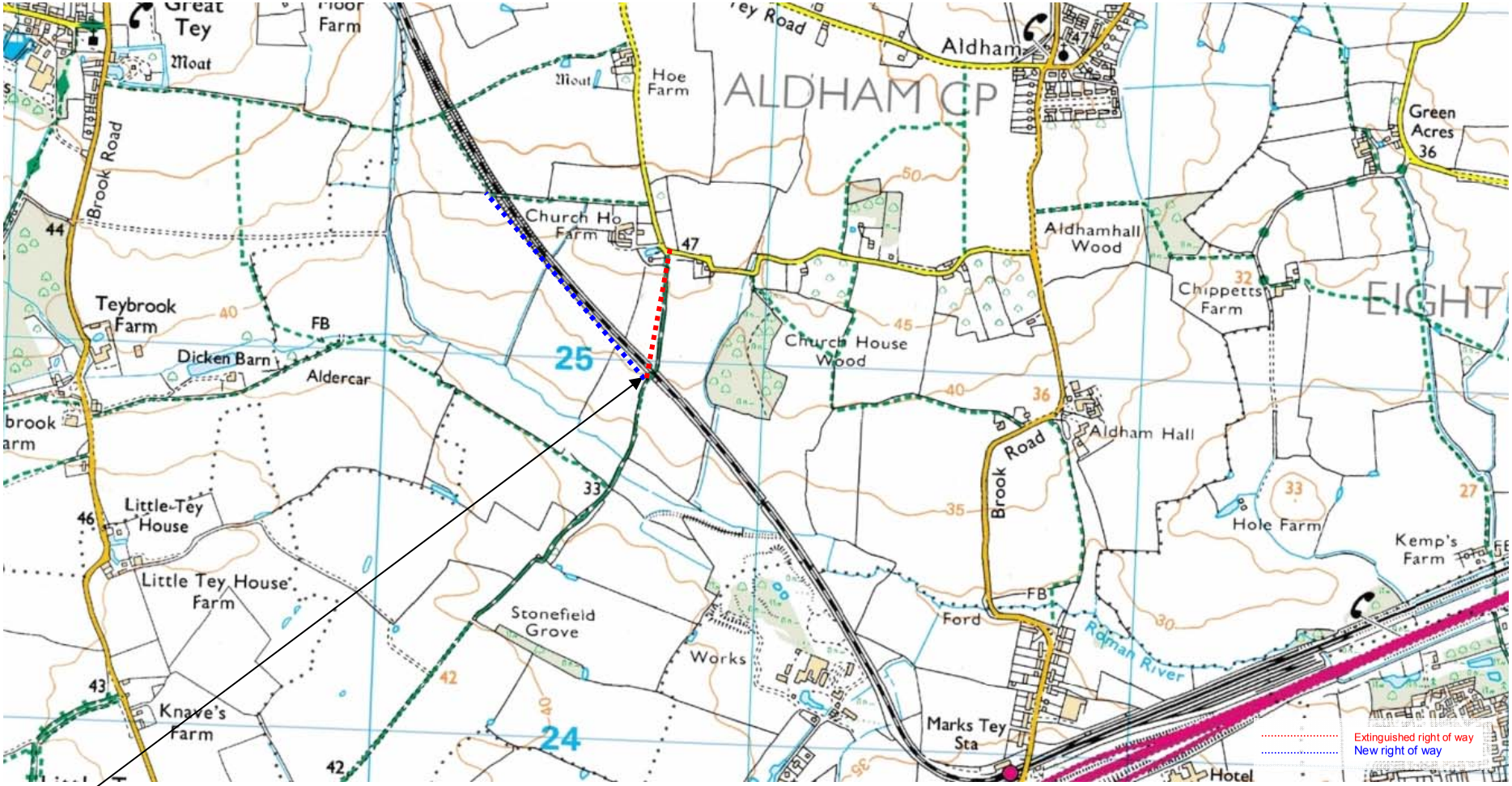
Bluehouse (diversion along to Pork Lane)


Stone Point
Wrabness Point
Sluice Rill
Oakfield Wood
Nature Reserve
WRABNESS CP
Shore Farm
West Grove
Essex Way
Wood Fleet
Long Twill
Copperas Bay
Wall Lane
Wrabness Hall
Lower Farm
East Grove
Simpson's Farm
Strandlands
Wrabness Nature Reserve
Wrabness
Dimbols Farm
Brakey Grove
Rectory Farm
Stour Wood
Stour Estuary Nature Reserve
Wheatsheaf Lane
Resr
Primrose Hill
Foxes' Farm
Domine Farm
White Cross
Stourwood Farm
Cook's Corner
The Firs
Priory Farm
Const Bay
Extinguished right of way
New right of way

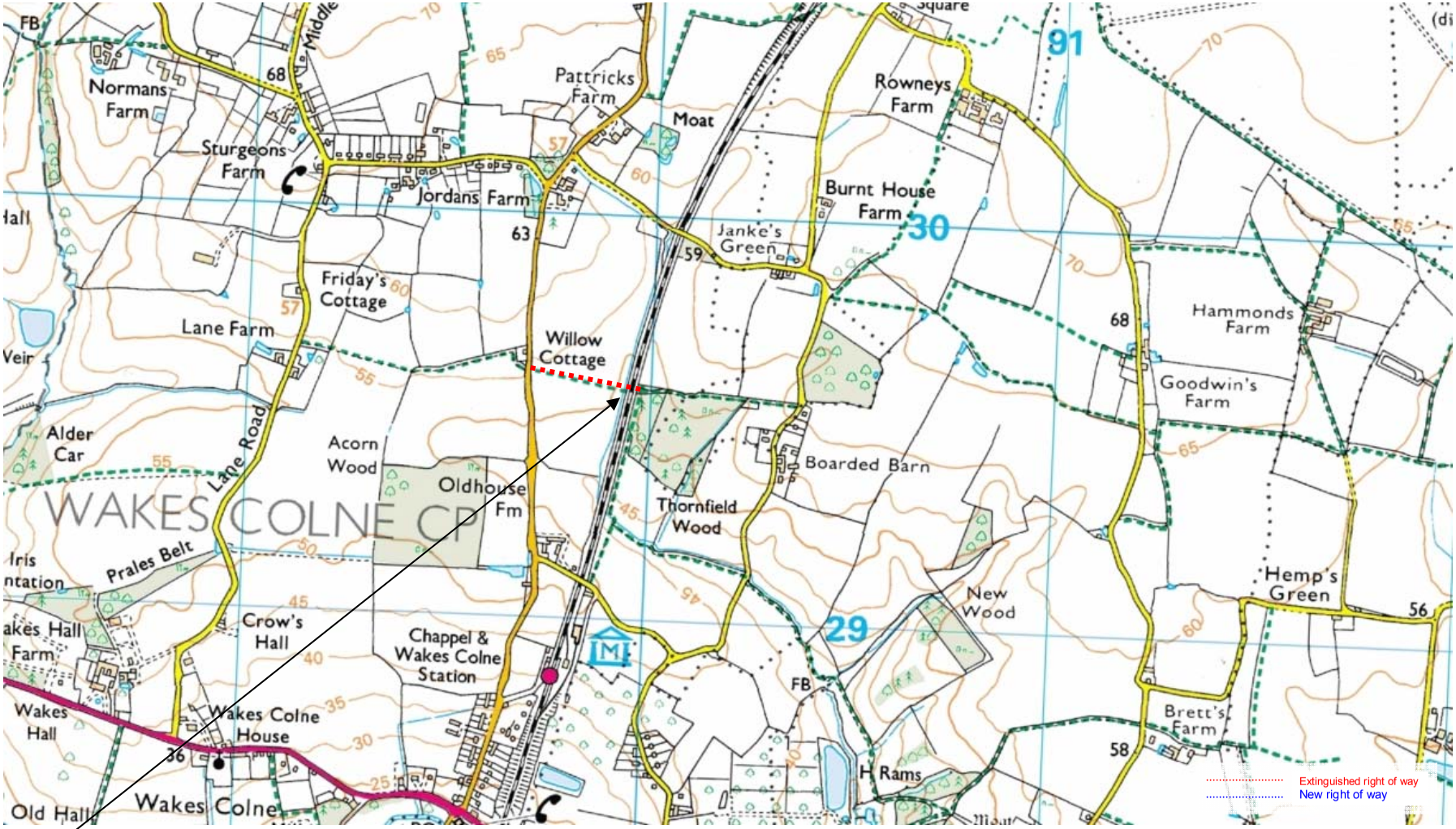
Wheatsheaf



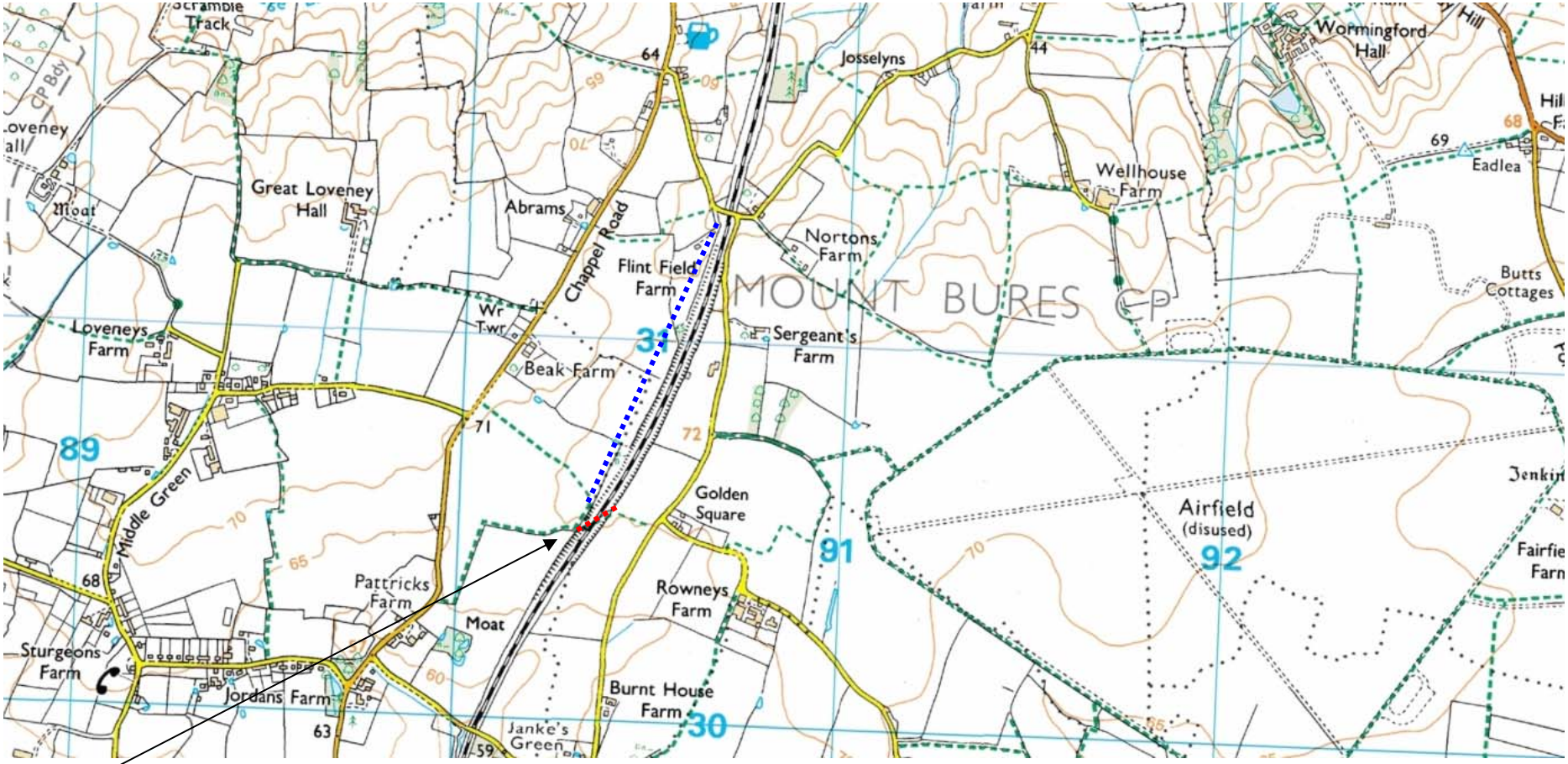
Maria Street



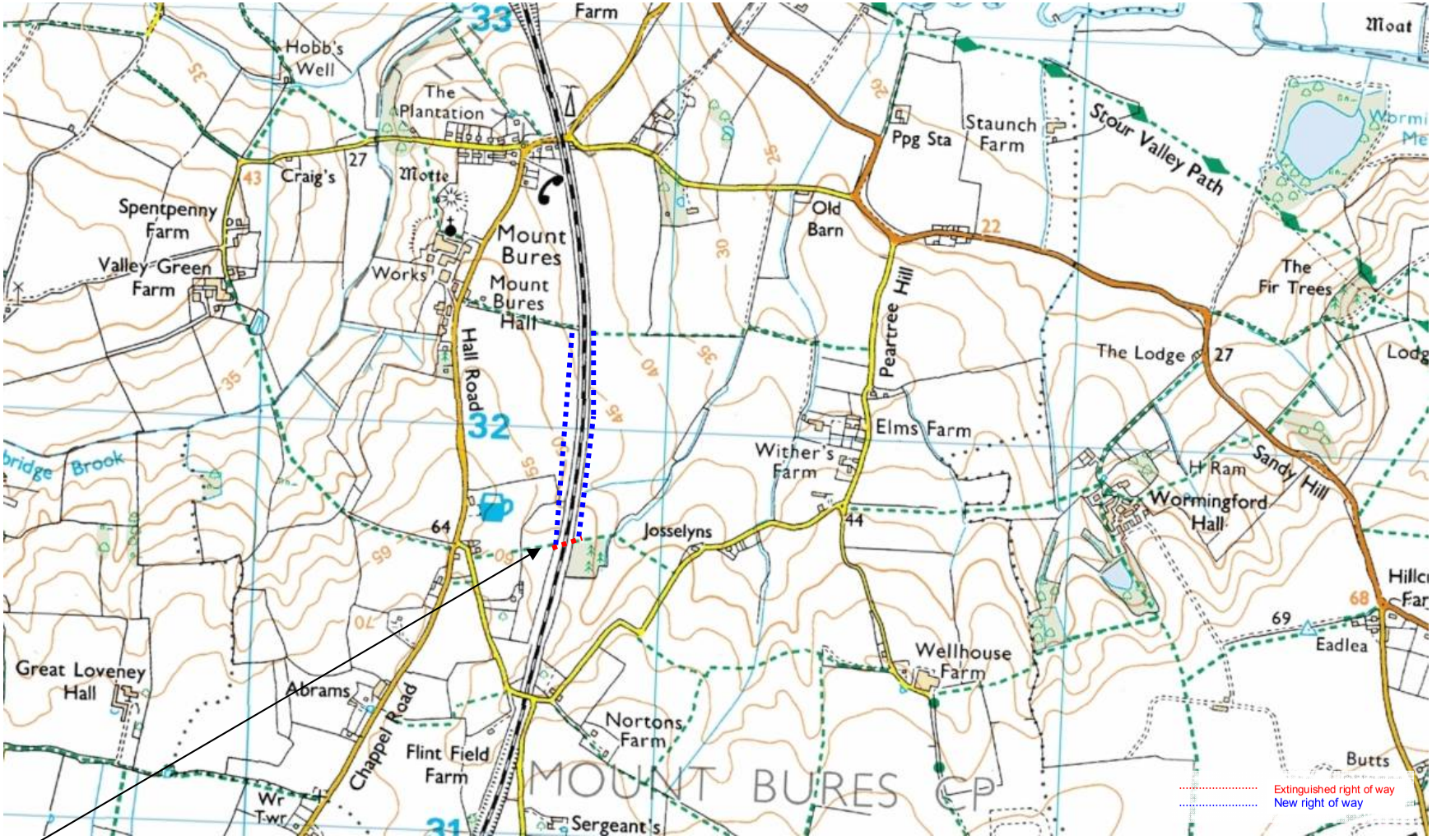
Church House Farm



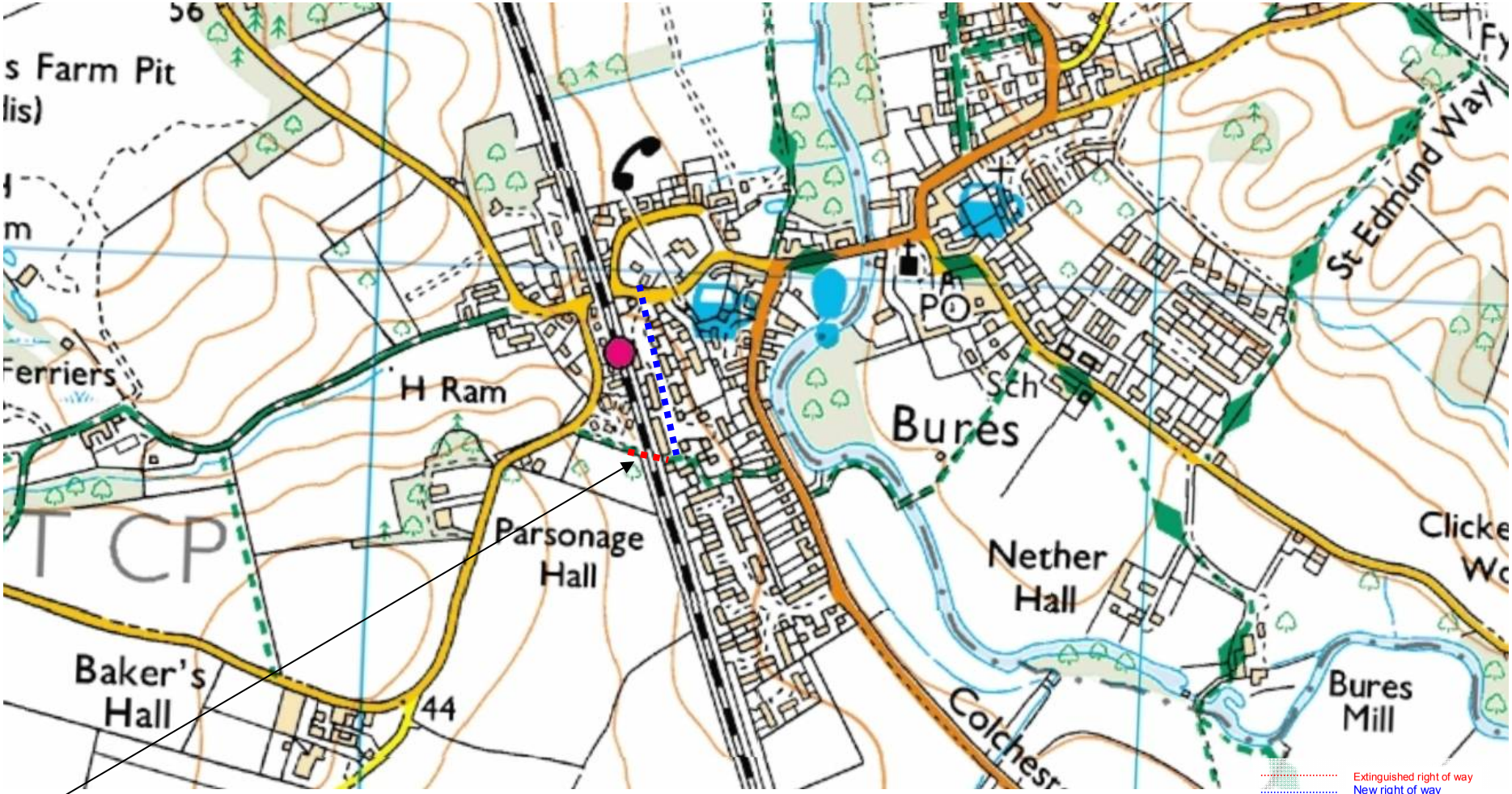
Thornfield Wood



Extinguished right of way
New right of way


Farm
Moat
Hobb's Well
The Plantation
Ppg Sta
Staunch Farm
Stour Valley Path
Craig's
Motte
Spentpenny Farm
Valley Green Farm
Mount Bures
Works
Mount Bures Hall
Old Barn
Hall Road
Peartree Hill
The Fir Trees
The Lodge
Elms Farm
Wither's Farm
H Ram
Sandy Hill
Wormingford Hall
Josselyns
Brook
Great Loveney Hall
Abrams
Chappel Road
Flint Field Farm
Nortons Farm
Wellhouse Farm
Eadlea
Butts
MOUNT BURES CP
Sergeant's
Extinguished right of way
New right of way

Josselyns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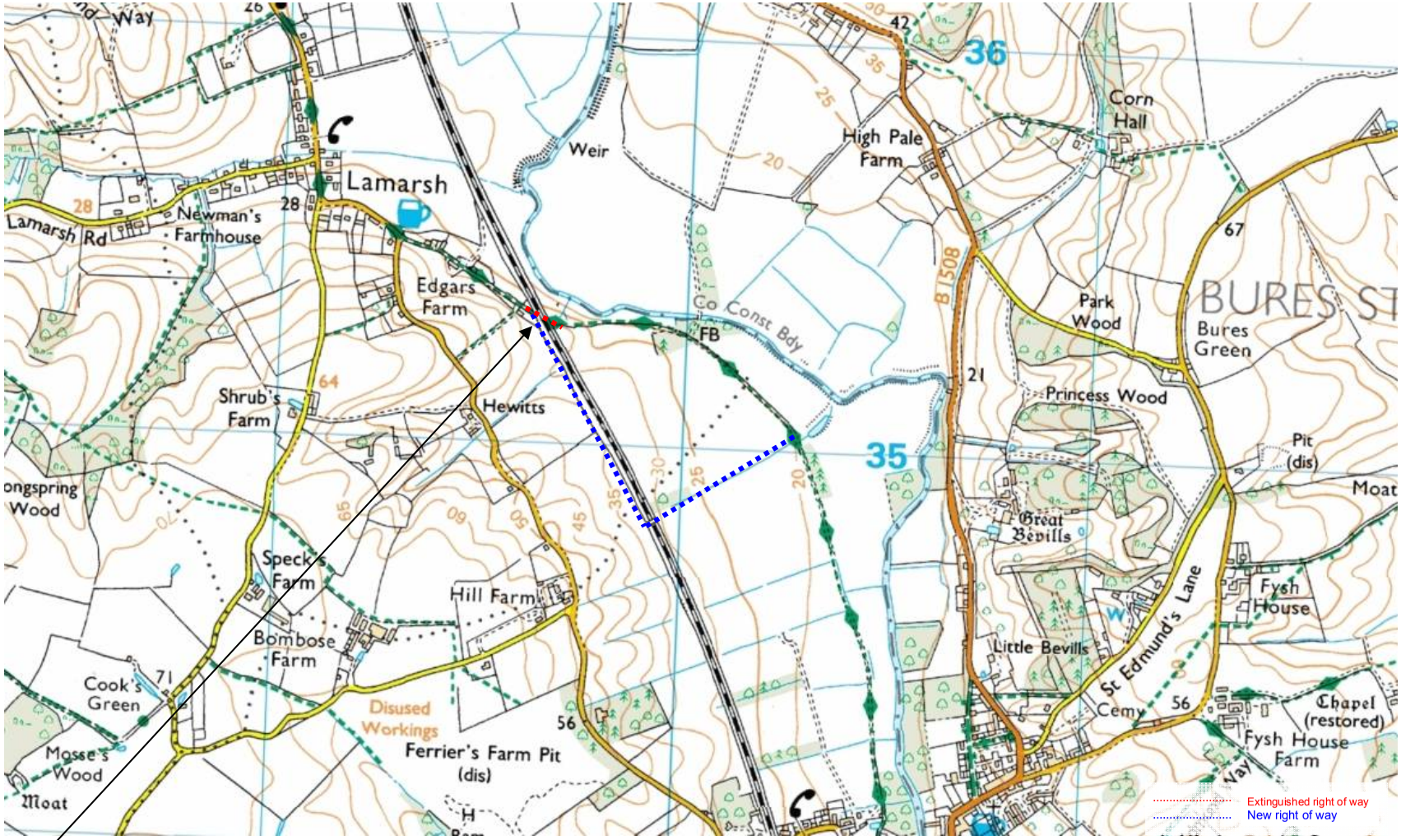

Lamarsh Kings Farm

Route Requirements Document
Hertfordshire Phase 1 & 2 TWAO – Mainline & Branchline

Route Requirements Document Template ref: NR/PSE/FRM/0240, Issue 03, 20th March 2014

Prepared by : Asset Engineer (level crossings)

..... Date: 13th January 2015
Andy Kenning

Checked by : Liability Negotiations Adviser

..... Date: 13th January 2015
Steve Day

Approved by : Sponsor

..... Date: 13th January 2015
Sean Cronin

Accepted by : Programme Manager

..... Date: 13th January 2015
Colin Conway

Optional Signatories

Endorsed by : Director of Route Asset Management

..... Date: 30/11/2014
Eliane Algaard

Endorsed by : Level Crossing Manager WA

..... Date: 13/01/15
Wayne Underwood

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Document History

Issue	Date	Originator	Modification
1.0	13-01-15	AK	Initial isue

Endorsement

The information contained within this Route Requirements Document has been produced with the approval of the following Route Asset Managers:

Discipline	Name	Title	Signature	Date
Earthworks	Ian Payne	Senior Asset Engineer	Not required for this RRD as there is no earthworks involved.	n/a
E & P	Carl Hunt	Route Asset Manager		
Gauging	Steve Valentine	Senior Asset Engineer	Not required for this RRD as no gauging is involved.	n/a
Signalling	Mike Essex	Route Asset Manager		
Structures	Anthony Dewar	Route Asset Manager	Not required for this RRD as there is no structures involved.	n/a
Telecoms	Andy Coleman	Senior asset Engineer		
Track	Nigel Wilson	Route Asset Manager		

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1 Purpose

The purpose of this RRD is to further develop the opportunity to close level crossings on Anglia Route within the county of Hertfordshire. This RRD is to cover crossings that can be diverted or extinguished without the need to build bridges or large structures. These diversions or extinguishments shall be carried out using compulsory powers obtained by means of a Transport & Works Act Order.

1.1 Background Information

An over arching CRD has been produced to explain in detail the Anglia Route strategy for achieving a crossing reduction in CP5. This also explains the different phases of the strategy, separate RRDs are to be produced for each county.

1.2 Stakeholders

The following stakeholders have been identified:

Name	Role	Contact
Hertfordshire County Council	Highway authority	Val Weaver val.weaver@hertfordshire.gov.uk
Broxbourne District Council	District Council	Alf Cuffaro ac.environment@broxbourne.gov.uk
East Herts District Council	District Council	tbc
Office of Rail Regulator	Govening Body	Tom Wake 07798932452 Tom.Wake@orr.gsi.gov.uk
Environment Agency	Statutory consultee (flood risk etc.)	corperate.services@environment-agency.gov.uk
Natural England	Statutory consultee (environment)	consultations@naturalengland.org.uk
Steve Day	Liability Negotiations Advisor	07515624312
Katie Brown	Land Consents	07713301739
Hannah Briggs	Public Relations Manager	07850407340
Richard Schofield	Route Director (Anglia)	07880740567
Eliane Algaard	Director of Route Asset Management	07702913224
Carl Hunt	Route Asset Manager (E&P)	07733126578
Mike Essex	Route Asset Manager (Signalling)	07979540804
Nigel Wilson	Route Asset Manager (Track)	07767644024
Dave Flatman	Route Telecoms Engineer	07799864214

Name	Role	Contact
Jenny Suitter	Route Asset Manager (B&C)	07919470475
Steve Valentine	Gauging Engineer	07734478777
Sean Cronin	Sponsor	07825969553
Wayne Underwood	Level Crossing Manager WA	07515621126
Bram Davenport	Level Crossing Manger	07808245673
The Ramblers	User Group (walkers)	Varies extensively by district
Sustrans	User Group (promoting non-motorised transport)	Nigel Brigham (Regional) nigel.brigham@sustrans.org.uk
Open Spaces Society	User Group (promoting access to land)	tbc
Auto Cycle Union	User Group (motor vehicles)	admin@acu.org.uk

2 General Description of the Route

2.1 Route Objectives (Problem Statement)

Closure difficulties

Public footpaths and bridleways can be closed by rail crossing diversion or extinguishment orders (expedient in the interests of public safety) or normal public path orders (diversion to make more commodious/better serve the landowner/not necessary). However, all of these are subject to challenge which can result in public inquiry, where success is not guaranteed. This is therefore a risky and time-consuming strategy. The legal costs of a basic application are around £3k–4k.

All pubic highways can be closed or downgraded by application to a magistrate's court, on the grounds that they are not needed for public use, or should be diverted. Again, this is risky as there is no guarantee magistrates will agree to make an Order. Cost of an application about £3k.

2.2 Route Definition

The best way to close public highways is through a Transport and Works Act Order. In that way, all proposed changes and consents can be consulted in advance, bridges provided where appropriate, and we can argue using the greater public benefit of improved rail services.

There are a number of footpath crossings on the BGK line on routes throughout Hertfordshire County which have the opportunity to be diverted or extinguished from crossing the railway line at grade to a grade separated crossing point.

The Hertford East Branch (HEB) and the Enfield Loop (HDT) have been assessed and none of the crossings on these lines are within the scope of phase 2.

Each crossing listed in section 2.3 shall have the following assessments carried out and providing that it can be achieved, the next assessment shall be carried out;

1. The diversion assessed for build ability based on the potential users and their physical abilities. This may be determined by other physical features along the footpath such as the presence of stiles or steps.
2. Diversity impact assessment needs to be carried out (to be completed by Network Rail team).
3. A brief design shall be produced to capture the alterations required.
4. Land clearance application made and approved.
5. The cost of each diversion shall be created against the design. These costs shall include recovery of all the current crossing assets (including whistle boards if fitted) and making good the boundary fencing to ensure there are no trespass issues following the diversion. Costs shall also include if any alterations required to the OLE (this shall be indicative at this stage, AIP shall be produced at GRIP3).
6. Environmental impact assessment for the impact of the diversion / extinguishment / downgrading.
7. Pre-Consultation for the diversion / extinguishment.
8. It is assumed that the diversions can be carried out within the Network Rail land ownership boundary. If not then land owner consent will be required for route of public path.
9. If land consents are required a land search shall be completed to identify the land owner/s.

2.3 Boundaries and Relationships

Strategic Route:	D
Route Number:	
Operating Route:	Anglia
ELR and Mileage:	BGK
OS Ref:	
Asset Type:	Level crossing
Asset Address (if applicable)**:**	

The crossings within this remit are as follows;

Phase 1 - Mainline

Name	Location	Type	Status	Proposal
Trinity Lane	BGK 13m 22ch	MGH	Public Road	Downgrade[1]
Slipe Lane UWCT	BGK 15m 65ch	UWCT	Occupation	Extinguishment[2]
Tednambury	BGK 27m 72ch	FPS	Public Footpath	Diversion
Pattens	BGK 28m 52ch	FPS	Public Footpath	Extinguishment
Gilston FPS	BGK 28m 79ch	FPS	Public Footpath	Diversion

[1] This down grade to Bridleway and remove the public road status and restrict vehicle usage to users of the allotments. No physical works required on site.
[2] This is a formalisation of the current arrangement; this will require the granting of rights to use alternative access to Wharf Road AHB. No physical works required on site.

Name	Location	Type	Status	Proposal
Twyford Road	BGK 29m 61ch	FPW	Public Footpath	Diversion

Phase 2 – Branchlines

None identified as suitable for phase 2.

2.4 Assumptions, Dependencies, Constraints & Risks

2.4.1 Assumptions

Reference	Details
A-HER-1	That the diversionary routes are buildable
A-HER-2	That funding will be made available for the diversions to be built
A-HER-3	That the diversions can be carried out within the existing Network Rail land ownership, or A-HER-4
A-HER-4	That consents from land owners for the diversions are obtained where it is not possible to utilise NR land.
A-HER-5	Any required land consents will be available

2.4.2 Dependencies

Reference	Details
D-HER-1	That Liabilities are able to support the TWAO application
D-HER-2	That the County Council & District Councils are willing to work with Network Rail and support this structured approach to level crossing management

2.4.3 Constraints

Reference	Details
C-HER-1	This requirement is to be restricted to the County of Hertfordshire
C-HER-2	This remit is not to cover the construction of large structures such as bridges or underpasses.

2.4.4 Risks

Reference	Details
R-HER-1	Not all the diversionary route will be buildable
R-HER-2	That there may be alternative proposals from external stakeholders
R-HER-3	That the secretary of State for Transport will not sign off the order
R-HER-4	The County Councils are not supportive of this structured approach to level crossing management.

2.5 Whole Life Cost Analysis

Whole Life Cost Modelling (WLCM) will be applied to phases 1 & 2, they do not need WLCM producing for them providing that the over all cost is equal to or less than the risk reduction cost.

Alterations to the Overhead Line Equipment (OLE) shall be subject to a Cost Benefit Analysed to understand the benefit in altering the OLE wire heights. This is to compare the options of altering a crossing at a time, or waiting until either wire renewals, or other improvement projects.

2.6 Route Key Milestones and Configuration States

It is anticipated that Phase 1 & 2 crossings shall be identified by the end of CP5 year 1. During CP5 year 2 it is expected that Phase 1 & 2 crossings shall be developed into buildable solutions and costed. Key milestones would be;

- Conformation that the diversions are buildable
- Design for each diversion that is buildable
- Costs produced for each of the designed diversions

2.7 Route Acceptance Strategy

This scheme shall follow GRIP and acceptance for each stage shall be at each stage gate as shown in the project programme.

Once the diversions have been designed, consulted and costed they shall be presented to the Sponsor for acceptance and inclusion in the Transport & Works Order, before the completion of GRIP3. This will allow the Sponsor to ‘group’ projects into TWAO to keep costs down and provide a strategic approach to the TWAO application.

2.8 Route Security Assessment

Nothing identified at the time of writing.

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3 Route Requirements				
		3.1 Deliverables				
RR-HertP1&P2-1101	RAM/Sponsor	The deliverables listed in Appendix A shall be produced and delivered at the required GRIP stage.	High	Deliverables listed in Appendix A are produced to the satisfaction of the RAM / Sponsors at the identified GRIP stages.	None identified	None
		3.2 Safety Requirements				
RR-HertP1&P2-1121	CR-CP5LX-1101	The Scheme shall be delivered in accordance with the Common Safety Method (CSM)	High	- Preliminary System Definition - CSM Assessment Completed and Category assigned - CSM Deliverables completed id the scheme deemed to be “significant change”.	None identified	None
RR-HertP1&P2-1122	CR- CP5LX -1102	The scheme shall be delivered in accordance with the CDM Regulations	High	- Personnel (posts) are designated and responsibilities discharged - Demonstrable evidence of compliance is provided	Construction (Design and Management) Regulations 1994	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
RR-HertP1&P2-1123	CR- CP5LX -1103	All meetings in connection with this project shall have a standing agenda item of Safety at the beginning of each meeting.	High	Meeting agendas and minutes shall be held as part of the project documentation file.	None identified	None
RR-HertP1&P2-1124	CR- CP5LX -1104	The closed level crossings shall be inaccessible to the public and appropriately fenced over.	High	Compliant to the Company standard for lineside fencing.	None identified	None
		3.3 General Scheme - Requirements				
RR-HertP1&P2-1131	CR- CP5LX -1111	The Sponsor Instruction and Client Requirements Document Contents shall be adhered to.	High	Demonstrable evidence of compliance.	None identified	None
RR-HertP1&P2-1132	CR- CP5LX -1112	The scheme shall be delivered in accordance with GRIP	High	Completed and approved GRIP stage gate at intervals laid down in the Sponsor Instruction.	None identified	None
RR-HertP1&P2-1133	CR- CP5LX -1113	The diverted / extinguished rights of way shall be updated on the definitive maps for the county	High	Definitive map updated to show correct status.	None identified	None
RR-HertP1&P2-1134	CR- CP5LX -1114	Design Guidance for Accessibility for Reduced Mobility shall be followed during early development and design.	High	All Accessibility requirements are provided (including step free access to new platforms and fire escape	None identified	Only used where access to a station is required

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
				arrangements). Where this is not possible mitigation measures and safe systems must be provided.		
RR-HertP1&P2-1135	CR- CP5LX -1115	Governing act regarding equality. In relation to this project particular attention must be given to provide access for those with reduced mobility and sight.	High	Demonstrable evidence of compliance and inclusion in development and design.	None identified	None
RR-HertP1&P2-1136	CR- CP5LX -1116	New footpath widths shall be 2metres wide as a minimum	High	New path to be of the minimum width.	None identified	None
RR-HertP1&P2-1137	CR- CP5LX -1117	Any new bridleway paths shall be 3metres wide as a minimum	High	New path to be of the minimum width.	None identified	None
RR-HertP1&P2-1138	CR- CP5LX -1118	Any footpath crossing that appears to have been abandoned shall be planned to be extinguished in phase 1 or phase 2.	High	No abandoned footpaths left on the Anglia Route.	None identified	None
RR-HertP1&P2-1139	CR- CP5LX -1119	Any footpath / bridleway crossing that have a near and practical alternative crossing point that provides a better level of protection shall be diverted in phase 1 or phase 2.	High	No footpaths / bridleways are left remaining when there is a close by alternative crossing point.	None identified	None
RR-HertP1&P2-1140	CR- CP5LX -1120	Any footpath / bridleway that can not be removed from the railway network in phase 1 or	Medium	Footpath / bridleways that were not extinguished or	None identified	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		phase 2 shall be developed for phase 3.		diverted are planned to be provided with a bridge.		
RR-HertP1&P2-1141	CR- CP5LX -1123	Diversity Impact Assessment	High	Production of a report detailing the diversity impact of the proposed changes.	None identified	None
		3.4 Network Rail Asset Requirements E&P				
RR-HertP1&P2-1201	CR-CP5LX-1171	Where a level crossing is being removed the Overhead Line Equipment (OLE) contact wires shall be adjusted to be as near to the nominal wire height of 4.7metres as practical.	Low	Contact wires are at the optimum height for that area of line.	A cost benefit analysis shall be applied to understand the operational benefits of altering the wire heights per crossing	That the current wire heights are compliant to standards (run-ins / run-outs).
RR-HertP1&P2-1202	CR-CP5LX-1172	Where a level crossing is being removed and the current (OLE) contact wires arrangements are not compliant to standard, the wire heights shall be adjusted to be as near to the nominal wire height of 4.7metres as practical.	High	Contact wires are at the optimum height for that area of line.	Records of existing deficient wire heights (including run-in / run-outs)	
RR-HertP1&P2-1203	CR-CP5LX-1173	Where new bridges are to be constructed they shall be bonded to the traction return where appropriate.	High	New structures are suitably bonded to be compliant to Network Rail company standards.	None identified	

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3.5 Network Rail Asset Requirements Signalling				
RR-HertP1&P2-1211	CR-CP5LX-1182	Where crossings are removed that have telephones fitted the signallers display system (diagram, panel or VSCS) shall be updated to shown the removal.	High	Signallers display system updated to reflect the current state of the infrastructure.	None identified	None
RR-HertP1&P2-1212	CR-CP5LX-1183	Where crossings are removed the Signalling RAM shall be informed so that a plan can be put in place to get them removed from the Signalling diagrams (if shown).	High	That it is recorded where footpath or UWCs are recovered and the Signalling RAM is presented with this information.	None identified	These alterations shall be managed by means of a records deficiency form and updated when the record is next worked on.
RR-HertP1&P2-1213	CR-CP5LX-1184	Where whistle boards are to be removed, the Signalling RAM shall be informed so that a plan can be put in place to remove them from the signalling diagrams.	High	That it is recorded where whistle boards are recovered and the Signalling RAM is presented with this information.	None identified	These alterations shall be managed by means of a records deficiency form and updated when the record is next worked on.

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3.6 Network Rail Asset Requirements Track				
RR-HertP1&P2-1221	CR-CP5LX-1191	Crossing deck (if fitted) shall be removed (including edge beams, if fitted) and track inspected to ensure that all the track components are still serviceable.	High	No evidence of crossing on site & track components signed as fit for purpose.	None identified	None
RR-HertP1&P2-1222	CR-CP5LX-1192	Where a crossing deck has been removed sleeper spacing shall be checked and if required corrected with serviceable spares to match the existing assets.	Medium	Sleeper spacing matches that of the approaches and all track components are of the same type.	None identified	None
RR-HertP1&P2-1223	CR-CP5LX-1193	Where level crossings have been removed the ballast shoulder and cribs shall be reinstated to provide suitable track support	High	Track support system shall be in accordance with Network Rail Company standard.	None identified	None
RR-HertP1&P2-1224	CR-CP5LX-1194	Where signalling equipment has been involved and train detection is reduced, any redundant Insulated Rail Joints (IRJ) shall be removed from the track. If in Continuous Welded Rail the rail shall be stressed to Level 1 (if <36metres of new rail) or level 2 (if > 36metres).	High	Redundant IRJs removed and stressing certificates provided	None identified	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3.7 Network Rail Asset Requirements Telecoms				
RR-HertP1&P2-1231	CR-CP5LX-1201	Where telephones are present they shall be recovered in working order and returned to be offered to the RCE and or NRT Central Stores (tie cabling shall be recovered and scraped).	High	Phones, posts, and bases removed including cabling.	None identified	None
RR-HertP1&P2-1232	CR-CP5LX-1202	Where telephones are displayed on a telephone concentrator, these shall be removed from the system.	High	Telephone concentrator updated to reflect the current state of the infrastructure.	None identified	None
		3.8 Operational Requirements				
RR-HertP1&P2-1241	CR-CP5LX-1231	Where whistle boards are to be removed these shall only be removed once published in the WON.	High	Whistle boards removed from the infrastructure.	None identified	None
RR-HertP1&P2-1242	CR-CP5LX-1232	Where crossings to be removed are fitted with a phone, this shall only be done once it has been published in the WON.	High	Sectional Appendix updated to reflect the current state of the infrastructure.	None identified	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
RR-HertP1&P2-1243	CR-CP5LX-1233	Where crossings to be removed are fitted with a phone, this shall only be done once Network Change has been done to remove them from the Sectional Appendix	High	Approved Network Change	None identified	None
		3.9 Performance Requirements				
RR-HertP1&P2-1251	CR- CP5LX -1131	Any temporary TSR's that are in place as a result of the crossing having insufficient sighting shall be removed once the crossing is closed.	Medium	Removal of the TSR	Operational publications will detail where and what speeds are in force.	None
RR-HertP1&P2-1252	CR- CP5LX -1132	Any operational restrictions regarding the standing of trains at signals due to the train blocking the footpath shall be removed.	Medium	Removal of local instruction	None identified	Only applicable to crossing where standage is an issue
RR-HertP1&P2-1253	CR- CP5LX -1133	Where a PSR exists due to sighting requirements of a crossing that is being removed, the project shall investigate the potential of removing the PSR and increasing the line speed.	Low	Increase in line speed over the section of line where the crossing used to be located.	None identified	That the other railway infrastructure can withstand a speed increase.

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
		3.10 Environmental Requirements				
RR-HertP1&P2-1261	CR-CP5LX-1141	Adherence to corporate policies in development, design and construction.	High	Production of the Environmental Impact Assessment for suitable crossings	None identified	None
		3.11 Reliability, Availability, Maintainability Requirements				
RR-HertP1&P2-1281	CR-CP5LX-1161	Where crossings are closed; Ellipse shall be updated to remove the Maintenance Schedulable Tasks (MST) from the maintainers work bank. This shall cover all disciplines.	High	Ellipse data updated	None identified	None
RR-HertP1&P2-1282	CR-CP5LX-1162	Where crossings are closed ALCRM is updated to show the crossing as closed and no longer part of the network.	High	ALCRM data updated	None identified	None
		3.12 Maintenance Requirements				
RR-HertP1&P2-1301	CR-CP5LX-1151	Any roadway that is built to be used as a public highway shall be built to be adopted by the Highway Authority for on going maintenance	High	Adoption of the new roadway by the Highways Authority	None identified	None

Reqt ID	Source Reference	Requirement and Heading	Priority	Acceptance Criteria	Supporting Information	Assumption
RR-HertP1&P2-1302	CR-CP5LX-1152	Where assets are removed from the railway the appropriate data base shall be update to reflect the current state of the railway. This shall include (but not limited to) such systems as Ellipse, GEOGIS.	High	Asset data records correctly showing the status of the assets.	None identified	None

Appendix A – Deliverables

See attached project characterisation spreadsheet detailing the project deliverables.

Appendix B – References

Anglia CP5 Level Crossing Reduction Strategy (CP5 Xing Reduction – Issue 1).

See pages 21 to 25 for maps of the crossings and their proposed alterations.

Appendix C - Glossary

Abbreviation	Description
CRD	Client Requirements Document
DRRD	Detailed Route Requirements Document
IP	Infrastructure Projects
RAM	Route Asset Manager
RRD	Route Requirements Document
WLC	Whole Life Cost
TWAO	Transport & Works Act Order
PRoW	Public Right of Way
ALCRM	All level Crossings Risk Model
WON	Weekly Operating Notice
RCE	Route Communications Engineer
NRT	Network Rail Telecoms
OHLE	OverHead Line Equipment
VSCS	Video Screen Control System
IRJ	Insulated Rail Joint
TSR	Temporary Speed Restriction
PSR	Permanent Speed Restriction

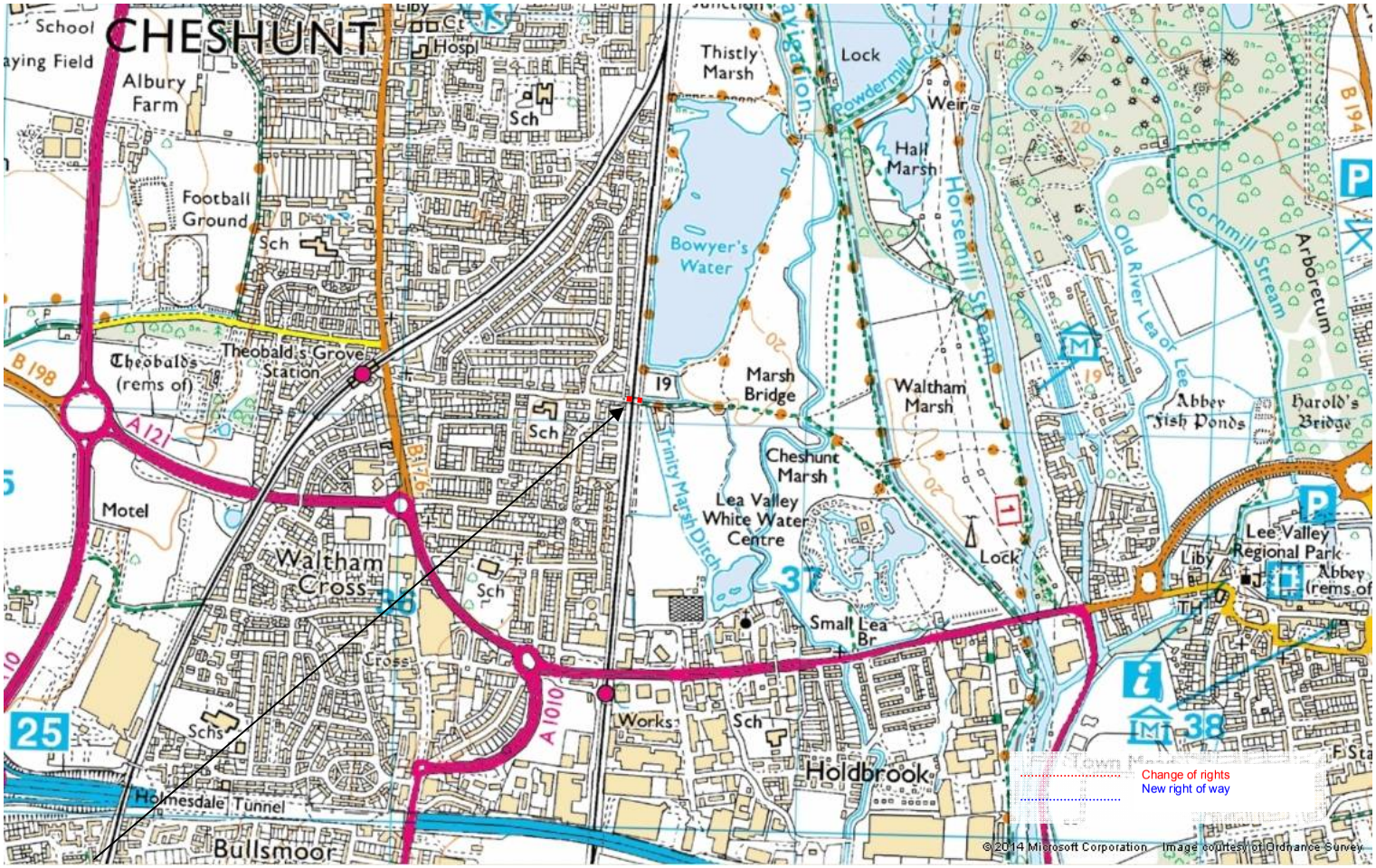
Appendix D - Whole Life Cost Analysis

Not applicable to this phase.

Appendix E - Additional Information

Nothing identified at the time of writing.

Appendix B – References



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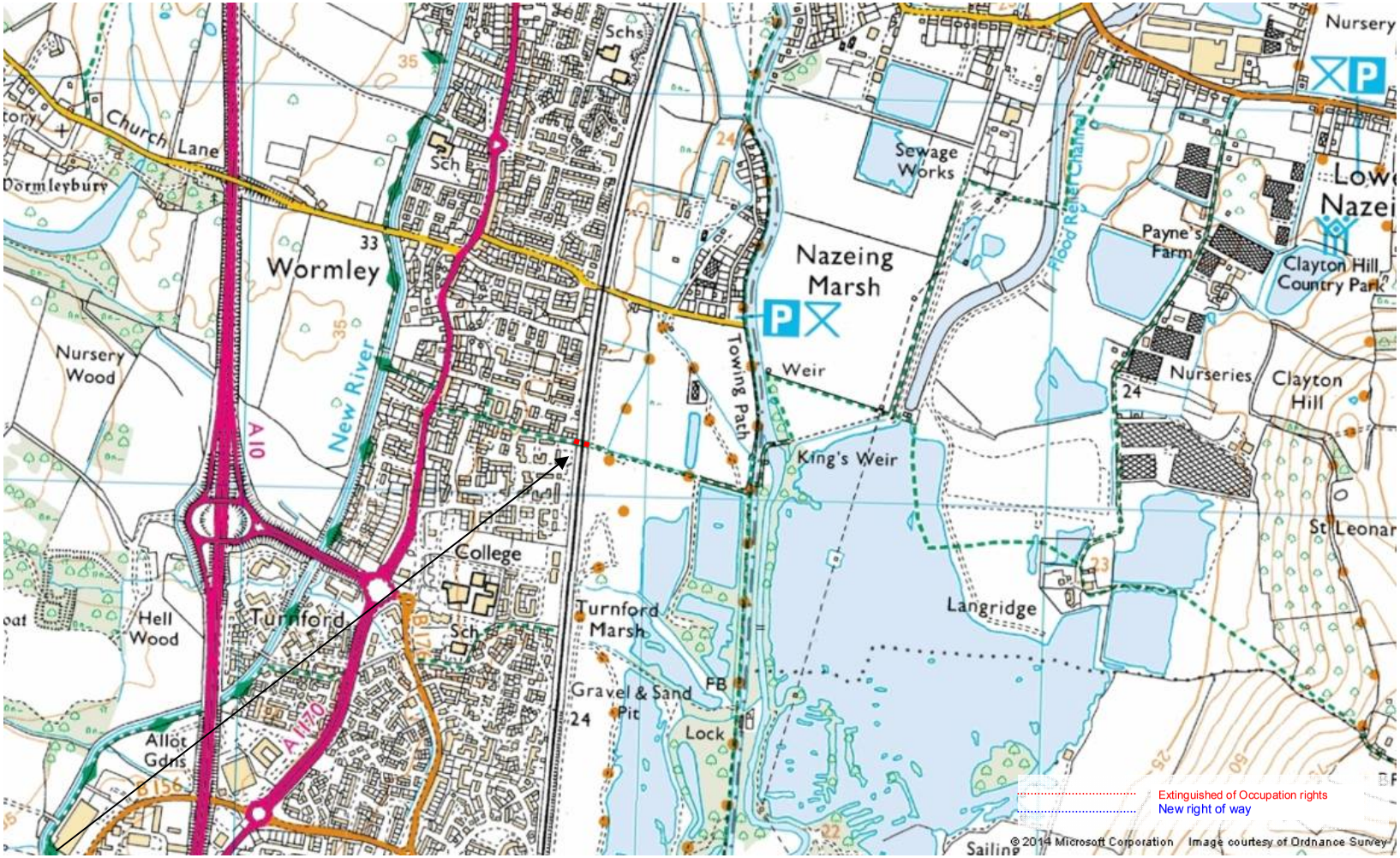
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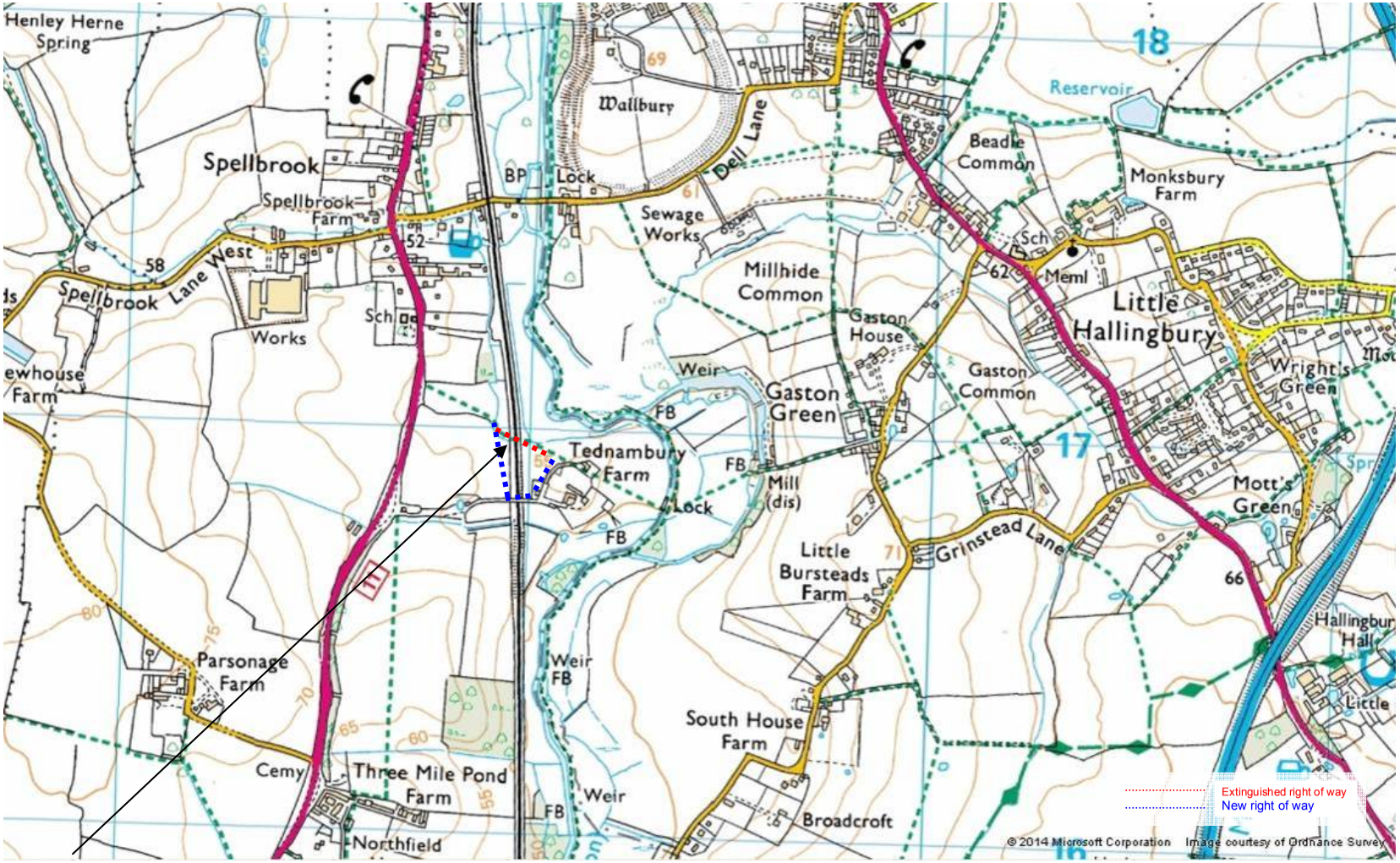
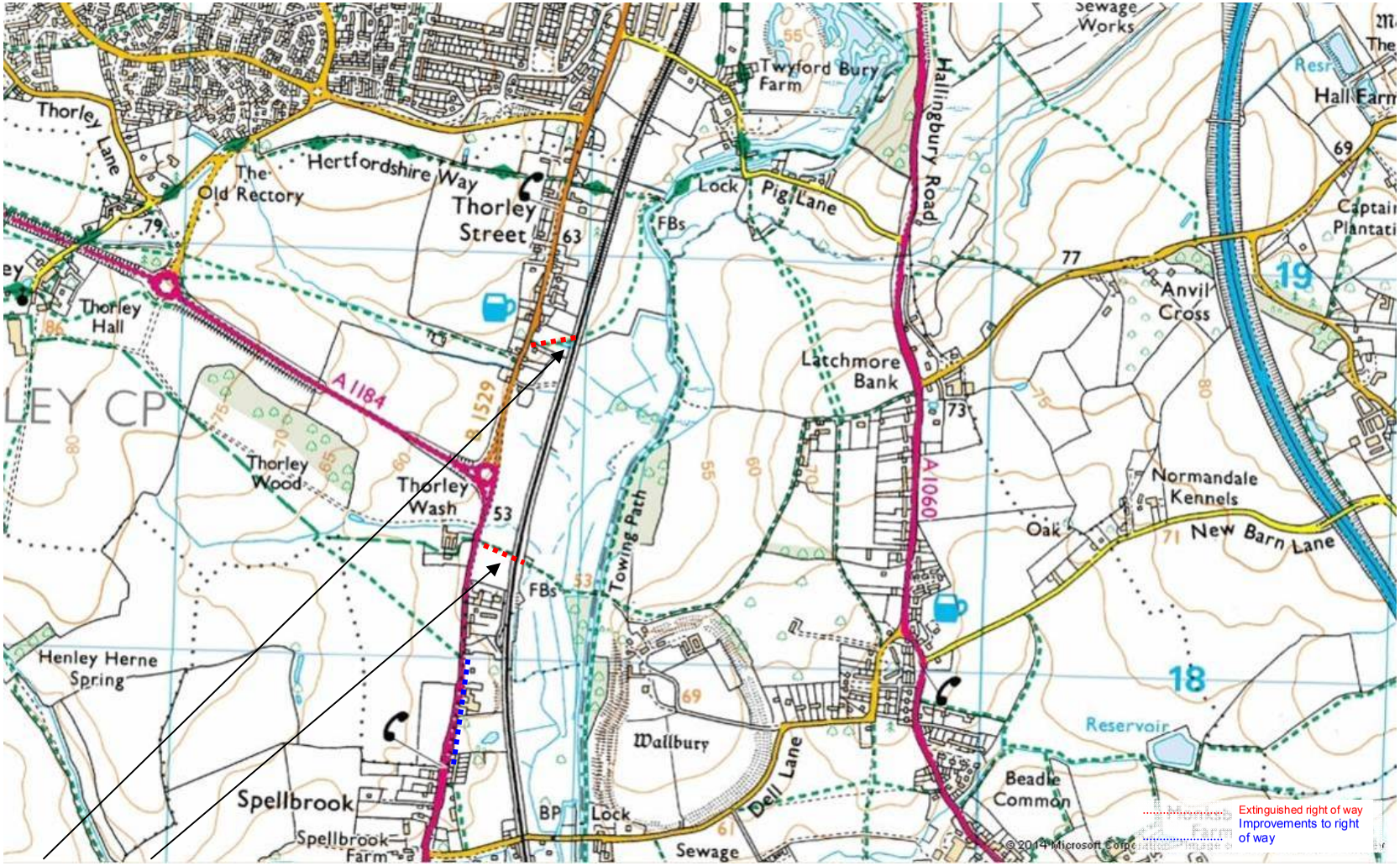
Wormley
Nursery Wood
New River
A10
Hell Wood
Turnford
College
Sch
Allot Gdns
A1170
B1170
Schs
Sch
Sewage Works
Nazeing Marsh
Towing Path
Weir
King's Weir
Flood Relief Channel
Turnford Marsh
Gravel & Sand Pit
FB
Lock
Langridge
Payne's Farm
Nurseries
Clayton Hill Country Park
Clayton Hill
Nursery
St Leonar
Sailing
Extinguished of Occupation rights
New right of way
© 2014 Microsoft Corporation Image courtesy of Ordnance Survey

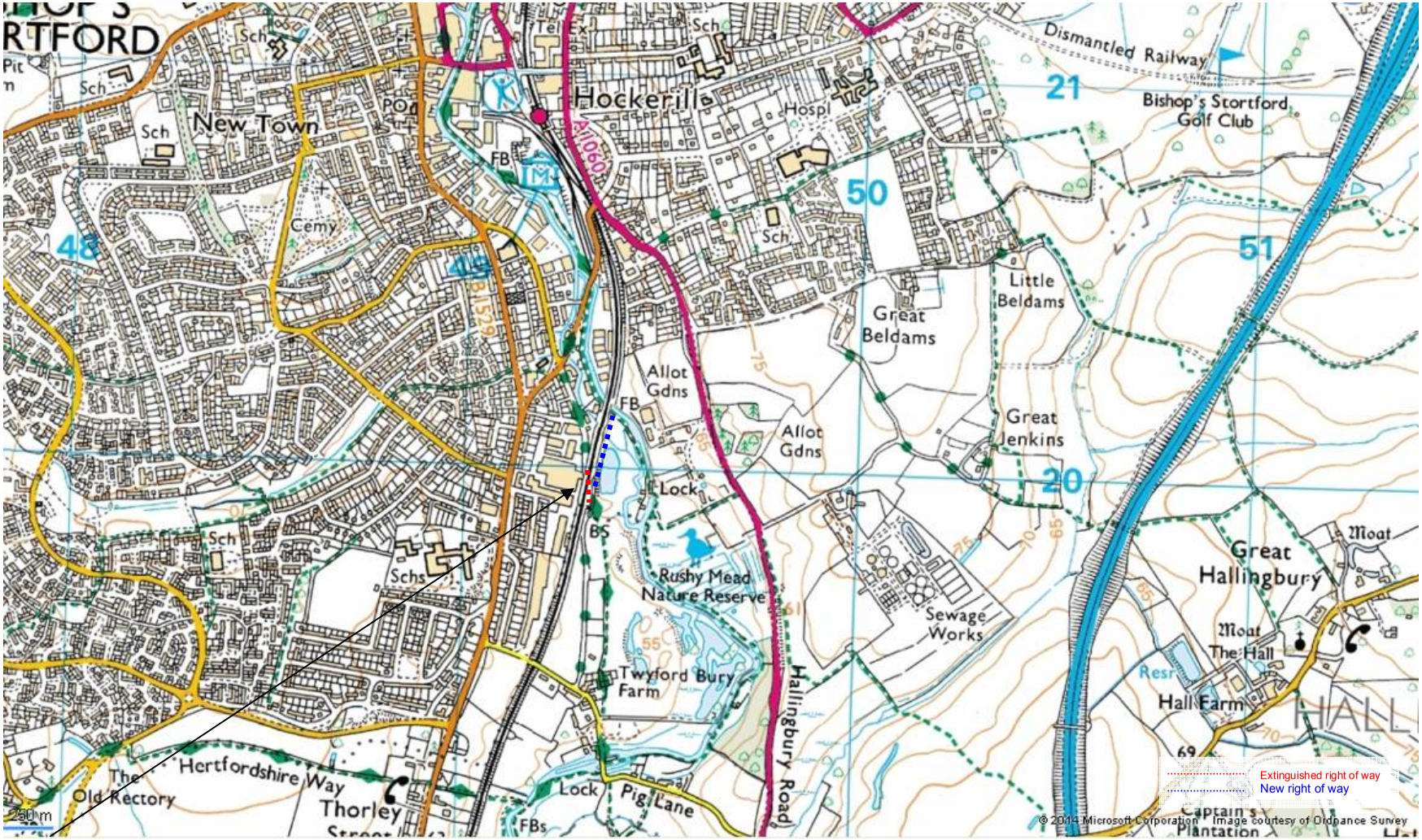
Slipe Lane



Tendnambury



Gilston & Pattens


Hockerill
New Town
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Lock
Rushy Mead Nature Reserve
Twyford Bury Farm
Hallingbury Road
Great Beldams
Little Beldams
Great Jenkins
Sewage Works
Great Hallingbury
Moat
The Hall
Hall Farm
Hertfordshire Way
The Old Rectory
Thorley
Pig Lane
Extinguished right of way
New right of way
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Twyford

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

For Public Issue

County Summary

Essex

354763/RPT202
Revision B
March 2016

Network Rail

Mott MacDonald

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

Essex

March 2016

Revision	Date	Originator	Checker	Technical Approver	Project Approver	Description
A	March 2016	DJ Weir	S Price	S Price	JA Smith	First Issue
B	March 2016	D Weir	S Price	S Price	J Smith	NR comments

Not For Public Issue

Information class:

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1 Introduction

1.1 Context

Network Rail has taken steps to close or reduce potential risk at many level crossings on the railway network and is continually looking at ways to improve safety, reliability and value for public money. This is achieved through various existing programmes and initiatives including the National Level Crossing Closure Programme which is based around safety criteria. Additionally, Network Rail has developed the Anglia Level Crossing Reduction Strategy to consider options to provide alternative means of crossing the railway to help expedite the process. In particular the strategy will help to:

- Improve the safety of level crossings 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

The purpose of the Anglia Level Crossing Reduction Strategy is to bring about safety benefits, allow Network Rail to more effectively manage their assets, to reduce the ongoing maintenance liability of the railway and enable various separate enhancement schemes.

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1.2 The Strategy

The Anglia Level Crossing Reduction Strategy comprises 5 phases; however the Mott MacDonald commission currently only relates to Phases 1 and 2 at the concept (GRIP1) feasibility stage.

Phase 1 (mainline) and 2 (branch line) comprise level crossings where the proposals do not include any new forms of grade separation across the railway, and where benefits may be deliverable and affordable within Network Rail Control Period 5 (to 31/3/19). Network Rail has specified within Route Requirement Documents and correspondence the 221 level crossings which should be considered within the Phase 1 and 2 concept feasibility study.

Phases 3 to 5 include new grade separated crossings of the railway, and diversion or downgrading of major highways. Network Rail has advised that these later phases are likely to be implemented within Control Period 6 (2019 to 2024) after Phases 1 and 2 are implemented. This is because the more substantive associated infrastructure means that they will take longer to develop and secure the necessary funding. It is expected that planning work on Phases 3 to 5 may be progressed during the latter stages of CP 5 although the implementation is likely be during Control period 6.

1.3 The Projects

Four separate Projects have been identified within the Strategy as listed below:

1. The county of Norfolk
2. The county of Suffolk
3. The county of Cambridgeshire
4. The county of Essex (and others) also include the county of Hertfordshire, the unitary authority of Thurrock and the London Borough of Havering.

Each of the four Projects will be the subject of a separate application under the Transport and Works Act 1992 for which Network Rail intends to apply. This will include the powers necessary to enable it to implement the Projects such as the acquisition of land, and / or rights over land, extinguishment of existing rights and alteration of rights including down grading of public roads.

The Norfolk Project Transport and Works Act Order (TWAO) preparation will not be progressed at this time and the number of level crossings within the Suffolk TWAO will be reduced from those assessed within the GRIP1 concept feasibility study. Within each Project where level crossings interact with one another they will be arranged into packages.

An individual level crossing feasibility report (references are contained within Table 1.1) has been prepared for each of the 221 level crossing sites considered within the GRIP1 study. In addition the following reports have been produced:

- Stakeholder Management Plan
- Compensation Code Note
- Diversity Impact Assessment scoping report
- Stage 1 Road Safety Report
- Census (traffic survey) scoping report
- Cost estimate report

This report provides a summary of the salient facts for the county of Essex at the GRIP1 concept feasibility stage; summary reports will be produced for the other local authorities within the Project and also the three other Projects within the Strategy. These will form part of the evidence base for the Strategy as it is progressed through the planning process, with TWAO applications likely to be submitted in early 2017 and public inquiries in late 2017 or early 2018.

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2 Summary of Proposals

2.1 Feasibility Studies

Mott MacDonald was instructed to review the GRIP0 proposals provided in Network Rail's Route Requirement Document, reference 148339-Essex. As part of these studies, site visits were undertaken at all level crossing proposal sites in September 2015 (where physically possible).

Parndon Mill level crossing was not observed on site because it was fenced off on both sides of the railway preventing access. Further investigation found that no apparatus is present on the railway.

Wallaces private level crossing was not visited because it is located on private land, instead it was observed from adjacent railway over bridges.

In January 2016 a further 4 sites (Eves, Manor Farm, Abbotts and Wivenhoe Park) were added to Mott MacDonald's study remit which were visited in January 2016 (where physically possible).

The Anglia Route GRIP 1 Review considered an "assessed solution" which was agreed with Network Rail following site reconnaissance at the level crossings. The assessed solution was based on the GRIP0 proposal from the Route Requirements Document with some GRIP0 solutions subject to minor tweaks with a smaller number of proposals adopting entirely new solutions.

Mott MacDonald scoped the requirements for a Stage 1 Road Safety Audit (RSA) on the level crossing proposals. The findings of the RSA are provided in Essex, Thurrock & Hertfordshire Stage1 Road Safety Audit, Report Number 354763/RPT219A.

Mott MacDonald undertook a preliminary Diversity Impact Assessment (DIA) which reviewed the likely impact that closure of level crossing would have on their surrounding communities and additionally determine which of the level crossing proposals may require a formal DIA. The findings of the scoping exercise are reported in Diversity Impact Assessment - Scoping Report, Report Number 354763/RPT 225.

Network Rail supplied level crossing usage data which was reviewed, and consideration given to the number and nature of users at each crossing. This review was combined with details of the GRIP 1 proposals along with comments from the relevant local authority in order to make recommendations regarding the nature and quantity of additional data collection required during the next stages of the project. The level crossing proposals were categorised by level of importance (high, medium,low) to indicate whether further surveys are required to support the proposals. These finding are summarised in Table 1.1.

2.2 Summary Table

In order to present a concise summary of the results of the GRIP1 Review a tabulated presentation of the data has been prepared; **Table 1.1** provides a list of all of the level crossings that are located in in the county of Essex which have been investigated as part of this review. The headings used in the summary table are described below along with a key to their sub-categories.

Crossing name: Network Rail's level crossing name;

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Footpath reference: The name of the Public Right of Way (PRoW) taken from the definative map which was provided by Essex County Council. The footpath name is predominately made up of the Parish of which it is located in along with a unique reference number from within the County.

Crossing type: An abbreviation of the level crossing types with a description provided below.

- AHB – Automatic half barrier crossing;
- BW – Bridleway level crossing;
- BWG – Bridleway level crossing with gates;
- CCTV – Barrier crossing with Closed circuit television;
- FP – Footpath level crossing;
- FPG – Footpath level crossing with gates;
- FPK – Footpath level crossing with kissing gates;
- FPO – Footpath level crossing open;
- FPS – Footpath level crossing with stiles;
- FPW – Footpath level crossing with wicket gates;
- FPWM – Footpath level crossing wicket gate with miniature warning lights;
- FPX – Footpath level crossing that is fenced off;
- MGH – Level crossing manned gated - hand operated;
- MSL – Level crossing with miniature stop lights;
- Sleeping Dog – A crossing where rights to cross the line still exist but are not exercised and there is very little or no trace of a crossing on site. It is not possible for the crossing to be used;
- UWC – User worked crossing;
- UWCM – User worked crossing with miniature warning lights;
- UWCT – User worked crossing with telephone;
- UWG – Public road crossing with user worked gates; and
- WT – Wave Train Fitted.

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MM ref: Mott MacDonald's unique reference number for each level crossing;

MM report (RPT): Mott MacDonald's unique feasibility review report reference number for that particular level crossing;

Proposal category: Six categories have been used to describe the level crossing closure proposals, namely:-

- **Category 1:** Closures that involve no material works (i.e. no level crossing apprarauts to remove) but require the formalisation of the legal status of the crossing under a TWAO. An example of these include level crossings with access prevented by fencing or barriers where it is not possible to cross the railway using the level crossing; an altertaive means of crossing the railway may already have been provided under a separate scheme such as a stepped footbridge constructed immediately next to a level crossing;
- **Category 2:** Closures that are extinguishments of the level crossing rights and do not involve any works outside of Network Rail's land. Involves the removal of the crossing apparatus;
- **Category 3:** Closures where Pubic Rights of Way (PRoWs) are diverted on either private land or within the public highway and that involve no substantive physical works;
- **Category 4:** Closures where (PRoWs) are diverted on either private land or within the public highway that involve works such as new steps, new ramps, footway provision etc;

- **Category 5:** Closures that involve works on private land or within the public highway but do not affect the PROW; and
- **Category 6:** Proposals to downgrade the status of the crossing, for example from a public road to a private user worked crossing and a bridleway.

RSA (y/n): This column states (yes or no) whether a Stage 1 Road Safety Audit has been undertaken on the level crossing closure proposals;

RSA Issues (y/n): This column states (yes or no) whether any road safety problems where identified in the Stage 1 Road Safety Audit (if applicable);

Landowner consultation: This column states (yes or no) whether any consultation was undertaken with affected landowners;

Cost: A capital cost esimtate at 3rd Quarter 2015 costs for the proposed level crossing closure works;

Council position: A short statement on Essex County Council's postion (and other local authorties) on the level crossing proposals following a series of meetings;

Delivery risk: A high level judgement on the deliverability of the proposal, acknowledging any associated risks such as environmental, constructability etc constraints;

Comment: A brief comment on any risks associated with the proposal;

Additional census priority: A high level indication of whether a level crossing usage census (or other) is prioritised to support the proposals, categorised by level of importance (high, medium,low). The rationale behind these priorities is outlined in the report 354763/RPT239;

DIA Scoping Rating: The findings of a Diversity Impact Assessment (DIA) scoping exercise which grouped the closure proposals into three categories, namely:-

- **Red:** Further, detailed assessment required to proceed. Consider a full DIA evidence gathering process to support completion of the Network Rail pro forma;
- **Amber:** Site can be closed as soon as infrastructure interventions have taken place. Complete Network Rail DIA pro forma based on available evidence; and
- **Green:** Site can be closed immediately with minimal impact and intervention. Review, sign-off and no further DIA work required at this stage.

Alternative for Study: This column states (yes or no) as to whether any other alternative options were identified in addition to the assessed option. Alternatives options that may have arisen during the review stage by the design team or have been requested by Essex County Council;

NR Progressed at GRIP2 (y/n): A statement (yes or no) whether Network Rail has instructed the level crossing closure proposal to proceed to GRIP Stage 2.

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Table 1.1 County Summary Thurrock

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
Old Lane	FP Royden 13	FPS	E01	145	2	No	n/a	No		No objections at this stage	Low	.	Medium	Green	No	Yes
Camps	FP Harlow 75	FPS	E02	146	4	No	n/a	Yes		No objections at this stage	Low	A link between Footpath Harlow 78 and Footpath Harlow 122 on the south side of the railway should be considered at the next GRIP stage	Medium	Medium	Yes	Yes
Sadlers	FP Harlow 74	FPS	E03	147	4	No	n/a	Yes		No objections at this stage	Low		Medium	Green	Yes	Yes
Parndon Mill	FP Harlow 73	FPX	E04	148	1	No	n/a	No		No objections at this stage	Low	The level crossing has been closed for a significant period of time	No data collection required	Green	No	Yes
Fullers End	FP Elsenham 29	FPWM	E05	149	4	No	n/a	No		No objections at this stage	Low	Future discussions should be held with the developer to discuss integration a footpath within the development proposals.	High	Red	Yes	Yes
Elsenham Emergency Hut	FP Henham 32	FPO	E06	150	4	No	n/a	No		No objections at this stage	Low	Alternative diversion via Elsenham Station footbridge or level crossing to be considered at next GRIP stage.	High	Green	Yes	Yes
Ugley Lane	Private Access Track	UWCT	E07	151	2	No	n/a	No		Private - no ECC involvement	Low		Medium	Green	No	Yes
Henham	FP Widdington 26	FPS	E08	152	4	Yes	No	No		No objections at this stage, check width of footway under bridge	Low		High	Green	No	Yes
Elephant	FP Newport 14	FPS	E09	153	4	Yes	No	No		No comment, ECC to review proposals and return comments.	Low		High	Green	No	Yes
Dixies	FP Newport 7	FPG	E10	154	3	Yes	No	No		No objections at this stage. Likely to receive opposition from general public.	Low		Medium	Amber	No	Yes

Mott MacDonald

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
Windmills	FP Newport 8	FPS	E11	155	3	Yes	Yes	No		No objections at this stage	Low		High	Green	No	Yes
Wallaces	Private FP	FPG	E12	156	2	Yes	No	No		Private - no ECC involvement	Medium	Landowner has previously declined offers from Network Rail to close the level crossing.	Medium	Green	No	Yes
Littlebury Gate House	FP Littlebury 30	FPG	E13	157	4	Yes	No	No		No comment, ECC to review proposals and return comments.	Low		High	Green	No	Yes
Church Lane CCTV (Ltn1)	FP Margaretting 35	CCTV	E14	158	4	Yes	No	No		No objections at this stage. ECC would not want to adopt diversion route for Church.	High	Ownership of the diversion route to be explored.	High	Red	Yes	Yes
Margaretting	FP Margaretting 32	FPWM	E15	159	3	No	No	Yes		Ongoing with NR. No objection at the stage.	Low	Proposal may be delivered in a separate scheme and fall out of the TWAO.	High	Green	No	Yes
Maldon Road	FP Margaretting 21	FPS	E16	160	2	No	No	No		No objections at this stage from ECC.	Low		High	Green	No	Yes
Boreham	BW Boreham 23	FPS	E17	161	4	Yes	Yes	Yes		No comment, ECC to review proposals and return comments.	Low	Agreed with ECC to provide a bridleway link between Boreham and Noakes level crossings to form a circular route.	Medium	Green	Yes	Yes
Noakes	FP Boreham 24	FPO	E18	162	4	Yes	Yes	No		No comment, ECC to review proposals and return comments.	Low	Agreed with ECC to provide a bridleway link between Boreham and Noakes level crossings to form a circular route.	No data collection required	Green	Yes	Yes
Potters	FP Rivenhall 43	FPK	E19	163	4	Yes	No	Yes		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Snivellers	BW Kelvedon 34	BW	E20	164	4	Yes	No	Yes		No comment, ECC to review proposals and return comments.	Medium	*Road Safety issues recommended to seek alternative diversion for	Medium	Green	Yes*	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
												a bridleway.				
Hill House 1	FP Fearing 3 and 7	FPS	E21	165	5	Yes	No	No		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Great Domsey	FP Fearing 3	FPS	E22	166	5	Yes	No	No		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Long Green	Un-adopted Road	FPWM	E23	167	1	No	n/a	No		Ongoing with NR	Low		Medium	Green	No	Yes
Church 1	FP Marks Tey 15	FPS	E24	168	3	No	n/a	No		No objections at this stage	Low		No data collection required	Green	No	Yes
Church 2	FP Stanway 29	FPS	E25	169	3	No	n/a	No		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Barbara Close	FP Hawkwell 21	FPW	E26	170	3	Yes	no	No		No objections at this stage	Low		High	Green	No	Yes
Puddle Dock	FP Brentwood 180 & Havering 177	FPS	E27	171	4	Yes	Yes	No		No comment, ECC to review ownership and return comments.	Low	Alternative circular option discussed and agreed with ECC.	High	Green	Yes	Yes
Whipps Farmers	FP Brentwood 178 & Havering 179	FPS	E28	172	4	Yes	Yes	No		No comment, ECC to review ownership and return comments.	Low	Alternative circular option discussed and agreed with ECC.	High	Green	Yes	Yes
Brown & Tawse	FP West Horndon FP39	FPW	E29	173	4	Yes	Yes	No		No comment, ECC to review ownership and return comments.	Medium	On-road diversion route considered unsafe with alternative to address the problem.	High	Green	Yes	Yes
Ferry	FP Benfleet 22	FPW	E30	174	4	Yes	No	No		No objections at this stage. Likely to receive opposition from general public.	Medium		High	Green	No	Yes
Brickyard Farm	FP Benfleet 12	FPW	E31	175	4	Yes	No	No		No objections at this stage. Likely to receive opposition from	Medium		High	Green	No	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
										general public.						
Woodgrange Close	Southend	FPW	E32	176	2	Yes	No	No		To be discussed with Southend Borough Council	Low		High	Red	No	Yes
Motorbike	FP Basildon 136	FPW	E33	177	4	No	n/a	No		No objections at this stage	Low		High	Green	No	Yes
Cousins Number 1	FP Cressing 34	FPS	E34	178	4	Yes	Yes	Yes		No objections at this stage	Low		Low	Green	No	Yes
Cranes No. 1	FP Cressing 14	FPS	E35	179	4	No	n/a	Yes		No objections at this stage	Low	Option tweaking to make use of adjacent under bridge.	Low	Green	No	Yes
Cranes No. 2	FP White Notley 8	FPS	E36	180	4	No	n/a	No		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Essex Way	FP White Notley 13	FPS	E37	181	4	No	n/a	No		Suggested alternative diversion route	Low	Agreed with ECC to divert along the field boundary instead of parallel to the railway.	Medium	Green	Yes	Yes
Battlesbridge	FP Rettendon 23	FPW	E38	182	4	Yes	No	No		No objections at this stage	Low		Low	Green	No	Yes
Woodham Fen	FP South Woodham Ferrers 35	FPW	E39	183	4	No	n/a	No		No objections at this stage	Low		High	Amber	No	Yes
Creaksea Place 1	FP Burnham-on-Crouch 3	FPW	E40	184	4	No	n/a	Yes		No objections at this stage if proposed alternative adopted.	Medium	Agreed with ECC to divert along the field boundary instead of parallel to the railway.	Medium	Green	Yes	Yes
Padget	Track	FPW	E41	185	4	Yes	No	No		No objections at this stage.	High	Likely to receive objections from the public.	High	Amber	No	Yes
Sand Pit	FP Elmstead 16 /FP Alresford 7	FPS	E42	186	4	Yes	Yes	Yes		No objections at this stage.	Medium	Some issues regarding works to existing highway to be confirmed.	Medium	Green	No	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
High Elm	FP Alresford 4	FPS	E43	187	4	Yes	Yes	Yes		No comment, ECC to review proposals and return comments.	Medium	Consider closure with users making use of existing highway.	High	Green	Yes	Yes
Frating Abbey	FP Great Bentley 5	FPS	E44	188	4	No	n/a	No		ECC would support the diversion to the south of the railway which involves less on-road walking.	High	Alternative solution requires further investigation.	High	Green	Yes	Yes
Great Bentley Station	FP Great Bentley 8	FPS	E45	189	4	No	n/a	No		ECC would not support use of the station platform as a permissive path in the event that barriers or a gate was installed.	High	Other options to be explored parallel to the railway or through an adjacent commercial estate. Both options require private land.	Low	Green	No	Yes but requires further investigati on
Lords No.1	FP Great Bentley 12	FPS	E46	190	4	No	n/a	No		ECC would not support use of the station platform as a permissive path in the event that barriers or a gate was installed.	High	Other options to be explored parallel to the railway or through an adjacent commercial estate. Both options require private land.	Low	Green	No	Yes
Bluehouse	FP Friton and Walton 16	FPS	E47	191	4	Yes	No	No		No objections at this stage	Low		Low	Green	No	Yes
Wheatsheaf	FP Wrabness 19	FPK	E48	192	4	No	n/a	No		No objections at this stage	Low	Consider providing an additional PROW route to connect footpath 184/4 to reduce the amount of on-road walking.	High	Green	Yes	Yes
Maria Street	Adopted Highway	FPW	E49	193	2	No	n/a	No		Concern at diversion length and on-road route but, no objection at this stage.	Low		Medium	Red	No	Yes
Church House Farm	BW Aldham 20	FPS	E50	194	4	No	n/a	No		No objections at this stage. ECC would not support downgrading to a footpath. The diversion route would need to be retained as a bridleway as a minimum.	Medium	Measures to upgrade bridge to be determined.	Medium	Green	Yes	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
Thornfield Wood	FP Wakes Colne 11	FPW	E51	195	4	No	n/a	No		Objections due to diversion length along roads. Essex suggested alternative diversions.	Medium	Likely objections due to diversion length.	Medium	Green	Yes	Yes
Golden Square	FP Mount Bures 21	FPS	E52	196	4	Yes	No	Yes		ECC concerned at the diversion length which is likely to receive objections from the RA. ECC suggested alternative diversion routes.	Medium		High	Green	Yes	Yes
Josselyns	FP Mount Bures 10	FPS	E53	197	4	No	n/a	Yes		Objections due to diversion length. ECC suggested alternative diversions.	Low		High	Green	Yes	Yes
Bures	FP Bures Hamlet 30	FPS	E54	198	3	No	n/a	No		ECC did not object to the proposals but suggested consulting the general public to see who complains. ECC also suggested alternative diversion routes.	Low		Low	Green	Yes	Yes
Lamarsh Kings Farm	FP Lamarsh 14	FPS	E55	199	4	No	n/a	Yes		No objections at this stage.	Medium	Land owner opposed to the use of his land for the proposals.	Medium	Green	No	Yes
Abbotts	FP Ardleigh 27, 28 and 42	FPS	E56	226	4	No	n/a	No		Essex County Council has not had the opportunity to comment on the proposals.	Medium	Suitability of the on-road solution to be investigated further.	Medium	Green	No	Yes
Wivenhoe Park	FP Colchester 236	UWCT + FP	E57	227	6	No	n/a	No		Essex County Council has not had the opportunity to comment on the proposals.	Medium	Determine legal usage and access rights.	Low	Green	No	Yes
Totals					C1: 2 C2: 6 C3: 7 C4: 39 C5: 2 C6: 1	Yes: 27 No: 30	Yes: 9 No: 20 n/a 28	Yes: 14 No: 43			High: 5 Med: 14 Low: 38		High: 24 Medium: 22 Low: 8 N/A: 3	Red: 2 Amber: 2 Green: 2	Yes: 21 No: 36	Yes: 57 No: 0

3 Summary of Baseline Information

3.1 Review of Baseline Information

The following sources of information have been used to inform the level crossing closure feasibility studies.

3.1.1 Bridge and Structure Examination Reports

Where a proposal made use of a Network Rail structure (not on the adopted highway) such as an under/over bridge or watercourse culvert, Network Rail supplied the relevant Bridge and Structure Examination Report. It should be noted that some of the structures were not visited on site because it was not physically possible due to fencing, overgrown landscaping or the site was located on private land. Structures that were not observed will need further investigation at the next GRIP stage. No structural inspections were undertaken as part of this study.

3.1.2 Level Crossing Information

Initially Mott MacDonald used level crossing information from Network Rail's Transparency web page (http://www.networkrail.co.uk/transparency/level-crossings/) with supplementary information provided by Network Rail at later date. This included the following items:-

- Level crossing ALCRM scores;
- Use and mis-use data (train types, line speed, number of trains, census results, mis-use, near misses and accidents);

3.1.3 Network Rail's Route View Web Page

Mott MacDonald were given access to Network Rail's Route View web page which provides low altitude aerial photography and was used to view level crossing sites with some photography utilised in the review reports.

Not For Public Issue

3.2 PROWS and Planning

Essex County Council (and other local authorities) provided a digitised copy of their definitive PROW map, which has been used to create our proposal plans.

During meetings with Essex County Council, the project team were informed of current planning applications that are located within the vicinity of the level crossings.

3.3 Environmental Constraints

Mott MacDonald has undertaken a high level environmental desk based study to identify environmental constraints within a 2km radius of the level crossing (the "study area"). Environmental constraints mapping was produced to aid site reconnaissance of the closure proposals and for future consideration at the next GRIP stages. The mapping contained the following data:-

- Bluesky World
  - National Tree Mapping;
- Information from the Environment Agency/Natural England:-
  - Flood Zone 1 to 3 mapping;

  - Watercourses;
  - Historic and active landfill sites;
  - Agricultural land quality;
  - Statutory Designated Sites e.g. SSSIs
- English Heritage:
  - Listed buildings and structures;
  - Schedule of ancient monuments;
  - Battlefields; and
  - Registered Parks and Gardens.

Once the closure proposals become more defined at the next GRIP stage Phase 1 habitat surveys will be undertaken.

3.4 Third Party Supplied Information

Mapping and data used to produce our level crossing closure proposal drawings was sourced from the following providers:-

- Ordnance Survey (OS) Mapping data. Through Network Rail's agreement with OS, Mott MacDonald were able to use the following mapping types for reporting purposes:-
  - OS Mastermap Topographic (1:1250 mapping);
  - OS Terrain 5 (5m spacing height data);
  - OS Master Aerial layer; and
  - OS Street View.
  -
- Land registry:-
  - PolygonPlus;
  - Land title registers; and
  - INSPIRE Land Boundary Polygons WMS.

Not For Public Issue

4 Summary of Consultation

Consultation held to date as part of the GRIP1 review is summarised below. Details of the consultation held by Network Rail prior to the GRIP1 review is contained within the individual level crossing reports.

4.1 Strategic Stakeholders

A workshop was held with Highways, PROW, Green Infrastructure, Legal, Trails and Heritage officers from Essex County Council (ECC) on Friday 6th November at their Seax House Offices in Chelmsford. A brief overview presentation from Mott MacDonald provided background context and an overview of the programme and project plan. This initial session also described the nature of the work undertaken to date, including the site visits and desktop research, and provided a further opportunity to forge partnership working for mutual benefit.

The 55 crossings within the County area of Essex were discussed in detail as a group, to understand the current situation and to consider the proposed solutions, in order to further develop and shape the initial proposals for level crossing closures. A Google Earth KMZ file showing the locations of all level crossings and a PDF plans of the proposed closure solutions were circulated to all attendees prior to the meeting.

4.2 Statutory Stakeholders

Mott MacDonald issued a Network Rail approved letter to the relevant statutory consultees (namely, the Environment Agency, Natural England, Historic England and Highways England) on Friday 9th October 2015. The letters introduced the programme, and requested the opportunity to meet with relevant individuals to discuss the programme and relevant crossings in further detail. Responses to the letter and following meetings are summarised in the individual feasibility reports.

Not For Public Issue

4.3 Landowners

At this early stage of the scoping/feasibility study only a prioritised list of 66 potentially affected landowners were consulted upon the Anglia level crossing closure proposals. In addition to this a small number of additional land owners were consulted upon during the site visit if the opportunity arose (i.e. the landowner was present on site whilst our surveyor was there). In the county of Essex, discussions have been held with or correspondence has been received from 14 landowners. Letters have been sent out to a further 2 landowners but at the time of writing this report we have not received any feedback from them. The remaining affected land owners not contacted at this stage will be consulted at the next GRIP stage, with further discussions with those contacted already to continue.

4.4 Access and User Groups

Mott MacDonald worked with Network Rail to prepare an online survey as the first means of engaging with Local User Groups. This collated high level feedback and information, which can be used as the basis for further, more detailed engagement in the later stages of the programme. The survey intended to give an opportunity for Local User Groups to inform the project team of their general principles in relation to the Anglia Route Level Crossing Reduction Strategy.

The following eight Local User Groups were contacted with the invitation to engage with Network Rail through the completion of the survey at an organisational level:

- Auto Cycle Union;
- British Driving Society;
- British Horse Society;
- Byways and Bridleways Trust;
- Cyclist Touring Club (CTC);
- Open Spaces Society;
- Sustrans; and
- The Ramblers Association.

The survey commenced on the 19th October 2015 and closed on 1st November 2015 (excluding a 4 day extension). All organisations were contacted before the survey closed with a final request to participate.

A total of 12 individual responses were received, representing all of the organisations listed above, with the exception of the Auto Cycle Union and the British Driving Society. Four of the 12 responses were received from the Ramblers Association's local contacts in the Anglia region. A response was also received from the Essex Bridleways Association and Colchester Cycling Campaign (at the request of one of the eight main organisations listed above).

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5 Conclusions

Mott MacDonald has undertaken a review of the GRIP0 proposals provided in Network Rail's Route Requirement Document, reference 148339-Essex and subsequent instructions. A summary of the review findings is listed below.

- 57 level crossing closure proposals were reviewed by Mott MacDonald in the County of Essex;
- ECC are yet to comment on 16 level crossing closure proposals but will do so once their Officers have undertaken site reconnaissance at these level crossings. ECC have not had the opportunity to comment on the proposals at two additional level crossing sites because the proposals were not sufficiently developed to enable discussion at the last meeting;
- Essex County Council do not object to any of the level crossing closure proposals at this stage;
- Alternative options/amendments were identified at 21 locations;
- All 57 level crossing closure proposals or their alternatives were considered suitable to progress to the next GRIP stage;
- All 57 level crossing closure proposals were instructed by Network Rail to take forward to the next stage GRIP2-4.

To progress the GRIP1 assessed solutions further, stakeholder engagement (in particular with landowners) should be undertaken at the next GRIP stage.

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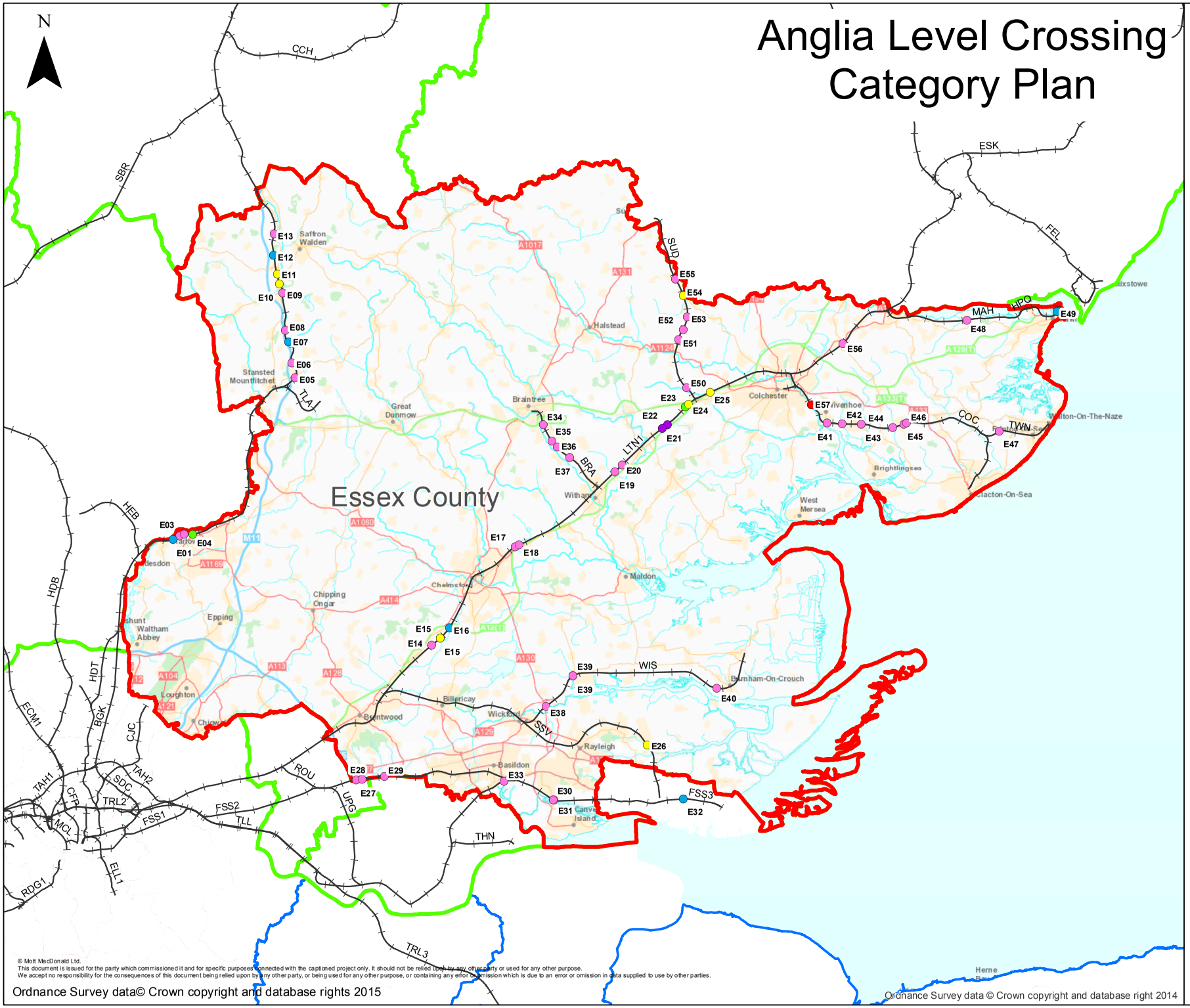
Appendix A. Level Crossing Location Plans

A.1 Level Crossing Location by Category Plan

Not For Public Issue

Anglia Level Crossing Category Plan



Key

LX Proposal Category

- 1
- 2
- 3
- 4
- 5
- 6
- Black *Removed from Study*
- Railway Line
- Authority Boundary
- Authority Boundaries in Study
- Other Authority Boundaries

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

For Public Issue

County Summary

Hertfordshire

354763/RPT211
Revision A
March 2016

Network Rail

Mott MacDonald

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

Hertfordshire

March 2016

Revision	Date	Originator	Checker	Technical Approver	Project Approver	Description
A	March 2016	DJ Weir	S Price	S Price	JA Smith	First Issue
B	March 2016	D Weir	S Price	S Price	J Smith	NR comments

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1 Introduction

1.1 Context

Network Rail has taken steps to close or reduce potential risk at many level crossings on the railway network and is continually looking at ways to improve safety, reliability and value for public money. This is achieved through various existing programmes and initiatives including the National Level Crossing Closure Programme which is based around safety criteria. Additionally, Network Rail has developed the Anglia Level Crossing Reduction Strategy to consider options to provide alternative means of crossing the railway to help expedite the process. In particular the strategy will help to:

- Improve the safety of level crossings 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

The purpose of the Anglia Level Crossing Reduction Strategy is to bring about safety benefits, allow Network Rail to more effectively manage their assets, to reduce the ongoing maintenance liability of the railway and enable various separate enhancement schemes.

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1.2 The Strategy

The Anglia Level Crossing Reduction Strategy comprises 5 phases; however the Mott MacDonald commission currently only relates to Phases 1 and 2 at the concept (GRIP1) feasibility stage.

Phase 1 (mainline) and 2 (branch line) comprise level crossings where the proposals do not include any new forms of grade separation across the railway, and where benefits may be deliverable and affordable within Network Rail Control Period 5 (to 31/3/19). Network Rail has specified within Route Requirement Documents and correspondence the 221 level crossings which should be considered within the Phase 1 and 2 concept feasibility study.

Phases 3 to 5 include new grade separated crossings of the railway, and diversion or downgrading of major highways. Network Rail has advised that these later phases are likely to be implemented within Control Period 6 (2019 to 2024) after Phases 1 and 2 are implemented. This is because the more substantive associated infrastructure means that they will take longer to develop and secure the necessary funding. It is expected that planning work on Phases 3 to 5 may be progressed during the latter stages of CP 5 although the implementation is likely be during Control period 6.

1.3 The Projects

Four separate Projects have been identified within the Strategy as listed below:

1. The county of Norfolk
2. The county of Suffolk
3. The county of Cambridgeshire
4. The county of Essex (and others) also including the county of Hertfordshire, the unitary authority of Thurrock and the London Borough of Havering.

Each of the four Projects will be the subject of a separate application under the Transport and Works Act 1992 for which Network Rail intends to apply. This will include the powers necessary to enable it to implement the Projects such as the acquisition of land, or rights over land, extinguishment of existing rights and alteration of rights including down grading of public roads.

The Norfolk Project Transport and Works Act Order (TWAO) preparation will not be progressed at this time and the number of level crossings within the Suffolk TWAO will be reduced from those assessed within the GRIP1 concept feasibility study. Within each Project where level crossings interact with one another they will be arranged into packages.

An individual level crossing feasibility report (references are contained within Table 1.1) has been prepared for each of the 221 level crossing sites considered within the GRIP1 study. In addition the following reports have been produced:

- Stakeholder Management Plan
- Compensation Code Note
- Diversity Impact Assessment scoping report
- Stage 1 Road Safety Report
- Census (traffic survey) scoping report
- Cost estimate report

This report provides a summary of the salient facts for the county of Hertfordshire at the GRIP1 concept feasibility stage; other summary reports will be produced for the other local authorities within this Project as well as the three Projects within the Strategy. These will form part of the evidence base for the Strategy as it is progressed through the planning process, with TWAO applications likely to be submitted in early 2017 and public inquiries in late 2017 or early 2018.

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2 Summary of Proposals

2.1 Feasibility Studies

Mott MacDonald was instructed to review the GRIP0 proposals provided in Network Rail's Route Requirement Document, reference 148339-Hertfordshire. As part of these studies, site visits were undertaken at all level crossing proposal sites in September 2015 (where physically possible).

In January 2016 Fowlers level crossing was added to Mott MacDonald's study remit however it was not physically possible to observe the level crossing because it is only accessible via private land.

The Anglia Route GRIP 1 Review considered an "assessed solution" which was agreed with Network Rail following site reconnaissance at the level crossings. The assessed solution was based on the GRIP0 proposal from the Route Requirements Document with some GRIP0 solutions subject to minor tweaks with a smaller number of proposals adopting entirely new solutions.

Mott MacDonald scoped the requirements for a Stage 1 Road Safety Audit (RSA) on the level crossing proposals. The findings of the RSA are provided in Essex, Thurrock & Hertfordshire Stage1 Road Safety Audit, Report Number 354763/RPT219A.

Mott MacDonald undertook a preliminary Diversity Impact Assessment (DIA) which reviewed the likely impact that closure of level crossing would have on their surrounding communities and additionally determine which of the level crossing proposals may require a formal DIA. The findings of the scoping exercise are reported in Diversity Impact Assessment - Scoping Report, Report Number 354763/RPT 225.

Network Rail supplied level crossing usage data which was reviewed, and consideration given to the number and nature of users at each crossing. This review was combined with details of the GRIP 1 proposals along with comments from the relevant local authority in order to make recommendations regarding the nature and quantity of additional data collection required during the next stages of the project. The level crossing proposals were categorised by level of importance (high, medium,low) to indicate whether further surveys are required to support the proposals. These finding are summarised in Table 1.1.

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2.2 Summary Table

In order to present a concise summary of the results of the GRIP1 Review a tabulated presentation of the data has been prepared; **Table 1.1** provides a list of all of the level crossings that are located in the county of Hertfordshire which have been investigated as part of this review. The headings used in the summary table are described below along with a key to their sub-categories.

Crossing name: Network Rail's level crossing name;

Footpath reference: The name of the Public Right of Way (PRoW) taken from the definative map which was provided by Hertfordshire County Council. The footpath name is predominately made up of the Parish of which it is located in along with a unique reference number from within the County.

Crossing type: An abbreviation of the level crossing types with a description provided below.

- AHB – Automatic half barrier crossing;

- BW – Bridleway level crossing;
- BWG – Bridleway level crossing with gates;
- CCTV – Barrier crossing with Closed circuit television;
- FP – Footpath level crossing;
- FPG – Footpath level crossing with gates;
- FPK – Footpath level crossing with kissing gates;
- FPO – Footpath level crossing open;
- FPS – Footpath level crossing with stiles;
- FPW – Footpath level crossing with wicket gates;
- FPWM – Footpath level crossing with wicket gates and miniature warning lights;
- FPX – Footpath level crossing that is fenced off;
- MGH – Level crossing with manned gates - hand operated;
- MSL – Level crossing with miniature stop lights;
- Sleeping Dog – A crossing where rights to cross the line still exist but are not exercised and there is very little or no trace of a crossing on site. It is not possible for the crossing to be used;
- UWC – User worked crossing;
- UWCM – User worked crossing with miniature warning lights;
- UWCT – User worked crossing with telephone;
- UWG – Public road crossing with user worked gates; and
- WT – Wave Train Fitted.

MM ref: Mott MacDonald's unique reference number for each level crossing;

MM report (RPT): Mott MacDonald's unique feasibility review report reference number for that particular level crossing;

Proposal category: Six categories have been used to describe the level crossing closure proposals, namely:-

- **Category 1:** Closures that involve no material works (i.e. no level crossing apprarauts to remove) but require the formalisation of the legal status of the crossing under a TWAO. An example of these include level crossings with access prevented by fencing or barriers where it is not possible to cross the railway using the level crossing; an altertaive means of crossing the railway may already have been provided under a separate scheme such as a stepped footbridge constructed immediately next to a level crossing;
- **Category 2:** Closures that are extinguishments of the level crossing rights and do not involve any works outside of Network Rail's land. Involves the removal of the crossing apparatus;
- **Category 3:** Closures where Pubic Rights of Way (PRoWs) are diverted on either private land or within the public highway and that involve no substantive physical works;
- **Category 4:** Closures where (PRoWs) are diverted on either private land or within the public highway that involve works such as new steps, new ramps, footway provision etc.;
- **Category 5:** Closures that invlove works on private land or within the public highway but do not affect the PROW; and
- **Category 6:** Proposals to downgrade the status of the crossing, for example from a public road to a private user worked crossing and a bridleway.

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RSA (y/n): This column states (yes or no) whether a Stage 1 Road Safety Audit has been undertaken on the level crossing closure proposals;

RSA Issues (y/n): This column states (yes or no) whether any road safety problems where identified in the Stage 1 Road Safety Audit (if applicable);

Landowner consultation: This column states (yes or no) whether any consultation was undertaken with affected landowners;

Cost: A capital cost esimtate at 3rd Quarter 2015 costs for the proposed level crossing closure works;

Council position: A short statement on Hertfordshire County Council's position on the level crossing proposals following a series of meetings;

Delivery risk: A high level judgement on the deliverability of the proposal, acknowledging any associated risks such as environmental, constructability etc constraints;

Comment: A brief comment on any risks associated with the proposal;

Additional census priority: A high level indication of whether a level crossing usage census (or other) is prioritised to support the proposals, categorised by level of importance (high, medium,low). The rationale behind these priorities is outlined in the report 354763/RPT239;

DIA Scoping Rating: The findings of a Diversity Impact Assessment (DIA) scoping exercise which grouped the closure proposals into three categories, namely:-

- **Red:** Further, detailed assessment required to proceed. Consider a full DIA evidence gathering process to support completion of the Network Rail pro forma;
- **Amber:** Site can be closed as soon as infrastructure interventions have taken place. Complete Network Rail DIA pro forma based on available evidence; and
- **Green:** Site can be closed immediately with minimal impact and intervention. Review, sign-off and no further DIA work required at this stage.

Alternative for Study: This column states (yes or no) as to whether any other alternative options were identified in addition to the assessed option. Alternatives options that may have arisen during the review stage by the design team or have been requested by Hertfordshire County Council;

NR Progressed at GRIP2 (y/n): A statement (yes or no) whether Network Rail has instructed the level crossing closure proposal to proceed to GRIP Stage 2.

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Table 1.1 County Summary Thurrock

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
Trinity Lane	Cheshunt 054	MGH	H01	203	2	No	n/a	Yes		No objection at this stage.	Low	Initial contact made with Steven Roberts - Estates Surveyor at Lee Valley Regional Park. Further consultation to be held at next GRIP stage.	Medium	Amber	No	Yes
Cadmore Lane	Cheshunt 009	FPW	H02	204	1	No	n/a	Yes		No objection at this stage.	Low		Medium	n/a	No	Yes
Slipe Lane	Cheshunt 022	UWCT	H03	205	2	No	n/a	Yes		No objection at this stage.	Low		Medium	Green	No	Yes
Tednambury	Sawbridgeworth 003	FPS	H04	206	4	No	n/a	No		HCC suggested a tweaked diversion away from residential properties.	Low	A variation to HCC's suggested alternative was discussed which makes use of a private road between the A1184 Cambridge Road and the railway.	Medium	Green	Yes	Yes
Pattens	Thorley 022	FPS	H05	207	4	Yes	No	No		No objection at this stage.	Low	*Upon investigation of diversions for Fowlers level crossing (post completion of investigation at Pattens and Gilston level crossings) a potential diversion for a footpath was discovered and should be investigated at the next GRIP stage.	High	Green	Yes*	Yes
Gilston	Thorley 007	FPS	H06	208	4	Yes	No	No		No objection at this stage.	Low		High	Green	Yes*	Yes
Twyford Road	Bishop's Stortford 068	FPW	H07	209	4	No	n/a	No		HCC requested the addition of a similar diversion route on the north side of the railway (i.e. symmetry of the proposed provision on the south side of the railway). The additional cost of these works would push this proposal into Network Rail's Phase 3 programme of works due to the associated cost.	Medium	An option to provide a diversion to the north of the railway which makes use of Bishop's Stortford Baptists Church's existing bridge. The route must maintain the security of the church site by means of secure fencing.	High	Amber	Yes	Yes
Johnsons	Bishop's Stortford 060	FPWM	H08	210	1	No	n/a	No		No objection at this stage.	Low	The ratification of the legal status of this crossing is being progressed in parallel to	Medium	n/a	No	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
												this review and may drop out of the TWAO should it be completed in advance.				
Fowlers	Private track in Thorley	UWCT	H09	233	5	No	n/a	Yes		At the time of writing this report HCC has not seen the proposals for this level crossing.	Medium	Option makes use of Network Rail bridge Ref: BGK 1476 which has a low headroom clearance and may restrict the passage of large vehicles.	Low	Green	No	Yes
Totals					C1: 2 C2: 2 C3: 0 C4: 4 C5: 1 C6: 0	Yes: 2 No: 7	Yes: 0 No: 9	Yes: 4 No: 5			High: 0 Medium: 2 Low: 7		High: 3 Medium: 5 Low: 1	Red: 0 Amber: 2 Green: 5 n/a: 2	Yes: 4 No: 5	Yes: 9 No: 0

Not For Publ

3 Summary of Baseline Information

3.1 Review of Baseline Information

The following sources of information have been used to inform the level crossing closure feasibility studies.

3.1.1 Bridge and Structure Examination Reports

Where a proposal made use of a Network Rail structure such as an under/over bridge or watercourse culvert, Network Rail supplied the relevant Bridge and Structure Examination Report. It should be noted that some of the structures were not visited on site because it was not physically possible due to fencing, overgrown landscaping or the site was located on private land. Structures that were not observed will need further investigation at the next GRIP stage. No structural inspections were undertaken as part of this study.

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Initially Mott MacDonald used level crossing information from Network Rail's Transparency web page (http://www.networkrail.co.uk/transparency/level-crossings/) with supplementary information provided by Network Rail at later date. This included the following items:-

- Level crossing ALCRM scores;
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3.1.3 Network Rail's Route View Web Page

Mott MacDonald were given access to Network Rail's Route View web page which provides low altitude aerial photography and was used to view level crossing sites with some photography utilised in the review reports.

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3.2 PROWS and Planning

Hertfordshire County Council provided a digitised copy of their definitive PROW map, which has been used to create our proposal plans.

During meetings with Hertfordshire County Council, the project team were informed of current/potential planning applications that are located within the vicinity of the level crossings which include the following proposals:-

- A housing development located to the southeast of Trinity Lane level crossing was being considered; and
- Land located to the west of the B1383 Thorley Street (west of Pattens and Gilston level crossings) is currently allocated for residential development.

3.3 Environmental Constraints

Mott MacDonald has undertaken a high level environmental desk based study to identify environmental constraints within a 2km radius of the level crossing (the "study area"). Environmental constraints mapping was produced to aid site reconnaissance of the closure proposals and for future consideration at the next GRIP stages. The mapping contained the following data:-

- Bluesky World

  - National Tree Mapping;
- Information from the Environment Agency/Natural England:-
  - Flood Zone 1 to 3 mapping;
  - Watercourses;
  - Historic and active landfill sites;
  - Agricultural land quality;
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- English Heritage:
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  - Schedule of ancient monuments;
  - Battlefields; and
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Once the closure proposals become more defined at the next GRIP stage Phase 1 habitat surveys will be undertaken.

3.4 Third Party Supplied Information

Mapping and data used to produce our level crossing closure proposal drawings was sourced from the following providers:-

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  -
- Land registry:-
  - PolygonPlus;
  - Land title registers; and
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4 Summary of Consultation

Consultation held to date as part of the GRIP1 review is summarised below. Details of the consultation held by Network Rail prior to the GRIP1 review is contained within the individual level crossing reports.

4.1 Strategic Stakeholders

A workshop was held with Highways, PROW, Green Infrastructure, Legal, Trails and Heritage officers from Hertfordshire County Council (HCC) and London Borough of Broxbourne (LBB) on Thursday 8th October at their Wallfields Office in Hertford. A brief overview presentation from Mott MacDonald provided background context and an overview of the programme and project plan. This initial session also described the nature of the work undertaken to date, including the site visits and desktop research, and provided a further opportunity to forge partnership working for mutual benefit.

The 9 crossings within the County area of Hertfordshire were discussed in detail as a group, to understand the current situation and to consider the proposed solutions, in order to further develop and shape the initial proposals for level crossing closures. A Google Earth KMZ file showing the locations of all level crossings and a PDF plans of the proposed closure solutions were circulated to all attendees prior to the meeting.

A telephone conference was also held on (19th January 2016) with HCC and LBB post completion of the GRIP1 reviews to provide an update to project and discuss any amendments to the proposals.

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4.2 Statutory Stakeholders

Mott MacDonald issued a Network Rail approved letter to the relevant statutory consultees (namely, the Environment Agency, Natural England, Historic England and Highways England) on Friday 9th October 2015. The letters introduced the programme, and requested the opportunity to meet with relevant individuals to discuss the programme and relevant crossings in further detail. Responses to the letter and following meetings are summarised in the individual feasibility reports.

4.3 Landowners

At this early stage of the scoping/feasibility study only a prioritised list of 66 potentially affected landowners were consulted upon the Anglia level crossing closure proposals. In addition to this a small number of additional land owners were consulted upon during site visits if the opportunity arose (i.e. the landowner was present on site whilst our surveyor was there). In the county of Hertfordshire only one landowner (covering 3 level crossing sites) was contacted during this review stage which is summarised below. The remaining affected land owners will be consulted at the next GRIP stage.

An initial telephone conversation was held with Steven Roberts - Estates Surveyor at Lee Valley Regional Park.

4.4 Access and User Groups

Mott MacDonald worked with Network Rail to prepare an online survey as the first means of engaging with Local User Groups. This collated high level feedback and information, which can be used as the basis for further, more detailed engagement in the later stages of the programme. The survey intended to give an opportunity for Local

User Groups to inform the project team of their general principles in relation to the Anglia Route Level Crossing Reduction Strategy.

The following eight Local User Groups were contacted with the invitation to engage with Network Rail through the completion of the survey at an organisational level:

- Auto Cycle Union;
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- Sustrans; and
- The Ramblers Association.

The survey commenced on the 19th October 2015 and closed on 1st November 2015 (excluding a 4 day extension). All organisations were contacted before the survey closed with a final request to participate.

A total of 12 individual responses were received, representing all of the organisations listed above, with the exception of the Auto Cycle Union and the British Driving Society. Four of the 12 responses were received from the Ramblers Association's local contacts in the Anglia region. A response was also received from the Essex Bridleways Association and Colchester Cycling Campaign (at the request of one of the eight main organisations listed above).

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5 Conclusions

Mott MacDonald has undertaken a review of the GRIP0 proposals provided in Network Rail's Route Requirement Document, reference 148339-Hertfordshire and subsequent instructions. A summary of the review findings is listed below.

- 9 level crossing closure proposals were reviewed by Mott MacDonald in the County of Hertfordshire;
- Hertfordshire County Council suggested amendments to 2 of the level crossing proposals (H04 Tednambury and H07 Twyford Road);
- Hertfordshire County Council and London Borough of Broxbourne do not object to any of the level crossing closure proposals at this stage;
- All 9 level crossing closure proposals were considered suitable to progress to the next GRIP stage;
- Fowlers level crossing was added to Mott MacDonald's review remit in December 2015;
- Through investigation of Fowlers level crossing a suitable footpath diversion was identified for Pattens and Gilston level crossings. This should be investigated further at the next GRIP stage;
- All 9 level crossing closure proposals were instructed by Network Rail to take forward to the next stage GRIP2-4.

To progress the GRIP1 assessed solution further stakeholder engagement (in particular with landowners) should be undertaken at the next GRIP stage.

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Not For Public Issue

Appendix A. Level Crossing Location Plans

A.1 Level Crossing Location by Category Plan

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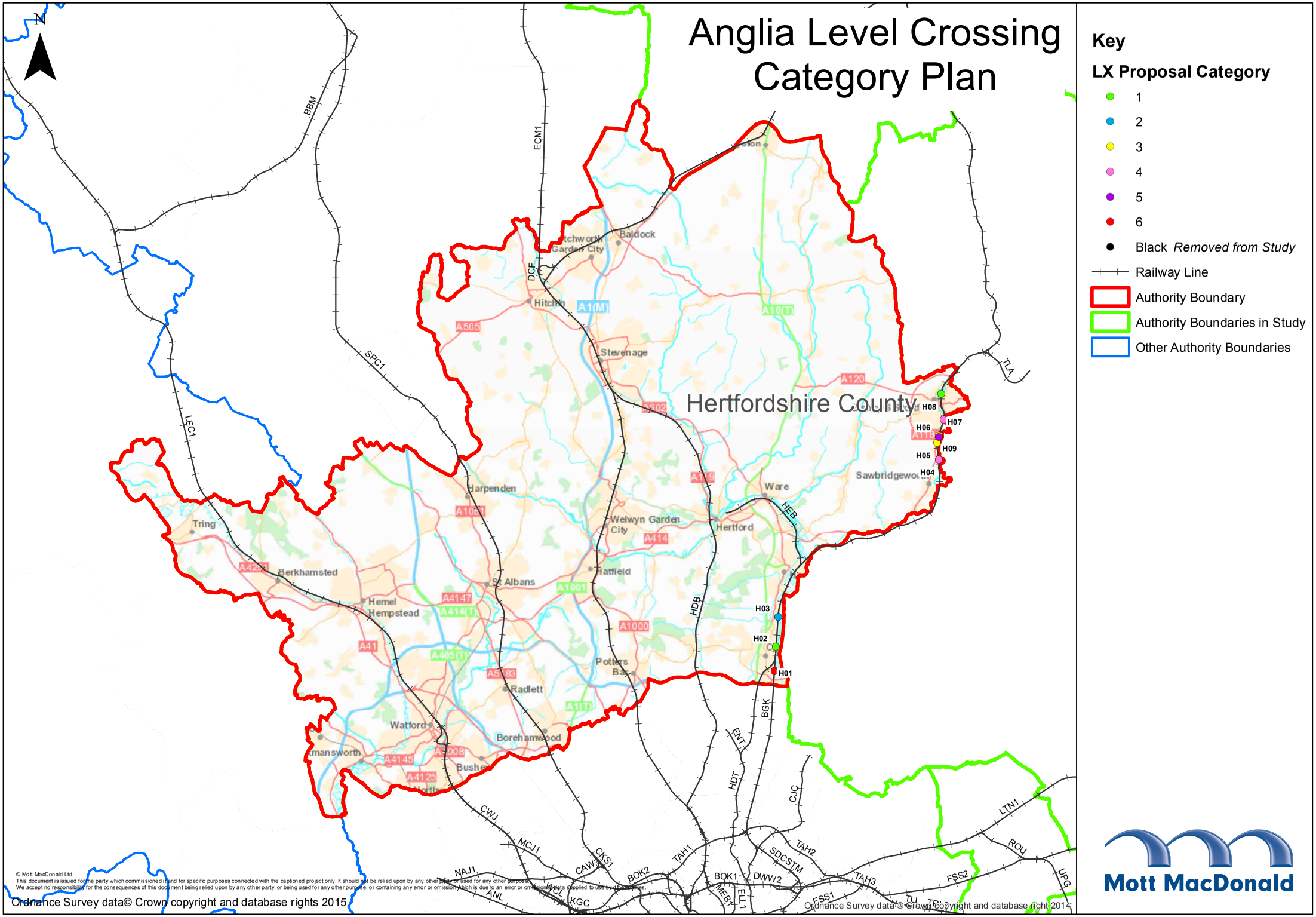
Anglia Level Crossing Category Plan



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

For Public Issue

County Summary

Essex

354763/RPT202
Revision B
March 2016

Network Rail

Mott MacDonald

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

Essex

March 2016

Revision	Date	Originator	Checker	Technical Approver	Project Approver	Description
A	March 2016	DJ Weir	S Price	S Price	JA Smith	First Issue
B	March 2016	D Weir	S Price	S Price	J Smith	NR comments

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1 Introduction

1.1 Context

Network Rail has taken steps to close or reduce potential risk at many level crossings on the railway network and is continually looking at ways to improve safety, reliability and value for public money. This is achieved through various existing programmes and initiatives including the National Level Crossing Closure Programme which is based around safety criteria. Additionally, Network Rail has developed the Anglia Level Crossing Reduction Strategy to consider options to provide alternative means of crossing the railway to help expedite the process. In particular the strategy will help to:

- Improve the safety of level crossings 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

The purpose of the Anglia Level Crossing Reduction Strategy is to bring about safety benefits, allow Network Rail to more effectively manage their assets, to reduce the ongoing maintenance liability of the railway and enable various separate enhancement schemes.

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1.2 The Strategy

The Anglia Level Crossing Reduction Strategy comprises 5 phases; however the Mott MacDonald commission currently only relates to Phases 1 and 2 at the concept (GRIP1) feasibility stage.

Phase 1 (mainline) and 2 (branch line) comprise level crossings where the proposals do not include any new forms of grade separation across the railway, and where benefits may be deliverable and affordable within Network Rail Control Period 5 (to 31/3/19). Network Rail has specified within Route Requirement Documents and correspondence the 221 level crossings which should be considered within the Phase 1 and 2 concept feasibility study.

Phases 3 to 5 include new grade separated crossings of the railway, and diversion or downgrading of major highways. Network Rail has advised that these later phases are likely to be implemented within Control Period 6 (2019 to 2024) after Phases 1 and 2 are implemented. This is because the more substantive associated infrastructure means that they will take longer to develop and secure the necessary funding. It is expected that planning work on Phases 3 to 5 may be progressed during the latter stages of CP 5 although the implementation is likely be during Control period 6.

1.3 The Projects

Four separate Projects have been identified within the Strategy as listed below:

1. The county of Norfolk
2. The county of Suffolk
3. The county of Cambridgeshire
4. The county of Essex (and others) also include the county of Hertfordshire, the unitary authority of Thurrock and the London Borough of Havering.

Each of the four Projects will be the subject of a separate application under the Transport and Works Act 1992 for which Network Rail intends to apply. This will include the powers necessary to enable it to implement the Projects such as the acquisition of land, and / or rights over land, extinguishment of existing rights and alteration of rights including down grading of public roads.

The Norfolk Project Transport and Works Act Order (TWAO) preparation will not be progressed at this time and the number of level crossings within the Suffolk TWAO will be reduced from those assessed within the GRIP1 concept feasibility study. Within each Project where level crossings interact with one another they will be arranged into packages.

An individual level crossing feasibility report (references are contained within Table 1.1) has been prepared for each of the 221 level crossing sites considered within the GRIP1 study. In addition the following reports have been produced:

- Stakeholder Management Plan
- Compensation Code Note
- Diversity Impact Assessment scoping report
- Stage 1 Road Safety Report
- Census (traffic survey) scoping report
- Cost estimate report

This report provides a summary of the salient facts for the county of Essex at the GRIP1 concept feasibility stage; summary reports will be produced for the other local authorities within the Project and also the three other Projects within the Strategy. These will form part of the evidence base for the Strategy as it is progressed through the planning process, with TWAO applications likely to be submitted in early 2017 and public inquiries in late 2017 or early 2018.

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2 Summary of Proposals

2.1 Feasibility Studies

Mott MacDonald was instructed to review the GRIP0 proposals provided in Network Rail's Route Requirement Document, reference 148339-Essex. As part of these studies, site visits were undertaken at all level crossing proposal sites in September 2015 (where physically possible).

Parndon Mill level crossing was not observed on site because it was fenced off on both sides of the railway preventing access. Further investigation found that no apparatus is present on the railway.

Wallaces private level crossing was not visited because it is located on private land, instead it was observed from adjacent railway over bridges.

In January 2016 a further 4 sites (Eves, Manor Farm, Abbotts and Wivenhoe Park) were added to Mott MacDonald's study remit which were visited in January 2016 (where physically possible).

The Anglia Route GRIP 1 Review considered an "assessed solution" which was agreed with Network Rail following site reconnaissance at the level crossings. The assessed solution was based on the GRIP0 proposal from the Route Requirements Document with some GRIP0 solutions subject to minor tweaks with a smaller number of proposals adopting entirely new solutions.

Mott MacDonald scoped the requirements for a Stage 1 Road Safety Audit (RSA) on the level crossing proposals. The findings of the RSA are provided in Essex, Thurrock & Hertfordshire Stage1 Road Safety Audit, Report Number 354763/RPT219A.

Mott MacDonald undertook a preliminary Diversity Impact Assessment (DIA) which reviewed the likely impact that closure of level crossing would have on their surrounding communities and additionally determine which of the level crossing proposals may require a formal DIA. The findings of the scoping exercise are reported in Diversity Impact Assessment - Scoping Report, Report Number 354763/RPT 225.

Network Rail supplied level crossing usage data which was reviewed, and consideration given to the number and nature of users at each crossing. This review was combined with details of the GRIP 1 proposals along with comments from the relevant local authority in order to make recommendations regarding the nature and quantity of additional data collection required during the next stages of the project. The level crossing proposals were categorised by level of importance (high, medium,low) to indicate whether further surveys are required to support the proposals. These finding are summarised in Table 1.1.

2.2 Summary Table

In order to present a concise summary of the results of the GRIP1 Review a tabulated presentation of the data has been prepared; **Table 1.1** provides a list of all of the level crossings that are located in in the county of Essex which have been investigated as part of this review. The headings used in the summary table are described below along with a key to their sub-categories.

Crossing name: Network Rail's level crossing name;

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Footpath reference: The name of the Public Right of Way (PRoW) taken from the definative map which was provided by Essex County Council. The footpath name is predominately made up of the Parish of which it is located in along with a unique reference number from within the County.

Crossing type: An abbreviation of the level crossing types with a description provided below.

- AHB – Automatic half barrier crossing;
- BW – Bridleway level crossing;
- BWG – Bridleway level crossing with gates;
- CCTV – Barrier crossing with Closed circuit television;
- FP – Footpath level crossing;
- FPG – Footpath level crossing with gates;
- FPK – Footpath level crossing with kissing gates;
- FPO – Footpath level crossing open;
- FPS – Footpath level crossing with stiles;
- FPW – Footpath level crossing with wicket gates;
- FPWM – Footpath level crossing wicket gate with miniature warning lights;
- FPX – Footpath level crossing that is fenced off;
- MGH – Level crossing manned gated - hand operated;
- MSL – Level crossing with miniature stop lights;
- Sleeping Dog – A crossing where rights to cross the line still exist but are not exercised and there is very little or no trace of a crossing on site. It is not possible for the crossing to be used;
- UWC – User worked crossing;
- UWCM – User worked crossing with miniature warning lights;
- UWCT – User worked crossing with telephone;
- UWG – Public road crossing with user worked gates; and
- WT – Wave Train Fitted.

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MM ref: Mott MacDonald's unique reference number for each level crossing;

MM report (RPT): Mott MacDonald's unique feasibility review report reference number for that particular level crossing;

Proposal category: Six categories have been used to describe the level crossing closure proposals, namely:-

- **Category 1:** Closures that involve no material works (i.e. no level crossing apprarauts to remove) but require the formalisation of the legal status of the crossing under a TWAO. An example of these include level crossings with access prevented by fencing or barriers where it is not possible to cross the railway using the level crossing; an altertaive means of crossing the railway may already have been provided under a separate scheme such as a stepped footbridge constructed immediately next to a level crossing;
- **Category 2:** Closures that are extinguishments of the level crossing rights and do not involve any works outside of Network Rail's land. Involves the removal of the crossing apparatus;
- **Category 3:** Closures where Pubic Rights of Way (PRoWs) are diverted on either private land or within the public highway and that involve no substantive physical works;
- **Category 4:** Closures where (PRoWs) are diverted on either private land or within the public highway that involve works such as new steps, new ramps, footway provision etc;

- **Category 5:** Closures that involve works on private land or within the public highway but do not affect the PROW; and
- **Category 6:** Proposals to downgrade the status of the crossing, for example from a public road to a private user worked crossing and a bridleway.

RSA (y/n): This column states (yes or no) whether a Stage 1 Road Safety Audit has been undertaken on the level crossing closure proposals;

RSA Issues (y/n): This column states (yes or no) whether any road safety problems where identified in the Stage 1 Road Safety Audit (if applicable);

Landowner consultation: This column states (yes or no) whether any consultation was undertaken with affected landowners;

Cost: A capital cost esimtate at 3rd Quarter 2015 costs for the proposed level crossing closure works;

Council position: A short statement on Essex County Council's postion (and other local authorties) on the level crossing proposals following a series of meetings;

Delivery risk: A high level judgement on the deliverability of the proposal, acknowledging any associated risks such as environmental, constructability etc constraints;

Comment: A brief comment on any risks associated with the proposal;

Additional census priority: A high level indication of whether a level crossing usage census (or other) is prioritised to support the proposals, categorised by level of importance (high, medium,low). The rationale behind these priorities is outlined in the report 354763/RPT239;

DIA Scoping Rating: The findings of a Diversity Impact Assessment (DIA) scoping exercise which grouped the closure proposals into three categories, namely:-

- **Red:** Further, detailed assessment required to proceed. Consider a full DIA evidence gathering process to support completion of the Network Rail pro forma;
- **Amber:** Site can be closed as soon as infrastructure interventions have taken place. Complete Network Rail DIA pro forma based on available evidence; and
- **Green:** Site can be closed immediately with minimal impact and intervention. Review, sign-off and no further DIA work required at this stage.

Alternative for Study: This column states (yes or no) as to whether any other alternative options were identified in addition to the assessed option. Alternatives options that may have arisen during the review stage by the design team or have been requested by Essex County Council;

NR Progressed at GRIP2 (y/n): A statement (yes or no) whether Network Rail has instructed the level crossing closure proposal to proceed to GRIP Stage 2.

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Table 1.1 County Summary Thurrock

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
Old Lane	FP Royden 13	FPS	E01	145	2	No	n/a	No		No objections at this stage	Low	.	Medium	Green	No	Yes
Camps	FP Harlow 75	FPS	E02	146	4	No	n/a	Yes		No objections at this stage	Low	A link between Footpath Harlow 78 and Footpath Harlow 122 on the south side of the railway should be considered at the next GRIP stage	Medium	Medium	Yes	Yes
Sadlers	FP Harlow 74	FPS	E03	147	4	No	n/a	Yes		No objections at this stage	Low		Medium	Green	Yes	Yes
Parndon Mill	FP Harlow 73	FPX	E04	148	1	No	n/a	No		No objections at this stage	Low	The level crossing has been closed for a significant period of time	No data collection required	Green	No	Yes
Fullers End	FP Elsenham 29	FPWM	E05	149	4	No	n/a	No		No objections at this stage	Low	Future discussions should be held with the developer to discuss integration a footpath within the development proposals.	High	Red	Yes	Yes
Elsenham Emergency Hut	FP Henham 32	FPO	E06	150	4	No	n/a	No		No objections at this stage	Low	Alternative diversion via Elsenham Station footbridge or level crossing to be considered at next GRIP stage.	High	Green	Yes	Yes
Ugley Lane	Private Access Track	UWCT	E07	151	2	No	n/a	No		Private - no ECC involvement	Low		Medium	Green	No	Yes
Henham	FP Widdington 26	FPS	E08	152	4	Yes	No	No		No objections at this stage, check width of footway under bridge	Low		High	Green	No	Yes
Elephant	FP Newport 14	FPS	E09	153	4	Yes	No	No		No comment, ECC to review proposals and return comments.	Low		High	Green	No	Yes
Dixies	FP Newport 7	FPG	E10	154	3	Yes	No	No		No objections at this stage. Likely to receive opposition from general public.	Low		Medium	Amber	No	Yes

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EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
Windmills	FP Newport 8	FPS	E11	155	3	Yes	Yes	No		No objections at this stage	Low		High	Green	No	Yes
Wallaces	Private FP	FPG	E12	156	2	Yes	No	No		Private - no ECC involvement	Medium	Landowner has previously declined offers from Network Rail to close the level crossing.	Medium	Green	No	Yes
Littlebury Gate House	FP Littlebury 30	FPG	E13	157	4	Yes	No	No		No comment, ECC to review proposals and return comments.	Low		High	Green	No	Yes
Church Lane CCTV (Ltn1)	FP Margaretting 35	CCTV	E14	158	4	Yes	No	No		No objections at this stage. ECC would not want to adopt diversion route for Church.	High	Ownership of the diversion route to be explored.	High	Red	Yes	Yes
Margaretting	FP Margaretting 32	FPWM	E15	159	3	No	No	Yes		Ongoing with NR. No objection at the stage.	Low	Proposal may be delivered in a separate scheme and fall out of the TWAO.	High	Green	No	Yes
Maldon Road	FP Margaretting 21	FPS	E16	160	2	No	No	No		No objections at this stage from ECC.	Low		High	Green	No	Yes
Boreham	BW Boreham 23	FPS	E17	161	4	Yes	Yes	Yes		No comment, ECC to review proposals and return comments.	Low	Agreed with ECC to provide a bridleway link between Boreham and Noakes level crossings to form a circular route.	Medium	Green	Yes	Yes
Noakes	FP Boreham 24	FPO	E18	162	4	Yes	Yes	No		No comment, ECC to review proposals and return comments.	Low	Agreed with ECC to provide a bridleway link between Boreham and Noakes level crossings to form a circular route.	No data collection required	Green	Yes	Yes
Potters	FP Rivenhall 43	FPK	E19	163	4	Yes	No	Yes		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Snivellers	BW Kelvedon 34	BW	E20	164	4	Yes	No	Yes		No comment, ECC to review proposals and return comments.	Medium	*Road Safety issues recommended to seek alternative diversion for	Medium	Green	Yes*	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
												a bridleway.				
Hill House 1	FP Fearing 3 and 7	FPS	E21	165	5	Yes	No	No		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Great Domsey	FP Fearing 3	FPS	E22	166	5	Yes	No	No		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Long Green	Un-adopted Road	FPWM	E23	167	1	No	n/a	No		Ongoing with NR	Low		Medium	Green	No	Yes
Church 1	FP Marks Tey 15	FPS	E24	168	3	No	n/a	No		No objections at this stage	Low		No data collection required	Green	No	Yes
Church 2	FP Stanway 29	FPS	E25	169	3	No	n/a	No		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Barbara Close	FP Hawkwell 21	FPW	E26	170	3	Yes	no	No		No objections at this stage	Low		High	Green	No	Yes
Puddle Dock	FP Brentwood 180 & Havering 177	FPS	E27	171	4	Yes	Yes	No		No comment, ECC to review ownership and return comments.	Low	Alternative circular option discussed and agreed with ECC.	High	Green	Yes	Yes
Whipps Farmers	FP Brentwood 178 & Havering 179	FPS	E28	172	4	Yes	Yes	No		No comment, ECC to review ownership and return comments.	Low	Alternative circular option discussed and agreed with ECC.	High	Green	Yes	Yes
Brown & Tawse	FP West Horndon FP39	FPW	E29	173	4	Yes	Yes	No		No comment, ECC to review ownership and return comments.	Medium	On-road diversion route considered unsafe with alternative to address the problem.	High	Green	Yes	Yes
Ferry	FP Benfleet 22	FPW	E30	174	4	Yes	No	No		No objections at this stage. Likely to receive opposition from general public.	Medium		High	Green	No	Yes
Brickyard Farm	FP Benfleet 12	FPW	E31	175	4	Yes	No	No		No objections at this stage. Likely to receive opposition from	Medium		High	Green	No	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
										general public.						
Woodgrange Close	Southend	FPW	E32	176	2	Yes	No	No		To be discussed with Southend Borough Council	Low		High	Red	No	Yes
Motorbike	FP Basildon 136	FPW	E33	177	4	No	n/a	No		No objections at this stage	Low		High	Green	No	Yes
Cousins Number 1	FP Cressing 34	FPS	E34	178	4	Yes	Yes	Yes		No objections at this stage	Low		Low	Green	No	Yes
Cranes No. 1	FP Cressing 14	FPS	E35	179	4	No	n/a	Yes		No objections at this stage	Low	Option tweaking to make use of adjacent under bridge.	Low	Green	No	Yes
Cranes No. 2	FP White Notley 8	FPS	E36	180	4	No	n/a	No		No comment, ECC to review proposals and return comments.	Low		Medium	Green	No	Yes
Essex Way	FP White Notley 13	FPS	E37	181	4	No	n/a	No		Suggested alternative diversion route	Low	Agreed with ECC to divert along the field boundary instead of parallel to the railway.	Medium	Green	Yes	Yes
Battlesbridge	FP Rettendon 23	FPW	E38	182	4	Yes	No	No		No objections at this stage	Low		Low	Green	No	Yes
Woodham Fen	FP South Woodham Ferrers 35	FPW	E39	183	4	No	n/a	No		No objections at this stage	Low		High	Amber	No	Yes
Creaksea Place 1	FP Burnham-on-Crouch 3	FPW	E40	184	4	No	n/a	Yes		No objections at this stage if proposed alternative adopted.	Medium	Agreed with ECC to divert along the field boundary instead of parallel to the railway.	Medium	Green	Yes	Yes
Padget	Track	FPW	E41	185	4	Yes	No	No		No objections at this stage.	High	Likely to receive objections from the public.	High	Amber	No	Yes
Sand Pit	FP Elmstead 16 /FP Alresford 7	FPS	E42	186	4	Yes	Yes	Yes		No objections at this stage.	Medium	Some issues regarding works to existing highway to be confirmed.	Medium	Green	No	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
High Elm	FP Alresford 4	FPS	E43	187	4	Yes	Yes	Yes		No comment, ECC to review proposals and return comments.	Medium	Consider closure with users making use of existing highway.	High	Green	Yes	Yes
Frating Abbey	FP Great Bentley 5	FPS	E44	188	4	No	n/a	No		ECC would support the diversion to the south of the railway which involves less on-road walking.	High	Alternative solution requires further investigation.	High	Green	Yes	Yes
Great Bentley Station	FP Great Bentley 8	FPS	E45	189	4	No	n/a	No		ECC would not support use of the station platform as a permissive path in the event that barriers or a gate was installed.	High	Other options to be explored parallel to the railway or through an adjacent commercial estate. Both options require private land.	Low	Green	No	Yes but requires further investigati on
Lords No.1	FP Great Bentley 12	FPS	E46	190	4	No	n/a	No		ECC would not support use of the station platform as a permissive path in the event that barriers or a gate was installed.	High	Other options to be explored parallel to the railway or through an adjacent commercial estate. Both options require private land.	Low	Green	No	Yes
Bluehouse	FP Friton and Walton 16	FPS	E47	191	4	Yes	No	No		No objections at this stage	Low		Low	Green	No	Yes
Wheatsheaf	FP Wrabness 19	FPK	E48	192	4	No	n/a	No		No objections at this stage	Low	Consider providing an additional PROW route to connect footpath 184/4 to reduce the amount of on-road walking.	High	Green	Yes	Yes
Maria Street	Adopted Highway	FPW	E49	193	2	No	n/a	No		Concern at diversion length and on-road route but, no objection at this stage.	Low		Medium	Red	No	Yes
Church House Farm	BW Aldham 20	FPS	E50	194	4	No	n/a	No		No objections at this stage. ECC would not support downgrading to a footpath. The diversion route would need to be retained as a bridleway as a minimum.	Medium	Measures to upgrade bridge to be determined.	Medium	Green	Yes	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
Thornfield Wood	FP Wakes Colne 11	FPW	E51	195	4	No	n/a	No		Objections due to diversion length along roads. Essex suggested alternative diversions.	Medium	Likely objections due to diversion length.	Medium	Green	Yes	Yes
Golden Square	FP Mount Bures 21	FPS	E52	196	4	Yes	No	Yes		ECC concerned at the diversion length which is likely to receive objections from the RA. ECC suggested alternative diversion routes.	Medium		High	Green	Yes	Yes
Josselyns	FP Mount Bures 10	FPS	E53	197	4	No	n/a	Yes		Objections due to diversion length. ECC suggested alternative diversions.	Low		High	Green	Yes	Yes
Bures	FP Bures Hamlet 30	FPS	E54	198	3	No	n/a	No		ECC did not object to the proposals but suggested consulting the general public to see who complains. ECC also suggested alternative diversion routes.	Low		Low	Green	Yes	Yes
Lamarsh Kings Farm	FP Lamarsh 14	FPS	E55	199	4	No	n/a	Yes		No objections at this stage.	Medium	Land owner opposed to the use of his land for the proposals.	Medium	Green	No	Yes
Abbotts	FP Ardleigh 27, 28 and 42	FPS	E56	226	4	No	n/a	No		Essex County Council has not had the opportunity to comment on the proposals.	Medium	Suitability of the on-road solution to be investigated further.	Medium	Green	No	Yes
Wivenhoe Park	FP Colchester 236	UWCT + FP	E57	227	6	No	n/a	No		Essex County Council has not had the opportunity to comment on the proposals.	Medium	Determine legal usage and access rights.	Low	Green	No	Yes
Totals					C1: 2 C2: 6 C3: 7 C4: 39 C5: 2 C6: 1	Yes: 27 No: 30	Yes: 9 No: 20 n/a 28	Yes: 14 No: 43			High: 5 Med: 14 Low: 38		High: 24 Medium: 22 Low: 8 N/A: 3	Red: 2 Amber: 2 Green: 2	Yes: 21 No: 36	Yes: 57 No: 0

3 Summary of Baseline Information

3.1 Review of Baseline Information

The following sources of information have been used to inform the level crossing closure feasibility studies.

3.1.1 Bridge and Structure Examination Reports

Where a proposal made use of a Network Rail structure (not on the adopted highway) such as an under/over bridge or watercourse culvert, Network Rail supplied the relevant Bridge and Structure Examination Report. It should be noted that some of the structures were not visited on site because it was not physically possible due to fencing, overgrown landscaping or the site was located on private land. Structures that were not observed will need further investigation at the next GRIP stage. No structural inspections were undertaken as part of this study.

3.1.2 Level Crossing Information

Initially Mott MacDonald used level crossing information from Network Rail's Transparency web page (http://www.networkrail.co.uk/transparency/level-crossings/) with supplementary information provided by Network Rail at later date. This included the following items:-

- Level crossing ALCRM scores;
- Use and mis-use data (train types, line speed, number of trains, census results, mis-use, near misses and accidents);

3.1.3 Network Rail's Route View Web Page

Mott MacDonald were given access to Network Rail's Route View web page which provides low altitude aerial photography and was used to view level crossing sites with some photography utilised in the review reports.

Not For Public Issue

3.2 PROWS and Planning

Essex County Council (and other local authorities) provided a digitised copy of their definitive PROW map, which has been used to create our proposal plans.

During meetings with Essex County Council, the project team were informed of current planning applications that are located within the vicinity of the level crossings.

3.3 Environmental Constraints

Mott MacDonald has undertaken a high level environmental desk based study to identify environmental constraints within a 2km radius of the level crossing (the "study area"). Environmental constraints mapping was produced to aid site reconnaissance of the closure proposals and for future consideration at the next GRIP stages. The mapping contained the following data:-

- Bluesky World
  - National Tree Mapping;
- Information from the Environment Agency/Natural England:-
  - Flood Zone 1 to 3 mapping;

  - Watercourses;
  - Historic and active landfill sites;
  - Agricultural land quality;
  - Statutory Designated Sites e.g. SSSIs
- English Heritage:
  - Listed buildings and structures;
  - Schedule of ancient monuments;
  - Battlefields; and
  - Registered Parks and Gardens.

Once the closure proposals become more defined at the next GRIP stage Phase 1 habitat surveys will be undertaken.

3.4 Third Party Supplied Information

Mapping and data used to produce our level crossing closure proposal drawings was sourced from the following providers:-

- Ordnance Survey (OS) Mapping data. Through Network Rail's agreement with OS, Mott MacDonald were able to use the following mapping types for reporting purposes:-
  - OS Mastermap Topographic (1:1250 mapping);
  - OS Terrain 5 (5m spacing height data);
  - OS Master Aerial layer; and
  - OS Street View.
  -
- Land registry:-
  - PolygonPlus;
  - Land title registers; and
  - INSPIRE Land Boundary Polygons WMS.

Not For Public Issue

4 Summary of Consultation

Consultation held to date as part of the GRIP1 review is summarised below. Details of the consultation held by Network Rail prior to the GRIP1 review is contained within the individual level crossing reports.

4.1 Strategic Stakeholders

A workshop was held with Highways, PROW, Green Infrastructure, Legal, Trails and Heritage officers from Essex County Council (ECC) on Friday 6th November at their Seax House Offices in Chelmsford. A brief overview presentation from Mott MacDonald provided background context and an overview of the programme and project plan. This initial session also described the nature of the work undertaken to date, including the site visits and desktop research, and provided a further opportunity to forge partnership working for mutual benefit.

The 55 crossings within the County area of Essex were discussed in detail as a group, to understand the current situation and to consider the proposed solutions, in order to further develop and shape the initial proposals for level crossing closures. A Google Earth KMZ file showing the locations of all level crossings and a PDF plans of the proposed closure solutions were circulated to all attendees prior to the meeting.

4.2 Statutory Stakeholders

Mott MacDonald issued a Network Rail approved letter to the relevant statutory consultees (namely, the Environment Agency, Natural England, Historic England and Highways England) on Friday 9th October 2015. The letters introduced the programme, and requested the opportunity to meet with relevant individuals to discuss the programme and relevant crossings in further detail. Responses to the letter and following meetings are summarised in the individual feasibility reports.

Not For Public Issue

4.3 Landowners

At this early stage of the scoping/feasibility study only a prioritised list of 66 potentially affected landowners were consulted upon the Anglia level crossing closure proposals. In addition to this a small number of additional land owners were consulted upon during the site visit if the opportunity arose (i.e. the landowner was present on site whilst our surveyor was there). In the county of Essex, discussions have been held with or correspondence has been received from 14 landowners. Letters have been sent out to a further 2 landowners but at the time of writing this report we have not received any feedback from them. The remaining affected land owners not contacted at this stage will be consulted at the next GRIP stage, with further discussions with those contacted already to continue.

4.4 Access and User Groups

Mott MacDonald worked with Network Rail to prepare an online survey as the first means of engaging with Local User Groups. This collated high level feedback and information, which can be used as the basis for further, more detailed engagement in the later stages of the programme. The survey intended to give an opportunity for Local User Groups to inform the project team of their general principles in relation to the Anglia Route Level Crossing Reduction Strategy.

The following eight Local User Groups were contacted with the invitation to engage with Network Rail through the completion of the survey at an organisational level:

- Auto Cycle Union;
- British Driving Society;
- British Horse Society;
- Byways and Bridleways Trust;
- Cyclist Touring Club (CTC);
- Open Spaces Society;
- Sustrans; and
- The Ramblers Association.

The survey commenced on the 19th October 2015 and closed on 1st November 2015 (excluding a 4 day extension). All organisations were contacted before the survey closed with a final request to participate.

A total of 12 individual responses were received, representing all of the organisations listed above, with the exception of the Auto Cycle Union and the British Driving Society. Four of the 12 responses were received from the Ramblers Association's local contacts in the Anglia region. A response was also received from the Essex Bridleways Association and Colchester Cycling Campaign (at the request of one of the eight main organisations listed above).

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5 Conclusions

Mott MacDonald has undertaken a review of the GRIP0 proposals provided in Network Rail's Route Requirement Document, reference 148339-Essex and subsequent instructions. A summary of the review findings is listed below.

- 57 level crossing closure proposals were reviewed by Mott MacDonald in the County of Essex;
- ECC are yet to comment on 16 level crossing closure proposals but will do so once their Officers have undertaken site reconnaissance at these level crossings. ECC have not had the opportunity to comment on the proposals at two additional level crossing sites because the proposals were not sufficiently developed to enable discussion at the last meeting;
- Essex County Council do not object to any of the level crossing closure proposals at this stage;
- Alternative options/amendments were identified at 21 locations;
- All 57 level crossing closure proposals or their alternatives were considered suitable to progress to the next GRIP stage;
- All 57 level crossing closure proposals were instructed by Network Rail to take forward to the next stage GRIP2-4.

To progress the GRIP1 assessed solutions further, stakeholder engagement (in particular with landowners) should be undertaken at the next GRIP stage.

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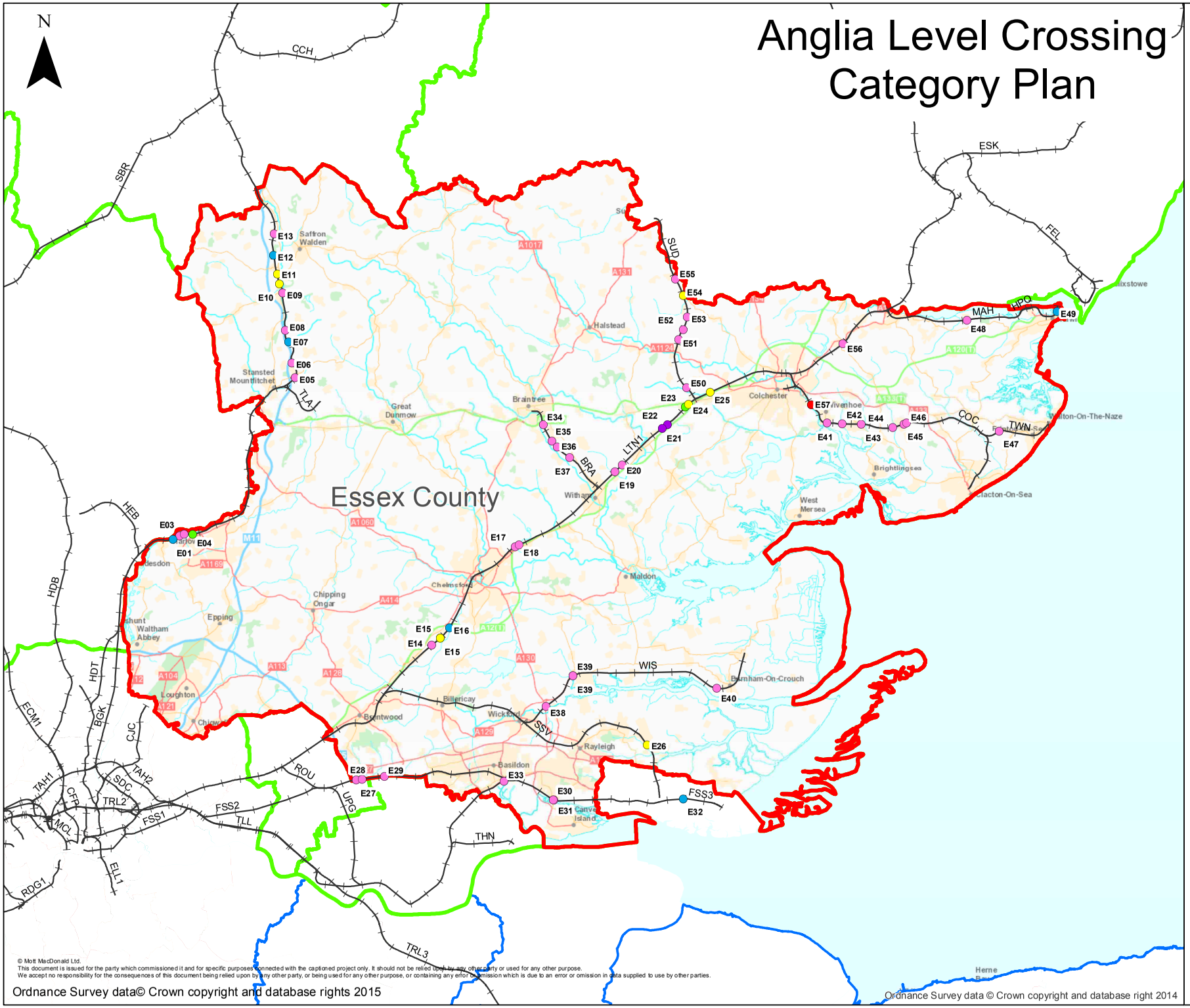
Appendix A. Level Crossing Location Plans

A.1 Level Crossing Location by Category Plan

Not For Public Issue

Anglia Level Crossing Category Plan



Key

LX Proposal Category

- 1
- 2
- 3
- 4
- 5
- 6
- Black *Removed from Study*
- Railway Line
- Authority Boundary
- Authority Boundaries in Study
- Other Authority Boundaries

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

For Public Issue

County Summary

Hertfordshire

354763/RPT211
Revision A
March 2016

Network Rail

Mott MacDonald

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

Hertfordshire

March 2016

Revision	Date	Originator	Checker	Technical Approver	Project Approver	Description
A	March 2016	DJ Weir	S Price	S Price	JA Smith	First Issue
B	March 2016	D Weir	S Price	S Price	J Smith	NR comments

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1 Introduction

1.1 Context

Network Rail has taken steps to close or reduce potential risk at many level crossings on the railway network and is continually looking at ways to improve safety, reliability and value for public money. This is achieved through various existing programmes and initiatives including the National Level Crossing Closure Programme which is based around safety criteria. Additionally, Network Rail has developed the Anglia Level Crossing Reduction Strategy to consider options to provide alternative means of crossing the railway to help expedite the process. In particular the strategy will help to:

- Improve the safety of level crossings 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

The purpose of the Anglia Level Crossing Reduction Strategy is to bring about safety benefits, allow Network Rail to more effectively manage their assets, to reduce the ongoing maintenance liability of the railway and enable various separate enhancement schemes.

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1.2 The Strategy

The Anglia Level Crossing Reduction Strategy comprises 5 phases; however the Mott MacDonald commission currently only relates to Phases 1 and 2 at the concept (GRIP1) feasibility stage.

Phase 1 (mainline) and 2 (branch line) comprise level crossings where the proposals do not include any new forms of grade separation across the railway, and where benefits may be deliverable and affordable within Network Rail Control Period 5 (to 31/3/19). Network Rail has specified within Route Requirement Documents and correspondence the 221 level crossings which should be considered within the Phase 1 and 2 concept feasibility study.

Phases 3 to 5 include new grade separated crossings of the railway, and diversion or downgrading of major highways. Network Rail has advised that these later phases are likely to be implemented within Control Period 6 (2019 to 2024) after Phases 1 and 2 are implemented. This is because the more substantive associated infrastructure means that they will take longer to develop and secure the necessary funding. It is expected that planning work on Phases 3 to 5 may be progressed during the latter stages of CP 5 although the implementation is likely be during Control period 6.

1.3 The Projects

Four separate Projects have been identified within the Strategy as listed below:

1. The county of Norfolk
2. The county of Suffolk
3. The county of Cambridgeshire
4. The county of Essex (and others) also including the county of Hertfordshire, the unitary authority of Thurrock and the London Borough of Havering.

Each of the four Projects will be the subject of a separate application under the Transport and Works Act 1992 for which Network Rail intends to apply. This will include the powers necessary to enable it to implement the Projects such as the acquisition of land, or rights over land, extinguishment of existing rights and alteration of rights including down grading of public roads.

The Norfolk Project Transport and Works Act Order (TWAO) preparation will not be progressed at this time and the number of level crossings within the Suffolk TWAO will be reduced from those assessed within the GRIP1 concept feasibility study. Within each Project where level crossings interact with one another they will be arranged into packages.

An individual level crossing feasibility report (references are contained within Table 1.1) has been prepared for each of the 221 level crossing sites considered within the GRIP1 study. In addition the following reports have been produced:

- Stakeholder Management Plan
- Compensation Code Note
- Diversity Impact Assessment scoping report
- Stage 1 Road Safety Report
- Census (traffic survey) scoping report
- Cost estimate report

This report provides a summary of the salient facts for the county of Hertfordshire at the GRIP1 concept feasibility stage; other summary reports will be produced for the other local authorities within this Project as well as the three Projects within the Strategy. These will form part of the evidence base for the Strategy as it is progressed through the planning process, with TWAO applications likely to be submitted in early 2017 and public inquiries in late 2017 or early 2018.

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2 Summary of Proposals

2.1 Feasibility Studies

Mott MacDonald was instructed to review the GRIP0 proposals provided in Network Rail's Route Requirement Document, reference 148339-Hertfordshire. As part of these studies, site visits were undertaken at all level crossing proposal sites in September 2015 (where physically possible).

In January 2016 Fowlers level crossing was added to Mott MacDonald's study remit however it was not physically possible to observe the level crossing because it is only accessible via private land.

The Anglia Route GRIP 1 Review considered an "assessed solution" which was agreed with Network Rail following site reconnaissance at the level crossings. The assessed solution was based on the GRIP0 proposal from the Route Requirements Document with some GRIP0 solutions subject to minor tweaks with a smaller number of proposals adopting entirely new solutions.

Mott MacDonald scoped the requirements for a Stage 1 Road Safety Audit (RSA) on the level crossing proposals. The findings of the RSA are provided in Essex, Thurrock & Hertfordshire Stage1 Road Safety Audit, Report Number 354763/RPT219A.

Mott MacDonald undertook a preliminary Diversity Impact Assessment (DIA) which reviewed the likely impact that closure of level crossing would have on their surrounding communities and additionally determine which of the level crossing proposals may require a formal DIA. The findings of the scoping exercise are reported in Diversity Impact Assessment - Scoping Report, Report Number 354763/RPT 225.

Network Rail supplied level crossing usage data which was reviewed, and consideration given to the number and nature of users at each crossing. This review was combined with details of the GRIP 1 proposals along with comments from the relevant local authority in order to make recommendations regarding the nature and quantity of additional data collection required during the next stages of the project. The level crossing proposals were categorised by level of importance (high, medium,low) to indicate whether further surveys are required to support the proposals. These finding are summarised in Table 1.1.

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2.2 Summary Table

In order to present a concise summary of the results of the GRIP1 Review a tabulated presentation of the data has been prepared; **Table 1.1** provides a list of all of the level crossings that are located in the county of Hertfordshire which have been investigated as part of this review. The headings used in the summary table are described below along with a key to their sub-categories.

Crossing name: Network Rail's level crossing name;

Footpath reference: The name of the Public Right of Way (PRoW) taken from the definative map which was provided by Hertfordshire County Council. The footpath name is predominately made up of the Parish of which it is located in along with a unique reference number from within the County.

Crossing type: An abbreviation of the level crossing types with a description provided below.

- AHB – Automatic half barrier crossing;

- BW – Bridleway level crossing;
- BWG – Bridleway level crossing with gates;
- CCTV – Barrier crossing with Closed circuit television;
- FP – Footpath level crossing;
- FPG – Footpath level crossing with gates;
- FPK – Footpath level crossing with kissing gates;
- FPO – Footpath level crossing open;
- FPS – Footpath level crossing with stiles;
- FPW – Footpath level crossing with wicket gates;
- FPWM – Footpath level crossing with wicket gates and miniature warning lights;
- FPX – Footpath level crossing that is fenced off;
- MGH – Level crossing with manned gates - hand operated;
- MSL – Level crossing with miniature stop lights;
- Sleeping Dog – A crossing where rights to cross the line still exist but are not exercised and there is very little or no trace of a crossing on site. It is not possible for the crossing to be used;
- UWC – User worked crossing;
- UWCM – User worked crossing with miniature warning lights;
- UWCT – User worked crossing with telephone;
- UWG – Public road crossing with user worked gates; and
- WT – Wave Train Fitted.

MM ref: Mott MacDonald's unique reference number for each level crossing;

MM report (RPT): Mott MacDonald's unique feasibility review report reference number for that particular level crossing;

Proposal category: Six categories have been used to describe the level crossing closure proposals, namely:-

- **Category 1:** Closures that involve no material works (i.e. no level crossing apprarauts to remove) but require the formalisation of the legal status of the crossing under a TWAO. An example of these include level crossings with access prevented by fencing or barriers where it is not possible to cross the railway using the level crossing; an altertaive means of crossing the railway may already have been provided under a separate scheme such as a stepped footbridge constructed immediately next to a level crossing;
- **Category 2:** Closures that are extinguishments of the level crossing rights and do not involve any works outside of Network Rail's land. Involves the removal of the crossing apparatus;
- **Category 3:** Closures where Pubic Rights of Way (PRoWs) are diverted on either private land or within the public highway and that involve no substantive physical works;
- **Category 4:** Closures where (PRoWs) are diverted on either private land or within the public highway that involve works such as new steps, new ramps, footway provision etc.;
- **Category 5:** Closures that invlove works on private land or within the public highway but do not affect the PROW; and
- **Category 6:** Proposals to downgrade the status of the crossing, for example from a public road to a private user worked crossing and a bridleway.

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RSA (y/n): This column states (yes or no) whether a Stage 1 Road Safety Audit has been undertaken on the level crossing closure proposals;

RSA Issues (y/n): This column states (yes or no) whether any road safety problems where identified in the Stage 1 Road Safety Audit (if applicable);

Landowner consultation: This column states (yes or no) whether any consultation was undertaken with affected landowners;

Cost: A capital cost esimtate at 3rd Quarter 2015 costs for the proposed level crossing closure works;

Council position: A short statement on Hertfordshire County Council's position on the level crossing proposals following a series of meetings;

Delivery risk: A high level judgement on the deliverability of the proposal, acknowledging any associated risks such as environmental, constructability etc constraints;

Comment: A brief comment on any risks associated with the proposal;

Additional census priority: A high level indication of whether a level crossing usage census (or other) is prioritised to support the proposals, categorised by level of importance (high, medium,low). The rationale behind these priorities is outlined in the report 354763/RPT239;

DIA Scoping Rating: The findings of a Diversity Impact Assessment (DIA) scoping exercise which grouped the closure proposals into three categories, namely:-

- **Red:** Further, detailed assessment required to proceed. Consider a full DIA evidence gathering process to support completion of the Network Rail pro forma;
- **Amber:** Site can be closed as soon as infrastructure interventions have taken place. Complete Network Rail DIA pro forma based on available evidence; and
- **Green:** Site can be closed immediately with minimal impact and intervention. Review, sign-off and no further DIA work required at this stage.

Alternative for Study: This column states (yes or no) as to whether any other alternative options were identified in addition to the assessed option. Alternatives options that may have arisen during the review stage by the design team or have been requested by Hertfordshire County Council;

NR Progressed at GRIP2 (y/n): A statement (yes or no) whether Network Rail has instructed the level crossing closure proposal to proceed to GRIP Stage 2.

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Table 1.1 County Summary Thurrock

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
Trinity Lane	Cheshunt 054	MGH	H01	203	2	No	n/a	Yes		No objection at this stage.	Low	Initial contact made with Steven Roberts - Estates Surveyor at Lee Valley Regional Park. Further consultation to be held at next GRIP stage.	Medium	Amber	No	Yes
Cadmore Lane	Cheshunt 009	FPW	H02	204	1	No	n/a	Yes		No objection at this stage.	Low		Medium	n/a	No	Yes
Slipe Lane	Cheshunt 022	UWCT	H03	205	2	No	n/a	Yes		No objection at this stage.	Low		Medium	Green	No	Yes
Tednambury	Sawbridgeworth 003	FPS	H04	206	4	No	n/a	No		HCC suggested a tweaked diversion away from residential properties.	Low	A variation to HCC's suggested alternative was discussed which makes use of a private road between the A1184 Cambridge Road and the railway.	Medium	Green	Yes	Yes
Pattens	Thorley 022	FPS	H05	207	4	Yes	No	No		No objection at this stage.	Low	*Upon investigation of diversions for Fowlers level crossing (post completion of investigation at Pattens and Gilston level crossings) a potential diversion for a footpath was discovered and should be investigated at the next GRIP stage.	High	Green	Yes*	Yes
Gilston	Thorley 007	FPS	H06	208	4	Yes	No	No		No objection at this stage.	Low		High	Green	Yes*	Yes
Twyford Road	Bishop's Stortford 068	FPW	H07	209	4	No	n/a	No		HCC requested the addition of a similar diversion route on the north side of the railway (i.e. symmetry of the proposed provision on the south side of the railway). The additional cost of these works would push this proposal into Network Rail's Phase 3 programme of works due to the associated cost.	Medium	An option to provide a diversion to the north of the railway which makes use of Bishop's Stortford Baptists Church's existing bridge. The route must maintain the security of the church site by means of secure fencing.	High	Amber	Yes	Yes
Johnsons	Bishop's Stortford 060	FPWM	H08	210	1	No	n/a	No		No objection at this stage.	Low	The ratification of the legal status of this crossing is being progressed in parallel to	Medium	n/a	No	Yes

EXISITNG CROSSING DESCRIPTION					ASSESSED SOLUTION								NEXT STAGE			
Crossing Name	Footpath Ref	Crossing Type	MM Ref	MM Report (RPT)	Proposal Category	RSA (Yes/ No)	RSA Issues (Yes/ No)	Landowner consultation (Yes/ No)		Council Position	Delivery Risk	Comment	Additional Census Priority	DIA Scoping rating	Alternative for Study (Yes/ No)	NR Progressed at GRIP2 (Yes/ No)
												this review and may drop out of the TWAO should it be completed in advance.				
Fowlers	Private track in Thorley	UWCT	H09	233	5	No	n/a	Yes		At the time of writing this report HCC has not seen the proposals for this level crossing.	Medium	Option makes use of Network Rail bridge Ref: BGK 1476 which has a low headroom clearance and may restrict the passage of large vehicles.	Low	Green	No	Yes
Totals					C1: 2 C2: 2 C3: 0 C4: 4 C5: 1 C6: 0	Yes: 2 No: 7	Yes: 0 No: 9	Yes: 4 No: 5			High: 0 Medium: 2 Low: 7		High: 3 Medium: 5 Low: 1	Red: 0 Amber: 2 Green: 5 n/a: 2	Yes: 4 No: 5	Yes: 9 No: 0

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3 Summary of Baseline Information

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The following sources of information have been used to inform the level crossing closure feasibility studies.

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Where a proposal made use of a Network Rail structure such as an under/over bridge or watercourse culvert, Network Rail supplied the relevant Bridge and Structure Examination Report. It should be noted that some of the structures were not visited on site because it was not physically possible due to fencing, overgrown landscaping or the site was located on private land. Structures that were not observed will need further investigation at the next GRIP stage. No structural inspections were undertaken as part of this study.

3.1.2 Level Crossing Information

Initially Mott MacDonald used level crossing information from Network Rail's Transparency web page (http://www.networkrail.co.uk/transparency/level-crossings/) with supplementary information provided by Network Rail at later date. This included the following items:-

- Level crossing ALCRM scores;
- Use and mis-use data (train types, line speed, number of trains, census results, mis-use, near misses and accidents);

3.1.3 Network Rail's Route View Web Page

Mott MacDonald were given access to Network Rail's Route View web page which provides low altitude aerial photography and was used to view level crossing sites with some photography utilised in the review reports.

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3.2 PROWS and Planning

Hertfordshire County Council provided a digitised copy of their definitive PROW map, which has been used to create our proposal plans.

During meetings with Hertfordshire County Council, the project team were informed of current/potential planning applications that are located within the vicinity of the level crossings which include the following proposals:-

- A housing development located to the southeast of Trinity Lane level crossing was being considered; and
- Land located to the west of the B1383 Thorley Street (west of Pattens and Gilston level crossings) is currently allocated for residential development.

3.3 Environmental Constraints

Mott MacDonald has undertaken a high level environmental desk based study to identify environmental constraints within a 2km radius of the level crossing (the "study area"). Environmental constraints mapping was produced to aid site reconnaissance of the closure proposals and for future consideration at the next GRIP stages. The mapping contained the following data:-

- Bluesky World

  - National Tree Mapping;
- Information from the Environment Agency/Natural England:-
  - Flood Zone 1 to 3 mapping;
  - Watercourses;
  - Historic and active landfill sites;
  - Agricultural land quality;
  - Statutory Designated Sites e.g. SSSIs
- English Heritage:
  - Listed buildings and structures;
  - Schedule of ancient monuments;
  - Battlefields; and
  - Registered Parks and Gardens.

Once the closure proposals become more defined at the next GRIP stage Phase 1 habitat surveys will be undertaken.

3.4 Third Party Supplied Information

Mapping and data used to produce our level crossing closure proposal drawings was sourced from the following providers:-

- Ordnance Survey (OS) Mapping data. Through Network Rail's agreement with OS, Mott MacDonald were able to use the following mapping types for reporting purposes:-
  - OS Mastermap Topographic (1:1250 mapping);
  - OS Terrain 5 (5m spacing height data);
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  - OS Street View.
  -
- Land registry:-
  - PolygonPlus;
  - Land title registers; and
  - INSPIRE Land Boundary Polygons WMS.

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4 Summary of Consultation

Consultation held to date as part of the GRIP1 review is summarised below. Details of the consultation held by Network Rail prior to the GRIP1 review is contained within the individual level crossing reports.

4.1 Strategic Stakeholders

A workshop was held with Highways, PROW, Green Infrastructure, Legal, Trails and Heritage officers from Hertfordshire County Council (HCC) and London Borough of Broxbourne (LBB) on Thursday 8th October at their Wallfields Office in Hertford. A brief overview presentation from Mott MacDonald provided background context and an overview of the programme and project plan. This initial session also described the nature of the work undertaken to date, including the site visits and desktop research, and provided a further opportunity to forge partnership working for mutual benefit.

The 9 crossings within the County area of Hertfordshire were discussed in detail as a group, to understand the current situation and to consider the proposed solutions, in order to further develop and shape the initial proposals for level crossing closures. A Google Earth KMZ file showing the locations of all level crossings and a PDF plans of the proposed closure solutions were circulated to all attendees prior to the meeting.

A telephone conference was also held on (19th January 2016) with HCC and LBB post completion of the GRIP1 reviews to provide an update to project and discuss any amendments to the proposals.

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4.2 Statutory Stakeholders

Mott MacDonald issued a Network Rail approved letter to the relevant statutory consultees (namely, the Environment Agency, Natural England, Historic England and Highways England) on Friday 9th October 2015. The letters introduced the programme, and requested the opportunity to meet with relevant individuals to discuss the programme and relevant crossings in further detail. Responses to the letter and following meetings are summarised in the individual feasibility reports.

4.3 Landowners

At this early stage of the scoping/feasibility study only a prioritised list of 66 potentially affected landowners were consulted upon the Anglia level crossing closure proposals. In addition to this a small number of additional land owners were consulted upon during site visits if the opportunity arose (i.e. the landowner was present on site whilst our surveyor was there). In the county of Hertfordshire only one landowner (covering 3 level crossing sites) was contacted during this review stage which is summarised below. The remaining affected land owners will be consulted at the next GRIP stage.

An initial telephone conversation was held with Steven Roberts - Estates Surveyor at Lee Valley Regional Park.

4.4 Access and User Groups

Mott MacDonald worked with Network Rail to prepare an online survey as the first means of engaging with Local User Groups. This collated high level feedback and information, which can be used as the basis for further, more detailed engagement in the later stages of the programme. The survey intended to give an opportunity for Local

User Groups to inform the project team of their general principles in relation to the Anglia Route Level Crossing Reduction Strategy.

The following eight Local User Groups were contacted with the invitation to engage with Network Rail through the completion of the survey at an organisational level:

- Auto Cycle Union;
- British Driving Society;
- British Horse Society;
- Byways and Bridleways Trust;
- Cyclist Touring Club (CTC);
- Open Spaces Society;
- Sustrans; and
- The Ramblers Association.

The survey commenced on the 19th October 2015 and closed on 1st November 2015 (excluding a 4 day extension). All organisations were contacted before the survey closed with a final request to participate.

A total of 12 individual responses were received, representing all of the organisations listed above, with the exception of the Auto Cycle Union and the British Driving Society. Four of the 12 responses were received from the Ramblers Association's local contacts in the Anglia region. A response was also received from the Essex Bridleways Association and Colchester Cycling Campaign (at the request of one of the eight main organisations listed above).

Not For Public Issue

5 Conclusions

Mott MacDonald has undertaken a review of the GRIP0 proposals provided in Network Rail's Route Requirement Document, reference 148339-Hertfordshire and subsequent instructions. A summary of the review findings is listed below.

- 9 level crossing closure proposals were reviewed by Mott MacDonald in the County of Hertfordshire;
- Hertfordshire County Council suggested amendments to 2 of the level crossing proposals (H04 Tednambury and H07 Twyford Road);
- Hertfordshire County Council and London Borough of Broxbourne do not object to any of the level crossing closure proposals at this stage;
- All 9 level crossing closure proposals were considered suitable to progress to the next GRIP stage;
- Fowlers level crossing was added to Mott MacDonald's review remit in December 2015;
- Through investigation of Fowlers level crossing a suitable footpath diversion was identified for Pattens and Gilston level crossings. This should be investigated further at the next GRIP stage;
- All 9 level crossing closure proposals were instructed by Network Rail to take forward to the next stage GRIP2-4.

To progress the GRIP1 assessed solution further stakeholder engagement (in particular with landowners) should be undertaken at the next GRIP stage.

Not For Public Issue

Appendices

Appendix A. Level Crossing Location Plans 15

A.1 Level Crossing Location by Category Plan 15

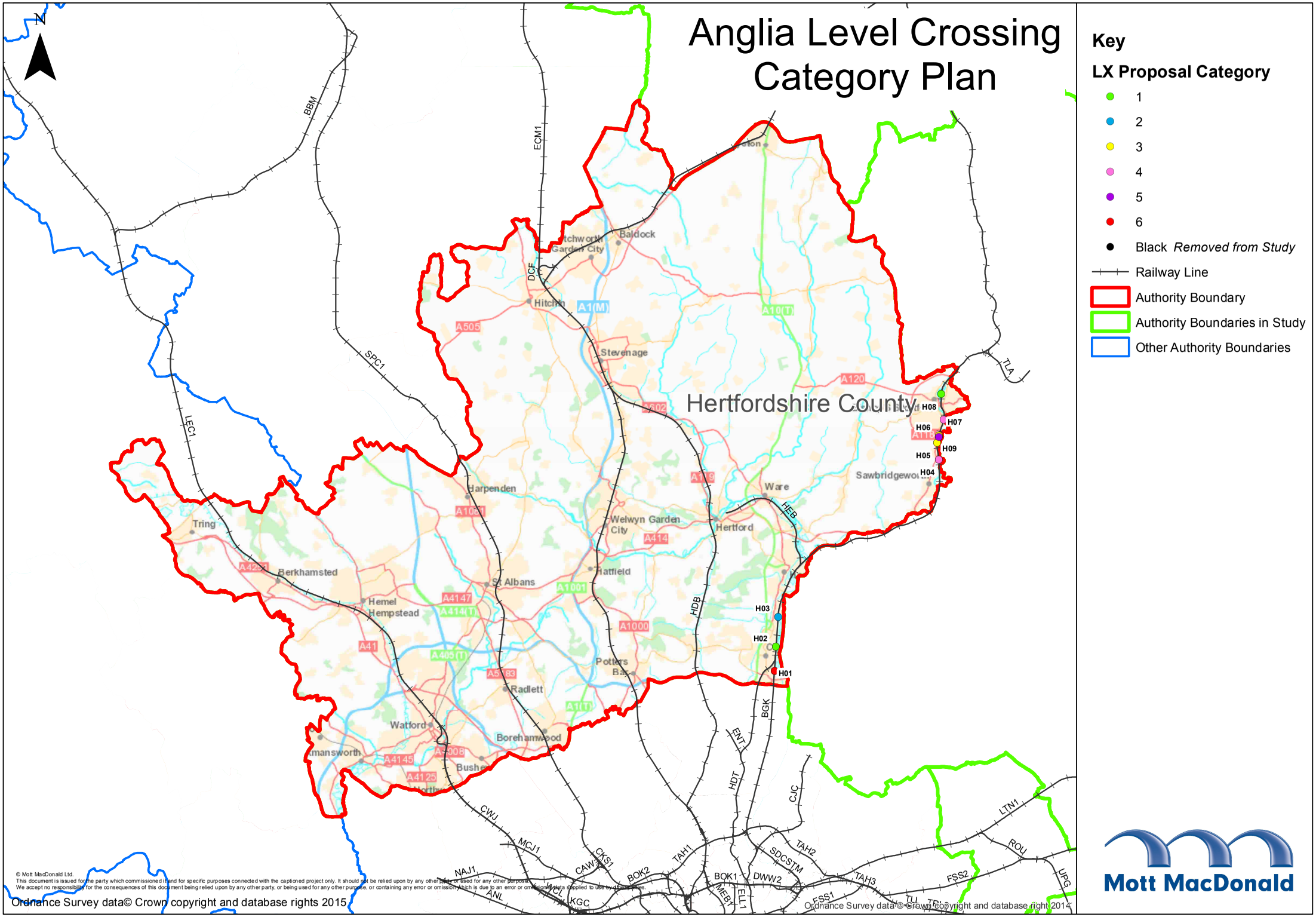
Not For Public Issue

Appendix A. Level Crossing Location Plans

A.1 Level Crossing Location by Category Plan

Not For Public Issue

Anglia Level Crossing Category Plan



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Essex TWA Consultation event detailed information

A total of 13 public exhibition events were held in the Essex and others area over the course of the two rounds of consultation (six and seven events for Round 1 and Round 2 respectively). Each level crossing was allocated to one of seven event locations, as outlined below:

Round 1

Event location: Colchester

- E41 Paget
- E42 Sand Pit
- E43 High Elm
- E44 Frating Abbey
- E45 Great Bentley Station
- E46 Lords No.1
- E47 Bluehouse
- E48 Wheatsheaf
- E49 Maria Street
- E51 Thornfield Wood
- E52 Golden Square
- E53 Josselyns
- E54 Bures
- E55 Lamarsh Kings Farm
- E56 Abbotts
- E57 Wivenhoe Park

Event location: Harlow

- E01 Old Lane
- E02 Camps
- E03 Sadlers
- E04 Parndon Mill
- H01 Trinity Lane
- H02 Cadmore Lane
- H03 Slipe Lane
- H04 Tednambury
- H05 Pattens
- H06 Gilston
- H07 Twyford Road
- H08 Johnsons
- H09 Fowlers

Event location: Newport

- E05 Fullers End
- E06 Elsenham Emergency Hut
- E07 Ugley Lane
- E08 Henham
- E09 Elephant
- E10 Dixies
- E11 Windmills
- E12 Wallaces
- E13 Littlebury Gate House

Event location: Upminster

- E27 Puddle Dock

- E28 Whipps Farmers
- E29 Brown & Tawse
- HA1 Butts Lane
- HA2 Woodhall Crescent
- HA3 Manor Farm
- HA4 Eve's
- T01 No 131
- T04 Jefferies
- T05 Howells Farm

Event location: Wickford

- E15 Parsonage Lane / Margaretting
- E16 Maldon Road
- E26 Barbara Close
- E30 Ferry
- E31 Brickyard Farm
- E32 Woodgrange Close
- E33 Motorbike
- E38 Battlesbridge
- E40 Creaksea Place 1

Event location: Witham

- E17 Boreham
- E18 Noakes
- E19 Potters
- E20 Snivillers
- E21 Hill House 1
- E22 Great Domsey
- E23 Long Green
- E24 Church 1
- E25 Church 2
- E35 Cranes No. 1
- E36 Cranes No. 2
- E37 Essex Way

Round 2

Event location: Colchester

- E41 Paget
- E42 Sand Pit
- E43 High Elm
- E44 Frating Abbey
- E45 Great Bentley Station
- E46 Lords No.1
- E47 Bluehouse
- E48 Wheatsheaf
- E49 Maria Street
- E51 Thornfield Wood
- E52 Golden Square
- E53 Josselyns
- E54 Bures
- E55 Lamarsh Kings Farm
- E56 Abbotts
- E57 Wivenhoe Park

Event location: Bishop’s Stortford

- E01 Old Lane
- E02 Camps
- E03 Sadlers
- E04 Parndon Mill
- H01 Trinity Lane
- H02 Cadmore Lane
- H03 Slipe Lane
- H04 Tednambury
- H05 Pattens
- H06 Gilston
- H07 Twyford Road
- H08 Johnsons
- H09 Fowlers

Event location: Newport

- E05 Fullers End
- E06 Elsenham Emergency Hut
- E07 Ugley Lane
- E08 Henham
- E09 Elephant
- E10 Dixies
- E11 Windmills
- E12 Wallaces
- E13 Littlebury Gate House

Event location: Upminster

- E27 Puddle Dock
- E28 Whipps Farmers
- E29 Brown & Tawse
- HA1 Butts Lane
- HA2 Woodhall Crescent
- HA3 Manor Farm
- HA4 Eve's

Event location: Wickford

- E15 Parsonage Lane / Margaretting
- E16 Maldon Road
- E26 Barbara Close
- E30 Ferry
- E31 Brickyard Farm
- E32 Woodgrange Close
- E33 Motorbike
- E38 Battlesbridge
- E40 Creaksea Place 1

Event location: Witham

- E17 Boreham
- E18 Noakes
- E19 Potters
- E20 Snivillers

- E21 Hill House 1
- E22 Great Domsey
- E23 Long Green
- E24 Church 1
- E25 Church 2
- E35 Cranes No. 1
- E36 Cranes No. 2
- E37 Essex Way

Event location: Thurrock

- T01 No 131
- T04 Jefferies
- T05 Howells Farm

The public exhibition programme and attendance for the Round 1 and Round 2 consultations are shown in Table 1 and Table 2 below. Representatives from the County Council, District Councils and Parish Councils and local user / interest groups were invited to a pre-meeting, one hour prior to the start of the public exhibition to be briefed on the proposals.

Table 1: Public exhibition programme and attendance for Round 1 public consultation, Essex and others area

Event location	Date	Pre-meeting time	Public time	Stakeholder attendees	Public attendees	Total attendees
Witham	16/06/16	13:00-14:00	14:00-19:00	8	43	**51**
Colchester	17/06/16	13:00-14:00	14:00-19:00	18	93	**111**
Newport	21/06/16	13:00-14:00	14:00-19:00	14	83	**97**
Upminster	22/06/16	13:30-14:30	14:30-19:00	9	20	**29**
Harlow	24/06/16	13:00-14:00	14:00-19:00	11	33	**44**
Wickford	25/06/16	10:00-11:00	11:00-15:00	0	26	**26**
				60	**298**	**358**

Source: Mott MacDonald

Table 2: Public exhibition programme and attendance for Round 2 public consultation, Essex and others area

Event location	Date	Pre-meeting time	Public time	Stakeholder attendees	Public attendees	Total attendees
Bishop's Stortford	21/09/16	13:45-14:30	14:30-18:30	28	53	**81**
Newport	22/09/16	13:00-14:00	14:00-18:30	12	42	**54**
Thurrock	24/09/16	13:45-14:30	14:30-18:00	8	8	**16**
Witham	27/09/16	13:00-14:00	14:00-19:00	10	31	**41**
Upminster	28/09/16	13:30-14:30	14:30-19:00	12	24	**36**
Colchester	30/09/16	13:00-14:00	14:00-19:00	32	74	**106**
Wickford	01/10/16	14:45-15:30	15:30-19:00	4	14	**18**
				106	**246**	**352**

Source: Mott MacDonald

Anglia

Level Crossing Proposals

E01 – Old Lane
Roydon Parish – EX/203/13

Network Rail has been working hard to better manage its level crossings and the risks they pose, and has developed proposals for the possible closure or change to public rights of way at over 130 of its level crossings in Anglia. Closing or modifying level crossings can help to bring about a number of benefits:

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

The level crossings in this initial phase of the Anglia Level Crossing Reduction Strategy do not include any new bridges or underpasses, and offer benefits which are currently affordable and deliverable.

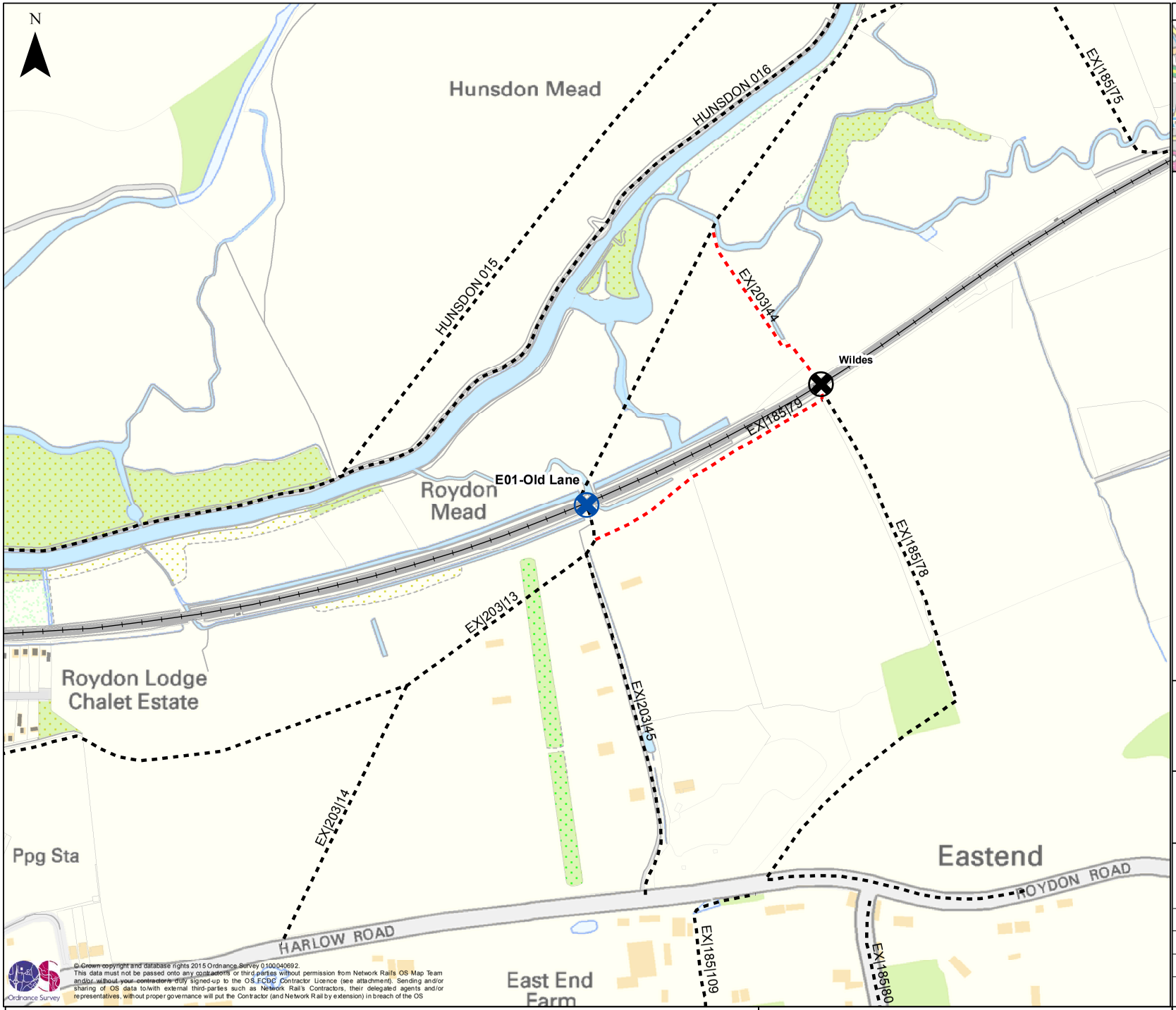
Old Lane is one of the level crossings in Essex County. It is located in Roydon Parish and has the postcode CM19 5DS. This is currently a Stop, Look & Listen public footpath level crossing where pedestrians make their own judgement whether it is safe to cross. The railway at this crossing carries passenger and freight trains. This level crossing is protected by whistle boards. Whistle boards are only effective between the hours of 07:00 - 23:00, outside of these hours train drivers are not allowed to use their horns. A photograph of the crossing is shown above.

Our proposed change: Is to close the level crossing to all users. To cross the railway the following is currently proposed (shown on the drawing overleaf):

Red Route - Users would be diverted to Wildes level crossing to the east via existing footpaths (Harlow 79 and Roydon 44).

This summary sheet and a questionnaire are available at the public exhibitions and on the project website at: **www.networkrail.co.uk/anglialevelcrossings**. Please complete the separate questionnaire using the level crossing identification number **E01** and your feedback will be considered before the proposals are finalised.

To contact our team, please email us at: **anglialevelcrossings@networkrail.co.uk** or phone the helpline: **03457 11 41 41.** We thank you for your time and providing your comments on the Anglia Level Crossing Proposals.



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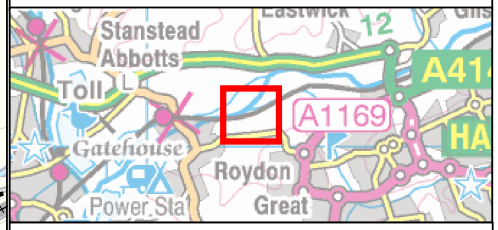
Overview



Level crossing being discussed

Other level crossings

Alternative Options

Red Route

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

Other line types using the above route option colours indicate use of existng 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).

Mott MacDonald

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

Anglia LX Consultation Stage 1

E01 - Old Lane
Essex
Roydon CP

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

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Drawing No.
MMD-367516-E01-GEN-002

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Anglia

Level Crossing Proposals

H04 – Tednambury
Sawbridgeworth Parish – Sawbridgeworth 003

Network Rail has been working hard to better manage its level crossings and the risks they pose, and has developed proposals for the possible closure or change to public rights of way at over 130 of its level crossings in Anglia. Closing or modifying level crossings can help to bring about a number of benefits:

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

The level crossings in this initial phase of the Anglia Level Crossing Reduction Strategy do not include any new bridges or underpasses, and offer benefits which are currently affordable and deliverable.

Tednambury is one of the level crossings in Hertfordshire County. It is located in Sawbridgeworth Parish and has the postcode CM23 4BD. This is currently a Stop, Look & Listen public footpath level crossing where pedestrians make their own judgement whether it is safe to cross. This level crossing is protected by whistle boards. Whistle boards are only effective between the hours of 07:00 - 23:00, outside of these hours train drivers are not allowed to use their horns. The railway at this crossing carries passenger and freight trains. A photograph of the crossing is shown above.

Our proposed change: Is to close the level crossing to all users. To cross the railway the following separate options are currently proposed (shown on the drawing overleaf):

Red Route - Users would be diverted south along the A1184 footway to a new east –west footpath to an existing private over bridge. The new footpath would continue on the east side of the railway linking to footpaths EX/37/2 and EX/37/38#2.

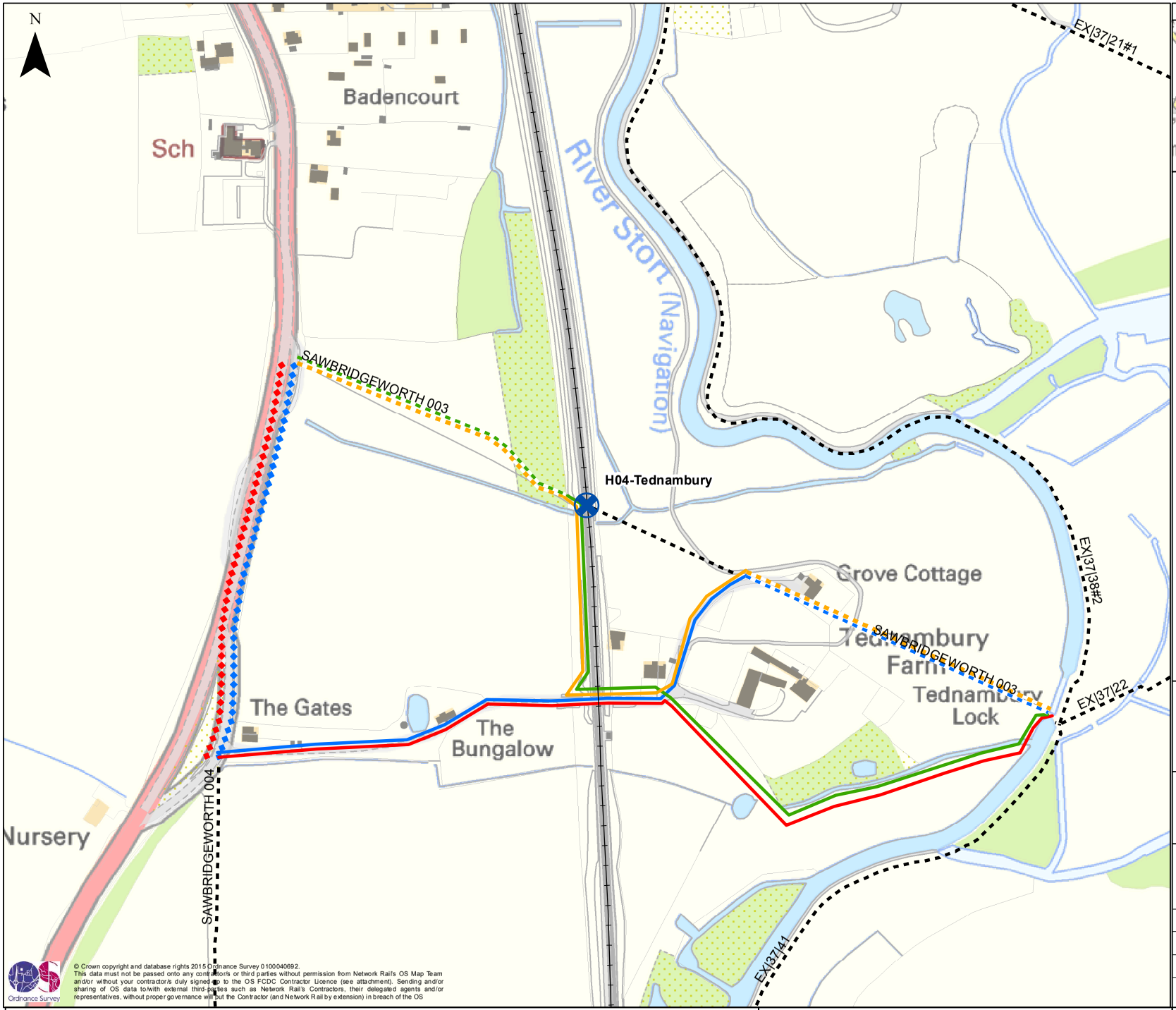
Blue Route - Users would be diverted south along the A1184 footway to a new east –west footpath to an existing private over bridge. The new footpath would continue on the east side of the railway linking to footpath Sawbridgeworth 003

Green Route – Users would be diverted from footpath Sawbridgeworth 003 to a new footpath on the west side of the railway to an existing overbridge to cross the railway. Users would then use a new footpath to re-join with Sawbridgeworth 003.

Orange Route - Users would be diverted from footpath Sawbridgeworth 003 to a new footpath on the west side of the railway to an existing overbridge to cross the railway. A new footpath on the east of the railway would connect the overbridge with footpaths EX/37/2 and EX/37/38#2.

This summary sheet and a questionnaire are available at the public exhibitions and on the project website at: **www.networkrail.co.uk/anglialevelcrossings**. Please complete the separate questionnaire using the level crossing identification number **H04** and your feedback will be considered before the proposals are finalised.

To contact our team, please email us at: **anglialevelcrossings@networkrail.co.uk** or phone the helpline: **03457 11 41 41.** We thank you for your time and providing your comments on the Anglia Level Crossing Proposals.



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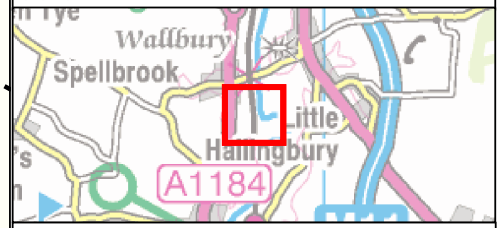
Overview



Level crossing being discussed

Alternative Options

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

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

Other line types using the above route option colours indicate use of existng 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).

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

Anglia LX Consultation Stage 1

H04 - Tednambury
Hertfordshire
Sawbridgeworth CP

Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd
P3	20/06/2016	Revised Format	WC	-	SJP	JAS
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Drawing No.
MMD-367516-H04-GEN-002

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Anglia Level Crossing Proposals Questionnaire

Please complete the following questionnaire to provide feedback on our initial options for level crossing changes in the Anglia region. Please leave your completed questionnaire in the drop box provided. If you would prefer to complete it at home, please return it in the freepost envelope provided.

All questionnaires must be returned within 28 days of the consultation event for that level crossing.

Which level crossing does your response relate to?

(Please provide the Unique ID number and crossing name as labelled in the level crossing summary sheet – it is very important that this is correct, to ensure your responses relate to the correct level crossing)

Unique ID: _____

Name: _____

1) On average, how often do you use the level crossing?

(Please select a single response)

- ☐ Daily
- ☐ Weekly
- ☐ Fortnightly
- ☐ Monthly
- ☐ Rarely
- ☐ Never (please go to Q6)

2) By what means do you use the level crossing?

(Please select all that apply)

- ☐ On foot
- ☐ On foot, accompanying a child / children on foot
- ☐ On foot, with a pram or push chair
- ☐ On foot, with a mobility aid
- ☐ Wheelchair
- ☐ Pedal cycle
- ☐ Horse
- ☐ Motorcycle / scooter
- ☐ Car / van
- ☐ Heavy goods vehicle
- ☐ Farm vehicle
- ☐ Other (please specify) .....

3) By what means do you most often use the level crossing?

(Please select a single response)

- ☐ On foot
- ☐ On foot, accompanying a child / children on foot
- ☐ On foot, with a pram or push chair
- ☐ On foot, with a mobility aid
- ☐ Wheelchair
- ☐ Pedal cycle
- ☐ Horse
- ☐ Motorcycle / scooter
- ☐ Car / van
- ☐ Heavy goods vehicle
- ☐ Farm vehicle
- ☐ Other (please specify) .....

4) For what purpose do you use the level crossing?

(Please select all that apply)

- ☐ Access to school
- ☐ Access to other local amenities
- ☐ Access to own property
- ☐ Access to neighbouring properties
- ☐ Commuting
- ☐ Moving livestock
- ☐ Leisure
- ☐ Other (please specify) .....

5) For what purpose do you most often use the level crossing?

(Please select a single response)

- ☐ Access to school
- ☐ Access to other local amenities
- ☐ Access to own property
- ☐ Access to neighbouring properties
- ☐ Commuting
- ☐ Moving livestock
- ☐ Leisure
- ☐ Other (please specify) .....

6) Please state your full home postcode (this information will be mapped to help with our data analysis).

.....

7) To what extent do you agree with the changes proposed at the level crossing itself?

(Please select a single response)

- ☐ Strongly Agree
- ☐ Agree
- ☐ Undecided / neither agree or disagree
- ☐ Disagree
- ☐ Strongly disagree

8) Please consider the plan within the level crossing summary sheet which shows potential diversion route/s. If there are multiple options shown, please indicate which you most strongly prefer. If you would like to suggest your own alternative option, please tick "other" and provide details below.

(Please select a single response)

- ☐ Red route (if applicable)
- ☐ Blue route (if applicable)
- ☐ Green route (if applicable)
- ☐ Orange route (if applicable)
- ☐ Purple route (if applicable)
- ☐ Other (please specify and if possible, use the drawing on the summary sheet to illustrate an alternative route suggestion).

.....

.....

.....

.....

.....

Please submit your drawing with your completed questionnaire via the drop box or in the freepost envelope provided.

9) For the following categories, please indicate whether you have any concerns in relation to the proposals for this level crossing.

(Please select a single response for each category)

Category	No Concern	Concern (please specify)
Safety of pedestrians / cyclists / equestrians	☐	☐ .....
Safety of users of motorised vehicles	☐	☐ .....
Convenience (route and length) of diversion route	☐	☐ .....
Connection to the Public Right of Way network	☐	☐ .....
Ground condition / flood risk	☐	☐ .....
Environment / ecology	☐	☐ .....
Business impact	☐	☐ .....
Amenity (e.g. landscape, noise)	☐	☐ .....

Other (please specify) .....

.....

10) If you have any further comments about the options presented, or about the programme in general, please provide them below.

Any personal information supplied will be held and used in accordance with the Data Protection Act 1998.

Thank you for taking the time to complete our questionnaire. We will analyse and consider the responses as part of the feasibility work.

Anglia Level Crossing Proposals

E01 – Old Lane (Roydon Parish)

Public Right of Way Reference – EX/203/13

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings in Anglia. Closing or modifying level crossings can help to bring about a number of benefits:

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

The level crossings in this initial phase of the Anglia Level Crossing Reduction Strategy do not include any new bridges or underpasses, and offer benefits which are currently affordable and deliverable.

Old Lane is one of the level crossings in the County of Essex. It is located in Roydon Parish and has the postcode CM19 5DS. This is a stop, look and listen public footpath level crossing where the user has to decide whether it is safe to cross; however, the level crossing is currently temporarily closed for safety reasons. This level crossing is protected by whistle boards. Whistle boards are only effective between the hours of 07:00 - 23:00; outside of these hours train drivers are not allowed to use their horns. The railway at this point carries passenger and freight trains with a line speed of 80 mph. There are generally 322 trains passing through this point on the railway per day.

Network Rail's level crossing risk assessments are supported by use of the All Level Crossing Risk Model (ALCRM). This produces a score for the 'individual risk' presented as a letter ranging from A to M, where A is the highest risk and M is the lowest. In addition 'collective risk' is based on the number of people who use the crossing, and is presented as a number ranging from 1 to 13, where 1 is the highest risk and 13 is the lowest. Old Lane level crossing currently has an ALCRM score of M13. Old Lane level crossing is temporarily closed and as a result has the lowest possible risk score. There were no incidents of misuse, no near misses and no accidents at this crossing between 2011 and 2015.

Public consultation was undertaken in June on initial options for changes at this level crossing. At this level crossing, six questionnaire responses were received. For Old Lane, a summary of the questionnaire responses is shown below (route colours refer to the June 2016 Stage 1 consultation plan – please see the project website for details):

- 33 % of responses agreed with the proposals
- 17 % of responses were neutral towards the proposals
- 50 % of responses disagreed with the proposals

- 67 % of responses supported the red route
- 33 % of responses preferred another route

Several respondents suggested that severe flooding has rendered Old Lane level crossing impossible to use for the last few years, and therefore the red route proposed was considered to be a feasible alternative for walkers and walking groups.

As part of the consultation process a wide range of statutory consultees, landowners and user groups were also consulted. The responses received have been taken into account when determining the preferred option.

The consultation feedback together with a range of other factors such as user safety and convenience, environmental impacts and economic factors were used to determine a preferred option. In this case, the red route shown at the June 2016 Stage 1 consultation has been taken forward.

Our preferred option is to formally close the level crossing to all users. Crossing infrastructure would be removed and fencing installed to prevent trespass onto the railway. Users would be diverted to Wildes public footpath level crossing (ALCRM score B9) to the east via existing footpaths (EX/185/79 and EX/203/44).

Diversion lengths:

- The diversion will add an additional 100m to the route.

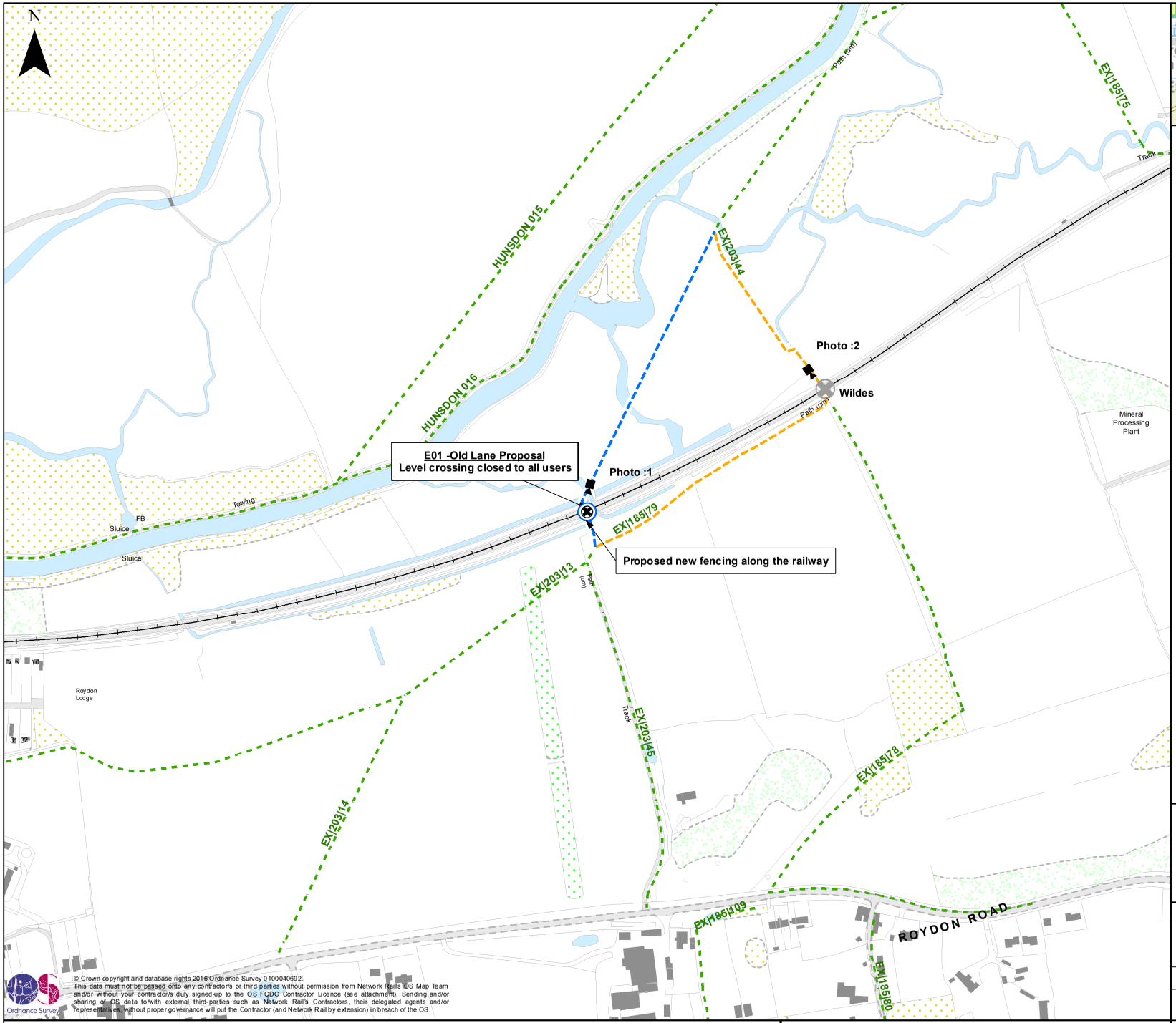
Photo 1: Existing level crossing - Old Lane

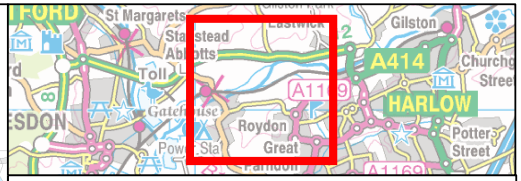
Photo 2: Alternative railway crossing - Wildes

Photo locations are shown on the plan overleaf.

This summary sheet and a questionnaire are available at the public exhibitions and on the project website at: **www.networkrail.co.uk/anglialevelcrossings.** Please complete the separate questionnaire using the level crossing identification number **E01** and your feedback will be considered before the proposals are finalised ahead of submitting a Transport and Works Act Order to the Secretary of State.

To contact our team, please email us at: **anglialevelcrossings@networkrail.co.uk** or phone the helpline: **03457 11 41 41.** We thank you for your time and providing your comments on the Anglia Level Crossing Proposals.





Level Crossings

- Level crossing being discussed
- Other level crossing in the project
- Other level crossing not in the project

Right of Way / Other Route Type

- Footpath
- Bridleway
- Restricted byway
- Byway open to all traffic
- Highway (shown where used as part of a diversion
- Private Road / Track (shown where used as part of a diversion route)

The line styles above indicate the type of right of way or other route proposed.

The colours below indicate the nature of the proposal.

Right of Way / Other Route Status

- No Change and not part of diversion route
- Use of Existing right of way for diversion route
- Change of Status to right of way
- Closure of existing right of way
- Creation of new right of way

Photographs

- Photograph Location (with no. - see Summary Sheet for details)

NetworkRail

Anglia Level Crossing Reduction Strategy

Round 2 Public Consultation Proposal

E01 - Old Lane
Essex
Roydon CP

Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd
P1	16/08/2016	For Information	WC	DW	SJT	JAS

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Drawing No.
MMD-367516-E01-GEN-003

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Anglia Level Crossing Proposals

H04 – Tednambury (Sawbridgeworth Parish)

Public Right of Way Reference – Sawbridgeworth 003

Network Rail has been working hard to better manage its level crossings and the risks they pose. It has developed proposals for the possible closure or change to public rights of way at around 130 level crossings in Anglia. Closing or modifying level crossings can help to bring about a number of benefits:

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

The level crossings in this initial phase of the Anglia Level Crossing Reduction Strategy do not include any new bridges or underpasses, and offer benefits which are currently affordable and deliverable.

Tednambury is one of the level crossings in the County of Hertfordshire. It is located in Sawbridgeworth Parish and has the postcode CM23 4BD. This is a stop, look and listen public footpath level crossing where the user has to decide whether it is safe to cross. This level crossing is protected by whistle boards. Whistle boards are only effective between the hours of 07:00 - 23:00; outside of these hours train drivers are not allowed to use their horns. The railway at this crossing carries passenger and freight trains with a line speed of 80 mph. There are generally 317 trains passing through this level crossing per day.

Network Rail's level crossing risk assessments are supported by use of the All Level Crossing Risk Model (ALCRM). This produces a score for the 'individual risk' presented as a letter ranging from A to M, where A is the highest risk and M is the lowest. In addition 'collective risk' is based on the number of people who use the crossing, and is presented as a number ranging from 1 to 13, where 1 is the highest risk and 13 is the lowest. Tednambury level crossing currently has an ALCRM score of B5, which is considered high risk. Key issues relate to sun glare, short sighting time and frequent trains. There were no incidents of misuse, no near misses and no accidents at this crossing between 2011 and 2015.

Public consultation was undertaken in June on initial options for changes at this level crossing. At this level crossing, one questionnaire responses was received. For Tednambury, a summary of the questionnaire responses is shown below (route colours refer to the June 2016 Stage 1 consultation plan – please see the project website for details):

- 100 % agreed with the proposals
- 100 % of responses preferred the orange route

As part of the consultation process a wide range of statutory consultees, landowners and user groups were also consulted. The responses received have been taken into account when determining the preferred option.

During June and July of this year, Network Rail undertook new census surveys of the number and type of level crossing users. A three day census was undertaken (Saturday, Sunday and Monday) and the daily usage was as follows:

Weekday (Monday)	3 pedestrians
Weekend (average daily)	2 pedestrians

The consultation feedback together with a range of other factors such as user safety and convenience, environmental impacts and economic factors were used to determine a preferred option. In this case, the green route (very similar to the orange route) shown at the June 2016 Stage 1 consultation has been taken forward.

Our preferred option is to close the level crossing to all users. Crossing infrastructure would be removed and fencing installed to prevent trespass onto the railway. Users would be diverted from public footpath Sawbridgeworth 003 to a new 2 metre wide footpath on the west side of the railway to an existing overbridge to cross the railway. Users would then use a new 2 metre wide public footpath to re-join with public footpath Sawbridgeworth 003. There would also be a proposed timber footbridge over the watercourse to the east of Tednambury Farm. The new footpaths and footbridge would be constructed to an appropriate standard, and new wayfinding signs. Details will be discussed and agreed with the local authority.

Diversion lengths:

- The diversion will add an additional 170m to the route.

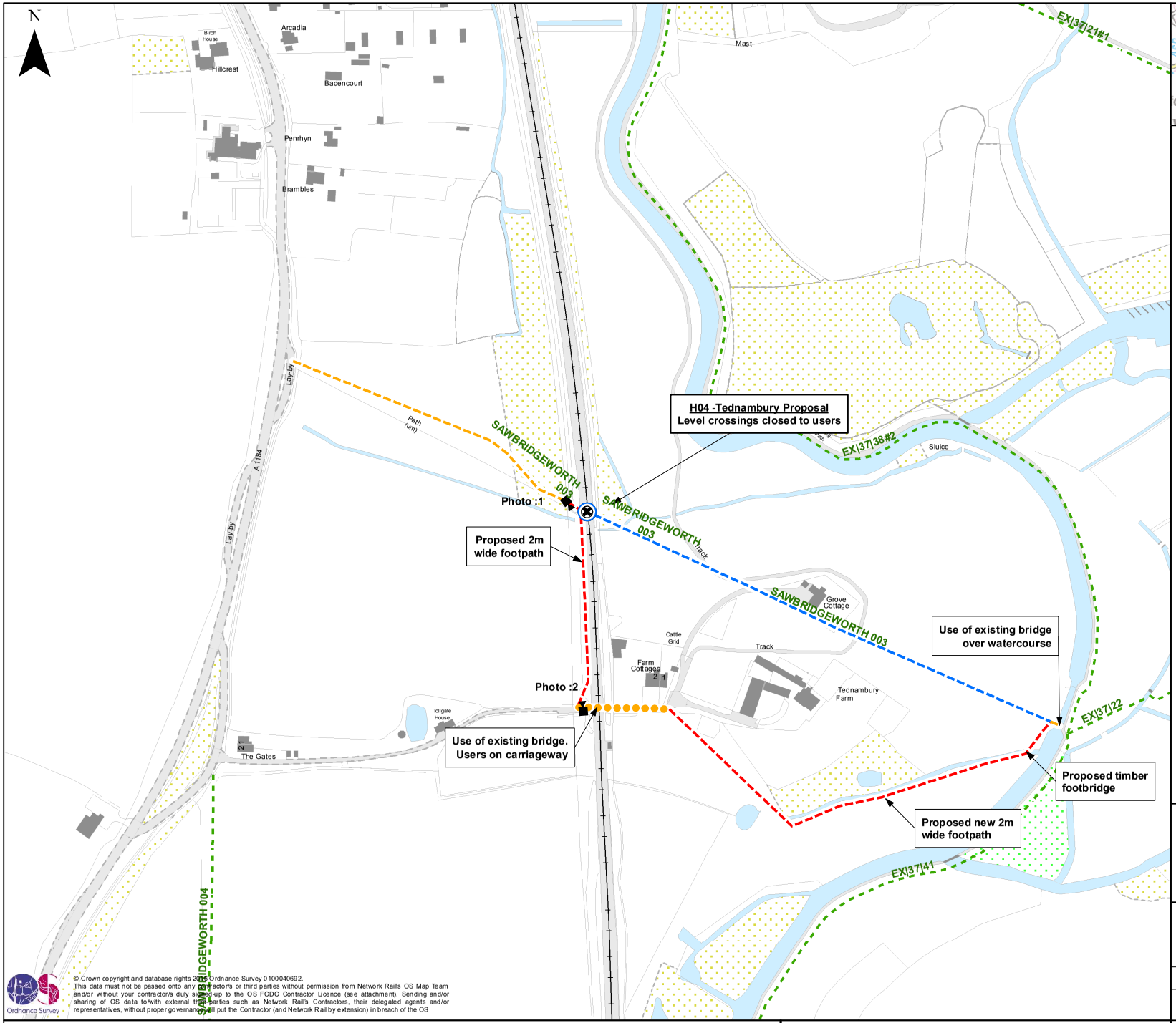
Photo 1: Existing level crossing

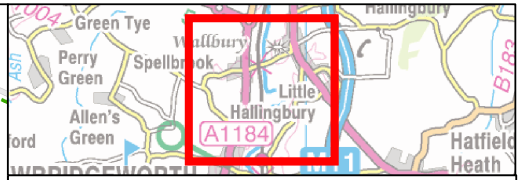
Photo 2: Alternative railway crossing

Photo locations are shown on the plan overleaf.

This summary sheet and a questionnaire are available at the public exhibitions and on the project website at: **www.networkrail.co.uk/anglialevelcrossings.** Please complete the separate questionnaire using the level crossing identification number **H04** and your feedback will be considered before the proposals are finalised ahead of submitting a Transport and Works Act Order to the Secretary of State.

To contact our team, please email us at: **anglialevelcrossings@networkrail.co.uk** or phone the helpline: **03457 11 41 41.** We thank you for your time and providing your comments on the Anglia Level Crossing Proposals.





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- Closure of existing right of way
- Creation of new right of way

Photographs

- Photograph Location (with no. - see Summary Sheet for details)

NetworkRail

Anglia Level Crossing Reduction Strategy

Round 2 Public Consultation Proposal

H04 - Tednambury
Hertfordshire
Sawbridgeworth CP

Rev	Date	Description	Dwn	E Chk	Ch'k'd	App'd
P1	16/08/2016	For Information	WC	DW	SJT	JAS

Scale at A3
1:3,000

Drawing No.
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Anglia Level Crossing Proposals Questionnaire

Please complete the following questionnaire to provide feedback on our preferred options for level crossing changes in the Anglia region. Please leave your completed questionnaire in the drop box provided. If you would prefer to complete it at home, please return it via post free of charge by putting FREEPOST ANGLIA LEVEL CROSSING PROPOSALS on the envelope. All questionnaires must be returned with 21 days of the consultation event for that level crossing.

1) Which level crossing does your response relate to?

(Please provide the Unique ID number and level crossing name as labelled in the level crossing summary sheet – it is very important that this is correct, to ensure your responses relate to the correct level crossing).

Unique ID : _____

Name of level crossing : _____

If the level crossing has more than one option presented on the summary sheet, please specify which option you wish to provide feedback on:

☐ Option A

☐ Option B

(If you wish to provide feedback on both options, please complete two questionnaires).

2) Please select from the following:

(Tick all that apply).

☐ I am a member of the public

☐ I am a local stakeholder (e.g. Councillor). Please specify: _____

☐ I am a representative from a Local User Group. Please specify: _____

3) To what extent do you agree with the preferred option for this level crossing?

(Please select a single response)

☐ Strongly agree
☐ Agree
☐ Undecided / neither agree or disagree
☐ Disagree
☐ Strongly disagree

4) For the following categories, do you have any concerns in relation to the preferred option for this level crossing?

(Please tick one response for each category)

Category	Yes	No
Safety of pedestrians / cyclists / equestrians	☐	☐
Safety of users of motorised vehicles	☐	☐
Convenience (route and length) of diversion route	☐	☐
Connection to the Public Right of Way network	☐	☐
Ground condition / flood risk	☐	☐
Environment / ecology	☐	☐
Business impact	☐	☐
Amenity (e.g. landscape, noise)	☐	☐

5) What is your home postcode?

(This information will be mapped to help with our data analysis).

_____

6) If you have any further comments about the preferred option, please provide them below.

Any personal information supplied will be held and used in accordance with the Data Protection Act 1998.

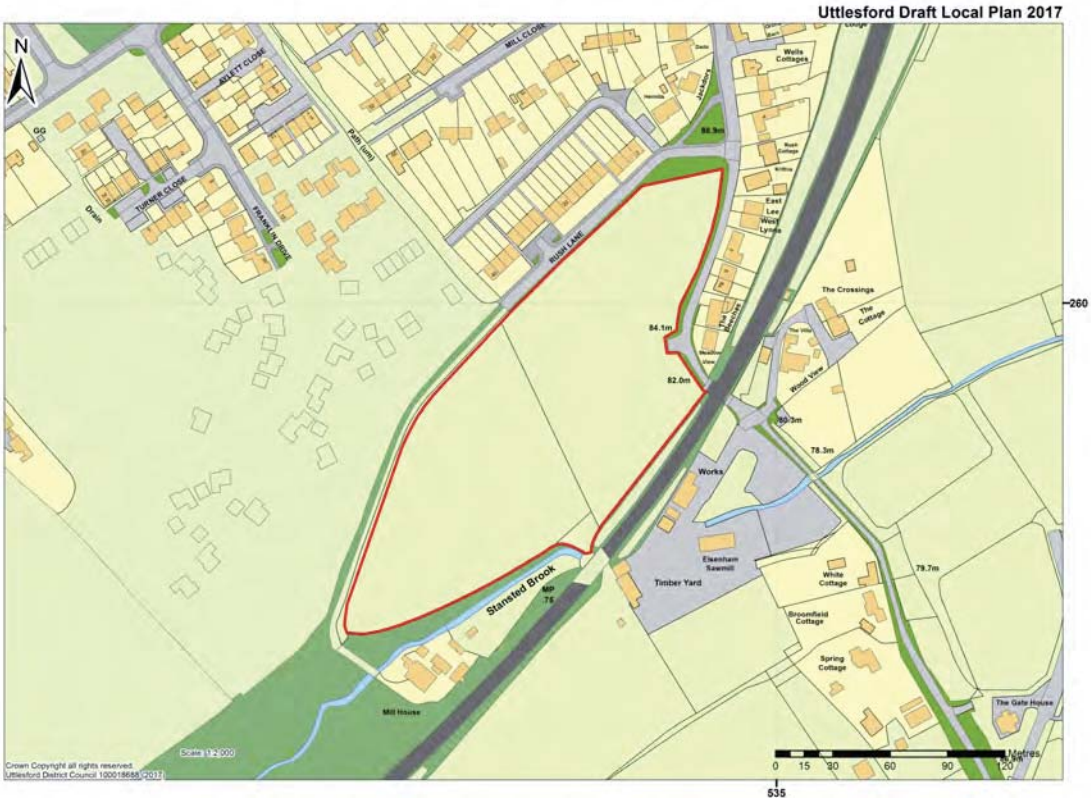
Thank you for taking the time to complete our questionnaire. We will analyse and consider the responses as part of the feasibility work.

12 Residential Site Allocations

Site: Land south of Rush Lane, Elsenham			
Quantum of Development	40 No. dwellings	**Site Area**	2.3 Hectares
Site specific policy: ELSE 1 Land south of Rush Lane, Elsenham as shown on the Policies Map, is allocated for the development of approximately 40 dwellings. Detailed proposals that comply with other relevant policies and meet the following site specific development requirement will be permitted: • The development provides 40 residential dwellings and recreational open space; • The informal recreation open space be located on the southern half of the site and link with the open space being provided with the housing development south of Stansted Road; • The development is designed to mitigate adverse effects upon existing residential and community interests and may be required, by legal obligation, to provide or contribute towards wider and longer term planning benefits reasonably associated with the alleviation of any such impact; • A Transport Statement may be required to support a planning application and appropriate access arrangements to be agreed and to the satisfaction of the highway authority; • A Landscape and Visual Impact Assessment will be required and should inform the design and layout of the site proposals; and • Appropriate ecological survey will be required.			
Site description: This is a greenfield site in the south-western part of Elsenham. Site is bounded by residential development on the western, southern and northern boundaries and a timber yard on the eastern boundary.			
Constraints: No known constraints on site.			
Status of site as of 1 April 2016: Allocation			

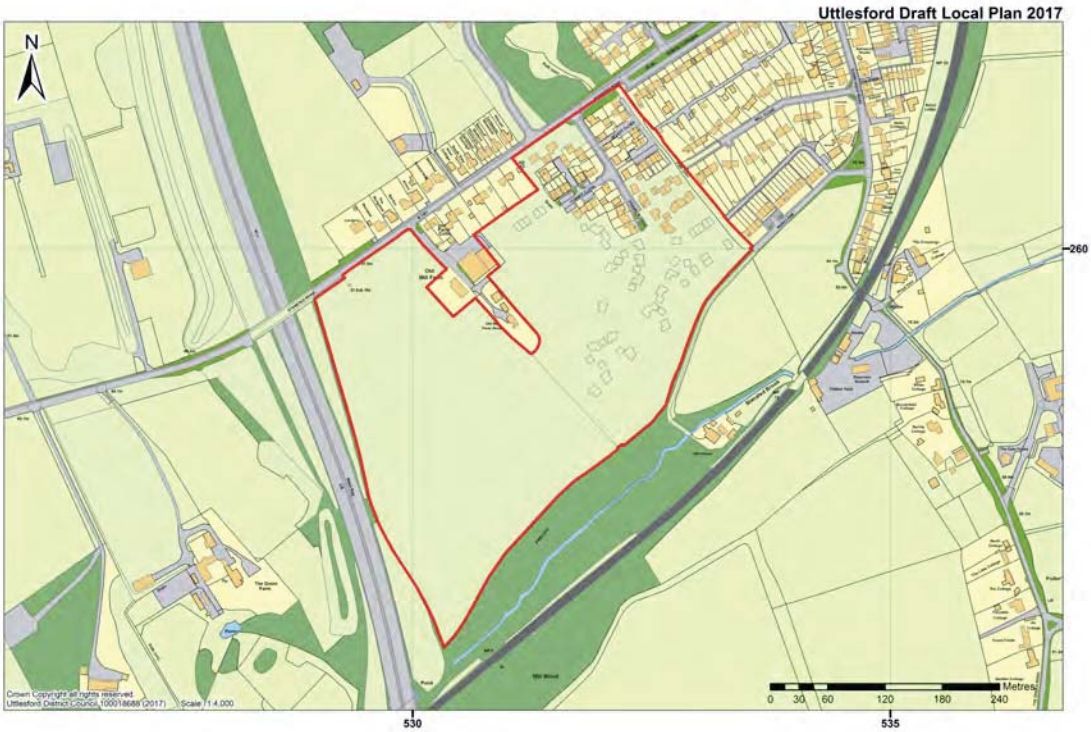
Residential Site Allocations 12

Site: Land south of Rush Lane, Elsenham



Residential Site Allocations 12

Site: Land South of Stansted Road, Elsenham			
Quantum of Development	165 No. dwellings	**Site Area**	12.8 Hectares
Site specific policy: ELSE 2 Land South of Stansted Road, Elsenham, as shown on the Policies Map, is allocated for the development of approximately 165 dwellings. Development of this site has now commenced.			
Site description: This is a greenfield site, adjoining the south western edge of Elsenham. Site is bound by residential development to the north and east, the M11 to the west and by woodland and Stansted Brook to the south.			
Constraints: Site is located inside the Countryside Protection Zone (CPZ)			
Status of site as of 1 April 2016: Planning permission granted 05 February 2016 (UTT/15/2632/DFO).			

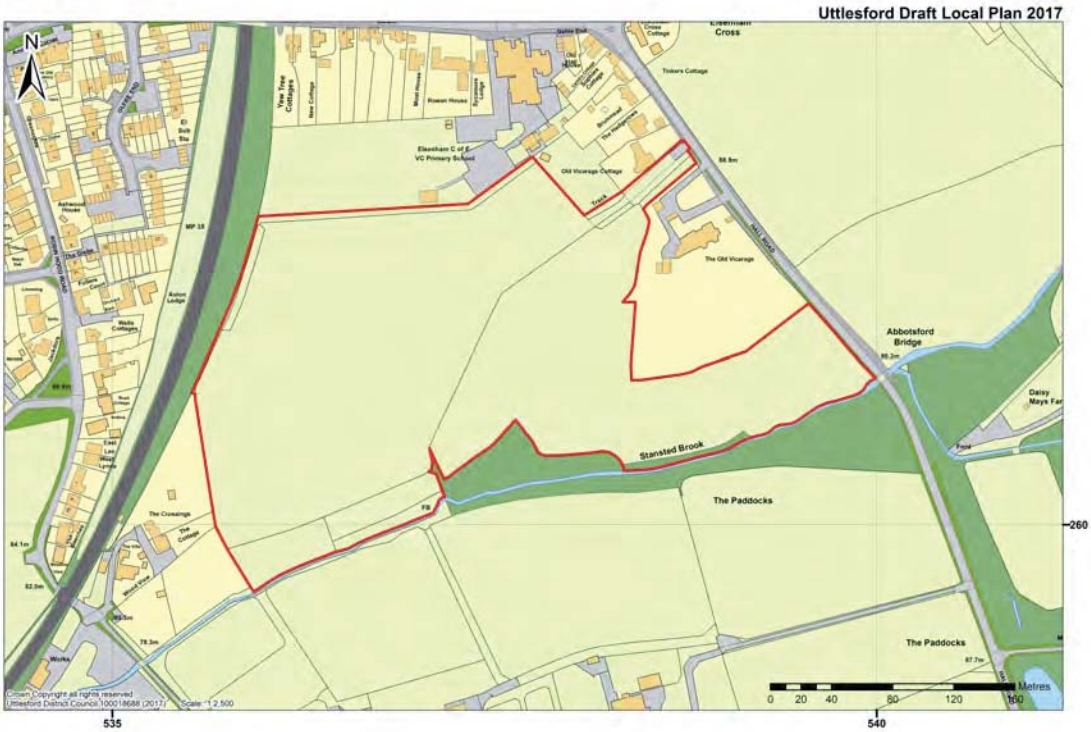


12 Residential Site Allocations

Site: Land west of Hall Road, Elsenham			
Quantum of Development	130 No. dwellings	**Site Area**	6.6 Hectares
Site specific policy: ELSE 2 Land west of Hall Road, Elsenham as shown on the Policies Map, is allocated for the development of approximately 130 dwellings. Detailed proposals that comply with other relevant policies and meet the following site specific development requirement will be permitted: • The development provides for a mixed and balanced community; • Development respects the amenity of existing dwellings adjoining the site; • The development is designed to mitigate adverse effects upon existing residential and community interests and may be required, by legal obligation, to provide or contribute towards wider and longer term planning benefits reasonably associated with the alleviation of any such impact; • A Transport Statement may be required to support a planning application and appropriate access arrangements to be agreed and to the satisfaction of the highway authority; • A Landscape and Visual Impact Assessment will be required and should inform the design and layout of the site proposals; and • Part of the development site (approx. 1Ha) be retained for educational purposes as part of expansion of Elsenham Primary School,			
Site description: This is a greenfield site in the south-eastern part of Elsenham. Site is bounded by a primary school to the north, a railway line to the west and agricultural fields mark southern and eastern boundaries.			
Constraints: Loss of land for educational expansion to housing. However it is proposed that part of the site is safeguarded for educational purposes.			
Status of site as of 1 April 2016: Planning permission granted 19th December 2013 (UTT/13/0177/OP).			

Residential Site Allocations 12

Site: Land west of Hall Road, Elsenham



Residential Site Allocations 12

Site: Bury Water Lane/Whiteditch Lane, Newport			
Quantum of Development	84 No. dwellings	**Site Area**	6.8 Hectares
Site specific policy: NEWP 2 Bury Water Lane/Whiteditch Lane, Newport, as shown on the Policies Map, is allocated for the development of approximately 84 dwellings. Development has commenced on site.			
Site description: This is a Greenfield site located on north western edge of Newport. Site is bounded on three sides by agricultural fields and by a care village which is currently under construction to the east of the site.			
Constraints: No known constraints on site.			
Status of site as of 1 April 2016: Outline planning permission was granted on site 29th November 2013 (UTT/13/1769/OP).			

12 Residential Site Allocations

Site: Land opposite Branksome, Whiteditch Lane, Newport			
Quantum of Development	15 No. dwellings	**Site Area**	1 Hectare
Site specific policy: NEWP 2 Land opposite Branksome, Whiteditch Lane, Newport as shown on the Policies Map, is allocated for the development of approximately 15 dwellings. Detailed proposals that comply with other relevant policies and meet the following site specific development requirement will be permitted: • The development provides for a mixed and balanced community; • Development respects the amenity of existing dwellings adjoining the site; • A Transport Statement may be required to support a planning application and appropriate access arrangements to be agreed and to the satisfaction of the highway authority; and • A Landscape and Visual Impact Assessment will be required and should inform the design and layout of the site proposals.			
Site description: This is a greenfield site located to the north west of Newport. Site is predominantly surrounded by agricultural fields although there are some residential properties located to the east of the site.			
Constraints: No known constraints on site.			
Status of site as of 1 April 2016: Planning permission was granted on appeal on site on 27th July 2015 (UTT/14/1794/OP).			

Residential Site Allocations 12

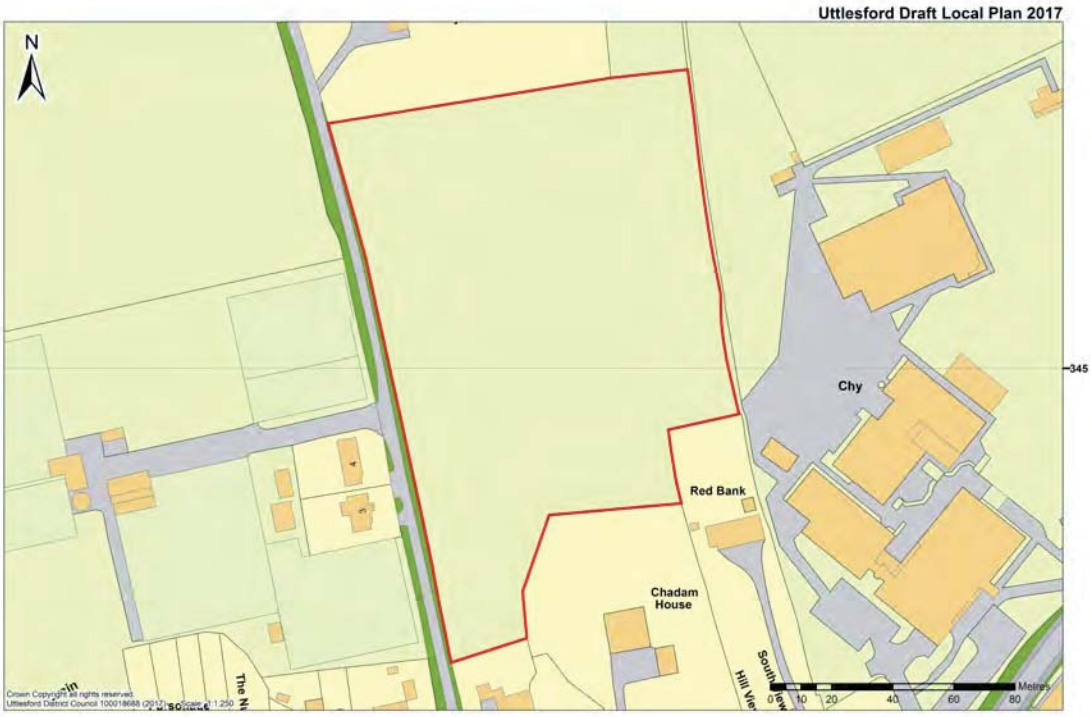
Site: Land opposite Branksome, Whiteditch Lane, Newport

12 Residential Site Allocations

Site: Land south of Wyndhams Croft, Whiteditch Lane, Newport			
Quantum of Development	15 No. dwellings	**Site Area**	1.6 Hectares
Site description: NEWP 2 Land south of Wyndhams Croft, Whiteditch Lane, Newport as shown on the Policies Map, is allocated for the development of approximately 15 dwellings. Detailed proposals that comply with other relevant policies and meet the following site specific development requirement will be permitted: • The development provides for a mixed and balanced community; • Development respects the amenity of existing dwellings adjoining the site; • A Transport Statement may be required to support a planning application and appropriate access arrangements to be agreed and to the satisfaction of the highway authority; and • A Landscape and Visual Impact Assessment will be required and should inform the design and layout of the site proposals.			
Site description: This is a greenfield site located to the north west of Newport. To the west is a residential care village under construction on the western boundary of the site, a sports complex to the east, residential properties to the south and a farm on the northern boundary.			
Constraints: No known constraints on site.			
Status of site as of 1 April 2016: Planning permission was granted on 18th December 2015 (UTT/14/3266/OP).			

Residential Site Allocations 12

Site: Land south of Wyndhams Croft, Whiteditch Lane, Newport



12 Residential Site Allocations

Site: Land west of Cambridge Road, Newport			
Quantum of Development	34 No. dwellings	**Site Area**	1.5 Hectares
Site description: NEWP 2			
Site Description: This is a greenfield site located on the northern boundary of Newport. Site is bounded by residential development to the south, agricultural fields to the north, west and east.			
Constraints: Appropriate mitigation measures will need to be in place on the western boundary to mitigate against the noise impact from the adjacent railway line.			
Status of site as of 1 April 2016: Planning permission was granted on 17th March 2016 (UTT/15/2364/FUL).			

12 Residential Site Allocations

Site: Land at Holmwood, Whiteditch Lane, Newport			
Quantum of Development	12 No. dwellings	**Site Area**	1.4 Hectares
Site description: NEWP2 Land at Holmwood, Whiteditch Lane, Newport, as shown on the Policies Map, is allocated for the development of approximately 12 dwellings. Detailed proposals that comply with other relevant policies and meet the following site specific development requirement will be permitted: • The development provides for a mixed and balanced community; • Development respects the amenity of the existing dwellings adjoining the site; • A Transport Statement may be required to support a planning application and appropriate access arrangements to be agreed and to the satisfaction of the highway authority; and • A Landscape and Visual Impact Assessment will be required and should inform the design and layout of the site proposals.			
Site Description: This is a part brownfield, part greenfield site located on the northern edge of Newport. Site currently comprises a farm and ancillary land uses. The site is surrounded by a mix of low density residential development and agricultural fields.			
Constraints: Access - The development proposal will need to demonstrate through a Transport Assessment that suitable access can be provided.			
Status of site as of 1 April 2016: Allocation			

Residential Site Allocations 12

Site: Land at Holmwood, Whiteditch Lane, Newport

12 Residential Site Allocations

Site: Land at Bury Water Lane, Newport			
Quantum of Development	81 No. dwellings	**Site Area**	2.1 Hectares
Site specific policy: NEWP 2 Land at Bury Water Lane, Newport, as shown on the Policies Map, is allocated for the development of approximately 81 dwellings. Detailed proposals that comply with other relevant policies and meet the following site specific development requirement will be permitted: • The development provides for a mixed and balanced community; • Development respects the amenity of the existing dwellings adjoining the site; • A Transport Statement may be required to support a planning application and appropriate access arrangements to be agreed and to the satisfaction of the highway authority; and • A Landscape and Visual Impact Assessment will be required and should inform the design and layout of the site proposals.			
Site Description:			
Constraints: No known on site constraints.			
Status of site as of 1 April 2016: Outline application was submitted on 5th February 2016 (UTT/16/0459/OP).			

Residential Site Allocations 12

Site: Land at Bury Water Lane, Newport

3.44 The site may have potential to be of archaeological interest and this should be taken into consideration. No development shall commence within the area of interest before the applicant has secured the implementation of a programme of archaeological work. Upon the granting of any planning permission for the development of the site, the developer will be required to afford access to the site at all reasonable times to an archaeologist nominated by Essex County Council and shall allow their observations of the excavations and records to be made of any items of interest.

3.45 A Health Impact Assessment must be undertaken and accompany any planning applications to develop the site. Actions required to address any negative impacts identified through the Health Impact Assessment must accompany the development of the site.

3.46 The provision of small-scale retail (A1) units in the form of neighbourhood shops should be explored at the planning application stage, and if considered to be viable, they should be well designed, planned and integrated into the development of the site.

3.47 This site will form a gateway into Rayleigh from the west. The topography of the location will need to be carefully considered at the design stage as there is an increase in the height of the land from London Road towards Rawreth Lane at the northern end of the site, and an increase in the height of the land from the A1245 eastwards towards Rawreth Industrial Estate. A green buffer to the west of the site should have a positive impact on the approach into Rayleigh from this direction. There is an opportunity for the development of landmark buildings towards the western end of the site taking into account the principles of the Essex Design Guide whilst being sensitive to the neighbouring landscape. Design throughout the development should be of high quality.

Policy SER2 – West Rochford

Site Context

3.48 The site is located on agricultural land between Hall Road and Ironwell Lane to the west of Oak Road. Ironwell Lane is an unmade track running from Ashingdon Road in Rochford to Rectory Road in Hawkwell. The site is adjacent to the existing residential area to the east.

3.49 The site is just outside the Rochford Conservation Area, which meets the site on its south eastern corner. There are listed structures and buildings in proximity to the site.

3.50 There is a small area in the north eastern corner of the site which lies within flood zone 2 and 3. There is also a Tree Preservation Order area along the south eastern boundary and other trees subject to Preservation Orders towards the south eastern corner of the site.

3.51 There is a public footpath running through the western section of the site northwards from Hall Road to Ironwell Lane, and an existing cycle route runs along Hall Road directly to the south of the site.

Site Capacity

3.52 The Core Strategy (Policy H2) identifies that the site in this general location should have the capacity to accommodate a minimum of 600 dwellings during the plan period. The site identified in Figure 8 is capable of providing 600 dwellings at a density of 30 dwellings per hectare. The overall site area is 28.5 hectares to take account of site constraints and to accommodate the following infrastructure, services and facilities:

- New primary school with commensurate early years and childcare provision;
- Local highway capacity and infrastructure improvements;
- Public transport infrastructure improvements and service enhancements;
- Link and enhancements to local pedestrian/cycling and bridleway network;
- Enhanced pedestrian access to town centre;
- Hall Road junction improvements;
- Sustainable drainage systems;
- Public open space;
- Play space;
- Youth facilities and community facilities; and
- Link to cycle network.

3.53 The principles for the development of this site are set out in the Concept Statement. The land allocated for development in accordance with this policy is identified in Figure 8.

Site Map

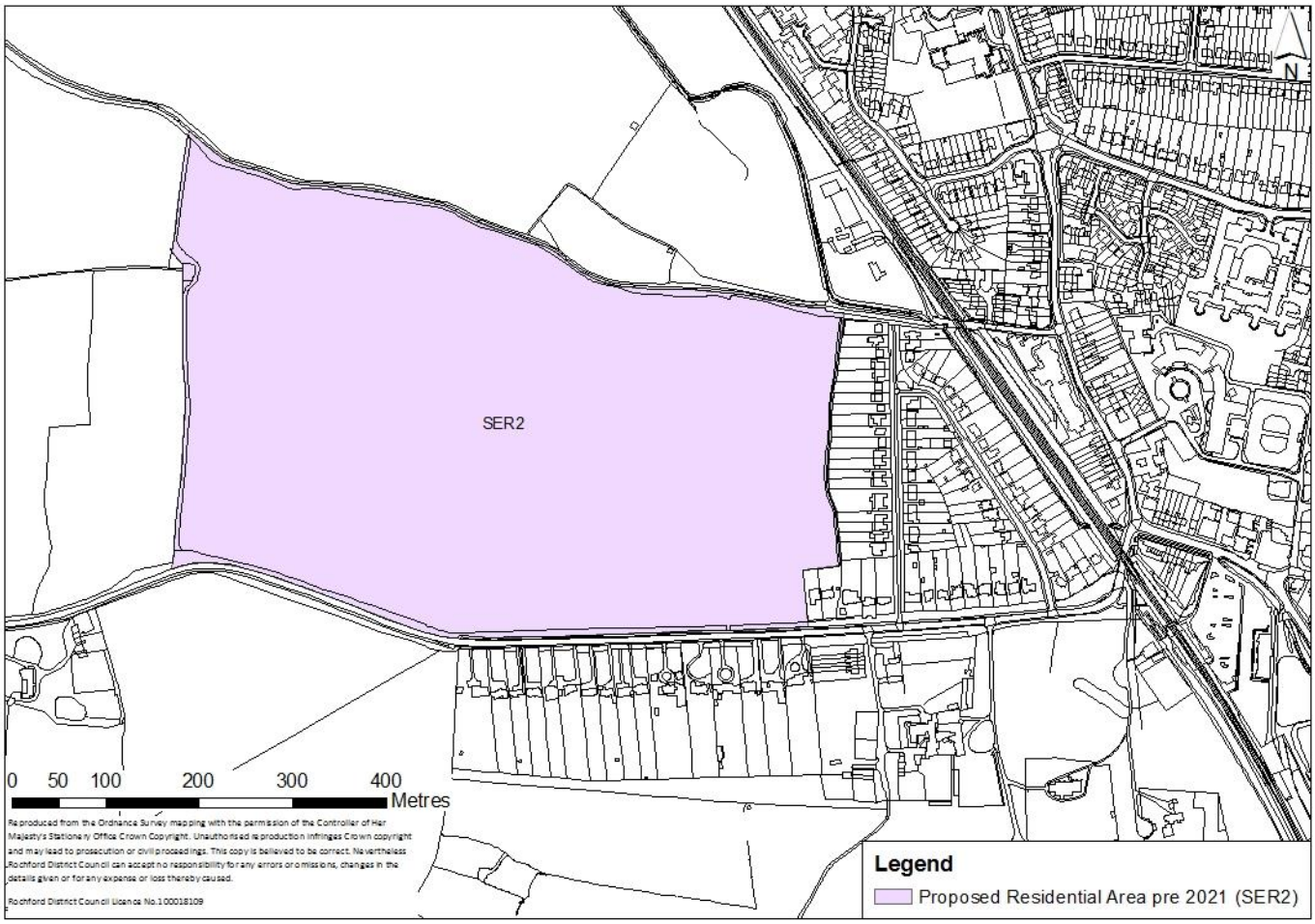


Figure 8 – West Rochford

Concept Statement

3.54 Development of this site should provide 600 dwellings, of which at least 210 should be provided as 'tenure blind' affordable housing units. The site will accommodate no more than 600 dwellings, unless it can be demonstrated that:

- The additional number of dwellings are required to maintain a five year-land supply; and
- The additional number of dwellings to be provided on the site is required to compensate for a shortfall of dwellings that had been projected to be delivered within the location identified in the adopted Core Strategy.

3.55 All dwellings should comply with the Lifetime Homes Standard plus a minimum of 18 dwellings should be built to full wheelchair accessibility standards. A Lifetime Homes and wheelchair accessibility housing statement will be required to accompany any planning application to demonstrate how the proposed development will address the 16 Lifetime Homes Standard design criteria, and show on plans how criteria 1, 3, 5, 6, 7, 10, 12, 14 and 15 will be achieved.

3.56 Compliance with the appropriate Code for Sustainable Homes standard will also be required, and a minimum of 10% of the energy should be generated by on-site renewable and low carbon sources, unless demonstrated as part of a planning application that this would be unviable.

3.57 Public open space should be provided to the west of the site to act as a buffer between residential development and open land to the west. It will not form part of the development area, but will be situated in the Green Belt to the west of the residential settlement. This area should be a minimum of 4.3 hectares, publically accessible and integrated into the development. Allotments may also be accommodated within the green buffer to the west on an additional 0.3 hectares. This calculation of need is based on 600 dwellings being provided across the site. In the event a greater number are provided, the provision of public open space should increase proportionately.

3.58 This site forms the gateway into Rochford and as such a high quality of design is expected. The south side of the site, adjacent to Hall Road, on the approach to the Conservation Area, is sensitive to new development and must be treated accordingly. The frontage should predominantly comprise detached houses, set back from the road frontage, with green landscaping. Fronting the site, hedges should be used to demarcate dwelling boundaries (as opposed to walls or fencing).

3.59 Trees and hedges should be developed in garden areas along the eastern boundary of the site to create a green buffer in perpetuity between new and existing development, whilst promoting integration.

3.60 Whilst being sensitive to the character and setting of the surrounding area, the development should not be of an overly uniform design. The principles of the Essex Design Guide should be taken into account. The creation of a green buffer will have a positive impact on the western approach along Hall Road into Rochford in particular.

3.61 At least 1.1 hectares on site should be set aside for a new primary school with commensurate early years and childcare provision (Policy EDU2). This should be integrated into the development with good pedestrian and cycling access, and the potential for multi-use of the site, accommodating youth and community facilities, should be explored. A green travel plan will be required to accompany any planning application for the school.

3.62 The type of youth facilities required to accompany development should reflect the needs of the target age-group. This could take the form of indoor and outdoor facilities, but in any case, a minimum of 0.03 hectares for outdoor youth facilities should be provided, or equivalent area incorporated within other community buildings. The type of youth facilities provided should be determined in consultation with young people and agreed at the planning application stage. Guidance on the provision of outdoor youth facilities produced by Fields in Trust should be referred to.

3.63 A minimum of 0.07 hectares for play space should also be provided across the site, although the exact quantum may depend on the type of play space provided. Play space may take the form of a combination of local areas for play (LAP), local equipped areas for play (LEAP) and/or neighbourhood equipped areas for play (NEAP). This should be determined in consultation with the Council, however, for such a development at least a LEAP which requires a minimum of 0.04 hectares should be provided on-site. These areas should be appropriately distributed across the site to

enable the local community to easily access them. They should be well located within the development so that they are open, welcoming, safe and easily accessible from pedestrian routes, and within appropriate walking times for the different spaces. Play spaces should be suitably landscaped and visible from nearby dwellings or well used pedestrian routes. In general, the design of these should follow the principles established by Fields in Trust and Play England.

3.64 Outdoor sports facilities, such as playing fields, should be provided within the site or off-site, for example through utilising the school playing field, or providing facilities in the adjacent green buffer on a minimum of 2.6 hectares.

3.65 The above calculations of greenspace, play space and youth facilities requirements are based on 600 dwellings being provided on the site. If a greater number are provided, the provision of such facilities should increase proportionately.

3.66 There is a small area (approximately 0.2 hectares based on the most recent data from the Environment Agency) which is at risk of flooding to the north east corner of the site. This should be designated as public open space such as natural/semi-natural greenspace and integrated into the development.

3.67 Amenity greenspace/appropriate landscaping should also be integrated into the site.

3.68 Conditions will be attached to ensure that any greenspace provided on or off site has ecological value. In addition, a landscape strategy promoting green links and biodiversity corridors should be prepared for the site.

3.69 There is a Tree Preservation Order area along the south eastern boundary and other trees subject to Preservation Orders towards the south eastern corner of the site which should be retained, unless it can be demonstrated at the planning application stage that this would render development unviable/undeliverable. The loss of any trees on site or in the vicinity of the site should be appropriately mitigated against, with the provision of replacement trees on a like-for-like basis.

3.70 The development should be permeable; pedestrian and cycle routes should be provided throughout the site, ensuring connectivity between the different elements of development, particularly between residential and the education/community uses.

3.71 Attenuation and source control Sustainable Drainage Systems (SUDS) of a size proportionate to the development should be used such as balancing ponds, swales, detention basins and green roofs. These could be incorporated into the greenspace provided on- and/or adjacent to the site. Consideration would need to be given to the potential impact of certain types of SUDS on below ground archaeology. Appropriate SUDS should be determined in consultation with Essex County Council and the Environment Agency. A site specific flood risk assessment incorporating a surface water drainage strategy should be prepared for the site.

3.72 The wastewater transmission network will need modelling at the planning application stage due to adjacent developments in the same catchment and the downstream transfer pumping station is likely to already be at capacity due to the number of sewer discharge/flood events in close proximity. Any issues identified should be resolved in conjunction with Anglian Water.

3.73 Connection from the existing main to the new development area, to be funded by the developer, will be required and upgrades to existing network may be needed. This should be determined in consultation with Essex and Suffolk Water.

3.74 A Health Impact Assessment must be undertaken and accompany any planning applications to develop the site. Actions required to address any negative impacts identified through the Health Impact Assessment must accompany the development of the site, or be provided prior to the commencement of development.

3.75 At least two vehicular access/egress points and suitable junctions should be provided to the site off Hall Road. Public transport infrastructure improvements and service enhancements in terms of a western bus link to and from the site should be provided. The site should facilitate the development of the proposed Sustrans cycle network particularly along the Ironwell Lane section to the north of the site through financial contributions. A new cycle network within the development should connect the route along Ironwell Lane to the existing cycle network along Hall Road, and provide a non-vehicular route to the Joint Area Action Plan area around London Southend Airport (Policy NEL3). Contributions towards the development of an on-road cycle route along the western end of Hall Road may also be required.

3.76 A Transport Assessment, including an assessment of air quality, must accompany any planning application to develop the site. This must examine the additional transport impacts that the development of this site will generate. Actions to address impacts identified through the Transport Assessment must accompany the development of the site, or be provided prior to the commencement of development.

3.77 Financial contributions towards local highway capacity and infrastructure improvements will be required, and contributions towards the improvement of road junctions in the vicinity of the development may be required. This should be determined at the planning application stage.

3.78 A grade II listed milestone located to the south of the site ('Milestone on northern verge opposite house called Birches') and other Listed Buildings (such as the grade I listed 'Rochford Hall and Ruins', the adjacent grade II listed wall and barns, and the grade II* listed 'Church of St Andrews') would need to be taken into consideration at the planning applications stage. The detailed design and layout of development must ensure there is no adverse impact on the setting of these listed buildings.

3.79 The site may have potential to be of archaeological interest and this should be taken into consideration. No development shall commence within the area of interest before the applicant has secured the implementation of a programme of archaeological work. Upon the granting of any planning permission for the development of the site, the developer will be required to afford access to the site at all reasonable times to an archaeologist nominated by Essex County Council and shall allow their observations of the excavations and records to be made of any items of interest.

3.80 The site is within a Minerals Safeguarding Area and therefore consultation on the proposed development of the site with Essex County Council is required.