TraffMap **Stick Diagram** **Run on 10/03/2014**

AccsMap - Accident Analysis System

Accidents between dates 31/12/2008 and 31/12/2013
Selection:
Selected using Manual Selection

Notes:
Epping Town Centre

Percentages

Pedestrian: 30
Wet: 23
Dark: 40

Accident Figures

Fatal	Serious	Slight	Total
1	1	28	30

Site Diagram

Appendix B:

Level 1 Cost Estimate

PRELIMINARY COSTINGS

Epping Western relief road option one

Epping western relief road option one as per drawing DC20053-00-009

Reference: DC20053-00-009
Version: 001
Prepared By Koula Valsamis-Warren 28/05/2014

Checked By

Authorised

Item	Description	Unit	Quantity	Rate	Amount £
	Highway Works				
	Total Cost of Highway Works	sum	1	8,354,630	8,354,630
	Structures Works				
	Culvert, footbridge	sum	3	250,000	750,000
	Bridge	sum	1	350000	350,000
	Landscaping and Ecology				
	Landscaping and Ecology	sum	1	500,000	500,000
	Estimated Construction Costs			**£**	**9,954,630**
	Statutory Undertaker Diversions				
	Statutory Undertaker Diversions - Nominal Sum [Assumes no pylon affected]	sum	1.00	1,000,000	1,000,000
	Estimated Construction Costs			**£**	**10,954,630**
	Scheme Preparation				
	Design - Civils (includes project management etc.)	%		12.0	1,002,556
	Design - Structures	%		15.0	112,500
	Surveys (includes topographical survey, trial holes, drainage)	%		10.0	995,463
	Environmental Surveys, mitigation and design	%		4.0	398,185
	Contract Administration				
	NEC Project Manager and Supervisor	%		10.0	1,095,463
	Risk				
	Sum from Quantified Risk Assessment - [assumed 40%]	%	40.00	4,381,852	4,381,852
	Total			**£**	**18,940,649**

Notes

Costs do not include:

Land Acquisition
Part 1 Claims
TRO Processing, advertising and legal fees
Consultation and publicity
Essex CC Commissioning and administrative costs
Drainage attenuation structures

The following assumptions have been made:
There are no special geotechnical requirements
No quantified risk assessment has been made therefore an assumption has been made.
The pylon will remain in-situ
There are no special environmental issues/requirements

The price base used is:
2013 Prices

PRELIMINARY COSTINGS

Western relief road option two

Western relief road option two as per drawing DC20053-00-010

Reference: DC20053-00-010
Version: 001
Prepared By Koula Valsamis-Warren 28/05/2014

Checked By

Authorised

Item	Description	Unit	Quantity	Rate	Amount £
	Highway Works				
	Total Cost of Highway Works	sum	1	8,998,454	8,998,454
	Structures Works				
	Culvert, footbridge	sum	3	250,000	750,000
	Landscaping and Ecology				
	Landscaping and Ecology	sum	1	500,000	500,000
	Estimated Construction Costs			**£**	**10,248,454**
	Statutory Undertaker Diversions				
	Statutory Undertaker Diversions - Nominal Sum [Assumes no pylon affected]	sum	1.00	1,000,000	1,000,000
	Estimated Construction Costs			**£**	**11,248,454**
	Scheme Preparation				
	Design - Civils (includes project management etc.)	%		12.0	1,079,814
	Design - Structures	%		15.0	112,500
	Surveys (includes topographical survey, trial holes, drainage)	%		10.0	1,024,845
	Environmental Surveys, mitigation and design	%		4.0	409,938
	Contract Administration				
	NEC Project Manager and Supervisor	%		10.0	1,124,845
	Risk				
	Sum from Quantified Risk Assessment - [assumed 40%]	%	40.00	4,499,382	4,499,382
	Total			**£**	**19,499,779**

Notes

Costs do not include:

Land Acquisition
Part 1 Claims
TRO Processing, advertising and legal fees
Consultation and publicity
Essex CC Commissioning and administrative costs
Drainage attenuation structures

The following assumptions have been made:

There are no special geotechnical requirements
No quantified risk assessment has been made therefore an assumption has been made.
The pylon will remain in-situ
There are no special environmental issues/requirements

The price base used is:

2013 Prices

Appendix C:

Drawings

Proposed removal of existing mature trees and general area of Registered Common Land.

Proposed removal of existing parking bays.

2 x 3.25m approach lanes and 2 x 3.25m exit lanes to extend southwards from junction. Precise lengths and alignments to be decided pending the results of modelling exercise and further site survey investigations.

Existing footway buildout to potentially be altered to act as extension to new "paved" area market / parking space facility.

Existing monument.

Registered Common Land.

Proposed relocation of bus shelter.

Proposed relocation of existing telephone call boxes.

Proposed removal of existing inaccessible pedestrian refuge islands.

Proposed relocation of bus stop to north east. Proposed introduction of 37.0m length facility with new kerb alignment to facilitate more effective stopping and allow for increased carriageway capacity.

Notes

1. Do not scale.
2. Refer to drawing number DC20053-00-007 for continuation at cutline B.

Key

- Proposed kerb alignment
- Proposed dropped kerb
- Proposed road marking
- Existing road marking
- Proposed red blister tactile paving
- Proposed guardrail
- Proposed primary signal aspect
- Proposed secondary signal aspect
- Proposed pedestrian phase
- Proposed "paved" area to accommodate market stalls and potentially parking facilities.
- Proposed removal of existing traffic islands

Rev.	Date	Description of revision	Drawn	Checked	Reviewed	Approved

DRAWING STATUS

FEASIBILITY

Essex Highways

Ringway Jacobs working in partnership with Essex County Council

Mark Rowe, Service Director, Essex Highways
County Hall, Chelmsford, CM1 1QH
Tel: 0845 6037631

SCHEME TITLE

EPPING TOWN CENTRE STRATEGY

DRAWING TITLE

HIGH STREET PROPOSALS SHEET 1 OF 2

DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
JO	KJH	DH	RDM	
DATE	DATE	DATE	DATE	DATE
APR 14	APR 14	7/5/14	May 14	

CHECKPRINT

DRAWING UNITS U.N.O.
DIMENSIONS IN MILLIMETRES
LEVELS IN METRES

SCALE AT A3 (420x297mm)
1:500

DRAWING No.
DC20053-00-006

REV.
-

File Location N:\9 Trans Impr\DC2\1 Projects\DC20053 Epping Town Centre\03_CAD\DC20053-00-006 & 007.dwg Last saved by kerrie.hodges on 6 May 2014 Printed By Kerrie Hodges on 29 May 2014

Proposed introduction of new "paved" area. Exact form and configuration to be decided pending further discussion. New "paved" area to accommodate market stalls on Mondays and potentially accommodate on-street parking during other days.

Proposed introduction of parallel parking bays - 12 no. bays at 2.0m in width and 6.6m in length.

Proposed introduction of new "paved" area. Exact form and configuration to be decided pending further discussion. New "paved" area to accommodate market stalls on Mondays and potentially accommodate on-street parking during other days.

Retain existing pelican crossing.

Proposed introduction of 2 x 4.0m width traffic lanes.

Proposed alteration of parking bays to accommodate 12 no. bays at 2.0m in width and 6.3m in length.

Proposed removal of existing inaccessible pedestrian refuge islands.

Existing paved area accommodating bus stop, taxi bays, parking bays and market stall pitches.

Proposed alteration of parking bays to accomodate 4 no. bays at 2.0m in width and 5.75m in length.

Proposed alteration of parking bays to accomodate 4 no. bays at 2.0m in width and 5.45m in length.

COTTIS LANE

BUTTERCROSS LANE

STAR LANE

GROVE LANE

CUTLINE B

CUTLINE C

DISABLED

POLICE VEHICLES ONLY

TAXIS

Sorting Office

Simon Campion Court

Hotel

Notes

1. Do not scale.
2. Refer to drawing number DC20053-00-006 for continuation at cutline B.

Key

- Proposed kerb alignment
- Proposed dropped kerb
- Proposed road marking
- Existing road marking
- Proposed red blister tactile paving
- Proposed guardrail
- Proposed primary signal aspect
- Proposed secondary signal aspect
- Proposed pedestrian phase
- Proposed "paved" area to accommodate market stalls and potentially parking facilities.
- Proposed removal of existing traffic islands

Rev.	Date	Description of revision	Drawn	Checked	Reviewed	Approved

DRAWING STATUS

FEASIBILITY

Essex Highways

Ringway Jacobs working in partnership with Essex County Council

Mark Rowe, Service Director, Essex Highways
County Hall, Chelmsford. CM1 1QH
Tel: 0845 6037631

SCHEME TITLE

EPPING TOWN CENTRE STRATEGY

DRAWING TITLE

HIGH STREET PROPOSALS SHEET 2 OF 2

with change

DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
JO	KIH	JH	RDM	
DATE	DATE	DATE	DATE	DATE
APR 14	APR 14	MAY 14	May 14	

CHECK PRINT

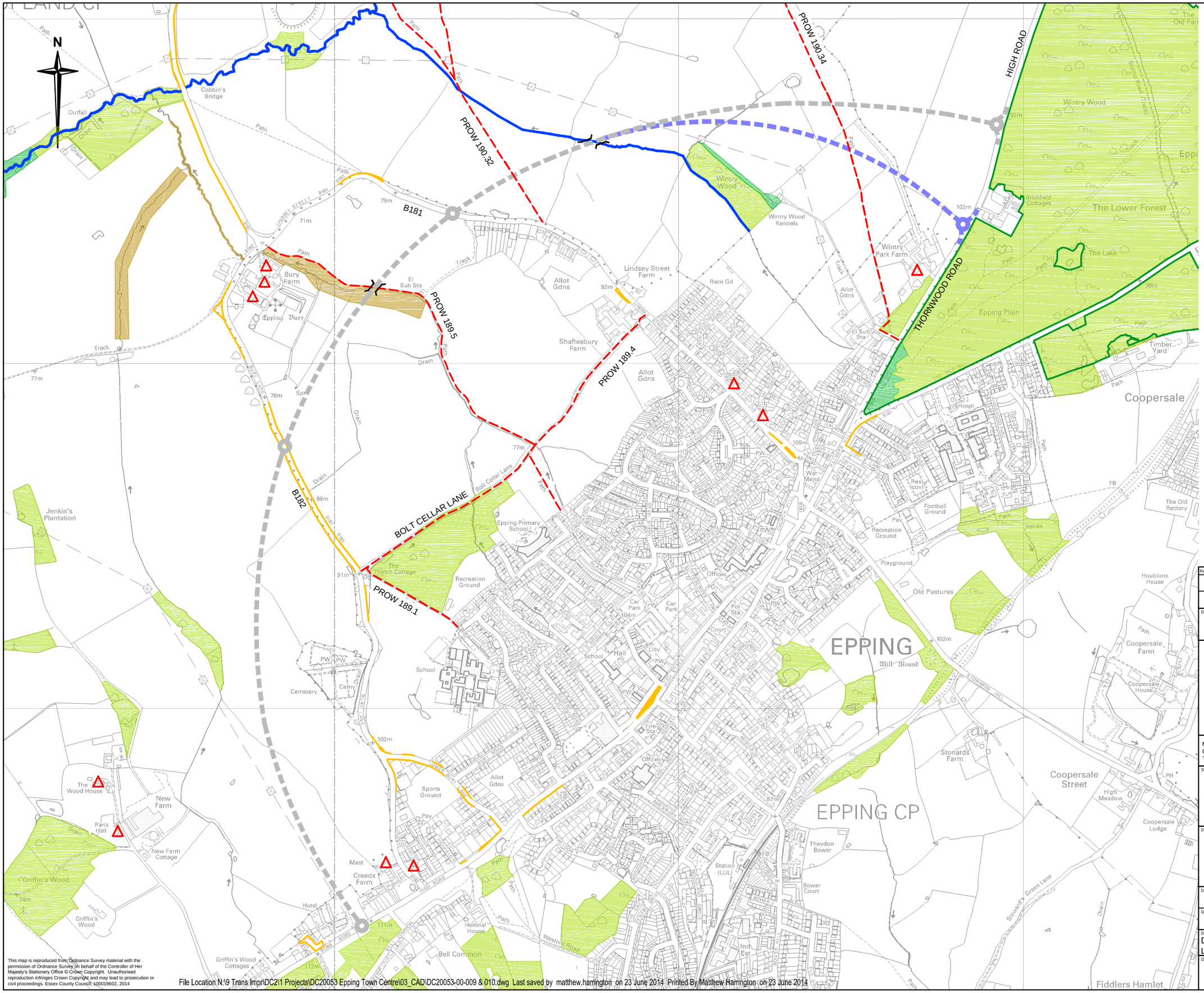
DRAWING UNITS U.N.O.
DIMENSIONS IN MILLIMETRES
LEVELS IN METRES

SCALE AT A3 (420x297mm)
1:500

DRAWING No.
DC20053-00-007

REV.
-

File Location N:\9 Trans Impr\DC\21 Projects\DC20053 Epping Town Centre\03_CAD\DC20053-00-006 & 007.dwg Last saved by kerrie.hodges on 6 May 2014 Printed By Kerrie Hodges on 29 May 2014



Notes

1. Do not scale.
2. Public Right of Way (PROW) information taken from Essex County Council website.
3. MAGIC website used to identify location of Registered Common Land, Woodland and Listed Buildings. (www.magic.gov.uk)
4. Environment Agency website used to identify Main Rivers.

Key

- Indicative Route Option One
- Alternative northern junction
- Public Right of Way (PROW)
- Registered Common Land
- Deciduous Woodland BAP Priority Habitat
- National Inventory of Woodland and Trees
- Ancient and Semi-Natural Woodland
- Tree Felling Licence Agreements
- Main River
- Listed Building

Rev.	Date	Description of revision	Drawn	Checked	Review'd	Approv'd

DRAWING STATUS

FEASIBILITY

Essex Highways

Ringway Jacobs working in partnership with Essex County Council

Mark Rowe, Service Director, Essex Highways
County Hall, Chelmsford. CM1 1QH
Tel: 0845 6037631

SCHEME TITLE

EPPING TOWN CENTRE

DRAWING TITLE

WESTERN RELIEF ROAD INDICATIVE ROUTE OPTION ONE

DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
KVW	MH	JH	RDM	TK
DATE	DATE	DATE	DATE	DATE
MAY 14	MAY 14	JUN 14	JUN 14	JUN 14

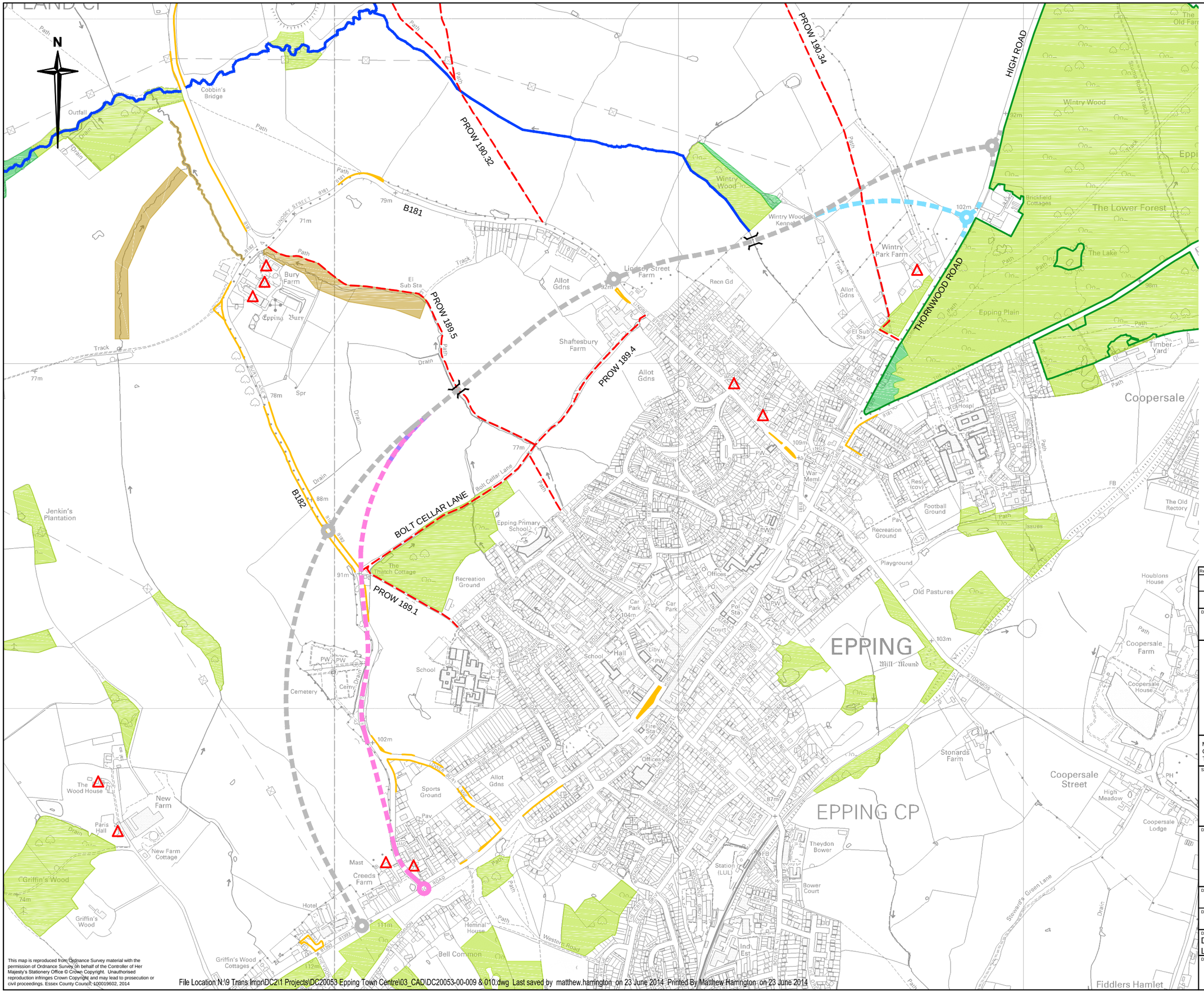
DRAWING UNITS U.N.O.
DIMENSIONS IN MILLIMETRES
LEVELS IN METRES

SCALE AT A3 (420x297mm)
1:10,000

DRAWING No.
DC20053-00-009

REV.
-

File Location N:\9 Trans Impr\DC2\1 Projects\DC20053 Epping Town Centre\03_CAD\DC20053-00-009 & 010.dwg Last saved by matthew.harrington on 23 June 2014 Printed By Matthew Harrington on 23 June 2014



Notes

1. Do not scale.
2. Public Right of Way (PROW) information taken from Essex County Council website.
3. MAGIC website used to identify location of Registered Common Land, Woodland and Listed Buildings. (www.magic.gov.uk)
4. Environment Agency website used to identify Main Rivers.

Key

- Indicative Route Option Two
- Alternative northern junction
- Alternative southern junction
- Public Right of Way (PROW)
- Registered Common Land
- Deciduous Woodland BAP Priority Habitat
- National Inventory of Woodland and Trees
- Ancient and Semi-Natural Woodland
- Tree Felling Licence Agreements
- Main River
- Listed Building

Rev.	Date	Description of revision	Drawn	Checked	Review'd	Approv'd

DRAWING STATUS

FEASIBILITY

Essex Highways

Ringway Jacobs working in partnership with Essex County Council

Mark Rowe, Service Director, Essex Highways
County Hall, Chelmsford. CM1 1QH
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SCHEME TITLE

EPPING TOWN CENTRE

DRAWING TITLE

WESTERN RELIEF ROAD INDICATIVE ROUTE OPTION TWO

DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
KVW	KJH	JH	RDM	TK
DATE	DATE	DATE	DATE	DATE
MAY 14	MAY 14	JUN 14	JUN 14	JUN 14

DRAWING UNITS U.N.O.
DIMENSIONS IN MILLIMETRES
LEVELS IN METRES

SCALE AT A3 (420x297mm)
1:10,000

DRAWING No.
DC20053-00-010

REV.
-

File Location N:\9 Trans Impr\DC2\1 Projects\DC20053 Epping Town Centre\03_CAD\DC20053-00-009 & 010.dwg Last saved by matthew.harrington on 23 June 2014 Printed By Matthew Harrington on 23 June 2014

Appendix D:

Junction Capacity Descriptions & Application

RFC = Ratio of Flow to Capacity

The ratio of flow to capacity provides a measure of the utilised capacity of a junction approach arm. Arms exceeding a ratio of 0.85 (i.e. 85% capacity utilised) are considered to be approaching capacity and characteristically have light-to-moderate levels of queued traffic flow. Arms exceeding a ratio of 1.00 (i.e. 100% capacity utilised) are considered to be over capacity and are characterised as having heavy volumes of queued traffic.

ARCADY results that exceed RFCs of 1.00 generate queue lengths that are subject to exponential growth. However, the instability of flows through over-capacity approach arms, results in an inherent difficulty in calibrating modelled outputs to observed conditions. For this reason, queue lengths attributed to over capacity approach arms should be seen as indicative rather than representative.

The capacity assessment tables at the end of this technical note use a colour-coding system to assist in appraisal:

- Arms with an RFC of less than 0.85 are coloured green
- Arms with an RFC between 0.85 and 0.99 are coloured amber
- Arms with an RFC of 1.00 or more are coloured red

DOS = Degree of Saturation

The degree of saturation is an output from LINSIG which provides a measure of the utilised capacity of a signalised junction approach lane. It is directly comparable to the RFC outputs obtained from ARCADY assessments (see above).

The colour-coding system used to categorise DOS in the model results tables is as follows:

- Lanes with a DOS of less than 85% are coloured green
- Lanes with a DOS between 85% and 99% are coloured amber
- Lanes with a DOS of 100% or more are coloured red