

**National Asset Delivery  
Technical Surveys and Testing**

**East Area – 607575  
A47 Speed Limit Review  
Scope**

**CONTENTS AMENDMENT SHEET**

<b>Amend. No.</b>	<b>Revision No.</b>	<b>Amendments</b>	<b>Initials</b>	<b>Date</b>
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**LIST OF ANNEXES**

**Appendix 1**   **Supplementary Constraints**

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## 1 PURPOSE OF THE SERVICES

### 1.1 Project objectives

- 1.1.1 The strategic objective of the study is to improve safety on the A47 route by reviewing the existing speed limits and proposing a strategic 'route based' approach to setting more appropriate speed limits along the route.
- 1.1.2 It will be necessary to undertake traffic surveys to fully appraise the route characteristics and to determine the most appropriate measures along the route. The first task of the project is the high-level review of the route supported by collision analysis work to determine survey locations and specifications, and then to undertake / deliver those surveys. Due to the budget identified for 2020-21 the route may be prioritised in terms of survey work, and high-level concept proposals will be delivered. Further feasibility work and proposals to preliminary design stage will be intended to follow in 2021-22. The strategy may identify a requirement for further surveys and speed limit assessments in subsequent years.
- 1.1.3 The specification that applies to the services is included in Section 6.

### 1.2 Scope of services

- 1.2.1 The services to be provided under this contract are:
- (1) To set up 49 survey points along the route at locations identified and specified in Para 1.2.2 below, to collect traffic volumes, classifications and speeds at each location
  - (2) The survey is to be conducted as soon as possible over a one-week (7 day) period, outside school holidays at each location within a neutral month – for 24 hours each day.
  - (3) The survey shall be carried out using RADAR collecting two-way traffic at 5-minute intervals, recorded by direction, vehicle speed and classification.
  - (4) The consultant is to coordinate works along with Traffic Management which will be determined and supplied by the Client.
- 1.2.2 The list of all 49 sites are listed below, along with a location description, co-ordinates, carriageway type, a link to the point on a map and any relevant comments (mostly concerning site constraints):

No.	Location Description	Co-ordinates	Dual/Single C/way	Link to Point	Comments
1	A47 Soke Parkway – 800m east of Junction 15	516390, 299253	Dual (NSL) (both sides)	<a href="#">Link</a>	verge available (central res)

2	A47 Soke Parkway – 138m east of Junction 19 EB exit slip	518727, 301953	Dual (NSL) (both sides)	<a href="#">Link</a>	verge available (central res)
3	A47 Eye Road – 670m east of roundabout junction with A16	521194, 302408	Single (NSL)	<a href="#">Link</a>	verge available
4	A47 The Causeway – 100m west of Pode Hole Quarry	525866, 303774	Single (NSL)	<a href="#">Link</a>	verge available
5	A47 Thorney Bypass – 1.7km east of roundabout junction with B1040 (between laybys)	529819, 304657	Dual (NSL) (both sides)	<a href="#">Link</a>	verge available
6	Thorney Toll A47 Wisbech Road – 100m east of Dairy Drove	534028, 303974	Single (NSL)	<a href="#">Link</a>	verge available
7	Thorney Toll A47 Wisbech Road – 260m east of Cross Guns Road	534364, 303928	Single (NSL)	<a href="#">Link</a>	verge available
8	Thorney Toll A47 Wisbech Road – 770m east of Cross Guns Road	534850, 303844	Single (NSL)	<a href="#">Link</a>	verge available
9	Guyhirn A47 Fen Road – 890m west of roundabout junction with March Road (Rings End)	538939, 303150	Single (NSL)	<a href="#">Link</a>	verge available
10	Guyhirn A47 Fen Road – 250m west of roundabout junction with March Road (Rings End)	539562, 303038	Single (40mph) (plus RT lane)	<a href="#">Link</a>	verge available (back of footways)
11	A47 South Brink – 15m east of of Chapel Lane (western end)	543377, 306327	Single (NSL)	<a href="#">Link</a>	verge available
12	A47 – 200m west of roundabout junction with Elm High Road	546913, 307733	Single (NSL)	<a href="#">Link</a>	verge available
13	A47 – 200m east of roundabout junction with Elm High Road	547327, 307902	Single (NSL)	<a href="#">Link</a>	limited verge available
14	A47 Pullover Road – 560m west of junction with Eau Brink Road	558367, 317232	Single (NSL)	<a href="#">Link</a>	verge available
15	A47 Pullover Road – 800m east of junction with Eau Brink Road	559563, 317771	Single (NSL)	<a href="#">Link</a>	limited verge available
16	Middleton A47 Lynn Road – 450m west of gateway on western side of village	565304, 316280	Single (NSL)	<a href="#">Link</a>	verge available
17	Middleton A47 Lynn Road – 330m west of School Road	565920, 316020	Single (40mph)	<a href="#">Link</a>	limited verge available
18	Middleton A47 Lynn Road – between School Road and Station Road	566273, 315961	Single (40mph)	<a href="#">Link</a>	limited verge/footway
19	Middleton A47 Lynn Road – eastern end of layby on east side of village	566566, 316060	Single (40mph)	<a href="#">Link</a>	verge available
20	East Winch A47 Lynn Road – 155m west of Church Lane	568982, 316292	Single (NSL)	<a href="#">Link</a>	verge available

21	East Winch A47 Lynn Road – 300m east of Gayton Road	569526, 316240	Single (50mph)	<a href="#">Link</a>	verge available
22	East Winch A47 Lynn Road – 125m east of Walton Road	570190, 316069	Single (50mph)	<a href="#">Link</a>	verge available
23	Pentney A47 Main Road – 225m east of Pentney Lane	574052, 314147	Single (NSL)	<a href="#">Link</a>	limited verge/footway
24	Narborough A47 Lynn Road – 1.5km east of Swaffham Road	577168, 310943	Single (NSL)	<a href="#">Link</a>	verge available
25	Necton A47 Norwich Road – 200m west of Tuns Road	587629, 310104	Single (50mph)	<a href="#">Link</a>	verge available
26	Necton A47 Norwich Road – between Tuns Lane and Dunham Road	587830, 310224	Single (50mph)	<a href="#">Link</a>	verge available
27	Necton A47 Norwich Road – 150m east of Dunham Road	587969, 310343	Single (50mph)	<a href="#">Link</a>	limited verge available
28	Lt Fransham A47 Main Road – 200m east of Spicers Corner (west end)	589433, 311513	Single (NSL)	<a href="#">Link</a>	verge available
29	Lt Fransham A47 Main Road – 50m east of Spicers Corner (east end)	589783, 311704	Single (40mph)	<a href="#">Link</a>	verge available
30	Lt Fransham A47 Main Road – 200m east of Station Road	590280, 311999	Single (40mph)	<a href="#">Link</a>	verge/footway available
31	Lt Fransham A47 Main Road – 200m east of Crown Lane	590636, 312251	Single (NSL)	<a href="#">Link</a>	verge available
32	Wendling A47 Main Road – 800m east of Swaffham Road	592850, 313098	Single (NSL)	<a href="#">Link</a>	limited verge available
33	Scarning A47 - 240m east of Chapel Lane	595939, 312639	Single (NSL)	<a href="#">Link</a>	limited verge available
34	Dereham A47 - 270m east of Junction eastbound exit slip	599409, 312315	Dual (NSL) <b>(both sides)</b>	<a href="#">Link</a>	restricted site
35	Dereham A47 – 300m east of Norwich Road compact junction	601596, 313468	Dual (NSL) <b>(both sides)</b>	<a href="#">Link</a>	verge available (central res)
36	A47 Norwich Bypass - 1.2km west of eastbound offslip to A11 junction	617512, 306817	Dual (NSL) <b>(both sides)</b>	<a href="#">Link</a>	verge available (central res)
37	A47 Norwich Bypass - 800m east of eastbound onslip from A140 junction	622961, 304661	Dual (NSL) <b>(both sides)</b>	<a href="#">Link</a>	verge available (central res)
38	Brundall A47 Yarmouth Road – 600m west of Brundall roundabout	631295, 309204	Dual (NSL) <b>(EB only)</b>	<a href="#">Link</a>	verge available (central res)
39	Brundall A47 Yarmouth Road – 600m east of Brundall roundabout	632469, 309561	Dual (NSL) <b>(WB only)</b>	<a href="#">Link</a>	restricted site
40	Acle A47 – 500m west of Acle roundabout	640288, 310135	Dual (NSL) <b>(EB only)</b>	<a href="#">Link</a>	verge available (central res)
41	Acle A47 – 500m east of Acle roundabout	641066, 310153	Single (NSL)	<a href="#">Link</a>	verge available

42	Acle A47 New Road – 300m west of Branch Road	643590, 309094	Single (NSL)	<a href="#">Link</a>	verge available
43	Acle A47 Acle New Road – 2.0km east of Branch Road	645904, 308929	Single (NSL)	<a href="#">Link</a>	verge available
44	A47 Acle New Road – 600m west of Werryman's Way (Private Road)	649746, 308923	Single (NSL)	<a href="#">Link</a>	verge available
45	A47 Acle New Road – 250m west of Vauxhall Holiday Park	651336, 308921	Single (NSL)	<a href="#">Link</a>	verge available
46	*Breydon Bridge A47 – on bridge deck*	651644, 308066	Single (50mph)	<a href="#">Link</a>	*Bridge Deck* *(see Para 3.2.5) *
47	A47 Lowestoft Road – 450m south of B1534 roundabout (both sides)	652151, 301420	Dual (40mph) (both sides)	<a href="#">Link</a>	verge available (central res)
48	A47 Yarmouth Road – 700m south of Jay Lane (both sides)	652872, 298660	Dual (NSL) (both sides)	<a href="#">Link</a>	verge available (central res)
49	A47 Yarmouth Road – 550m south of Rackhams Corner RAB (both sides)	653115, 297111	Dual (NSL) (both sides)	<a href="#">Link</a>	verge available (central res)

### 1.3 Deliverables

1.3.1 The *Consultant* is required to produce the following deliverables:

- (1) Data presented in reports and produced in hard and soft copy for posting and email to the client by the agreed completion date.
- (2) Report to include:
  - Speed data provided is to be presented as both two-way traffic flows and split by eastbound and westbound directions (*excluding Dual Carriageway sites which specify one direction only*)
  - Classed volumes (including HGV's, LGV's, Vans, Cars, Powered Two-Wheelers and Pedal Cycles) are to be provided for both directions, as well as split by eastbound/westbound directions. Data provided should be split into 1-hour periods – for each day.
  - Total volumes are to be provided and split into **both** 15-minute periods and 1-hour periods, with peak volumes highlighted for ease of reference. Again, data should be provided for bi-directional, as well as eastbound/westbound directions.
  - An overall summary should be provided for each site including graphs/charts for volumes and different vehicle classes. A 7-day average for speed and volumes should also be provided, for ease of reference.

- The summary report should state the survey date, weather and any unusual circumstances on the day.
  - A location plan should be provided to illustrate RADAR positions.
- (3) In addition to the reports provided, all data should be supplied in tabular and graphical form in Microsoft Excel format.

## 2 EXISTING INFORMATION

2.1.1 The A47 is made up of single carriageway, dual carriageway and single dual carriageway. The majority of survey locations sit within the single carriageway sections of the route. Some of the dual carriageway sites are constrained due to boundary features and lengths of vehicle restraint system, but most of the single carriageway sites have been situated in locations with available verge widths (refer to Table in 1.2.2 above).

2.1.2 No drawings are available at this stage of the project. However, a plan with the confirmed survey locations has been supplied, and is listed below.

Drawing No.	Title	Revision / Date
n/a	Location plan for all proposed survey points	28/09/2021



### **3 CONSTRAINTS ON HOW THE CONSULTANT PROVIDES THE SERVICES**

#### **3.1 General**

- 3.1.1 The *Consultant* Provides the Services in such manner as to minimise the risk of damage or disturbance to or destruction of third party property.
- 3.1.2 The *Consultant* complies with the constraints and meets with the requirements outlined in Appendix 1.
- 3.1.3 The *Consultant* submits information detailing how the *Consultant* will provide the Services to the *Client* prior to the *services* commencing. This information will include any lifting plans, risk assessments, method statements, the *Consultant's* staff training information and any other relevant Health and Safety requirements.

#### **3.2 Working hours & site-specific constraints**

- 3.2.1 The survey is to be conducted outside school holidays within a neutral month (ideally November 2021) – for 24 hours each day.
- 3.2.2 Some of the dual carriageway sites are constrained due to boundary features and lengths of vehicle restraint systems. All single carriageway sites have been situated in locations with available verge/footway width.
- 3.2.3 Some site locations are within villages and are therefore close to residential properties. It is therefore important that works are not undertaken during unsocial hours, so disruption is kept to a minimum.
- 3.2.4 Traffic management it to be supplied by the M&R and works co-ordinated accordingly.
- 3.2.5 Site 46 (*highlighted in Table under 1.2.2*) is within a bridge deck and may not be a feasible location. Therefore, it may be preferable to relocate this survey point to the side of the bridge deck, as appropriate.

#### **3.3 Health, Safety and Environment & Risk Management**

##### Health and Safety requirements

- 3.3.1 In Providing the Services the *Consultant* meets the requirements of Annex 2 of the supplementary constraints relation to health and safety duties.
- 3.3.2 When implemented, the *Consultant* shall comply with the requirements of Highways England's safety passport scheme and ensure that all of his employees, and any of his subcontractor's, are registered in accordance with the implementation of the scheme.

3.3.3 Not used.

3.3.4 Before commencing the construction phase of the *services*, the *Consultant* confirms to the *Client* that adequate welfare facilities are in place. Where the facilities detailed in section 5 are not deemed adequate, the *Consultant* provides all necessary facilities to Provide the Services and to comply with the minimum requirements set out in HSE guidance document L153.

#### Environmental requirements

3.3.5 In Providing the Services the *Consultant* meets the requirements of Annex 2 of the supplementary constraints in relation to environmental duties.

#### Risk Management

3.3.6 The *Consultant* identifies, manages and mitigates risks in accordance with the principles of ISO31000.

3.3.7 The *Consultant* submits a risk register, which captures all risks associated with the delivery of the *services* including those identified by the *Client*, with his tender and maintains it for the contract period.

## 4 REQUIREMENTS FOR THE PROGRAMME

- 4.1.1 The *Consultant* submits programme to the *Client* with his tender.
- 4.1.2 The *Consultant* Provides the Services taking into account the following programme constraints:
- (i) the *starting date* and *completion date* and any post site works, reporting and review period
  - (ii) The services and other things provided by *Client* (see Section 5)
  - (iii) Gathering of data to be undertaken during early-mid November 2021, with reports made available within 10 days following the completion of all site surveys.
  - (iv) There is a total of 49 sites identified for ATC surveys along the route; therefore, the programme may need to consider a phased approach to the works, over several shifts/days to allow a sufficient window for the installation and removal of survey equipment.
- 4.1.3 The programme should be in the form of an activity and time related bar chart, produced as a result of a critical path analysis.
- 4.1.4 The programme should preferably be provided in either a PDF or MS Excel format and cover the full contract period including post site activities. Activities should be clearly defined and named and the programme should detail the following:
- (i) dates and times associated with the project, including the *starting date*, *completion date* & *Consultant's* planned completion, and any other dates or times that will specifically impact the delivery of the project
  - (ii) activities associated with delivering the project
- 4.1.5 The *Consultant* should provide details of the proposed resources (plant, labour, subcontractors etc.) expected to deliver each activity. This information can either be shown on the programme itself or provided in an associated resource statement included in the Proposal for Providing the Services.
- 4.1.6 The *Consultant* updates the programme every week. The *Consultant* submits an updated programme to the *Client* upon request.

## **5 SERVICES AND OTHER THINGS PROVIDED BY THE *CLIENT***

5.1.1 The following temporary traffic management will be provided by the *Client* to allow the *Consultant* to Provide the Works:

- (1) Traffic management (TM) will be made available for all sites listed in Para 1.2.2. Specific traffic management for each individual site has not been agreed at this stage.

5.1.2 Not used.

FOR INFORMATION  
DO NOT COMPLETE AT THIS STAGE

## 6 SPECIFICATION FOR THE SERVICES

6.1.1 The *Consultant* shall Provide the Services in accordance with:

6.1.2 DMRB CA 185 - This document contains the requirements for the measurement of vehicle speeds and for determining 85th percentile speeds on existing all-purpose trunk roads. Specific requirements include:

- (1) All speed measurements (spot and journey speed) shall be undertaken in free flow conditions where vehicles are unlikely to be accelerating or braking, unless the measurements are to be taken in connection with changes to an existing feature that naturally impacts the free flow of traffic.
- (2) Vehicle speed measurement tools should be checked for accuracy prior to a survey being undertaken.
- (3) For dual carriageway roads, speed measurements using manual methods shall be conducted on the same side of the road as the flow of traffic that is being surveyed. For single carriageway roads, speed measurements using manual methods should be conducted on the same side of the carriageway as the flow of traffic that is being surveyed.

6.1.3 See Para 1.3.1 for the format of data collected and resultant reports provided as part of the project.