

**National Asset Delivery
Technical Surveys and Testing**

609248-P-02

**Scope for Area 14 Network-wide Road
Markings and Studs Retro-Reflectivity
Survey**

FOR INFORMATION ONLY
DO NOT COMPLETE AT THIS STAGE

CONTENTS AMENDMENT SHEET

Amend. No.	Revision No.	Amendments	Initials	Date
0	0	Original version issued with tender	LPM	16/08/20 21

FOR INFORMATION ONLY
DO NOT COMPLETE AT THIS STAGE

TABLE OF CONTENTS

1	PURPOSE OF THE SERVICES.....	5
1.1	Project objectives	5
1.3	Scope of services.....	5
1.4	Deliverables	5
2	Existing INFORMATION [delete reference to drawings if none exist]	5
3	Constraints on how the Consultant Provides the Services.....	6
3.1	General	6
3.2	Working hours & site specific constraints	6
3.3	Health, Safety and Environment & Risk Management	7
4	Requirements for the programme.....	8
5	Services and other things provided by the Client.....	9
6	Specification for the SERVICES	9

1 PURPOSE OF THE SERVICES

1.1 Project objectives

- 1.2** The principle objective of this project is to undertake a road marking and stud retro-reflectivity survey to determine asset condition across the full Highways England Area 14 network. The survey is to be in accordance with CS 126 and subsequent reporting in accordance with the requirements detailed in the deliverables and specification sections to support the development of renewal schemes.

The specification that applies to the *services* is included in Section 6

1.3 Scope of services

- 1.3.1** The *services* to be provided under this contract are:

General scope of the works to be provided	
Category	Survey Description
Asset Condition	Traffic sign retro reflectivity survey in accordance with CS 126.

1.4 Deliverables

- 1.4.1** The *Consultant* is required to produce the following deliverables:

- (1) Provide electronic record of the colour, and measure of wet/dry retro-reflectivity levels of road markings in accordance with CS 126, and luminance as detailed in BS EN 1436 and subject to a pass-fail assessment.
- (2) Provide high resolution imagery/video of the assets.
- (3) Provide an assessment of road markings and scoring of a wear index in accordance with CS 126 Annex C.
- (4) Provide electronic record of the measure retro-reflectivity levels of road markings in accordance with CS 126, and subject to a pass-fail assessment.
- (5) Provide an assessment of the road stud arrangement from visual inspection to issues such as wear, gaps due to damaged, loose or missing studs or inserts; loss of or damage to retroreflective lenses, sinkage or settlement or masking due to adjacent raised road surfacing (e.g. surface dressing); detritus on lenses or masking by adhesive etc.
- (6) Provide electronic documentation of the survey data and records collected and analysed and geo-positioned within a ESRI shape file and provide a GIS viewer system with functionality to output records in an agreed format.

2 EXISTING INFORMATION

2.1.1

- Highways England AD14 network shape files
- Highways England AD14 network chart plans (36 page booklet showing network route and chart sections on an OS Mastermap background).
- The Area 14 network covers the routes as tabulated with recorded length in lane 1324.268 km lane kilometres as outlined in the Site Information.

2.1.2 Refer to the site information for details of existing site conditions including ground conditions, limitation on access, position of existing structures etc.

Drawing Number	Title	Revision/Date
	Area 14 Chart Plans – Sheet 1 to 36	

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 site is the Highways England strategic road network for AD Operational Area 14.

3.2.2 The driven survey is to be conducted at traffic speed without need for traffic management. There are no restriction working hours.

Hand held devices shall be used on areas of the network deemed safety critical or that cannot be surveyed using vehicle mounted devices. Safety critical areas are determined to be at adjoining side roads at at-grade junctions with a total of 590 sites. The contractor is to determine a safe and suitable off-network location to park the vehicle and undertake works. Contractor should consider working within off peak hours.

- 3.2.3 The *Consultant's* working hours for site works shall be determined by the Contractor, in line with their policies and H&S governance for safe working, and HSE guidance.
- 3.2.4 The survey programme has been developed in conjunction with the Client's construction delivery programme as to avoid loss of coverage due to planned / cyclic works. The order of survey, or dates maybe subject to change should the need arise due to delivery of the forward programme or incident/maintenance response.

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 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. Details on the scheme can be found here: <http://www.highwaysafetyhub.com/safety-passport.html>
- 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 this tender.
- 4.1.2 The *Consultant* Provides the Services taking into account the following programme constraints: 5 weeks
- (i) The starting date to be 20th September 2021.
 - (ii) The services and other things provided by *Client* (see Section 5)
 - (iii) The site survey data collection is expected to be completed within 2 weeks from start date.
 - (iv) The processed and digitised data and management system is to be provided within 60 days of the completion of site activity.
 - (v) The survey contractor is expected to call in the start and end location of the survey for each day, by midday of the preceding day. An email should be sent to the Highways England survey coordinator [REDACTED] and the Network Occupancy management Team at A [REDACTED]
 - (vi) The survey contractor shall make note of the Operational Control Centre telephone number for the reporting of defects/incidents whilst operating on the network.
- 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 Client does not provide anything.

5.1.2 None provided.

6 SPECIFICATION FOR THE *SERVICES*

6.1.1 The *Consultant* shall Provide the Services in accordance with the DMRB document CS 126.

- (1) Vehicle mounted survey at traffic speed to determine the retro-reflectivity, wear, and luminance, and identify areas of missing road marking and road studs throughout the mainline carriageway and junction merges and diverges to satisfy the requirements of CS 126.
- (2) Handheld survey measurement to determine the retro-reflectivity of road marking and road studs at locations deemed safety critical to be at grade junction GIVE WAY lines/markings, and STOP lines, and grade separated junction slip roads with a sharp deviation of route to satisfy the requirements of CS 126 and as described in BS EN 1436 [Ref 8.N].
- (3) All survey devices and techniques (including vehicle mounted devices and handheld spectrometer devices) shall be approved by the Overseeing Organisation and calibrated and maintained in line with the manufacturer's recommendations as described in BS EN 1436 [Ref 8.N].
- (4) Single carriageways are to be surveyed in both directions to ensure both lenses of bi-directional road studs, and all road markings are captured.
- (5) All survey devices and techniques (including vehicle mounted devices and handheld spectrometer devices) shall be approved by the Overseeing Organisation and calibrated and maintained in line with the manufacturer's recommendations as described in BS EN 1436 [Ref 8.N].
- (6) The Consultant is required to inspect road markings and retroreflecting road studs including light emitting (active) road studs.
- (7) On multi-lane carriageways each lane shall be assessed separately.