

1. Overview

The Authority has previously commissioned the generation of the M50 Cordon to identify the number of people travelling into the city from the M50 on a daily basis, and to supplement transport data that is already collected at other significant points in Dublin, such as the Canal Cordon. The data assists in gaining a wider insight into travel patterns in Dublin. The information generated at the proposed survey locations will also be used to support the ongoing development of the Eastern Regional Model (ERM), in which the main city is Dublin.

The services to be provided comprise the undertaking of traffic surveys at specified locations on the M50 Cordon. The Contract must be completed in its entirety and includes a combination of survey types.

The Contract requires Classified Junction Turning Counts (JTC), VO (Vehicle Occupancy), ATC (Automatic Traffic Counts) Pedestrian (JTC PED) and Bus Occupancy (BO) surveys.

1.1.2 Specifications of Service Requirements

M50 Cordon

Traffic data is required at specified locations for the period between 07:00 to 19:00 (for JTC, VO, JTC PED and BO surveys). Traffic data is required at specific locations for a 24 hour period for ATC surveys. A list of the locations of each survey is given in the **Pricing Document**. This survey list may be subject to change prior to commencing surveys, depending on the availability of additional survey data and requirements.

Traffic surveys undertaken during extreme weather conditions, public transport strike action, pandemic conditions or significant road works that may impact on normal operational conditions at any of the sites during the agreed survey time period will not be acceptable. Such issues should be highlighted to the Client prior to undertaking the survey and if the survey cannot be undertaken the Authority must be contacted immediately to choose a new survey location where the survey equipment should be installed instead, to ensure the survey takes place at the same time as the rest of the batch. To negate the possibility of a survey and relocating, all sites should be inspected for suitability prior to the survey dates.

Traffic Surveys

Traffic surveys in the following formats are required:

1. JTC – 3 arm to 6 arm surveys including;
 - a. VO surveys;
 - b. ATC surveys;
 - c. PED surveys;
2. JTC PED surveys (at all JTC survey locations and additionally at all PED & Cycle only locations); and
3. BO surveys

All survey types should be carried out in accordance with the NTA streamlined dataset formats (available in Appendix 3 to 8). In addition, a user-friendly format shall be provided for ease of data review; use of an online system to facilitate is preferable but not a necessity. All data is to be supplied to the Client in electronic format, unless otherwise agreed.

The methodologies for collecting traffic data can involve the use of video cameras and/or capture of sensitive data. Where cameras are used, Tenderers should refer to section 3.2.6 to ensure data captured is treated in compliance with Data Protection Law.

Templates, examples, instructions and guidance are available in Appendix 3 to 8

VO Surveys

For the JTC survey locations that make up the M50 Cordon, the successful Tenderer is required to collect average vehicle occupancy for cars and taxis at each location between the hours of 07:00 and 19:00. The methodology can be found in the guidelines and specifications in the appendices.

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ATC Surveys

For the JTC survey locations that make up the M50 Cordon, the successful Tenderer is required to collect directional volumetric information over a 24-hour period for a continuous period of 2 weeks, excluding school holidays. The methodology can be found in the guidelines.

BO Surveys

The BO surveys should be carried out between the hours of 07:00 to 19:00 on a neutral weekday (Tuesday – Thursday) during a neutral month and should also avoid survey teams working in poor visibility / darkness in the evening peak.

Data is to be collected in both directions for all sites. The following details should be recorded at each bus stop for each passing bus or coach:

- Location;
- Direction – inbound / outbound, northbound / southbound, or eastbound / westbound;
- Operator;
- Bus Arrival Time
- Bus service type (public, private, school);
- Fleet number
- Registration plate
- Route number;
- Bus Type double decker, single decker, single deck coach, double deck coach, minibus/coach);
- Note if bus stops or passes stop;
- Number alighting the bus;
- Number boarding the bus;
- Bus departure time;
- Number of passengers left (at stop; and
- Bus occupancy (for stopped or passing buses) (0%, 25%, 50%, 75% 100%).

The locations of the sites where BO surveys are required are specified in the pricing document.

JTC PED Surveys

The JTC PED surveys should be carried out between the hours of 07:00 to 19:00 on a neutral weekday (Tuesday – Thursday) during a neutral month and should also avoid survey teams working in poor visibility / darkness in the evening peak.

Bidirectional data is to be collected for Pedestrian (PED) and Pedal Cycle (P/C) classifications at all sites (including both general JTC locations and PED & Cycle only locations). The following details should be recorded:

- The 5 User Classes to be used for JTC – PED data collection are: Child < 5, Child < 16, Adult, Elderly and Disabled;
- Counts should be conducted with arm labelling A- F starting from the north and moving clockwise;
- Pedestrian movements should be captured for flows that enter an arm, exit and arm and bi-directional flows which cross an arm perpendicularly;
 - Relevant labelling should be located directly above each movement as a heading within the dataset results sheet;
- The figures for Entering Arm and Exiting Arm should be the sum of pedestrian flows on both sides of the street entering and exiting the arms respectively;
- In the case that an arm doesn't exist (i.e. there are less than 6 arms at a junction) then a '-1' should be entered to identify this;
- The relevant direction at each pedestrian crossing and the label of each arm should be included in a junction schematic; and
- Separate lines of data should be completed for each pedestrian class for each 15-minute interval.

All surveys

Submissions for this Contract should include the following;

- A detailed method statement of how the works will be managed and carried out. This is to include measures to assure the accuracy of the data collected;
- Identification of the number of enumerators or cameras and supervising staff to be used. Evidence of adequate resourcing, both staff and equipment, to carry out works should also be presented; and
- A written policy and procedure document for the operation and use of camera systems and/or any other system which captures sensitive data in relation to Data Protection Law.

Survey data is required to be submitted within four working weeks of completing the data collection.

In submitting their Pricing Submissions, Tenderers are asked to carefully consider any means for achieving cost savings and reflect these in their submissions. The Contract currently includes a specific batch of surveys, detailed within Appendix IX. The price should be fixed for the Contract. The price should also include a unit cost for undertaking the number of surveys outlined in Table 3-1, should any changes of survey quantities occur. The unit cost should be identified in the Pricing Submission.

Junction Type	Current Number
3 arm JTC	19
4 arm JTC	23
5 arm JTC	2
6 arm JTC	1
JTC VO	45
ATC	45
LJTC	0
BO	72
JTC PED	51
Pedestrian Only	6

Table 3-1: Quantities of Traffic & Bus Surveys Required (Refer to the Pricing Document)

The current expectations of the Authority are that there will be no requirements for LJTC surveys. However, as the specifications may change prior to the commencement of the Services, Tenderers are requested to provide unit costs for these types of surveys in the event that these are required.

Refer to the **Pricing Document, Table 2.1 and Table 2.2** show the extent of the survey area.

Although it is anticipated that all surveys are required, there may be alterations to the final number. The price includes a typical unit price for each survey type, so that in the event of additional surveys a pro rata increase can be applied for that survey type. It is also possible that the number of surveys could reduce and therefore it is expected that this unit price would be used to reduce or increase the final fee level as required. The Authority reserves the right to increase or decrease the number of surveys required.

For the avoidance of doubt, the rates to be priced shall include, without limitation, such items as:

- Salary payments;
- Provision of all secretarial/administrative/clerical support;
- All equipment required in the performance of the services;
- Office overheads;
- Insurance;
- General office consumables;
- Annual leave payments/sick leave payments;
- All travel and subsistence arrangements for attendance at the authority in Ireland;
- Postage/telephone/fax/email costs;
- Internal photocopy and printing costs;
- General overheads; and
- Profit.

Tenderers should note that their pricing is deemed to include an allowance for repeating fieldwork and post-fieldwork should their quality not be deemed sufficient by the Authority, or for other unforeseen circumstances (such as network problems on the survey day), and for all costs associated. Furthermore, the pricing is deemed to include for all costs associated with rectifying the non-availability of data or equipment. If the Tenderer considers some unforeseen circumstances should not be included in this condition, then this should be identified in the Pricing Submission.

All survey types should be carried out in accordance with the NTA streamlined dataset formats. A user-friendly format should be provided for ease of data review; use of an online system to facilitate is preferable but not a necessity. All data is to be supplied to the Client in electronic format, unless otherwise agreed.

Any qualifying data captured by any of the aforementioned surveys will be treated in accordance with Data Protection Law. Refer to section 3.2.6 for further details.

1.1.3 Programme of Surveying

All surveys must avoid school and public holidays. The programme of this tendering process, and subsequent appointment and surveying, will follow the following structure:

- Following an evaluation period of the submitted Tenders, appointment of the successful Tenderer will occur;
- Surveys will commence no later than one week after appointment;
- Surveys will be completed two weeks after commencement; and
- Delivery of data will occur no more than four working weeks after the completion of surveys.

Tenderers should also outline their own proposed schedule of how they intend to carry out the work.

1.1.4 Survey Delivery Format

The data must be delivered in accordance with the NTA streamlined dataset formats specified by the Authority in the Appendices with one excel file per location. It is not permissible to include more than one survey site per excel file. Multiple tabs should not be used to include more than one site per excel file. Each template should also include the specific reference number included in the Appendices, grid co-ordinates in easting/northing format and GPS co-ordinates in latitude/longitude format. There is one template for ATC and another for JTC. Additional templates for Bus Surveys, Vehicle Occupancy and Pedestrian Counts may also be available.

The acquisition of the data at specified locations will be used to enhance an existing database that has been streamlined into a specific format. This format is reflected by the format of templates in Appendices. Consequently, it is imperative that these templates are followed to facilitate seamless integration with the existing database. The Authority Specifications can be accessed in the Appendices.

In addition, a copy of surveys captured by video should be supplied in digital format when requested by the Authority and subject to adhering to the data protection requirements in section 3.2.6.

Additionally, data will be provided to the Authority in a user-friendly format for ease of data review; use of an online system to facilitate is preferable but not a necessity. Depending on the format proposed the Authority may, at its discretion, waive some of the above formatting requirements.

All data is to be supplied to the Authority in electronic format, unless otherwise agreed.

1.1.5 Survey Report

The successful Tenderer must prepare a report covering the following aspects of data collection:

- Background / introduction of surveys;
- Details of each survey with site location, survey dates/day, vehicle categories, comments for any hindrance;
- Details of the methodology adopted for data analysis;
- Summary tables for the broad data analysis such as journey time data analysis;
- Figures with locations and direction of movement with names;
- Site notes and photographs; and
- Any other issues relation to data collection.

The successful Tenderer must also supply a report with an analysis of the data provided including:

- Vehicle Occupancy Statistics (per site, per time period and per occupancy);
- Total Vehicle Flows Inbound and Outbound for all Automatic Traffic Counts (ATC) (required to also be analysed by site and time period);
- Total Vehicle Flows inbound and outbound of each arm of each junction (per site, per time period); and
- Further information on required data analysis will be provided.

Photographic evidence of the arrangement of traffic survey apparatus at each specified location will be required in each survey's location report. Photographic evidence must be included in the dataset templates for JTC, PED and ATC in the facilitated locations. In the case of ATC counts, photographic evidence must be given of the pneumatic tubes on site, with the correct measurement device also shown in the photograph. These photographs must be submitted to the Authority on the first day of surveying for approval. This is a quality assurance measure.

1.1.6 Data Protection

In compliance with Data Protection Law and in relation to all relevant data held in its possession, the Authority shall act as a "Data Controller" and the successful Tenderer shall act as a 'Data Processor'.

For works arising from any subsequent call-off contract (under the Framework Agreement) the Client will replace the Authority as a "Data Controller".

The successful Tenderer shall ensure that data is secured at all times during the collection, processing, transfer, and storage of data. All data must be handled in accordance with Data Protection Law.

The successful Tenderer shall (and shall procure that all of its Staff and any third-party providing services on its behalf) comply with Data Protection Law in carrying out the Services.

It is strongly recommended that the successful Tenderer utilises survey techniques that avoid capturing personal data and produce anonymised data at source. If this is not possible the successful Tenderer shall anonymise the data as soon as possible. Otherwise, the successful Tenderer shall ensure that they comply with these data protection requirements.

The Contract will require the data detailed under Section 3.2 above to be collected and processed on behalf of the Authority. Where the successful Tenderer is processing personal data, they shall:

- Provide appropriate signage at all locations where personal data will be collected in the necessary undertaking of the Services to inform the public they are being recorded, the purpose and planned duration of the survey and contact details for any queries (to be agreed with the Authority).
- Process the personal data only in accordance with any requirements specified herein or as otherwise notified by the Authority;
- Process the personal data only to the extent, and in such a manner as is necessary for the provision of the successful Tenderer's obligations under the Contract;
- Implement appropriate technical and organisational measures to protect the personal data against unauthorized or unlawful processing and against accidental loss, destruction, damage, alteration or disclosure;
- At the Authority's request, the successful Tenderer shall make all documentation regarding compliance with Data Protection Law available within 10 days of such a request;
- Take reasonable steps to ensure the reliability of its employees and agents who may have access to the personal data and use all reasonable endeavors to ensure that such persons have sufficient skills and are appropriately trained in data protection;
- Not cause or permit the personal data to be transferred outside the European Economic Area without the prior written consent of the Authority;
- Not disclose the personal data to any third parties in any circumstances other than with the written consent of the Authority or in compliance with a legal obligation imposed upon the Authority;
- Provide assistance, as necessary, to allow the Authority to respond to any data subjects exercising their rights, in a timely manner;
- Notify the Authority within five working days if it receives a complaint or request relating to the Authority's obligations under Data Protection Law;
- Do not engage in any sub-processor agreements without the Authority's approval;
- Ensure any sub-processor agreements reflect the Authority's data protection requirements within this document and ensure no liability for non-compliance is carried by the Authority;

- When the services are completed, seek agreement with the Authority on deletion / retention or transfer (in a secure manner) of data. This data shall be anonymised as required; and
- Report any breach of the above requirements or Data Protection Law to the Authority within 48 hours of becoming aware of said breach.

The Authority has set out below some minimum practical requirements for compliance with data processing obligations within Data Protection Law. This list is not exhaustive, and the successful Tenderer must consider whether measures are required to ensure appropriate security and compliance with Data Protection Law.

The successful Tenderer shall:

- Maintain an overarching policy document in relation to data protection, including but not limited to, retention policy and organizational and security measures;
- Maintain a written policy and procedure document for the operation and use of camera systems in relation to Data Protection Law;
- Choose a data processor providing sufficient guarantees in respect of the technical and organisational security measures governing the processing to be carried out;
- Maintain records of processing; and
- Take reasonable steps to ensure compliance with those measures.

1.1.7 Health and Safety

The successful Tenderer must take full responsibility for the safety of all staff involved with the survey, including the use of all applicable safety measures in accordance with the relevant sections of the Health and Safety legislation.

Tenderers must provide a detailed Health and Safety method statement and risk assessment outlining the measures that will be taken to ensure the safety of survey staff and the general public. A copy of the company's Health and Safety statement is also required.

It is a requirement that any health and safety issues that arise during the course of the surveys are reported to the Authority immediately.

1.1.8 Quality Management

The successful Tenderer shall endeavor to ensure that the counts are not undertaken during adverse or untypical situations, such as school holidays, bank holidays, strikes, protests, very heavy rainfall / snow / sleet, fuel crises, significant road works, pandemics, accidents etc. Weather conditions are particularly pertinent where drones are being used to supplement surveys; refer to section 3.2.9 below for further details. In these circumstances, if considered to be affecting traffic, the survey shall be stopped and repeated on a subsequent day at the successful Tenderer's expense. Disruptions to traffic during the surveys are to be noted by the enumerators and transcribed onto the output. The Authority should be notified immediately of any instance where surveys could not be carried out for any reason.

Tenderers should also provide a schedule indicating that they have adequate resources and equipment available to undertake the surveys and confirm that the deadlines for the supply of processed data for the various surveys can be achieved within the required timescale.

1.1.9 Requirements for Drone Surveys

Where it is requested that surveys are to be supported by drone surveys, such as to supplement QLS and PS, the Tenderer, any other entities and/or their drone operator shall comply with the following requirements:

- Ensure the drone operator is a current holder of a Specific Operating Permission (SPO) or hold a current Specific Category Licence and operate under a Specific Operations Risk Assessment (SORA) or Pre-Defined Risk Assessment (PDRA).
- Have Public Liability Insurance in place, to a value of €6,500,000;
- Hold an up-to-date Operations Manual, which details how the SORA or PDRA is achieved;
- Have a sufficient and robust Data Protection policy in place; refer to section 3.2.6 also;
- Have an up to date Company Safety Policy including adequate measures for Covid and any credentials for operating from rooftops if required;
- Understand that having an Irish Aviation Authority (IAA) Open Category License of A1, A2 or A3 is not deemed adequate due to complexity of traffic monitoring flights and proximity to the public and roadway. The lack of a required risk assessment or public liability insurance policy in this category would pose a risk to completing traffic monitoring drone services in a safe and professional manner;
- Utilise professional drone hardware with the minimum requirement of a 20 megapixel camera and 5 axis obstacle avoidance;
- Utilise industry standard photogrammetry software generating high-quality maps and imagery;
- Utilise industrial grade drone flight mapping and control software;
- Utilise appropriate Personal Protective Equipment (PPE) and restrict access to take off and landing areas from the public, including standard Health and Safety Authority approved signage
- Provide a separate method statement and risk assessment for each individual flight; and
- Evidence of any special permissions from IAA to fly in Class C airspace or restricted zones are to be produced before any flights and initiated.

Drone surveys are not to be undertaken in adverse weather conditions owing to wind and rain. The Tenderer is responsible for ensuring that conditions are suitable before flights commence and shall notify the Authority immediately if the survey cannot be completed for any reason. The Tenderer shall also consider the flight times for surveys as battery life is a current limitation on flight times (industry average is approximately 20 minutes).

1.1.10

Notification

The successful Tenderer shall notify the relevant Local and Road Authorities under the terms of legislation in advance of the survey. This should also identify any conflicts with roadworks. In addition, the successful Tenderer should also provide advance notification to the relevant Garda station. The Authority should be included in all notifications to Local Authorities, Public Transport Providers, Gardaí, or others using the Authority address.

1.1.11 *Communication between the Authority and Successful Tenderer*

Tenderers should ensure communication channels between the Authority and the successful Tenderer are agreed prior to undertaking surveys and confirm how communication between the survey team in the field and the survey team in the office will be facilitated. Should an issue arise with a survey while on site, the Authority contact should be notified immediately so that an alternative arrangement can be made.

1.1.12

Appointment

The Contract will be appointed to one Tenderer. After appointment the successful Tenderer may be required to meet in person with the Authority at the Authority's offices in Dublin.

It is anticipated that the successful Tenderer will be appointed following the evaluation of the

Tender, however it is not anticipated that the Contract works will be undertaken until Autumn

2022. Following this, the successful Tenderer will be required to review the requested surveys with an Authority representative to ensure that all locations of the surveys are suitable, and also that the locations and types of surveys requested are fully understood by the successful Tenderer.

1.1.13 *Communication with An Garda Síochána*

The successful Tenderer shall be responsible for informing Garda personnel at the nearest Garda Station as to the carrying out of traffic surveys in specified locations. This is to be carried out in addition to communication with Local and Road Authorities. The Authority should be included in all notifications to Local Authorities, Public Transport Providers, Gardaí, or others using the Authority address.