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Date: 14th August 2018

RFQ Ref: OP0754.2018

To whom it may concern,

REQUEST FOR QUOTATION (RFQ) – PROCESSING SOFTWARE FOR LEICA CITYMAPPER OBLIQUE AERIAL IMAGERY

Ordnance Survey Ltd is a company registered in England and Wales (company registration number 09121572) whose registered address is at Explorer House, Adanac Drive, SOUTHAMPTON, SO16 0AS, UK (**OS**). OS is a limited company in which the entire share capital is owned by the Department for Business, Energy & Industrial Strategy (**BEIS**).

OS is the national mapping agency of Britain and is responsible for the surveying, production, maintenance, and marketing of a wide range of geographic information, relied on by government, business, and individuals. Further information can be found on our website: <http://www.os.uk>.

The requirement is in support of investigative work that Ordnance Survey is undertaking in the potential uses of aerial oblique imagery. OS are investigating software options for processing Leica City Mapper oblique aerial sensor data (imagery and Lidar) to support existing projects. OS is looking for a software solution which can efficiently import Leica CityMapper captured imagery (Nadir and Oblique) which has already been run through the aerial triangulation process.

OS requires a proposal setting out:

- a) a response to the technical requirements as detailed in Appendix A; and
- b) a response to the pricing requirements, with itemised pricing to be provided for the Requirement as summarised below:

ACTIVITY	DESCRIPTION	COST £ + VAT
Provide Processing software to process Leica City Mapper Sensor System data	Total cost of providing a processing software which can process Leica CityMapper Oblique and Nadir imagery. As defined in Appendix A.	[itemised cost to be provided 1. Software License 2. Software installation/configuration 3. Software Support & Maintenance 4. Training for staff at OSHQ]

If you require any additional information to provide the required submission, please submit any questions to procurementgroup@os.uk (marked for the attention of Hannah Lawless), no later than **2pm on Tuesday 21st August 2018**. OS reserves the right to issue the response to any clarification request made by you to all participants. All submissions in response to this RFQ must be made via email to procurementgroup@os.uk by no later than **2pm on Friday 24th August 2018**

OS reserves the right to cease this procurement process at any time without any liability (whether in contract, tort or negligence) to the participant. All OS's technical and commercial information contained within this RFQ must be considered confidential and must not be disclosed to a third party.

OS has no liability for any costs incurred by the participant in preparing or evaluating this quotation. The request and submittal of the quote does not constitute a purchase agreement between OS and the participant. OS reserves the right to amend, add or delete its requirements from this RFQ. This RFQ does not constitute an order or contract offer and there is no obligation for OS to accept your submitted proposal.

All documents and information contained in this RFQ shall remain the property of OS. Participants shall not disclose either: a) the fact that they have been invited to participate in this RFQ or release details of the proposed contract; or b) details of their

quotation in whole or in part, other than on an 'in confidence' basis to those who have a legitimate need to know or with whom they need to consult for the purposes of preparing the quotation.

Amendments to RFQ

At any time prior to the date for submission of RFQ responses, OS may amend the procurement process or the RFQ. Any such amendment shall be issued to all participants at the same time, and if appropriate to ensure participants have reasonable time in which to take such amendment into account, the date for submission of RFQ's shall, at the discretion of OS, be extended

Freedom of Information Act 2000 ('FOIA') and Environmental Information Regulations 2004 ('EIR')

OS is committed to meeting their legal responsibilities under FOIA and EIR. Accordingly, all information submitted to OS (including without limitation, the information contained in the RFQ and the proposals received from Participants in response) may need to be disclosed by OS in response to a request for information.

OS may also decide to include certain information in the relevant publication scheme maintained under FOIA or EIR. In making a submission, each participant therefore acknowledges and accepts that the information contained therein may be disclosed under the FOIA or EIR.

In respect of any information submitted by a participant that it considers being commercially sensitive the participant should: 1) clearly define such information as commercially sensitive; 2) explain the potential implications of disclosure of such information; and 3) provide an estimate of the period of time during which the Participant believes that such information will remain commercially sensitive.

However, participants should be aware that even where a participant has indicated that information is confidential or commercially sensitive, OS is responsible for determining, at its absolute discretion, whether such information is exempt from disclosure under FOIA or EIR, or must be disclosed in response to a request for information. Blanket labelling of all the content of submissions as 'confidential' is not acceptable.

Participants should also note that the receipt by OS of any material marked 'confidential' or equivalent does not mean that that OS accepts any duty of confidence by virtue of that marking, and OS has the final decision regarding the disclosure of any such information in response to a request for information under the FOIA or EIR.

General Data Protection Regulation - Liability

Prior to the General Data Protection Regulations ((EU) 2016/679) (GDPR) coming into effect on 25 May 2018, OS's position on Data Protection was as follows:

- OS's standard contract terms with its suppliers included mutual unlimited liability in respect of breaches of the Data Protection Act 1998 (and unlimited liability in relation to other items such as breach of confidentiality, death and personal injury and IPR).
- The acceptance of these standard terms has been a "pass/fail" event in previous tenders and quote processes.

OS has carefully considered the requirements of GDPR and concluded that the standard position described above will not change following the GDPR coming into effect. Accordingly, OS cannot accept any limitation of liability in respect of any breaches of the GDPR.

The following points may help explain this position:

- OS and all of its suppliers are required to comply with their legal obligations under GDPR, and irrespective of what contract terms might say, should be working to achieve high confidence levels that their internal systems and processes in respect of the processing of personal data are robust enough to limit the risks to data subjects, OS themselves and their other customers under GDPR. Working towards best practice in GDPR compliance should therefore be the primary means by which OS and its suppliers manage and mitigate potential liability risks in this area.
- Whilst it is possible to quantify the potential maximum fine which could be imposed by the ICO for a breach of the GDPR, it is not possible to pre-determine the level of potential third party compensation claims which could arise from a breach of the GDPR.

- OS's position is aligned with the approach taken by Crown Commercial Services on behalf of HM Government as a whole.

OS will continue to keep this area under review as the ICO guidance and case law develops. However, for now the position remains that the Contract terms appended hereto include a mutual unlimited liability clause in respect of breaches of the GDPR clause.

The acceptance of the Contract terms includes acceptance of the GDPR provisions including an unlimited liability for breaches of the same. This requirement is a Pass/Fail event and for the avoidance of doubt, any Supplier not accepting the Contract terms will be recorded as a "fail" event and will result in the Participant's response being excluded from further evaluation in the tender process.

Conflict of Interest

Participants are responsible for ensuring that there are no conflicts of interest either between their own advisers and those of OS, or between the members of its consortium and their sub-contractors. Participants must notify OS of any actual or potential conflict of interest as soon as reasonably practicable as soon as it becomes aware of such a conflict and the measures it has taken and/or proposes to take to deal with such a conflict. OS reserves the right to disqualify the Participant where the measures taken or proposed do not address the conflict to OS's satisfaction.

Non-canvassing, non-collusion, compliance with Bribery Act 2010 and The Modern Slavery Act 2015

OS takes a zero-tolerance approach to bribery. Participants must have demonstrated that they take a robust approach to bribery prevention through either written policies or oral communication and training of its staff and agents.

OS also takes a zero-tolerance approach to slavery and is committed to preventing acts of slavery and human trafficking (as set out in the *Modern Slavery Act 2015 (MSAct)*) from occurring within both its business and supply chain. Ordnance Survey will expect any successful Contractor to be able to ensure it, and its supply chains, are compliant with the MSAct.

Participants must not canvass or solicit or offer any gift or consideration whatsoever as an inducement or reward to any officer or employee of, or person acting as an adviser to, OS in connection with the submission of a Tender, evaluation of responses, short-listing of Participants and in connection with the overall procurement exercise.

Participants must submit a bona fide response and confirm, by a signed return of the certificate at **Appendix E**, that it has not prepared its response in collusion with any third party and will not engage in collusive behaviour during the tender process.

Please do not hesitate to contact me if you have any questions concerning this project; thank you in advance for your support with this project.

Yours faithfully



Hannah Lawless, Category Manager

For and on behalf of **Ordnance Survey Limited**

APPENDIX A STATEMENT OF REQUIREMENTS

1 Background

OS are investigating software options for processing Leica City Mapper oblique aerial sensor data (imagery and Lidar) to support existing projects. OS is looking for a software solution which can efficiently import Leica CityMapper captured imagery (Nadir and Oblique) which has already been run through the aerial triangulation process.

2 Software solution Specification

Any Commercial Off the Shelf (COTS) software solution will be considered if the processing meets the following specification criteria:

3 Processing specification

For the purposes of the quotation exercise, our processing specification is as follows:

Technical - Mandatory (300 MARKS AVAILABLE): -

- Import Leica CityMapper imagery including associated Exterior Orientations (EO's) – whilst maintaining the accuracy of the EO's.
- Operate using OSGB36 British National Grid coordinate system
- Uses a Dense Matching, Semi-Global Matching (or equivalent) algorithm to carry-out the processing
- Processing shall create the following outputs: -
 - Point Cloud
 - DSM (Digital Surface Model)
 - 3D Colourised Textured MESH
 - True Ortho-imagery
 - Corrected EO data
- Processing Outputs shall be exportable in the following formats: -
 - Point Cloud - LAS
 - DSM – uncompressed TIFF with world file
 - 3D Colourised MESH. Minimum format requirement: -
 - .obj (unity)
 - AutoDesk 3DS
 - OSGB (OpenSceneGraph binary) or LODTreeExport or 3DML (Skyline classified 3D mesh)
 - 1 km tile True Ortho-imagery – uncompressed TIFF with world file
- Process over 20,000 images
- Has functionality to carry image processing and enhancement techniques across a block of imagery to provide an even colour and light balance to all imagery.
- Has functionality to carry image processing and enhancement techniques across a selection of individual images.
- Support and Maintenance for the software system, including trouble-shooting and user advice

Technical - Desirable (0 MARKS AVAILABLE): -

- Distributed Processing option
- Cloud-based Distributed Processing option
- Can integrate the Oblique imagery Point Cloud with the simultaneously captured CityMapper Lidar Point Cloud
- Can create a hybrid Point Cloud which takes advantage of the unique properties of the Lidar and Imagery Point Clouds. Unique properties being: -
 - Lidar height accuracy
 - Imagery Dense Point coverage and density

- Contains an Aerial Triangulation functionality. That is the ability to process the oblique and nadir imagery through to an accurate final EO output for each image (Exterior Orientation)
 - Preparation
 - Create project
 - Import ground control
 - Import GPS/INS data
 - Image Measurement
 - Interior Orientation
 - Automatic tie point measurement
 - Ground control measurement
 - Manual tie point editing/densification
 - Block adjustment
 - Input measurements
 - Iterative solution (bundle adjustment)
 - Final output EO (Exterior Orientation)

- Can output the following additional 3D Mesh formats: -
 - ESRI i3s (ESRI i3s scene database)
 - Google Earth KML
 - SpacEyes3D (SpacEyes3D Builder layer)
 - S3C (Smart3DCapture S3C)
 - Cesium 3D Tiles
 - 3SM
 - FBX (Autodesk FBX)
 - STL (StereoLithography)
 - OpenFlight
 - DAE (Colada)

Non-technical (300 Marks Available):

- Implementation Plan including: -
 - software configuration and installation
 - estimated expected processing times
 - Training for staff at OS HQ – Southampton

4 Deliverables

- Processing software which can process Leica CityMapper data as specified in Section 3.
- Implementation Plan as specified in Section 3.
- Training
- Support & Maintenance

5 Timescales (PASS/FAIL Requirement)

Please confirm you can provide a software solution between Monday 3rd September and Friday 14th September 2018.

During the timescales, installation, configuration and training must be delivered.

APPENDIX B REQUIREMENTS, EVALUATION AND AWARD & CRITERIA

- 1 The criteria are as follows:
 - a) the Participant’s response to the technical requirements; and
 - b) the Participant’s response to the pricing requirements.

- 2 OS’s requirements are set out in Appendix A and it has allocated each of the criteria an overall weighting (expressed as a percentage) reflecting its relative importance to OS:

a) response to the technical requirements	60%	(600 MARKS)
b) response to the pricing requirements	40%	(400 MARKS)

- 3 Further detail concerning the weightings is contained in Appendix A.

- 4 The technical requirements will be evaluated using the following scoring methodology:

Score	The Participant:
0 (Inadequate)	a) does not provide a response to the requirement/s; or b) responds to the requirement/s, however fails to address the specific issues (if any) identified by OS; or c) fails to provide any evidence (where applicable) to support its response.
1 (Concerns)	a) responds to the requirement/s, however, has only partially addressed the specific issues (if any) identified by OS; and/or b) provides insufficient evidence (where applicable) to support its response; and/or c) responds to all the requirement/s with insufficient detail raising significant concerns about the Participants ability to meet all the requirement/s; and/or d) provides a response which raises significant concerns about the Participants ability to meet the requirement/s.
3 (Potential)	a) provides a full response to the requirement/s, however the supporting evidence only partially addresses the requirement; and/or b) provides a response to the requirement/s, which raises concerns about the Participant’s ability to meet the requirement/s.
5 (Capable)	provides a full and comprehensive response to the requirement/s, supported by evidence (where applicable), to indicate the Participant can fully meet the requirement/s and does not raise any concerns about the Participants ability to meet all of the relevant requirement/s and/or to deliver the services to the required standard.

If a score of 1 is applied, 1/5 available marks for that question will be awarded (rounded up to the nearest whole number).

If a score of 3 is applied, 3/5 available marks for that question will be awarded (rounded up to the nearest whole number).

If a score of 5 is applied, all available marks for that question will be awarded.

For example:

If there are 10 marks available for a question and a score of 3 is applied to a Participant’s response, the Participant will be awarded 6 marks for that response. If there are 5 marks available for a question and a score of 3 is applied to the Participant’s response, the Participant will be awarded 3 marks for that response.

5 The Pricing requirements shall be evaluated as follows:

The Participant providing the lowest all-inclusive price shall be awarded 400 Marks. The marks awarded to other respondents shall be calculated as a proportion of the lowest all-inclusive price (Lowest all-inclusive price / Respondent all-inclusive price x 400)

Example

Respondent A: £750

Respondent B: £500

Respondent C: £1,000

Respondent A ($500 / 750 = 0.66$) x 400 = 264 Marks

Respondent B (Lowest all-inclusive Price) = 400 Marks

Respondent C ($500 / 1000 = 0.50$) x 400 = 200 Marks

6 Contract award on the basis of the Most Economically Advantageous (MEAT) tender



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Please note that any order placed, will be under OS's Goods and Services Contract. It must be noted that this contract will not be altered.

APPENDIX D COMPANY INFORMATION

Please complete and return the attached Company Information form, this will not be scored as part of the evaluation process but will be held on our records for information purposes. However, if the information contained in this form, highlights any areas of concern about the viability of your organisation, we reserve the right to eliminate any proposals put forward by you. If your company is not currently registered in the UK, you should still try to answer each question, substituting any appropriate professional, commercial or other registration within your domestic jurisdiction.

Full name of the potential supplier:		
Registered office address (if applicable):		
Registered website address (if applicable):		
Trading status:	<input type="checkbox"/> public limited company <input type="checkbox"/> limited company <input type="checkbox"/> limited liability partnership <input type="checkbox"/> other partnership	<input type="checkbox"/> sole trader <input type="checkbox"/> third sector <input type="checkbox"/> charity <input type="checkbox"/> voluntary organisation
Date of registration in country of origin:		
Company registration number:		
Charity registration number:		
Head office DUNS number:		
Registered VAT number:		
<p>If applicable, is your organisation registered with the appropriate professional or trade register(s) in the member state where it is established?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <p>If you responded yes, please provide the relevant details, including the registration number(s):</p>		
<p>Is it a legal requirement in the state where you are established for you to possess a particular authorisation, or be a member of a particular organisation in order to provide the services specified in this procurement?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <p>If you responded yes, please provide additional details of what is required and confirmation that you have complied with this:</p>		
Trading name(s) that will be used if successful in this procurement:		
Relevant classifications (state whether you fall within one of these, and if so which one):	<input type="checkbox"/> Yes: <input type="checkbox"/> No	<input type="checkbox"/> Voluntary Community Social Enterprise (VCSE) <input type="checkbox"/> Sheltered Workshop <input type="checkbox"/> Public service mutual
Are you a Small, Medium or Micro Enterprise (SME)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Please confirm an organisational structure chart is enclosed:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are you a subsidiary to another company?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Details of immediate parent company (if applicable):	Full name of the immediate parent company: Registered office address: Registration number: Head office DUNS number: Head office VAT number: Please enter N/A if not applicable:
Details of ultimate parent company (if applicable):	Full name of the ultimate parent company: Registered office address: Registration number: Head office DUNS number: Head office VAT number: Please enter N/A if not applicable:
Brief history (not more than 200 words) of your organisation:	
Names & Responsibilities of Owners / Directors / Executive Directors / Partners / Trustees / Management Committee (as applicable)	
Name	Responsibility
Does the Participant have any Information Assurance and Security certification, for example Cyber Essentials, Cyber essentials PLUS, ISO27000 series, or equivalent? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please give details below and include in your response a copy of your ISO 27001 certificate, detailing what your statement of applicability covers:	
Is your organisation registered with the Information Commissioners Office for the processing of personal information? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please provide your registration number.	

WE CERTIFY THAT:

- 1 the Tender submitted is a bona fide tender intended to be competitive;
- 2 that we have not, nor any person employed by us or acting on our behalf has:
 - 2.1 canvassed or solicited any member, officer or employee of OS in connection with the Tender submitted or the award of the contract; and
 - 2.2 fixed or adjusted the amount of the Tender with any third party (or solicit any third party to fix or adjust their tender); and
 - 2.3 communicated details of our Tender to any third party, other than OS or, where the Tender is submitted on behalf of a consortium, to other consortium members; and
 - 2.4 prevented or dissuaded any third party from tendering; and
 - 2.5 promised, offered, given, requested or accepted any advantage or inducement or consideration directly or indirectly to any third party in connection with the Tender.
- 3 we will not, nor any person employed by us or acting on our behalf will at any time undertake any of the acts in paragraph 2 above.
4. This bona fide form of offer must be signed by an authorised signatory: in the case of a partnership, by a partner for and on behalf of the firm; in the case of a limited company, by an officer duly authorised, the designation of the officer being stated. By signing this document, you are agreeing that you have the authority to submit a tender and enter into a Contract on behalf of the company that you represent.

Signature	
On Behalf of	
Name	
Title	
Date	