

Finance and Resources Committee

10.00am, Thursday, 26 January 2023

Award of Intelligent Infrastructure Contract

Executive/routine Wards Council Commitments	Executive All
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1. Recommendations

- 1.1 It is recommended that the Finance and Resources Committee notes the award of a contract for the provision of the delivery of the Intelligent Infrastructure project to Yunex Limited, at a total value of £1,034,568. This contract was awarded as an urgent decision in accordance with section 4.1 of the Council's Committee Terms of Reference and Delegated Functions by the Executive Director of Place, in consultation with the Convenor of Finance and Resources Committee.

Paul Lawrence

Executive Director of Place

Contact: Gavin Brown, Head of Network Management and Enforcement

E-mail: gavin.brown@edinburgh.gov.uk | Tel: 0131 469 3823

Award of Intelligent Infrastructure Contract

2. Executive Summary

- 2.1 This report details the award of the contract for the delivery of the Intelligent Infrastructure project to Yunex Limited at a total value of £1,034,568. This contract was awarded as an urgent decision in accordance with section 4.1 of the Council's Committee Terms of Reference and Delegated Functions by the Executive Director of Place, in consultation with the Convener of the Finance and Resources Committee.

3. Background

- 3.1 The Traffic Management Act 2004 (TMA) places a duty on local authorities to ensure that traffic moves freely and quickly on their roads and the roads of nearby authorities.
- 3.2 Traffic congestion means increased fuel consumption, increased emissions from combustion engines and increased travel times for commuters.
- 3.3 To fulfil duties as mandated in the TMA and help achieve the Scottish Government's commitment to net zero carbon emissions and the Councils' commitment to reducing carbon usage, an Urban Traffic Management (UTMC) system is required to optimise the flow of traffic on the city's road network.

4. Main report

UTMC Capabilities

- 4.1 The overall aim of the Intelligent Infrastructure project, and the delivery of the UTMC system, is to aid and optimise traffic flow, minimising the impact of large events, roadworks and environmental conditions on the road network.
- 4.2 The UTMC system will enable the Council to:
- 4.2.1 Manage traffic flow by changing signal timings at key junctions on the network before and after large events such as concerts, and sporting events;

- 4.2.2 To optimise traffic flows where roadworks and associated diversions are affecting traffic patterns across the city; and
- 4.2.3 To react to incidents on the surrounding trunk roads to take pre-emptive action and manage excess traffic diverting onto the local road network.
- 4.3 The system also includes the installation of air quality monitoring sensors as part of the contract to detect densities of traffic related pollutants such as Nitrogen Dioxide, and Particulate Matter (PM2.5 and PM10). Where high densities of pollutants are detected, a traffic management control strategy will be automatically introduced to expediate traffic in the area.

UTMC Contract

- 4.4 In order to appoint a competent Service Provider to deliver and maintain a UTMC system, Commercial and Procurement Services (CPS) published a Prior Information Notice (PIN) in Public Contracts Scotland (PCS) on 26 November 2021 to determine interest from potential Service Providers and inform the market of the Intelligent Infrastructure contract.
- 4.5 On 15 September 2022, CPS published a Contract Notice, under Open Procedure, on PCS as set out in the Public Contracts (Scotland) Regulations 2015, with a tender submission deadline of 24 October 2022.
- 4.6 To identify Service Providers offering Best Value the tender evaluations included an emphasis on quality as well as price and submissions were assessed on the basis of the most economically advantageous tender.
- 4.7 A cost/quality ratio of 40/60 was applied to ensure that quality was of a high standard and encourage competitive submissions. The 60% quality was split into two sections; tender questions at 40% and a technical compliance matrix at 20%. To further protect the quality element a minimum quality threshold of 60 marks out of 100 was included, with the Council having discretion to disqualify tenders which did not achieve this threshold.
- 4.8 A summary of the tender process is attached at Appendix 1.
- 4.9 Two tender returns were received and assessed. On the basis of this assessment the contract was awarded as an urgent decision, in accordance with section 4.1 of the Council's Committee Terms of Reference and Delegated Functions by the Executive Director of Place, in consultation with the Convener of the Finance and Resources Committee, to enable the contract to commence on 23 December 2022 for an initial period of five years with two optional extensions of three years (5+3+3).
- 4.10 The contract will be managed by the Council's Network Management and Enforcement team in accordance with our Contract Management arrangements, who will track community benefits and monitor Key Performance Indicators (KPIs).

5. Next Steps

- 5.1 The benefits derived from the Intelligent Infrastructure project and particularly the UTMC system will be measured in terms of reductions in vehicular delay and congestion on the road network.
- 5.2 The success of the contract will be measured against the KPIs set out in the contract.
- 5.3 The KPIs will ensure that strict contract management and performance monitoring is maintained for all maintenance and improvement works carried out on behalf of the Council, a range of KPIs include:
 - 5.3.1 Commercial Compliance;
 - 5.3.2 Health and Safety Compliance;
 - 5.3.3 Technical/Quality and Defects Correction; and
 - 5.3.4 Programming.
- 5.4 The Contract and Grants Management Team (CAGM) will engage with the Network Management and Enforcement team to support implementation and contract management delivery throughout the contract lifecycles. All efficiencies identified in the procurement process should be delivered by the service area through proactive contractor engagement monitoring of management information, application of KPIs and tracking of relevant budgets.

6. Financial impact

- 6.1 The cost for the delivery of the UTMC system, as part of the Intelligent Infrastructure project, has a total value of £1,034,568. The contract commenced on 23 December 2022 and installation will be complete by June 2023.
- 6.2 A successful European Regional Development Fund (ERDF) bid, as part of the 8th City Programme, obtained funding of £297,000 from the programme. The remaining capital project expenditure is funded from the Council's existing capital budgets and other contributions.
- 6.3 The capital cost associated with the provision and installation of the UTMC system is £703,737.
- 6.4 There are no UTMC system maintenance costs for the initial contract term of five years. Thereafter, maintenance costs will be funded from the Council's revenue budget and will continue for the life of the contract and any extension periods, potentially to financial year 2034/35.
- 6.5 It is anticipated that maintenance costs for the UTMC system will equate to £330,831, across the potential contract extension periods of three years plus three years, which equates to £55,138.50 per annum.

- 6.6 Revenue savings which will be realised by the delivery of the Intelligent Infrastructure project for the Council, include:
- 6.6.1 The collection of classified traffic data, via the Edinburgh Operations Centre's CCTV video analytics platform, will save the Council approximately £64,500 per annum because traffic count companies will no longer be required to collect data; and
 - 6.6.2 Current tasks being undertaken manually by the Network Management team will be automated and optimised by the introduction of a new UTMC system, delivering more effective use of Council resources and providing savings of approximately £6,000 per annum.
- 6.7 The savings on collection of traffic data and staff time costs combined are predicted to save the Council approximately £350,000 over the initial contract term of five years.

7. Stakeholder/Community Impact

- 7.1 This project was selected and approved for inclusion within a wider ERDF Operation, by both the 8th City Advisory Group and 8th City Strategic Board. These partnership structures (which includes representation from all Scottish cities and Scottish Government) were established as part of the governance arrangements that have been put in place for the 8th City Programme.
- 7.2 Consultation and engagement was undertaken with the supply market, in the form of a virtual awareness event on 16 December 2021. Extensive stakeholder engagement has been carried out and is fully detailed within Appendix 2 of this report.
- 7.3 Significant work has been undertaken to align several strands of 'smart city' workstreams spanning diverse groups of teams and departments towards infrastructure upgrade and integration. The intention of which will offer easier access to data and the ability to visualise and analyse that data to enable better decision-making, both for real-time management of the city and for longer term planning.
- 7.4 The TMA places duties on the local authorities to monitor levels of vehicular traffic, a duty which the Council is currently not fulfilling satisfactorily. The UTMC system will deliver classified vehicular traffic counts at 29 sites (using 35 cameras) on key arterial routes.
- 7.5 Not approving the award of the contract could result in the Council not being able to adequately meet its agreed commitments and statutory duties.
- 7.6 The UTMC system will also assist the Council in delivering air quality improvements across the city, as it provides the capability to respond to congestion and poor air quality by improving traffic flow, thereby reducing fuel usage and local emissions from vehicle exhausts.

- 7.7 Providing reliable journey time information and the ability to prioritise public transport and active travel will facilitate more informed travel choices by visitors, residents and those who work in the city. In addition, reduced journey times will promote increased economic activity within the city.
- 7.8 The arrangements described in this report could contribute to the public sector general equality duty to advance equality of opportunity. An Integrated Impact Assessment (IIA) has been completed for the Intelligent Infrastructure Project and no equalities or right impacts have been identified in relation to this report.

Environmental Benefits

- 7.9 The UTMC system will help to reduce the incidences of congestion on the city's road network, thereby reducing fuel consumption and vehicle exhaust emissions.
- 7.10 The UTMC system will also help to reduce the incidences of congestion on the city's road network, thereby reducing fuel consumption and vehicle exhaust emissions.
- 7.11 The UTMC system will provide the capability to quickly and easily schedule multiple Urban Traffic Control (UTC) and Split Cycle Offset Optimisation Technique (SCOOT) parameter changes to occur simultaneously without manual user input, for example making signal control changes to accommodate international rugby crowds leaving Murrayfield Stadium. This optimisation of traffic flow will bring local air quality benefits in the streets surrounding large sports stadia across the city.
- 7.12 These strategies which improve traffic flow and reduce local air pollutants will also be applied to any other event, such as roadworks or incidents on the city bypass, which cause drivers to reroute and overload certain sections the road network.
- 7.13 The installation of an initial 10 IoT air quality sensors around the city will measure Nitrogen Dioxide (NO₂) and Particulate Matter (PM₁₀ and PM_{2.5}), which are the most problematic pollutants emitted from vehicle exhausts. These sensors will feed real time data on these pollutants back to the UTMC system to make automated traffic management decisions to improve traffic flow in the most polluted areas. The contract provides the mechanism to expand this network of air quality sensors, supplying granular, comprehensive air quality data and providing environmental scientists with a much richer source to combine with the smaller number of existing DEFRA monitoring stations.

Community Benefits

- 7.14 The Service Provider will deliver 270 Community Benefit Points (CBP) for this contract with a range of benefits on offer including:
- 7.14.1 Employment opportunities; and
 - 7.14.2 School workshops.

Fair Work Practices

- 7.15 The Service Provider is a Living Wage employer and does not use zero hours contracts.
- 7.16 The Service Provider exceeds maternity, paternity and sick leave statutory minimums and operates a flexible working policy to promote healthy work life balance.

8. Background reading/external references

- 8.1 None.

9. Appendices

- 9.1 Appendix 1 – Summary of Tendering and Tender Evaluation Processes.
- 9.2 Appendix 2 – Extensive stakeholder engagement.

Appendix 1: Summary of Tendering and Tender Evaluation Processes

Process

Contract	Intelligent Infrastructure
Contract period (including any extensions)	11 years
Contract value	£1.035m
EU Procedure chosen	Open
Register of interest noted	34
Recommended supplier	Yunex Limited
Primary criterion	Most economically advantageous tender to have met the qualitative and technical specification of the client department
Evaluation criteria and weightings	<p>60% Quality, 40% Price</p> <p>Tender Questions (40%)</p> <p>UTMC Project delivery experience - 25%</p> <p>Contract delivery methodology – 25%</p> <p>Maintenance & support/ service levels -10%</p> <p>Innovation and future proofing – 5%</p> <p>Business Continuity - 5%</p> <p>Air quality monitoring units – 10%</p> <p>Cyber security - 10%</p> <p>Community Benefits – 5%</p> <p>Fair Work Practises – 5%</p> <p>Technical Compliance Matrix (20%)</p> <p>16x Technical questions covering software (15%)</p> <p>2x Technical questions covering service (5%)</p>
Evaluation Teams	Evaluation Teams will consist of suitably qualified Council Officers including Engineers, Senior Engineers and Transport Managers

Appendix 2: Extensive stakeholder engagement

<u>Date</u>	<u>Project Element</u>	<u>Stakeholders</u>
19/02/2021	Air Quality	Eurotech
23/02/2021	Journey Time	Renwicks UK
01/03/2021	Cycle Priority	Active travel team
08/03/2021	Integration of Just Eat data	Transport for Edinburgh (TfE)
08/03/2021	Common database	Swarco
11/03/2021	Air Quality	Spatial planning team
12/03/2021	Cycle Priority	Active travel team
15/03/2021	Cycle Priority	DYNNIQ
16/03/2021	Cycle/ Pedestrian Priority	Transport for Edinburgh (TfE)
16/03/2021	Common database	Siemens
17/03/2021	VMS/ Pedestrian priority	Living Streets
18/03/2021	Integration of Just Eat data	Cycling Scotland
14/04/2021	Bus Priority	Bus Operators
22/04/2021	Common database	Idox
22/04/2021	Bus Priority	Lothian Buses/ ITS team
04/05/2021	Integration of Just Eat data	Transport for Edinburgh (TfE)
12/05/2021	Common database	Osprey/ Mott Mac
13/05/2021	Cycle Priority	Aecom
19/05/2021	Common database	DYNNIQ
24/05/2021	Autonomous Bus and V2X	Transport Scotland
28/05/2021	Cycle Priority	Active Travel Team
08/06/2021	Cycle Priority	q-free
08/06/2021	Air Quality	Spatial planning team
09/06/2021	Traffic/ people Counters	Vivacity
10/06/2021	ATC	Planning/ Traffic signals
18/06/2021	Driver communications	One Network
22/06/2021	Air Quality	LEZ - George King
29/06/2021	VMS	St James quarter
08/08/2021	Public route/ travel info	One Network
13/07/2021	Traffic/ people Counters	Vivacity
29/07/2021	VMS/ Air quality	St James quarter developer
03/08/2021	Air Quality	LEZ
23/08/2021	Common database	Tyne & Wear Authority
07/10/2022	UTMC and SI360 platform	CGI
27/10/2022	UTMC Events Management	Easter Road (Hibernian) Zone X
15/11/2022	UTMC Events Management	Events Team at CEC