Report author: Joel Dodsworth
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Report to Chief Officer (Highways and Transportation)

Date: 18 December 2018

Subject: Request to waive Contract Procedure Rules 8.1 and 8.2 to award a contract to Underdog Software Ltd for support and further development of the SPRUCE traffic signal control software without seeking competition

Are specific electoral Wards affected? If relevant, name(s) of Ward(s):	☐ Yes	☒ No
Are there implications for equality and diversity and cohesion and integration?	☒ Yes	☐ No
Is the decision eligible for Call-In?	☐ Yes	☒ No
Does the report contain confidential or exempt information? If relevant, Access to Information Procedure Rule number: Appendix number:	☐ Yes	☒ No

Summary of main issues

1. Bus priority helps to improve the reliability of bus journey times and contributes to achieving the Best Council Plan Inclusive Growth commitment by providing benefit to public transport. The West Yorkshire active bus priority system (referred to variously as TLP or TSP) enables buses to send triggers from the ticket machines to the Leeds City Council (LCC) traffic signal control systems via an intermediate and bespoke software package (SPRUCE), when a bus reaches a pre-defined point on the approach to a junction. The triggers are then used to manipulate the signal timings so that the journey time for late running buses can be minimised.

2. The current operating system (SPRUCE) utilised to interface between the priority triggers and the UTC traffic control system has been developed, and is currently supported by, Underdog Software Ltd. SPRUCE is a development environment for traffic signal control projects, of which bus priority is one aspect.

3. There are several major investment programmes including A65 SCOOT, West Yorkshire Plus Transport Fund (WY+TF) and Leeds Public Transport Investment Programme (LPTIP) in progress that require bus priority to achieve the immediate and long term objectives of doubling bus patronage. In addition, there is a commitment by LCC as part of LPTIP to develop a new

method of control that will utilise new forms of detection data such as that from connected and autonomous vehicles (CAVs) to improve efficiency of signal control. This development is an outcome of the National Infrastructure Commission Roads for the Future competition, recently won by LCC.

4. Continued support and development of the SPRUCE system, including through the West Yorkshire Urban Traffic Management and Control (UTMC) relocation, will enable the bus priority configuration and CAV technology development, required for successful delivery of the various major investment programmes, to be delivered in an effective and timely manner and provides the best value for money for the Council whilst enabling it to meet the Best Council Plan 21st-Century Infrastructure commitment.

5. Recommendations

5.1 The Chief Officer (Highways and Transportation) is requested to approve:

i) The waiver of Contract Procedure Rules 8.1 and 8.2 – Intermediate Value Procurements – and the award of a contract direct to Underdog Software Ltd for the provision of support and further development of the SPRUCE traffic signal control software at a cost of £75,000 to commence on January 1st 2019 and to complete on 31st March 2021 without seeking competition.

1. Purpose of this report

1.1 This report sets out the reasons for recommending that the Chief Officer (Highways and Transportation) approves the waiver of Contract Procedure Rules 8.1 and 8.2 to award a contract direct to Underdog Software Ltd for the provision of support and further development of the SPRUCE traffic signal control software to commence on January 1st 2019 and to complete on 31st March 2021 without seeking competition.

2 Background information

2.1 Active bus priority is achieved by the LCC Urban Traffic Control (UTC) team configuring route specific bus trigger locations that are then sent to bus operators to load onto bus ticket machines whilst vehicles are in the depot. The ticket machine then sends out a trigger to the bus operator using a mobile 3G/4G connection when the bus enters the configured ‘virtual’ detection zones. The bus priority triggers are monitored and processed by the SPRUCE software and relayed to the UTC system where each request is actioned and the degree of priority assigned to the bus.

2.2 The bus priority system enables buses to be given different levels of priority depending on whether or not they are late and to what extent they are late. Methods of priority vary from green extensions (if the bus arrives at a green signal) to truncating the opposing greens (if the bus arrives at a red signal).

2.3 Bus priority is an important tool for achieving reliable bus journey times and is critical to the success of the LPTIP and in achieving the Leeds Transport Strategy aim of doubling bus patronage by 2026.

2.4 In addition, LCC has recently won an Innovate UK funded competition (Roads for the Future). The proposals in the competition entry, to develop a CAV-ready traffic signal control system, forms part of a commitment in LPTIP to create a control system capable of using new forms of technology to improve performance and to reduce the need for the expensive physical infrastructure associated with conventional detection (i.e. ducting and slot cutting). This is part of a wider aspiration of LCC to be at the forefront of CAV technology development.

2.5 Active bus priority and the CAV technology developments both make use of the SPRUCE traffic signal control development environment. SPRUCE is currently used by LCC, City of Bradford Council, Sheffield City Council and City of Edinburgh Council and enables bespoke traffic signal control strategies to be developed that would not normally be possible through standard UTC systems.

3 Main Issues

3.1 Reasons for Contracts Procedure Rules Waiver

3.1.1 To achieve the aspirations of LCC UTMC to develop a system that is capable of making use of the latest detection technology, there is a requirement to continue support of the SPRUCE system and to develop it further to accommodate the new type of detector information. Underdog Software Ltd is the supplier of the SPRUCE software system.

3.1.2 There is an immediate need to develop the current system as an alternative to expensive and disruptive detection required by conventional adaptive control systems, especially in the City Centre. There is also a need to continue to support the system to ensure that bus priority can be delivered at a large number of junctions as part of the A65 SCOOT, WY+TF and LPTIP projects, the need to continue to develop the SPRUCE system will ensure that Leeds remains in the forefront of technological advances in this field.

3.1.3 The Roads for the Future Innovate UK competition is an example of the aspiration of LCC to be at the forefront of technology development in CAVs. The rapid rate of CAV development requires the capability to develop innovative and adaptable proof of concepts. The SPRUCE system is currently used solely for providing bus priority at traffic signal installations with fixed signal timings. However, it is actually a development environment that is capable of providing a testbed for CAV technology developments.

3.1.4 Underdog Software Ltd developed, and is the supplier of, the SPRUCE system. The specialist software has been critical to the successful operation of bus priority in Leeds and Sheffield and forms part of the West Yorkshire UTMC project aspiration to create a centre of excellence.

3.2 Consequence if the proposed action is not approved

3.2.1 If LCC were not to draw upon the services of Underdog Software Ltd, the Council would not have the ability to enhance the current system and achieve the aspirations of developing CAV-ready infrastructure. LCC would also not be able to continue providing bus priority at a large number of traffic signal controlled junctions. As a consequence, the benefit of the significant

investment programmes will not be fully realised. Furthermore, the aspirations of LCC to be at the forefront of CAV development will be unlikely to materialise.

4 Corporate Considerations

4.1 Consultation and Engagement

4.1.1 Engagement with Sheffield City Council has been undertaken to identify best use of resource and to share best practice.

4.1.2 Bus operators that use the active priority system (First in Leeds) value its use. Arriva and Transdev have both recently stated an intention to invest in bus trigger capable ticket machines. Discussions are currently underway with Transdev with regard to configuring their systems to enable their buses to receive priority.

4.2 Equality and Diversity/Cohesion and Integration

4.2.1 The proposals have an impact on equality characteristics and, as such, an equality, diversity, cohesion and integration screening has been undertaken (see Appendix A).

4.3 Council Policies and City Priorities

4.3.1 The award of a contract to Underdog Software Ltd to provide specialist development of the SPRUCE system is an important aspect of the LPTIP delivery. LPTIP supports the inclusive growth commitment through improved public transport provision, of which bus priority is an essential component. CAV technology development supports the Council's 21st-Century infrastructure commitment by contributing to improving air quality, improving the city's infrastructure and improving transport safety and reliability.

4.4 Resources and value for money

4.4.1 Specialist support from Underdog Software Ltd commencing on January 1st 2019 until 31st March 2021 will not exceed £75,000.

4.4.2 Funding will be provided initially from the A65 SCOOT project with later work contributed to by the WY+TF and LPTIP projects.

4.4.3 Best value for money will be obtained by sharing best practice with other Local Authorities that operate the specialist systems such as City of Bradford Council and Sheffield City Council.

4.5 Legal Implications, Access to Information and Call In

4.5.1 This decision is a Significant Operational Decision and is not subject to Call-In but will be published by the Council. The report does not contain any exemptions or confidential information under the Council's Access to Information Rules.

4.5.2 In approving this waiver without subjecting the contract to competition, there is a risk of challenge to the Council from other potential providers to whom this contract could be of interest that the Council has not been wholly transparent

and that they may have been unfairly denied the chance to tender for this opportunity. In terms of transparency it should be noted that European case law suggests that contracts of this value should be subject to a degree of advertising if it is considered that it would be of interest to contractors operating in another Member State. It is up to the Council to decide what degree of advertising is appropriate. In particular, consideration should be given to the subject-matter of the contract, its estimated value, the specifics of the sector concerned (size and structure of the market, commercial practices, etc) and the geographical location of the place of performance.

4.5.3 The EU case law and the factors in paragraph 4.5.2 above have been considered and, due to the nature of the product, with Underdog Software Ltd having developed the SPRUCE system, and currently providing the specialist development and support for the system bespoke to LCC there is no viable alternative currently available, and due to the relatively low value of this contract (which is below the OJEU threshold) it is considered that the scope and nature of the contract are such that it would not be of interest to contractors in other EU member states.

4.5.4 There is a risk of an ombudsman investigation arising from a complaint that the Council has not followed reasonable procedures, resulting in a loss of opportunity. Obviously, the complainant would have to establish maladministration. It is not considered that such an investigation would necessarily result in a finding of maladministration however such investigations are by their nature more subjective than legal proceedings.

4.5.5 Whilst making the decision, the Chief Officer (Highways and Transportation) should acknowledge the risks identified above.

4.5.6 Although there is no overriding legal obstacle preventing the waiver of Contract Procedure Rules 8.1 and 8.2, the above comments should be noted. In making their final decision, the Chief Officer (Highways and Transportation) should be aware of the risk of challenge to the Council and be satisfied that on balance the course of action chosen represents Best Value for LCC.

4.6 Risk Management

4.6.1 As identified in section 4.5 above, there is a risk to the Council in awarding a contract directly in this way. However, the Chief Officer (Highways and Transportation) considers that the risks are outweighed by the benefits of awarding a contract to Underdog Software Ltd, who has developed, and is the supplier of, the SPRUCE system, and the resource/value for money implications of doing so.

4.6.2 It is considered that in terms of the risk of challenge to the procurement route of this contract, the Council has taken steps to mitigate this. The contract, given its value, falls outside any remit of the Public Contracts Regulations 2015 beyond the duty to act transparently, fairly and non-discriminatorily that applies to all public contracts.

4.6.3 It is recognised that there is a risk, when using bespoke systems, that there is less resilience for maintaining and supporting the system. However, there is also a significant benefit associated with the SPRUCE system in that it allows

proof of concepts to be developed in a best value manner. This significantly reduces risk associated with any future procurement of systems.

5 Conclusions

5.1 The use of Underdog Software Ltd to provide specialist development and support for active bus priority and CAV technology development will enable LCC to maximise the benefit of the various major investment programmes. In doing so, it supports the Best Council Plan priorities of 21st-Century Infrastructure and Inclusive Growth.

6 Recommendations

6.1 The Chief Officer (Highways and Transportation) is recommended to approve:

i) The waiver of Contract Procedure Rules 8.1 and 8.2 – Intermediate Value Procurements – and the award of a contract to Underdog Software Ltd for the provision of support and further development of the SPRUCE traffic signal control software at a cost of £75,000 commencing on January 1st 2019 until 31st March 2021 without seeking competition.

7 Background documents

7.1 None.

Appendix 1

Equality, Diversity, Cohesion and Integration Screening

As a public authority we need to ensure that all our strategies, policies, service and functions, both current and proposed have given proper consideration to equality, diversity, cohesion and integration.

A **screening** process can help judge relevance and provides a record of both the **process** and **decision.** Screening should be a short, sharp exercise that determines relevance for all new and revised strategies, policies, services and functions. Completed at the earliest opportunity it will help to determine:

- The relevance of proposals and decisions to equality, diversity, cohesion and integration.
- whether or not equality, diversity, cohesion and integration is being/has already been considered, and
- Whether or not it is necessary to carry out an impact assessment.

Directorate: City Development	**Service area: Highways and Transportation**
Lead person: Joel Dodsworth	**Contact number: 3788128**

1. Title: : Request to continue a current commercial agreement for the provision of ADSL and Ethernet circuits for UTMC operation

Is this a:

☐	**Strategy / Policy**	✓	**Service / Function**	☐	**Other**

If other, please specify

2. Please provide a brief description of what you are screening

The screening process relates to the waiver of procurement rules to provide services from Underdog Software Ltd.

3. Relevance to equality, diversity, cohesion and integration

All the council's strategies/policies, services/functions affect service users, employees or the wider community – city wide or more local. These will also have a greater/lesser relevance to equality, diversity, cohesion and integration.

The following questions will help you to identify how relevant your proposals are.

When considering these questions think about age, carers, disability, gender reassignment, race, religion or belief, sex, sexual orientation and any other relevant characteristics (for example socio-economic status, social class, income, unemployment, residential location or family background and education or skills levels).

Questions	**Yes**	**No**
Is there an existing or likely differential impact for the different equality characteristics?	X	
Have there been or likely to be any public concerns about the policy or proposal?		X
Could the proposal affect how our services, commissioning or procurement activities are organised, provided, located and by whom?		X
Could the proposal affect our workforce or employment practices?		X
Does the proposal involve or will it have an impact on • Eliminating unlawful discrimination, victimisation and harassment • Advancing equality of opportunity • Fostering good relations		X

If you have answered **no** to the questions above please complete **sections 6 and 7**

If you have answered **yes** to any of the above and;

- Believe you have already considered the impact on equality, diversity; cohesion and integration within your proposal please go to **section 4.**
- Are not already considering the impact on equality, diversity, cohesion and integration within your proposal please go to **section 5.**

4. Considering the impact on equality, diversity, cohesion and integration

If you can demonstrate you have considered how your proposals impact on equality, diversity, cohesion and integration you have carried out an impact assessment.

Please provide specific details for all three areas below (use the prompts for guidance).

- **How have you considered equality, diversity, cohesion and integration?**

(**think about** the scope of the proposal, who is likely to be affected, equality related information, gaps in information and plans to address, consultation and engagement activities (taken place or planned) with those likely to be affected)

- **Key findings**

(think about any potential positive and negative impact on different equality characteristics, potential to promote strong and positive relationships between groups, potential to bring groups/communities into increased contact with each other, perception that the proposal could benefit one group at the expense of another)

- **Actions**

(think about how you will promote positive impact and remove/ reduce negative impact)

5. If you are **not** already considering the impact on equality, diversity, cohesion and integration you **will need to carry out an impact assessment**.	
Date to scope and plan your impact assessment:	
Date to complete your impact assessment	
Lead person for your impact assessment (Include name and job title)	

6. Governance, ownership and approval Please state here who has approved the actions and outcomes of the screening		
Name	**Job title**	**Date**
Joel Dodsworth	UTMC Manager	6/12/2018

7. Publishing This screening document will act as evidence that due regard to equality and diversity has been given. If you are not carrying out an independent impact assessment the screening document will need to be published. Please send a copy to the Equality Team for publishing	
Date screening completed	
Date sent to Equality Team	
Date published (To be completed by the Equality Team)	