

Finance and Resources Committee

10.00am, Tuesday, 23 January 2018

Award of Energy Efficient Street Lighting Programme

Item number	7.13
Report number	
Executive/routine	
Wards	All
Council Commitments	16, 18, 25

Executive Summary

On [19 November 2015](#), the City of Edinburgh Council approved the business case and prudential borrowing required for the roll out of Light Emitting Diode (LED) Lanterns across the city.

This report seeks Committee approval to award a contract for the Energy Efficient Street Lighting Programme from 6 February 2018 to 31 December 2020.

Award of Energy Efficient Street Lighting Programme

1. Recommendations

- 1.1 It is recommended that the Finance and Resources Committee:
 - 1.1.1 approves the award of the contract for the Energy Efficient Street Lighting Programme to Amey Highways, for a value of £15.219m, from 6 February 2018 to 31 December 2020; and
 - 1.1.2 refers this report to Council on 1 February 2018 for approval of spend to save funding of £768,470.

2. Background

- 2.1 The Energy Efficient Street Lighting Programme covers the replacement of approximately 54,000 street lights with energy efficient lanterns, to deliver an ongoing reduction in street light energy consumption and maintenance costs.
- 2.2 These street lights are supported by a mix of concrete, steel and aluminium lighting columns and, at some locations, the project will involve the removal of concrete column brackets and the fitting of galvanised steel sleeves to accommodate the new lanterns.
- 2.3 To allow the Council full autonomous control of Edinburgh's street lights, a separate contract has been procured for the provision of a Central Management System (CMS). The CMS covers the installation of nodes on each of the new 54,000 lanterns and the retro-fitting on approximately 9,000 existing energy efficient street lights within the city. These will allow lighting levels in streets to be remotely monitored and adjusted in response to changing demands in service, and changing dynamics of traffic flows and street usage.
- 2.4 At the Transport and Environment Committee meeting on [27 October 2015](#), members approved the business case in principle for the roll-out of energy efficient street lighting across the city and the business case and prudential borrowing was approved on 19 November 2015.

3. Main report

- 3.1 To determine the optimum route to market, a full options appraisal was undertaken by Council Officers. This involved consultation with other local authorities across the UK, as well as engaging leading market suppliers.
- 3.2 The outcome of the options appraisal was to procure the project as a Prime Contract under an Open Procedure, owing to the size and competitiveness of market. This ensured that the Council was fully compliant with Official Journal of the European Union (OJEU) procurement thresholds, whilst stimulating competitiveness within the market to obtain best value for money.
- 3.3 Under the guidance of legal, the New Engineering Contract (NEC3) Option C was selected. This provides a Target Price, which is a guaranteed maximum price. Only items agreed by a Compensation Event can amend the Target Price, with the Council paying actual cost plus a pre-agreed percentage for management, overheads, and profit. Thus, this encourages a partnering ethos, with collaboration between parties and the Contractor providing full transparency in an open-book approach to provide better auditability.
- 3.4 To allow project certainty, the Council has put in place a contractual mechanism whereby the Contractor is liable for all costs exceeding the Target Price (also known as pain share). However, to incentivise the Contractor to deliver the project below the Target Price, the Council has also put in place a mechanism whereby any costs under the Target Price are shared equally with the Contractor (also known as gain share).
- 3.5 To ensure that the fundamental principles of procurement, transparency, equal treatment/non-discrimination, proportionality, and mutual recognition were adhered to the tender evaluation was undertaken on the most economically advantageous tender, this included emphasis on quality as well as price and submissions. To enable the Council to balance its requirement to deliver an ongoing reduction in street light energy consumption and maintenance costs, with the delivery of a high-quality service, the cost/quality ratio was set at 40/60.
- 3.6 The tender opportunity was advertised on Public Contracts Scotland and uploaded the web portal "In-Tend" on 19 September 2017.
- 3.7 Interested parties were invited to a Bidder's Day, which was held in the City Chambers on 26 September 2017.
- 3.8 The tender return date was 8 November 2017 and four responses were received.
- 3.9 Tenders were evaluated for cost and quality by separate panels from the Project Team and a summary of the Tendering and Tender Evaluation Processes is included in Appendix 1.
- 3.10 As part of the quality evaluation process, bidders were required to make presentations to the quality panel to demonstrate how they will meet the requirements of the project. These presentations took place on 27 and 28 November 2017.

- 3.11 Following completion of the quality analysis, tenders which passed the quality thresholds, were subject to cost analysis.
- 3.12 Combining the price and quality scores resulted in Amey Highways emerging as successful.

Supplier	Price	Quality	Combined
Amey Highways	37.87%	57.25%	95.12%
Supplier A	38.76%	54.50%	93.26%
Supplier B	37.85%	47.63%	85.48%
Supplier C	29.99%	23.81%	53.80%

- 3.13 The detailed results of the evaluation of Amey Highways' Tender are contained in Appendix 2.

4. Measures of success

- 4.1 Success will be measured by:
- 4.1.1 A sustained reduction in electricity consumption, energy costs and carbon use;
- 4.1.2 A reduction in lantern maintenance, replacement and waste disposal costs;
- 4.1.3 A reduction in light pollution;
- 4.1.4 Enhanced community safety, through improved clarity of CCTV images and the ability to vary light levels;
- 4.1.5 Improved responsiveness to lantern failures; and
- 4.1.6 The introduction of a dynamic street lighting monitoring and control system (CMS), that will enable:
- real-time inventory management;
 - the control and monitoring of street lighting to be managed centrally, including control of warranty;
 - an easy mechanism to remotely adjust lighting levels in response to changing demands on the service and changing dynamics of traffic flows and street usage in future years; and
 - provision of real-time monitoring and reporting, which can be used to identify and track faults proactively thus reducing residents' complaints. This will result in the Street Lighting Team no longer needing to undertake night scouting to identify street lights that are faulty. The system will also track actual energy consumption, and will be submitted to the Meter Administrator to increase accuracy of energy billing.

5. Financial impact

- 5.1 The costs associated with this component of the project (at £15.219m) will be contained within the £24.518m of prudential borrowing, approved by members at the Full Council meeting on 19 November 2015.
- 5.2 The financial model has been refreshed, updating the previous capital expenditure estimates with tender prices and revised project management costs. In addition, future projected energy costs have been updated with current inflation assumptions. The output from this refresh of the model indicates that the project remains affordable under the same parameters as approved by Council in November 2015. The project is anticipated to deliver revenue savings of £3.6m and avoid costs associated with increasing energy prices of over £54m. The refreshed output is summarised in Appendices 3 and 4.
- 5.3 While this project generates significant financial and environmental benefits over the long-term, there are deficits in the first three years as capital investment is required in advance of savings being achieved. In November 2015, Council was advised that these deficits could be contained within Place revenue budgets. However, due to budget pressures reported elsewhere on this agenda, spend to save funding of £768,470 is now required. This funding can be repaid over a five year period from expected savings in energy and maintenance.
- 5.4 The costs associated with procuring this contract are estimated at £35,000.

6. Risk, policy, compliance and governance impact

- 6.1 There are no significant compliance, governance or regulatory implications expected as a result of approving the recommendations in this report.

7. Equalities impact

- 7.1 Improving the street lighting assets will positively contribute to the delivery of the Equality Act 2010 for all of the protected characteristics and will improve the lives and safety of all residents and visitors to the city.
- 7.2 Converting to new energy efficient lanterns has been proven to enhance community safety through the use of more reliable equipment with a longer lifespan.
- 7.3 The project will continue to be managed to meet the recommendations of the Equalities and Rights Impact Assessment (ERIA). These recommendations were:
 - 7.3.1 To continue to use white light technology in all future street lighting installations;
 - 7.3.2 Set up a specific project team to ensure the appropriate level of resource is identified to deliver future projects;

- 7.3.3 Develop a Communication Plan, following consultation with Elected Members and Localities based Roads Teams;
- 7.3.4 Carry out ongoing updates of the ERIA, taking into account commissioning of street lighting designers, feedback from interested groups and from complaints and observations received from key protected characteristics (older people and people with disabilities); and
- 7.3.5 Review of the Street Lighting Design Guidance for use on all future projects which involve Street Lighting.

8. Sustainability impact

- 8.1 To contribute to the Sustainable Edinburgh 2020, the energy efficient lanterns last for over 20 years compared with the existing lamp's current life span of two to four years. These lanterns use less energy and therefore will generate savings in the Council's street lighting energy bill and future carbon tax.
- 8.2 The new lanterns are manufactured in accordance with the Waste Electrical and Electronic Equipment (WEEE) Regulations, taking account of all required environmental regulations and can be recycled at the end of their life, helping the Council meet its carbon footprint and environmental targets.
- 8.3 The lanterns, which are replaced under this project, will be recycled in accordance with the WEEE Regulations.
- 8.4 The development of the project-specific community benefits strategy allowed bidders to select a range of benefits on offer to the Council. These were based around a minimum points system, relative to the project value, Amey will provide this contract with 720 community benefit points, offering a range of benefits across:
 - Improving Education;
 - Improving Employability;
 - Supply Chain; and
 - Community.
- 8.5 Some of the benefits on offer are:
 - Apprenticeships;
 - Donation of tools and materials to local Schools;
 - Supported training for people with disabilities;
 - Volunteering at food banks; and
 - Providing those in fuel poverty with low-cost energy efficient light bulb.

- 8.6 In addition, the new innovative Key Performance Indicator process introduced into this contract ties contractor performance directly with the new Community Benefits system, whereby any failures in performance will generate additional community benefit points which the Council can spend as it sees fit.
- 8.7 The Council's Project Manager will be responsible for tracking and ensuring all benefits are realised during the life of the contract.

9. Consultation and engagement

- 9.1 Consultation and engagement was undertaken with other local authorities across the UK, as well as engaging leading market suppliers.
- 9.2 If the recommendations of this report are approved, the Communication Plan will be implemented to inform Elected Members and residents affected by this project.

10. Background reading/external references

- 10.1 [Report to the Transport and Environment Committee on 14 January 2014, Street Lighting – Result of White Light Pilot Project](#) (Item 7.10).
- 10.2 [Report to the Finance and Resources Committee on 16 January 2014, Street Lighting – Salix Funding](#) (Item 7.20).
- 10.3 [Report to the Transport and Environment Committee on 27 October 2015, Roll-out of Light Emitting Diode \(LED\) Lanterns across the City](#) (Item 7.5).
- 10.4 [Report to the City of Edinburgh Council on 19 November 2015](#) (item 8.7).

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11. Appendices

1. Appendix 1 Summary of Tendering and Tender Evaluation Processes.
2. Appendix 2 Results from Evaluation of Amey Highways' Tender.
3. Appendix 3 Budget Variance
4. Appendix 4 Total Cost Avoidance

Appendix 1 - Summary of Tendering and Tender Evaluation Processes

Contract	Award of Energy Efficient Street Lighting Programme (Ref: CT2254)	
Contract Period	This Contract will have a start date of 6th February 2018 and an overall completion date of 31st December 2020 and with separate completion dates applying to sections of the works.	
Estimated Contract Value (including extensions)	£ 15,219,449	
Procurement Route Chosen	Open Procedure	
Tenders Returned	4	
Name of Recommended Supplier(s)	Amey Highways	
Price / Quality Split	Quality 60	Price 40
Price / Quality Split Breakdown	Price (40%)	Total Project Cost (23%) Total Rate Cost (2%) Total Energy Cost (15%)
	Quality (60%) Tender Submission (55%)	Installation Programme (20%) Lighting Design (15%) Luminaire Selection (15%) Delivery Team (20%) Contract and Performance Management (5%) Innovation & Continuous Improvement (5%) Health, Safety & Welfare (5%) Business Continuity (5%) Community Benefits (5%) Risk Register (5%)
	Presentations (5%)	
Evaluation Team	Experienced officers from Place & Resources Directorate as well as Technical advisers from Currie and Brown.	

Appendix 2 – Results from Evaluation of Amey Highways' Tender

Price:

Tender Evaluation	Max (%)	Amey Highways
Total Price – Lighting Installation		£14,191,089.45
Tender Score	23%	21.24%
Total Price – Schedule of Rates		£1,028,359.22
Tender Score	2%	1.63%
Energy Consumption		£7,558,933.50
Tender Score	15%	15%
Total Price Score		37.87%

Quality:

Tender Submission Activity	Max Score	Amey Highways
Installation Programme	20	20
Lighting Design	15	15
Luminaire Selection	15	15
Delivery Team	20	20
Contract & Performance Management	5	5
Innovation & Continuous Improvement	5	3.75
Health, Safety & Welfare	5	3.75
Business Continuity	5	3.75
Community Benefits	5	5
Risk Register	5	3.75
Total	100	95

Score of 95/100 gives a Quality Score for Tender Submission = 52.25%

Presentation	Max Score	Amey Highways
Presentation	4	4

Score of 4/4 gives a Quality Score for Presentation = 5%

Therefore, Total Quality Score for Amey Highways = 52.25 + 5 = 57.25%

Appendix 3 – Budget Variance

Year	Total Revenue spend Energy, Financing & CMS charges	Energy uplift	Expected Opening Energy budget	Maintenance savings	Salix budget returned	Expected Energy budget	Budget Variance (Surplus)/ Deficit
2017-2018	3,161,295	150,000	3,220,746	0	0	3,220,746	-59,451
2018-2019	3,517,382	100,000	3,320,746	0	0	3,320,746	196,636
2019-2020	3,664,679	50,000	3,370,746	74,844	0	3,445,590	219,089
2020-2021	3,901,845	25,000	3,395,746	78,511	0	3,549,101	352,744
2021-2022	3,509,172	25,000	3,420,746	73,613	39,479	3,687,193	-178,021
2022-2023	3,604,229	25,000	3,445,746	0	39,478	3,751,671	-147,442
2023-2024	3,680,199	25,000	3,470,746	0	90,145	3,866,816	-186,617
2024-2025	3,792,387	25,000	3,495,746	0	134,105	4,025,921	-233,534
2025-2026	3,822,598	25,000	3,520,746	0	0	4,050,921	-228,323
2026-2027	3,894,811	25,000	3,545,746	0	0	4,075,921	-181,110
2027-2028	3,998,357	25,000	3,570,746	0	0	4,100,921	-102,564
2028-2029	4,000,084	25,000	3,595,746	0	0	4,125,921	-125,837
2029-2030	4,063,251	25,000	3,620,746	0	0	4,150,921	-87,670
2030-2031	3,967,927	25,000	3,645,746	0	0	4,175,921	-207,994
2031-2032	3,986,166	25,000	3,670,746	0	0	4,200,921	-214,755
2032-2033	4,062,156	25,000	3,695,746	0	0	4,225,921	-163,765
2033-2034	4,084,175	25,000	3,720,746	0	0	4,250,921	-166,746
2034-2035	4,015,314	25,000	3,745,746	0	0	4,275,921	-260,607
2035-2036	4,066,006	25,000	3,770,746	0	0	4,300,921	-234,915
2036-2037	4,117,966	25,000	3,795,746	0	0	4,325,921	-207,955
2037-2038	4,171,226	25,000	3,820,746	0	0	4,350,921	-179,695
2038-2039	4,059,194	25,000	3,845,746	0	0	4,375,921	-316,727
2039-2040	3,544,785	25,000	3,870,746	0	0	4,400,921	-856,136
Total	88,685,204					92,256,599	-3,571,394

Key Assumptions

Please note that the revised energy costs reflect the total estate of 64,000 lanterns, however the Business Case is to invest in 54,000.

The other 10,000 units have been upgraded to LED in previous years.

Appendix 4 – Total Cost Avoidance

Year	Do nothing option Energy costs	Change to LED Energy costs	Total Cost Avoidance
2017-2018	£3,071,862	£3,071,862	£0
2018-2019	£3,071,862	£3,071,862	£0
2019-2020	£3,265,935	£2,642,165	£623,770
2020-2021	£3,543,899	£2,273,464	£1,270,435
2021-2022	£3,523,766	£1,412,595	£2,111,171
2022-2023	£3,754,091	£1,504,927	£2,249,164
2023-2024	£3,936,634	£1,578,104	£2,358,530
2024-2025	£4,209,352	£1,687,430	£2,521,922
2025-2026	£4,277,396	£1,714,707	£2,562,689
2026-2027	£4,450,030	£1,783,912	£2,666,118
2027-2028	£4,700,641	£1,884,376	£2,816,265
2028-2029	£4,697,068	£1,882,943	£2,814,125
2029-2030	£4,846,563	£1,942,872	£2,903,691
2030-2031	£4,600,493	£1,844,229	£2,756,264
2031-2032	£4,637,502	£1,859,065	£2,778,437
2032-2033	£4,818,363	£1,931,568	£2,886,795
2033-2034	£4,864,369	£1,950,011	£2,914,358
2034-2035	£4,683,453	£1,877,486	£2,805,967
2035-2036	£4,800,539	£1,924,422	£2,876,117
2036-2037	£4,920,553	£1,972,533	£2,948,020
2037-2038	£5,043,567	£2,021,847	£3,021,720
2038-2039	£5,169,656	£2,072,393	£3,097,263
2039-2040	£5,298,897	£2,124,202	£3,174,695
Total	£100,186,491	£46,028,975	£54,157,516