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Report of the Chief Officer, Sustainable Energy and Air Quality

Report to the Director of Resources and Housing

Date: 21st September 2020

Subject: Woodhouse Lane Car Park LED lighting scheme

Are specific electoral wards affected? If yes, name(s) of ward(s):	☐ Yes ☒ No
Has consultation been carried out?	☐ Yes ☒ No
Are there implications for equality and diversity and cohesion and integration?	☐ Yes ☒ No
Will the decision be open 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

1. Main issues

- The Council has a substantial portfolio of sites and buildings, and therefore a substantial level of energy consumption. In January 2020, the Executive Board committed to a rationalisation and energy efficiency programme to reduce emissions from Council buildings by 40% by 2025. The Council has already implemented renewable solar PV energy generation and a range of other energy efficiency measures, including LED lighting, across a number of it sites, and is seeking to expand these measures across the whole portfolio wherever practicable. The Woodhouse Lane car park falls within this portfolio and is being targeted for conversion to LED lighting.

2. Best Council Plan Implications (click here for the latest version of the Best Council Plan)

- 'Sustainable Infrastructure' sits as one of the council's key priorities in its Best Council Plan. Our vision is to improve the resilience of the City's infrastructure whilst promoting a more competitive, less wasteful, more resource efficient, low carbon economy. The delivery of a wholesale upgrade of Woodhouse Lane Car Park's lighting to LEDs will contribute to all of these priorities, reducing the council's carbon footprint and energy expenditure. It is estimated that the scheme would deliver an annual reduction in electricity consumption of up to 474,168 kWh and 121 tonnes CO_2e.

3. Resource Implications

1. The LED lighting upgrade for Woodhouse Lane Car Park has been costed at £240,853.50, and will be funded through SALIX, with the works carried out by the internal service provider Leeds Building Services (LBS).
2. SALIX Finance Ltd. is a Government sponsored body for managing interest-free public sector funding to improve energy efficiency. To be eligible for SALIX funding the loan must be repaid from energy savings within a 5 year period. The Council's external technical advice has calculated that energy savings will pay back the investment within this period, ensuring the Council does not repay more per annum than the energy savings themselves.
3. The scheme requires an injection into the capital programme.

4. Recommendations

The Director of Resources and Housing is recommended to:

a) Approve the use of SALIX funding for the upgrade of lighting at Woodhouse Lane Car Park to LEDs (noting that approval of the Council's application to SALIX Finance Ltd for this scheme has now been received), with the Chief Financial Services Officer, under delegated treasury management powers, to conclude any matters in agreeing the terms of the loan to be paid back over 5 years to the value of £240,853.50;

b) Approve a £240,853.50 injection into the capital programme, and give authority to spend this sum, with the works to be delivered by the in-house provider, Leeds Building Services (LBS);

c) Note the intention to provide a separate business case to Finance Performance Group (FPG) for approval.

1. Purpose of this report

1.1 This report is intended to outline the proposals for the upgrade to lighting at Woodhouse Lane Car Park to LEDs, which will reduce the Council's energy consumption, expenditure on energy, and carbon emissions from its operations.

1.2 The report also notes that approval of an application for an interest-free loan from SALIX Finance Ltd has now been secured to the value of £240,853.50 to cover the cost of the proposed works (to be repaid through energy cost savings), and seeks an injection into the capital programme and authority to spend this sum, with the works to be completed in-house by Leeds Building Services (LBS).

2. Background information

2.1.1 The Council has a substantial portfolio of sites and buildings, and therefore a substantial level of energy consumption. In January 2020, the Executive Board committed to a rationalisation and energy efficiency programme to reduce carbon emissions from Council buildings by 40% by 2025. The Council has already implemented renewable solar PV energy generation and a range of other energy efficiency measures, including LED lighting, across a number of it sites, and is seeking to expand these measures across the whole portfolio wherever practicable. The Woodhouse Lane car park falls within this portfolio and is being targeted for conversion to LED lighting.

2.2 Woodhouse Lane Car Park is primarily lit with linear surface proofed T8 lamped luminaires across each of its floors. LEDs are one of the most energy-efficient light technologies available, and can consume 75% less energy than standard incandescent lighting. LEDs in turn can last 25 times longer than traditional light bulbs. Through the use of passive infrared sensors to detect movement it can be ensured that areas receive the required amount of light, as opposed to being used to a maximum level 24 hours a day. LEDs are also controllable which a traditional light is not. It is therefore possible to link the lighting to lumen sensors so that the energy used to power the LED is just that required to bring the lighting to the appropriate level meaning during the daylight hours the lighting will not be fully on.

2.3 The Council appointed an energy consultant, ENGIE, to carry out a cost assessment of upgrading the light bulbs across Woodhouse Lane Car Park to LEDs. This assessment determined an initial cost estimate of £291,236.38 for the works, but a subsequent quote from LBS has brought this cost down to £240,853.50. Modelling assumed that this investment would be paid back in less than 5 years through savings in our energy bills. However in addition to this saving, LED lighting brings with it reduced maintenance costs and much longer lifecycles of bulbs, meaning annual savings are likely to be even higher than this figure in reality.

2.4 The Council has now secured funding approval from SALIX Finance Ltd for the works. SALIX is the body for providing and managing interest-free Government funding to the public sector to improve energy efficiency, reduce carbon emissions and lower energy bills. SALIX is funded by the Department for Business, Energy and Industrial Strategy and the Department for Education, and typically expects the loan to be repaid from energy savings within a 5 year period.

3. Main issues

3.1 The Woodhouse Lane Car Park LED lighting upgrade has been costed at £240,853.50 and will be funded through SALIX, and carried out by LBS. The technical assessment indicates a substantial saving in terms of energy consumption, cost and carbon emissions from the scheme's operation. These figures are based upon the savings that will be realised by simply replacing the current bulbs with efficient and controllable LEDs, aligned with PIRs and lumen sensors to ensure that lighting is only used when required. It is anticipated that the installation of LED lighting and sensors will deliver an estimated 85% overall saving in energy costs.

3.2 The total cost of electricity consumed at Woodhouse Lane Car Park in 2019/20 was £78,317 which equates to 557,845 kWh of energy and 142 tonnes of CO_2e. Based on these 2019/20 actual costs, an 85% reduction in consumption would deliver a financial saving of £66,569 per annum, a reduction in consumption of 474,168 kWh and a 121 tonne reduction in CO_2e emissions. This would equate to £332,845 in savings over 5 years, as compared to the proposed £240,854 SALIX loan and cost of the works.

3.3 However, although the latest forecast for 2020/21 is in line with the actual spend of £78,317 in 2019/20, the Woodhouse Lane electricity budget for 2020/21 has been set at £63,000. The table below therefore shows the position in respect of the current budget, and also models a sensitivity based on a slightly more conservative 80% level of energy savings.

Energy consumption reduction modelled	19/20 actual consumption		Projected annual consumption/cost based on 19/20 actual consumption		Annual repayment required (based on 5 years)	Total cost	2020/21 budget	Variance to 2020/21 budget
	kWh	£	kWh	£	£	£	£	£
Status quo	557,845	78,317						
85%			83,677	11,748	48,171	59,919	63,000	-3,081
80%			111,569	15,663	48,171	63,834	63,000	834

3.4 This shows that there is a small margin below the assumed 85% savings when the £63k budget is taken into account, with a breakeven point of just over 80%.

3.5 Beyond this initial scheme, the upgrade of Woodhouse Lane Car Park could potentially also go beyond switching its lighting to LEDs. There are opportunities which the Council could deliver in addition to these works which again could reduce its carbon footprint and improve the viability of the building moving forwards, turning it into an exemplar building in the context of the Climate Emergency.

4. Corporate considerations

4.1 Consultation and engagement

4.1.1 Corporate Finance, including Treasury Management, have been consulted, and their input is reflected in section 4.4 below.

4.1.2 Parking Services have been involved in the proposals and are supportive of the approach on the basis of the SALIX loan being repaid within 5 years from savings against the current energy budget.

4.1.3 LBS and Corporate Property Management have also been engaged, not just in terms of the delivery of the scheme, but also the ongoing maintenance required.

4.2 Equality and diversity / cohesion and integration

4.2.1 An equality, diversity, cohesion and integration screening assessment has been carried out for the scheme and there are no negative implications in these areas.

4.3 Council policies and the Best Council Plan

4.3.1 Sustainable Infrastructure sits as one of the Council's key priorities in its Best Council Plan. Our vision is to improve the resilience of the city's infrastructure whilst promoting a more competitive, less wasteful, more resource efficient, low carbon economy.

4.3.2 The delivery of energy efficient lighting to Woodhouse Lane Car Park will contribute to all of these priorities, reducing the council's carbon footprint and energy expenditure, and adapting more of our portfolio of buildings so as to be sustainable, modern and climate resilient. Therefore the scheme makes a clear contribution to delivering the Best Council Plan priorities.

Climate Emergency

4.3.3 As outlined above, the Council strives to promote a less wasteful, more resource efficient, low carbon economy. Upgrading Woodhouse Lane Car Park's lighting to LEDs will reduce its emissions, ensure the council saves on its annual energy bills, and assist it in achieving net zero carbon emissions by 2030. Specifically, technical advice has indicated that an 85% reduction in electricity consumption can be delivered through the refurbishment. This would deliver an annual reduction in consumption of between 474,168 kWh and a 121 tonne reduction in CO_2e emissions.

4.4 Resources, procurement and value for money

4.4.1 Funding for the scheme will be provided via SALIX Finance Ltd in the form of an interest-free loan, and will cover the full costs of the refurbishment works. This will be to the value of £240,853.50. Based on ENGIE's assessment, energy savings associated with the works are to a value of £66,569 per annum. Savings will be used to pay back the loan and therefore this will be paid back within five years, with all further savings being wholly retained by the Council. Sensitivities around these assumptions and how this relates to the relevant service budget is addressed in section 3 above.

4.4.2 This is an invest to save scheme, and the issues in terms of this borrowing are not considered material by LCC Treasury Management with SALIX offering 0% interest over the 5 year payback period. The Council has used SALIX funding for its street lighting LED replacement scheme, and Treasury Management are familiar with SALIX terms, and satisfied that this represents an acceptable funding route.

4.4.3 An injection into the capital programme is required in line with the value of the scheme, together with authority to spend, and a separate business case is to be provided to FPG.

4.4.4 Ongoing maintenance costs for the building following the works will be funded from the existing revenue budget. These costs are expected to be reduced from current levels following the refurbishment, as LED lighting requires less maintenance and less frequent replacement.

4.5 Legal implications, access to information, and call-in

4.5.1 The terms of the SALIX loan agreement are familiar to the Council based on previous schemes funded via SALIX.

4.5.2 There are some aspects of the SALIX terms that are deemed excessively onerous based on advice from the Commercial Legal team, and technically represent a risk if rigorously applied. However, through previous engagement with SALIX in relation to previous schemes, they have made clear that they would not intend to, and never have, enforced in relation to these specific terms, and indeed have been in dialogue with the Council about amending their terms in future to make them more appropriate to this type of public sector scheme.

4.5.3 Therefore, and given the relatively low value of this scheme and the favourable interest-free repayment terms from SALIX, the internal legal advice is that to proceed can be viewed as an acceptable level of risk.

4.5.4 There are no specific access to information implications. The decision is not subject to call-in.

4.5.5 Although the Council does not currently participate in the 'Park Mark' accreditation scheme, all works will be in line industry standards and legal requirements for lighting and safety within Car Parks, and would meet the requirements of the 'Park Mark' standard.

4.6 Risk management

4.6.1 A primary risk relates to the potential for savings to be less than modelled, thus preventing the full repayment of the SALIX loan within the required timescales. The figures assumed are taken from an independent external technical assessment, and the sensitivity modelled in section 3 above shows a small tolerance should savings come in below the assumed levels.

4.6.2 There is also the potential for issues to arise during the course of the works that result in increased costs for LBS. The project will be closely monitored and managed by LBS and SEAQ teams to ensure that the scheme is delivered within the costs quoted.

5. Conclusions

5.1 This report seeks approval for the upgrade of lighting at Woodhouse Lane Car Park to LEDs, which are one of the most energy-efficient lighting technologies available. The refurbishment will be funded through SALIX, a government body which manages interest-free loans to the public sector. A cost assessment has been provided thought external technical advice, which indicates that the cost of the works will be recouped within a five year period through energy savings. In addition to reducing the Council's energy bills, the proposed works will ensure that the car

park is more energy efficient and has a reduced carbon footprint, contributing to the Council's response to the Climate Emergency and its commitment to achieving carbon neutrality by 2030. There is scope for future works on the car park to include a solar canopy, green wall, and additional EVCPs, and it is recommended that the potential for these is investigated.

6. Recommendations

The Director of Resources and Housing is recommended to:

a) Approve the use of SALIX funding for the upgrade of lighting at Woodhouse Lane Car Park to LEDs (noting that approval of the Council's application to SALIX Finance Ltd for this scheme has now been received), with the Chief Financial Services Officer, under delegated treasury management powers, to conclude any matters in agreeing the terms of the loan to be paid back over 5 years to the value of £240,853.50;

b) Approve a £240,853.50 injection into the capital programme, and give authority to spend this sum, with the works to be delivered by the in-house provider, Leeds Building Services (LBS);

c) Note the intention to provide a separate business case to Finance Performance Group (FPG) for approval.

7. Background documents[1]

7.1 None.

[1] The background documents listed in this section are available to download from the council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.