

Report to: Policy and Resources Committee, 6th February 2024

Report of: Head of Property and Asset Management

Subject: SAVINGS PLAN - ST MARTINS GATE MULTI STOREY CAR PARK – LED LIGHTING RETROFIT

1. Recommendation

The Committee is recommended to:

- 1.1 Approve the business case for replacement LED lighting with motion sensors for St Martins Gate Car Park; and**
- 1.2 Recommend to Council that the Capital Programme is adjusted to include £55k funding for this project.**

2. Background

- 2.1 St Martins Gate Multi Storey Car Park is the largest consumer of electricity in the Council's portfolio. Although the original light fittings were replaced some years ago to save energy, the range of LED light fittings now available are even more efficient and reliable. Some of these fittings have been replaced in recent years in a rolling programme in the Council's Asset Management Programme. Controls have also been installed to switch off lighting above Level 1 in the car park between midnight and 6 am saving more electricity. This report recommends that the capital programme funds an acceleration of the replacement programme using LED light fittings with motion sensors. The savings generated are estimated to pay back the expenditure within 5 years.

3. Preferred Option

- 3.1 The preferred option is to replace the lighting on the top 3 floors of the car park (Floors 2, 3 and 4) with new LED fittings which will be motion sensor activated.
- 3.2 The new fittings will switch on at 6.00am as at present but rather than come up to full brightness they will be programmed to come up to 10% brightness. Each fitting will have its own integral proximity sensor which upon activation will bring the light up to full brightness for a period of 2 minutes after the activation. The light will though remain fully illuminated whilst there is still someone/something within range.
- 3.3 This replacement programme will significantly reduce electricity consumption further. It will also reduce ongoing maintenance as the existing fittings have been prone to failure.

- 3.4 The fittings on floor 1, where there is a greater amount of pedestrian and vehicular traffic, will not be replaced.
- 3.5 The lights over the ramps will still be maintained at full brightness for health and safety reasons as will the lights in the stairwells.

Calculation of Savings

- 3.6 At 2024/25 electricity prices payable by the Council, the annual cost of the car park lighting is £15,830 pa.

Table 1 Existing Fittings						
Floor	Number of Fittings Being Replaced	Consumption per Fitting (W)	Consumption per Floor (kW)	kWH per Day (18hrs)	kWH per Annum	Annual Cost @ 30p pkwh
Second Floor	122	25	3.05	54.9	20039	6,011
Third Floor	122	25	3.05	54.9	30039	6,011
Fourth Floor	77	25	1.93	34.65	12647	3,794
Total						£15,816 pa

- 3.7 It is estimated that the new fittings will be at full brightness: -

2nd Floor – 15% of the time

3rd Floor – 10% of the time

4th Floor - 5% of the time

When lights are not at full brightness they will revert to 10% brightness, until activated.

It is calculated that the annual consumption for the top 3 floors in the car park will reduce to £4,470 per annum and that the annual saving will be £11,344 pa.

Table 2 Post Project Implementation							
Floor	Number of fittings	Consumption per fitting (W) Full brightness/ 10% brightness	Estimated hours per day the fitting would be at 10% power	Estimated hours per day the fitting would be at 100% power	kWH per Day	kWH per Annum	Annual Cost @ 30p pkwh
Second Floor	122	36 / 3.6	15.3	2.7	18.58	6781	2,034
Third Floor	122	36 / 3.6	16.2	1.8	15.02	5482	1,644
Fourth Floor	77	36 / 3.6	17.1	0.9	7.23	2640	792
Total							£4,472 pa

3.8 On the basis of competitive quotations received, the cost of this project will be £55,000 including a contingency. The simple payback excluding the cost of borrowing is therefore 4 years 6 months.

4. Alternative Options Considered

4.1 The use of separate sensors covering clusters of fittings has been considered. This would however make the project more complicated and increase installation costs. A faulty sensor would also cause a number of fittings to fail, rather than just a single light.

5. Implications

5.1 Financial and Budgetary Implications

It will be necessary to revise the Capital Programme. The cost of borrowing £51k is approximately £4.5k pa over 15 years and the net annual saving is therefore estimated to be £6.8k p.a., a revised payback of 7.5 years.

5.2 Legal and Governance Implications

None.

5.3 Risk Implications

The proposed contract sum allows for a contingency.

5.4 Corporate/Policy Implications

The proposal is in support of the Council's plans for decarbonization and savings.

5.5 Equality Implications

None.

5.6 Human Resources Implications

None.

5.7 Health and Safety Implications

The lighting will be activated to full illumination when the sensors detect persons or vehicles in proximity. The proposals have been developed in liaison with the Car Parking service to be satisfied that there are no health and safety concerns and lighting over the ramps and within entrances and stairwells will be kept at full illumination. It is possible to alter the level of illumination if it is not considered to be bright enough and officers will keep the matter under review.

Officers have liaised with the British Parking Association (BPA) as the car park carries the BPA's Park Mark accreditation. According to the BPA, there are many other car parks where lighting operates on motion sensors and it is not aware of any personal safety issues; the proposals will not affect the car park's accreditation.

5.8 Social, Environmental and Economic Implications

The Council has purchased its electricity from certified renewable sources since 2019.

Ward(s):

Cathedral

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