



**Report to: Environment Committee, 19<sup>th</sup> July 2022**

**Report of: Head of Property and Asset Management**

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**Subject: POTENTIAL FOR INVESTMENT IN ADDITIONAL PHOTOVOLTAIC (PV) PANELS AT ST MARTINS GATE MULTI-STOREY CAR PARK**

**1. Recommendation**

**That the Committee:**

- 1.1 Approves the commissioning of an Outline Business Case for the installation of further Solar Panels at St Martins Gate car park.**
- 1.2 Allocates up to £20K from the Environmental Sustainability budget to fund the development of the Outline Business Case and delegates the procurement of the business case and associated surveys to the Corporate Director Homes and Communities in consultation with the Chair and Vice-Chair of Environment Committee.**
- 1.3 In due course receives the Outline Business Case for consideration.**

**2. Background**

- 2.1 In 2019 the Council installed a 50 KWp (kilowatt peak) solar panel system on the roof level (Level 5) of St. Martins Gate car park.**
- 2.2 Since the system became operational in late March 2019, the panels have produced 126,976 units of electricity. The amount of electricity generated is in line with the original feasibility study estimates and equates to a £15,237.12 reduction (at a rate of 12p per unit over this period) in the City Council's energy bills to date - approximately £5,000 pa. In addition, the City Council has received Feed in Tariff (FIT) payments of £5,213.21 from Government.**
- 2.3 The solar panels have also reduced the City Council's carbon footprint of 1306 tonnes pa by approximately 2.3 tonnes pa.**
- 2.4 The existing solar panels generate on average 42,000kwh of electricity per year, which helps to power the car park's 920 lights, four lifts and twelve electric vehicle charging points.**
- 2.5 However, the total electricity consumption for St. Martins Gate car park is approximately 260,000 kwh annually.**

- 2.6 There is sufficient space on the roof level and the open section of the fourth level to install approximately five times the number of existing solar panels, and increase the electricity generated to over 250,000 kwh pa.
- 2.7 This could reduce the Council's energy bills by over £40k p.a (at current prices of 20p per unit), and this amount will increase with rising energy prices.
- 2.8 Taking the cost of the first installation with allowances for construction cost inflation, it is estimated that the cost of adding a further 250 KWp array would be approximately £400,000, which would give a straight pay-back period of 10 years at current prices or shorter as energy costs continue to rise.
- 2.9 The City Council has been protected from the sharp rises in energy costs so far, due to the hedging and purchasing strategies of its procurer, West Mercia Energy. However, next year's price increases can be expected to bring the cost nearer the current market rate of over 40 pence per KWh, which will reduce the straight payback period considerably - potentially to as little as four to five years.
- 2.10 Due to the positioning of the steel columns for the proposed solar panels, a similar design to the existing array would lead to a loss of approximately 40 car parking spaces out of the car park total of 760 spaces. The roof level is usually occupied by only a few vehicles, but it is busy at weekends around Christmas which is the only time the car park is at full capacity. As a consequence, Car Parking Services estimate that the loss of income would be approximately £1120 pa. The full effect on the potential loss of car parking income will be explored as part of the feasibility study.

### **3. Preferred Option**

- 3.1 The next step to progress this potential project would be to procure a multi-disciplinary consultant to conduct a more detailed feasibility study and outline business case. This is estimated to cost up to £20k, including any further surveys, which could be funded from the environmental sustainability budget.
- 3.2 The process would be led by the Property Services team.
- 3.3 Any future installation of solar panels at the location would be subject to planning and other consents, which the feasibility study would investigate.
- 3.4 Options for part funding from Government sources are unlikely but would be fully explored as part of the feasibility report. Feed In Tariffs are no longer available for new schemes.

### **4. Alternative Options Considered**

- 4.1 Alternative options and/or the extent of the proposal will be considered in the feasibility report.

## 5. **Implications**

### 5.1 Financial and Budgetary Implications

The cost of the feasibility report is estimated to be up to £20K to include any further surveys required, outline design, cost consultancy and appraisals. Competitive quotes will be sought for this work.

The Environmental Sustainability reserve was set at £100k in 2021/22, to support delivery of the Council's Environmental Sustainability Strategy. Commitment against this budget is as follows

<b>Project</b>	<b>Allocation</b>	<b>Status</b>	<b>Decision date</b>
Community Grants	£20k	Approved(spent)	July 2021
Biodiversity management plans (Council land, Waterway corridors)	£20k	Approved	November 2021
Community Grants	£20k	Proposed	July 22
SMG solar PV Outline Business Case	£20k	Proposed	July 22
Wild about Worcester	£15k	Proposed	July 22
Environmental Summit	£5k	Proposed	July 22
Total	£100k	-	-

### 5.2 Legal and Governance Implications

There are no legal or governance implications in respect of this report.

### 5.3 Risk Implications

There are no risk implications at this stage in the development of the outline business case. Risks will be considered as part of the outline business case.

### 5.4 Corporate/Policy Implications

The plan aligns with Worcester City Council's Environmental Sustainability Strategy 2020- 2030 - to reduce carbon emissions in Worcester in order to work towards becoming a Carbon Neutral City by 2030.

The strategy states

"City Council buildings

We have already:

- Installed a solar photovoltaic (PV) array on the top deck of St Martin's Gate car park

We will:

- Increase the generation of renewable electricity and renewable heating on Council buildings and from Council premises where it is cost and environmentally effective to do so.

- Seek to make all buildings within the Council’s ownership or used by the Council as energy efficient as possible, investigating the costs and viability of carbon neutrality for each building.
- Assess all Council owned buildings, including those leased to others, to identify potential projects.”

#### 5.5 Equality Implications

There are no equality implications that have been identified in respect of this report.

#### 5.6 Human Resources Implications

There are no Human Resource implications in respect of this report.

#### 5.7 Health and Safety Implications

There are no Health & Safety implications in respect of this report but these aspects will be considered in the Outline Business Case.

#### 5.8 Social, Environmental and Economic Implications

As was recognised by Worcester City Council in July 2019, the world is now in the middle of a climate emergency. This strategy seeks to eliminate Worcester’s contribution to climate change by becoming carbon neutral.

The Ecologist’s view of the proposals for the original installation was that this was a low impact scheme with no obvious obstructions to impact the existing external fascia’s, roofline or any of the other opportunities in which birds usually find places to nest or bats to roost.

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**Background Papers:** None