

ITEM 6

Solar Energy Installation

Joint report of the Finance Portfolio Holder and Environmental Portfolio Holder

Recommended:

1. That the project to install a solar photovoltaic array at the Ganger Farm pavilion be added to the Council's Capital Programme.
2. That the cost of the project, estimated to be £60,000, be financed from the Capital Receipts Reserve.

SUMMARY:

- A review of Council-owned properties was carried out in 2015 to identify opportunities for energy efficiency.
- The review included the provision of an outline business case for the installation of a solar array at the pavilion on the Ganger Farm development (now known as King's Chase), although this building was still some way off construction at that point.
- The developer (Barratt David Wilson Homes) is now ready to begin the construction of the pavilion. Approval is sought to add a solar energy installation as part of the pavilion to the capital programme.

1 Introduction

- 1.1 The Council's Medium Term Financial Strategy (MTFS) sets the aim of working to a position where the Council is not dependent on the government's revenue support grant by 2020/21.
- 1.2 The workstream known as Project Enterprise has been established to progress this element of the MTFS.
- 1.3 Renewable energy is one of the areas that Project Enterprise has sought to invest in.
- 1.4 This report presents an opportunity for the Council to consider a solar energy installation on the pavilion at the Ganger Farm development.

2 Background

- 2.1 In the autumn of 2015, a review was carried out on a number of properties owned by the Council to establish where opportunities exist to generate savings through energy efficiency / green energy generation.
- 2.2 The review was carried out by Local Partnerships, an organisation jointly owned by HM Treasury and the Local Government Association.

- 2.3 Part of Local Partnerships' brief included the preparation of a high-level appraisal for the inclusion of a solar array as part of the construction of the pavilion at Ganger Farm, when it came to be built.
- 2.4 Local Partnerships' report concluded that a project was likely to be viable.
- 2.5 The developer, Barratt David Wilson Homes (BDW), was consulted about the possibility of adding a solar installation to the plans for the pavilion that they had already submitted. Again, this proved to be positive and the matter has been held, pending the appropriate time in the development programme, to be brought forward for Members' consideration.
- 2.6 In November 2017, BDW indicated that the development programme was heading towards the construction of the pavilion. As there had been a two-year gap since the original feasibility report was produced, Local Partnerships were asked to reprise their original report, taking into account any changes to the plans for the building and the financial implications of construction costs and feed-in-tariff rates.
- 2.7 Local Partnerships' updated report from November 2017 is shown in the Annex to this report.

3 Solar Photovoltaic Installation

The building

- 3.1 The building that the array will be installed on is a pavilion / community building that will service the on-site sports pitches and serve as a local community centre on the Ganger Farm development.
- 3.2 The Council will adopt the building following its construction in line with the s106 agreement for the site. Therefore, the Council will benefit from savings arising from electricity generated on site.
- 3.3 Should any lease be granted to a third party for the future management of the property, a private power agreement would be entered into, requiring the tenant to pay for any electricity used that was generated on site.
- 3.4 More details of the site are shown in the Annex.

Options

- 3.5 Local Partnerships were asked to evaluate two sizes of solar array installation. The first was an installation of 49kWp, to take advantage of a higher feed-in-tariff for installations below 50kWp; the second was for an installation of 70kWp, as an example of a larger installation close to the site's capacity.
- 3.6 A summary of the sizing; estimated cost; and potential returns of each of the options is shown in the Annex.

3.7 Whilst the smaller array is expected to generate a slightly lower net income per annum, it does show a higher return on investment and a shorter repayment period. There is also less risk attached to the smaller array with regard to exporting excess capacity back to the National Grid – see risk assessment section.

3.8 For the above reasons, BDW were asked to provide cost information related to an array of 49kWp capacity.

Assumptions

3.9 A number of assumptions were used in the development of the business case including the feed-in-tariff rate; electricity demand; the amount of electricity to be exported to the grid; and inflation levels.

3.10 These assumptions are summarised in the financial case on page 9 of the Annex.

4 Corporate Objectives and Priorities

4.1 The project will contribute to the Council's Corporate Plan priority of 'Enjoy the natural and built environment'.

4.2 The project will also help deliver the objectives of the Sustainability Framework, the document which sets out the Council's aims for promoting sustainable practices with a focus on environmental matters.

5 Options

5.1 There are two options available to the Council; either to approve the project's inclusion in the Capital Programme or to refuse it.

6 Option Appraisal

Option 1 – approval of solar installation (RECOMMENDED)

6.1 The project to install a solar array at the Ganger Farm pavilion is an opportunity for the Council to demonstrate its commitment to renewable energy and take advantage of this at a time when a new building is being constructed.

6.2 The most significant advantages of carrying out the installation during the main construction of the building are:

- The necessary equipment for the installation is already on site, reducing the expected cost of the installation.
- The required infrastructure can be incorporated into the building's fabric from the start, eliminating any negative impact on users during a later retro-fit.

6.3 It should be noted that this does mean that the installation process is not being directly managed by the Council; rather it is being managed by the developer on site.

- 6.4 The business case shows that the project is expected to make a modest income for the Council after allowing for maintenance and depreciation (see financial implications section, below).

Option 2 – do not approve solar installation

- 6.5 There would be no immediate impact on the Council should it decide not to proceed with the solar installation proposed in this report.
- 6.6 However, the business case does indicate that not proceeding would lead to a modest budget pressure in future years.
- 6.7 Not proceeding with the installation would mean that there would be no requirement for a private power agreement, should the Council choose to let the building to a third party in the future.

7 Risk Management

- 7.1 A risk assessment has been completed in accordance with the Council's Risk management process and the existing risk controls in place mean that no significant risks (Red or Amber) have been identified.
- 7.2 The Council will have to apply to the local grid operator for permission to connect the array to the grid. Given the relatively small size of the array and the low level of electricity expected to be exported to the grid, this is considered to be a low risk.
- 7.3 The business case is based on the estimated electricity usage at the pavilion once it is built. Any changes to the estimated demand at the site will affect the business case. For example, a reduction in the demand for electricity will result in a greater export to the grid and a lower return on investment.
- 7.4 Movement in any of the assumptions shown in the Annex could affect the return generated by the project. A sensitivity analysis shows there to be a reasonable degree of tolerance in the assumptions for the project to remain viable.

8 Resource Implications

- 8.1 The business case that was provided by Local Partnerships suggested a total capital cost of £46,000 plus a contingency of £9,000 (total £55,000). This was based on a desktop assessment of the total cost and was not tendered. It also assumed that the roof structure would be capable of holding the installation without additional cost.
- 8.2 The installation cost put forward by BDW is £60,000 and is broadly in line with Local Partnerships' business case. The total includes £6,200 for strengthening steelwork to ensure the roof's capacity for the solar array.
- 8.3 It is recommended that the budget for this project is included in the Capital Programme and financed from the Council's Capital Receipts Reserve. A summary of the financial implications is shown in the table below.

Capital Cost	60,000
Annual electricity savings from own generation	3,457
Annual electricity sales from export to the grid	435
Feed-in-Tariff income	1,733
Total income / savings	5,625
Less: annual maintenance	(350)
Net income / savings	5,275
Voluntary Reinvestment in Capital Receipts Reserve	3,000
Net revenue income	2,275

- 8.4 In order to maintain sustainable balances in the Capital Receipts Reserve, an amount equivalent to 5% of the capital cost (£3,000) would be transferred to the reserve each year from the savings generated. The remaining balance of £2,275 would be additional income to the Council.
- 8.5 The average rate of return on the project is expected to be 8.8%, which is reduced to 3.8% after the contribution to the Capital Receipts Reserve.

9 Legal Implications

Planning

- 9.1 BDW will be responsible for ensuring that the appropriate planning permissions are obtained and adhered to in the installation of the solar array. An amendment to the existing permission, to incorporate the solar array, will be submitted as soon as Council approval of the budget is received.

Procurement

- 9.2 The pavilion at Ganger Farm is being built by the developer as a requirement of a s106 agreement related to a larger development. To incorporate the installation of the solar array into the building it is necessary that the developer manages the procurement and installation of the panels and associated infrastructure as part of their overall build programme.
- 9.3 This means that the purchase price will not be tendered in accordance with the Council's Contract Standing Orders which would normally require an advertised tender or framework call-off for a contract of this value.

- 9.4 Although that will not be possible for this contract, the similarity between the independently prepared business case and actual budget does provide some assurance as to the reasonableness of the cost.

Power sale

- 9.5 In the event that the Council leases the building to a community association, sports club or other body in the future, it will be necessary to include a power purchase agreement in the lease.
- 9.6 This would require the tenant to purchase from the Council any electricity used which is generated by the solar panels on the site.

10 Conclusion and reasons for recommendation

- 10.1 This report sets out a business case for the approval of a solar PV installation at the Ganger Farm pavilion.
- 10.2 The project will provide both a financial return to the Council as well as helping to reduce the Council’s carbon footprint.
- 10.3 For the above reasons it is recommended that the project be added to the Capital Programme.

<u>Background Papers (Local Government Act 1972 Section 100D)</u>			
None			
<u>Confidentiality</u>			
It is considered that this report does not contain exempt information within the meaning of Schedule 12A of the Local Government Act 1972, as amended, and can be made public.			
No of Annexes:	1	File Ref:	N/A
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