

POLICY & FINANCE COMMITTEE
25 NOVEMBER 2021

SOLAR PV FEASIBILITY OUTCOME

1.0 Purpose of Report

- 1.1 To inform Members of the outcome of Solar PV feasibility consultancy on our corporate and leisure buildings.
- 1.2 To request budget allocation for the installation of Solar PV on selected council buildings.

2.0 Background Information

- 2.1 The Council declared a Climate Emergency at the Full Council meeting of 16 July 2019. The declaration did not include a date for net zero for the Council but recognised the UK Government had, the preceding month, agreed a target date of 2050.
- 2.2 The Carbon Trust were appointed to work alongside officers and members to develop a Climate Emergency Strategy and Action Plan. The Climate Emergency Working Group (CEWG) met on several occasions to review the data and findings from The Carbon Trust, as well as to seek out views from partners, businesses and local groups. The CEWG comprised of the Chairman, Vice-Chairman and Opposition Spokespersons of the Policy & Finance, Leisure & Environment, Economic Development, and Homes & Communities Committees. Members of the working group recommended the carbon net neutral target date of 2035 and the emissions reduction target which were recommended to Policy and Finance Committee in September 2020 and approved by Full Council in December of the same year.
- 2.3 The Council's Climate Emergency Strategy and Action plan were also approved at Full Council December 2020 and its Action Plan outlines recommended carbon reduction initiatives which the council can undertake in order to improve energy efficiency and reduce our overall carbon footprint. This includes the suggested installation of Solar PV in 2025. As part of this in recent months the Council have undertaken feasibility works in collaboration with specialist consultants to consider the intricacies of Solar PV installation on a range of our corporate and leisure sites in order to gain further understanding in relation to costs involved, payback, carbon savings and if installation is practical.
- 2.4 The Council developed a specification document determining the scope of works and outlined the requirement for the project to contain two well-defined Phases:

Phase One

Feasibility study containing design overview for solar photovoltaic installation and the development of site specific business cases containing advice on the most appropriate site by site solution.

Phase Two

Procurement support in the development of a specification document based on design elements from Phase One and the project management of the successful installer, ensuring the forecasted benefits from Phase One are realised.

3.0 **Proposals**

- 3.1 The Council have worked in collaboration with the Solar PV consultants to understand the intricacies involved in the installation of Solar PV on our corporate and leisure buildings. This included the Solar PV consultants to carry out Phase One of the Solar PV feasibility, this incorporated three defined stages in order to meet the council's specific objectives:

Stage 1: Preliminary Feasibility Study - A desk-top based analysis of the site(s) to provide a high-level analysis of the options and feasibility of installing solar PV.

Stage 2. Site Visit - The walk-over survey to provide an opportunity for consultants to gain a better understanding of the site(s) and any potential issues which may arise.

Stage 3. Design proposal - A detailed study providing clear advice on viable solar PV array options, installation considerations and to produce a package of works and comprehensive installation details including prospective installation costs.

- 3.2 This detailed approach was taken with the following council owned buildings:

- Southwell Leisure Centre
- Ollerton Dukeries Leisure Centre
- Newark Sports and Fitness Centre
- Blidworth Leisure Centre
- The Buttermarket
- Newark Beacon
- Castle House Offices
- Brunel Drive Depot
- National Civil War Centre
- Palace Theatre
- Vicar Water Visitor Centre
- Sconce and Devon Visitor Centre

- 3.3 The sites have been grouped with a recommendation and explanations for the groupings. Attached as **Appendix A** is a breakdown of all of the sites with financial costings and estimated annual carbon savings.

3.4 **Not Feasible to Progress**

- The Buttermarket
- National Civil War Centre
- Palace Theatre

The report developed by consultants identifies the above sites which are deemed unsuitable for the installation of Solar PV due to listed building status, position within a conservation area, availability of usable roof space for panels, roof condition, steep pitch of roof and localised shading. These buildings are unlikely to get planning permission for installation of Solar PV.

3.5 Not Recommended to Progress at this Time

- Blidworth Leisure Centre
- Sconce and Devon Park

Both of these sites fail to payback the investment required within the 25 year lifespan of the solar PV installation that would be used and their contribution to carbon reduction is minimal. However both buildings will be kept under review as the national picture changes, tariff's and grants may change over time and make these more viable propositions.

3.6 Not Recommended in the First Phase but to be Kept Under Review

- Castle House
- Brunel Drive

The Brunel Drive site is currently subject to a master planning exercise looking at the site in its entirety. This master planning will look at how further electrification of the fleet can be supported, how the site is currently used and the buildings on the site. As part of this master planning, future provision of Solar PV will be examined but it would not be prudent to undertake this now when the master planning is in progress.

Castle House will be considered in the future for the addition of further Solar PV. Castle House already hosts a large Solar PV array which means a sizable investment has already been made at the site which effects its economically viability. However, this site will be kept under review and as the national picture changes, tariff's and grants may change over time and make this a more viable proposition.

3.7 Recommended Sites for Solar PV Installations

- Newark Sports & Fitness Centre
- Southwell Leisure Centre
- Dukeries Leisure Centre
- The Beacon
- Vicar Water

All of the sites above are recommended for Solar PV installation. All of the sites payback in investment within the 25 year estimated lifespan of the installation and make a contribution to carbon reduction.

The 3 leisure centres which operate swimming pools are unsurprisingly by far our biggest users of power, therefore it can be seen in Appendix A that they also are the 3 sites which forecast the biggest financial annual surplus and in turn also represent the biggest opportunity for carbon reduction. The reduction in energy bills which Active4Today will receive will be reflected in a reduced management fee paid by the Council to Active4Today, the exact details will be worked up subject to approval to go ahead with this scheme.

The Beacon also represents a significant forecasted annual financial surplus and associated carbon reductions. The forecasted capital cost at this site is also subject to a bid to the Public Sector De-Carbonisation Fund, with the outcome due next year.

Vicar water offers a smaller forecasted annual financial surplus and associated carbon reduction but does payback within the 25 year lifespan of the installation. This site will also offers an ideal site with the green natural environment surrounding the building providing a perfect opportunity to demonstrate the council's commitment to carbon reduction in a visible and tangible way.

- 3.8 Each individual site has been investigated throughout the feasibility study in order to determine the best possible solution for Solar PV installation, with different installations recommended for different sites. The total capital investment required to install Solar PV on all those sites recommended in 3.7 above is £685,250.

In progressing with the installation of Solar PV at these sites a total of 425,000 kWh of electricity can be generated on an annual basis, in turn saving the Council 98 tCO₂e of carbon emissions annually; directly supporting our carbon reduction ambitions and carbon neutrality target of 2035.

Carbon reduction projects such as this enable the Council to demonstrate our commitment to creating a more sustainable, carbon conscious and environmentally friendly environment for our residents to live in. This project also allows the Council to set an example as a leader of place, encouraging local businesses to consider and undertake carbon reduction measures and prioritise energy efficiency improvements.

3.9 Next Steps

Subject to approval to proceed the following next steps would be undertaken:

The next phase of the project is for the consultants to develop a detailed specification document for installation and undertake a procurement exercise to appoint an appropriate contractor. The installation will then be project managed jointly by the consultant and the Council; the consultant will be responsible for ensuring all necessary consents, accreditations, permits and securing grid connection; in combination with the management of the risks associated with the project. The specialist consultant will also be responsible for ensuring that the proposed benefits identified in the first stage of the project are realised at the end of the Solar PV installation.

The Council will endeavour to continue to consider further Solar PV installations across our corporate and leisure buildings, the Environmental Policy and Projects Officer will monitor ongoing changes to incentives and apply for grant funding should national government make these available. The Council has recently submitted a bid for the Public Sector Decarbonisation Scheme Phase 3, the site of focus is The Beacon, should the Council be successful with this application then the Solar PV on site will be funded by the grant funding which will make a significant reduction in the level of capital required. Successful bidders will be notified in early 2022.

4.0 Equalities Implications

- 4.1 There are no equalities implications envisaged within the implementation of Solar PV on our corporate and leisure buildings discussed in this report.

5.0 Digital Implications

- 5.1 Whilst there has been no digital implications identified there may be associated software requirements relating to the output of the potential solar PV install. The implications shall be considered as deemed appropriate. Furthermore, the ICT & Digital Services team will work to with the Environmental Policy and Projects Officer to reduce the technology carbon footprint for Newark and Sherwood District Council.

6.0 Financial Implications (FIN 21-22 / 7389)

- 6.1 Please see the table below for the financial assessment of proposed sites to take forward. Full detail of all sites reviewed included on **Appendix A**.

	To Progress					
Narrative	The Beacon	Vicar Water	Newark S&F	Southwell LC	Ollerton Dukeries Leisure Centre	Total
Construction	85,050.00	47,550.00	228,800.00	185,050.00	116,300.00	662,750.00
Project Management	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	22,500.00
Capital Costs	89,550.00	52,050.00	233,300.00	189,550.00	120,800.00	685,250.00
Financing						
Annual MRP (25 year life)	3,582.00	2,082.00	9,332.00	7,582.00	4,832.00	27,410.00
Interest - 2.23%	1,996.97	1,160.72	5,202.59	4,226.97	2,693.84	15,281.08
	5,578.97	3,242.72	14,534.59	11,808.97	7,525.84	42,691.08
Cost of Maintenance	366.00	183.00	1,067.50	854.00	518.50	2,989.00
Annual Costs	366.00	183.00	1,067.50	854.00	518.50	2,989.00
Total Annual Costs	5,944.97	3,425.72	15,602.09	12,662.97	8,044.34	45,680.08
Annual Electricity Savings	7,274.40	3,609.95	19,701.50	15,761.20	9,569.30	55,916.35
Net Annual Surplus/Loss	1,329.44	184.23	4,099.41	3,098.24	1,524.96	10,236.27

- 6.2 In order to progress with the chosen sites we would require a capital allocation of £685,250 to cover both the construction and project management costs.
- 6.3 The financial assessment assumes that the project will be funded from borrowing over the 25 years of the project, the 25 years is a prudent assessment of the life of assets (25 – 40 years), the rate used within the financial assessment is 2.23%.
- 6.4 Using the forecasted energy savings and revenue costs produced by our Solar PV consultants we have been able to model the revenue implications of the project.
- 6.5 As well the annual savings from Electricity we have also included all financing costs and ongoing maintenance costs for the solar panels project. Over the 5 sites we estimate an annual surplus of £10,236.27.

- 6.6 The surplus of £10,236.27 is based on the full project been funded from capital. We currently have a bid for grant funding in place for the site at Beacon, we will be informed if successful early 2022. If we are this would increase the estimated annual surplus to £15,815.24 as we save £5,578.97 in financing costs per annum.
- 6.7 In order to realise these savings we will reduce the electricity budgets of the sites included within the proposals managed by The Council. For the sites managed outside of The Council the proposal is to facilitate this savings through a reduction in management fee, this will be evidence based on the actual savings generated.
- 6.8 Our consultants also advised that there is a potential impact on business rates. The Office of Valuations are to include provisions within their calculations of values for Solar Panels, this is dependent on size of the Solar Provision in place at each site. Costs have been estimated at £12,000 for the sites included above.
- 6.9 The date of the next Revaluation is unconfirmed currently but it is anticipated to be April 2023. They are carried out every five years but delayed due to COVID. The works should be completed by this date so there is potential for this increase to be applied from then. Ultimately NSDC would also benefit from any increase in Business rates.
- 6.10 There are also ways to mitigate these Business rate increases as advised by our consultants through a Special Purpose Vehicle. This will be given further consideration at the time if costs come to fruition, but given the relatively small impact of an estimated £12,000 it may not be prudent to pursue.

7.0 Community Plan – Alignment to Objectives

- 7.1 This project aligns with the Council's Community Plan objective to "Enhance and protect the district's natural environment". There is a specific activity under this objective to reduce the Council's carbon emissions by implementing an environmental strategy and carbon reduction action plan to achieve carbon neutrality. However, the Greening Newark and Sherwood Action Plan where our Climate Emergency objectives sit can also be considered to touch upon all objectives.

8.0 RECOMMENDATIONS that:

- a) the Council progress with Solar PV installation at the recommended sites as set out in paragraph 3.7 of the report;**
- b) the Council make provision for capital funding to cover these costs totalling £685,250; and**
- c) a further report be presented to the Committee to report on progress and carbon reduction as part of the Climate Emergency update.**

Reason for Recommendations

The Council declared a Climate Emergency in July 2019, to demonstrate our commitment to this the Council commissioned and approved our Climate Emergency Strategy and Greening Newark and Sherwood Action Plan in December 2020. Within the Greening Newark and Sherwood Action Plan Newark and Sherwood District Council has already agreed to consider the installation of Solar PV on our corporate and leisure buildings.

Background Papers

15 December 2020 – Full Council report

16 March 2020 – Leisure & Environment Committee report

For further information please contact Briony Ashton, Environmental Policy & Projects Officer, on Ext. 5357.

Matthew Finch

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