Batchworth Depot Solar PV Installation

26/01/2026

THREE RIVERS DISTRICT COUNCIL

POLICY AND RESOURCES COMMITTEE
26 January 2026

PART I

Batchworth Depot Solar PV Installation

1 Summary

1.1 This report proposes that additional rooftop 22 kWp solar PV array and a 10.36 kWh battery are installed on Batchworth Depot, funded by the council capital sustainability requiring an investment of £20,708 excluding VAT with a capital payback period of 5.1 years.

2 Recommendations

2.1 That:

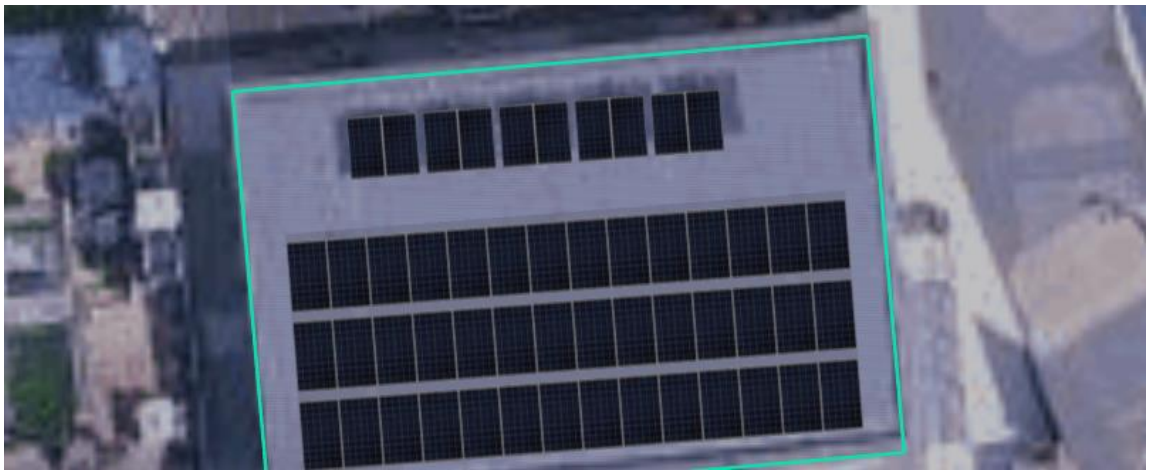
2.2 Policy and Resources Committee approve a 22 kWp solar array and a 10.36kWh battery to Batchworth depot offices, requiring investment of £20,708 excluding VAT with a capital payback period of 5.5 years.

3 Details

3.1 Three Rivers District Council continue to be committed to achieving net-zero by 2030 for our own, in-house emissions and to galvanise a net-zero district by 2045. Achieving net carbon zero and being climate resilient is one of four core pillars of the corporate framework. Residents endorsed this as a priority in the recent resident survey conducted in February-March 2024 when environment/climate change ranked as the third biggest concern for households.

3.2 During 2024/25 the Batchworth depot site consumed 23,518 kWh of electricity, creating 4.9tCO2e per annum. It has an electric heating system powered by a multi V5 VRF system which provides heating and cooling to the offices, storeroom, and mess room. There are two dual headed EV chargers. The depot has an existing 3.75 kWp array consisting of 10 * 375w panel, controlled by a 3.6kW Solis inverter.

3.3 **Solar Panel Design:** An additional solar array consisting of 42 * 530w panels, combined with one inverter which connect both the existing and new array, with a 10.36 kWh battery. The system will be secured to the roof via a ballast system with side panels to prevent bird nesting.



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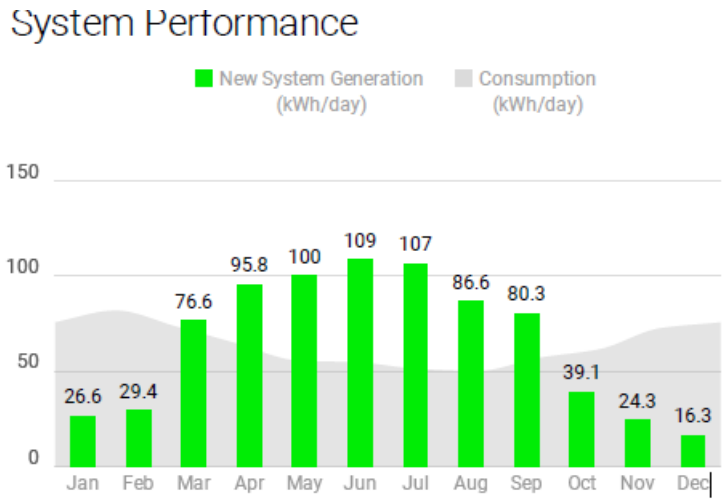
3.4 The system is estimated to generate 24,104 kWh per annum, providing the depot with the majority of its electrical need. 36% of the electricity generated will be exported. (N Power the current electric supplier has recently doubled their export rates from 4p to 8.5p per kWh). This amount exported can be included as a carbon offset.

3.5 Figure 1 below identifies how much electricity comes from the grid, and how much from the solar:



3.6 The structure of the roof is suitable to take the additional loading.

3.7 **Finance**: The system will cost £20,708 excluding VAT. It is estimated to reduce the depot electricity bill from ~£5,700 per annum to £2,504, and generate an export income of £745 per annum. The capital payback period is 5.5 years. Over the 25-year lifetime of the system an £8000 provision for maintenance and repair including one replacement of the inverter and battery. See Appendix 1 for the detailed Sustainability Fund Financial Appraisal.

3.8 **Environmental Benefits**: During 24/25 the depot electricity supply created 5.9 tCO2e per annum, the new array will remove 5t CO2e per annum, the same as the carbon absorbed by 1,046 trees planted, or 75t CO2e over its lifetime.

3.9 The embodied energy from cradle to grave for the construction and disposal of the equipment 13.3tCO2e paying back in 2.7 years.

3.10 **Procurement**: A mini competition took place in December. Three bids were received and the successful bidder was Carbon Rewind, whose design and price produced the optimal capital payback period.

3.11 **Planning:** This array will not require planning permission and will be installed under permitted development with prior approval requested.

3.12 **Warranties**: The JA Trina solar panels have a 25 year product warranty, with 30year 80% + performance. The Fox Inverter and Battery have 10 year manufacturer warranty; and Carbon Rewind provide a 2-year installation warranty for installation and workmanship.

3.13 We acknowledge that local government reform introduces uncertainty around the future ownership of the Batchworth Depot. However, with a capital payback period of 5.5 years, combined with the added benefits of improving the building's saleability and rentability, council officers suggest installation of additional solar PV is still a sensible investment.

4 Options and Reasons for Recommendations

4.1 The council has the option of not installing additional rooftop solar PV at Batchworth Depot. However, this option results in Strategic Risk 10: Failure to deliver net-zero carbon commitments - Impacts negatively on the council's ability to achieve net zero by 2030. The council will lose the opportunity to reduce £4,800 per annum from the depot's electricity bill.

5 Policy/Budget Reference and Implications

5.1 The programme to decarbonise council buildings is set out in the Climate Emergency and Sustainability Strategy (2023-2027).

5.2 This project will contribute to the achievement of

CP50: Reducing council operations carbon emissions.

5.3 Installing rooftop solar PV at Batchworth Depot will contribute to three key themes within the Corporate Framework (2023-2026):

5.3.1 *"Net Carbon Zero & Climate Resilient":* The rooftop solar PV will remove 3 tCO_2e annually and 75 tCO_2e over its lifetime. These emissions fall within Three Rivers Council's scope 2 emissions and thus fall within our commitment to decarbonise council buildings is set out in the Climate Emergency and Sustainability Strategy (2023-2027).

5.3.2 *"Provide responsive and responsible local leadership"*: By installing Solar PV arrays on council operated buildings, we are demonstrating to residents and businesses our commitment to clean energy and leading by example for others to follow suit.

5.3.3 *"Support and enable sustainable communities"*: The rooftop solar PV will help improve both the environmental and financial sustainability of Three Rivers District Council. By installing rooftop solar PV at Batchworth Depot the council

6 Financial Implications

6.1 It is recommended that existing council capital sustainability budget is used to fund this project. Thus, it is recommended that the Sustainability Financial Appraisal (appendix 1) be considered by the Policy and Resource Committee on 26th January 2026.

7 Legal Implications

7.1 The recommendations in this report are fully in line with the expectations on local authorities to take local action on climate change contained in the Climate Change Act 2008.

7.2 Legal support will be required to check the terms and conditions associated with the agreed bidder.

8 Equal Opportunities Implications

8.1 A Short Equality Impact and Outcome Assessment is described at Appendix 2.). There are no negative impacts arising from the project.

9 Staffing Implications

9.1 Officers within the Property and Facilities helped by the Climate Change team will be responsible for the installation.

10 Climate Change and Sustainability Implications

10.1 Appendix 3 details the sustainability impact assessment at Appendix 3 giving an average score of 3.47.

Climate and Sustainability Impact Assessment Summary	
Homes, buildings, infrastructure, equipment, and energy	3.40
Travel	N/A
Goods and Consumption	3.00
Ecology	N/A
Adaptation	N/A
Engagement and Influence	4.00
Total Overall Average Score	**3.47**

11 Community Safety Implications

11.1 None.

12 Public Health implications

12.1 None.

13 Customer Services Centre Implications

13.1 None.

14 Communications and Website Implications

14.1 Once installation is complete the website will be updated, and communication will be required.

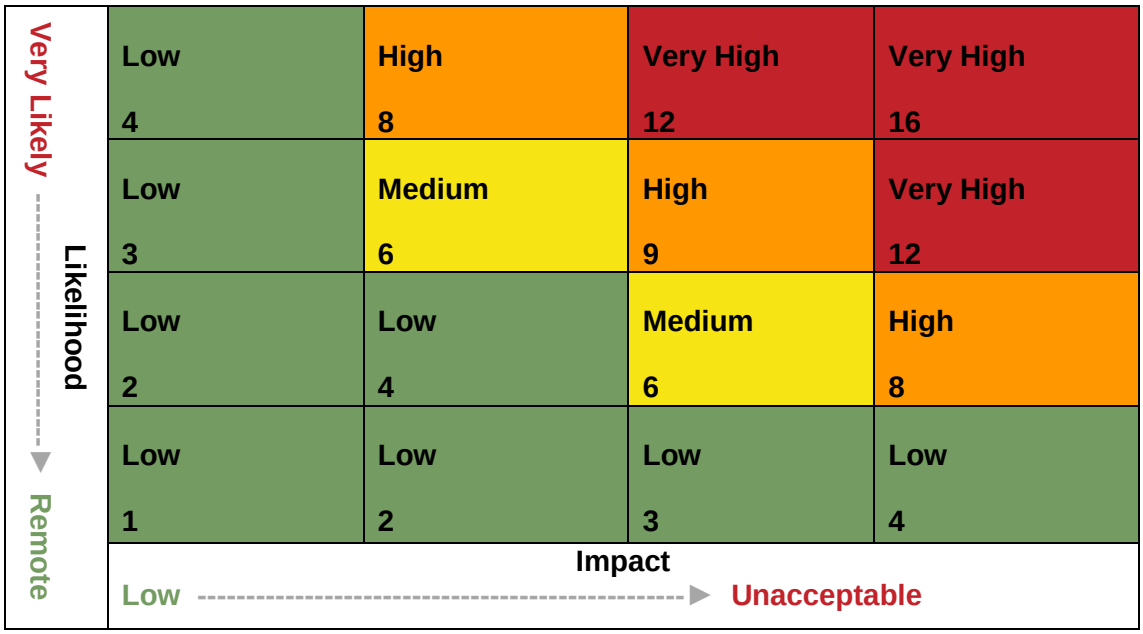
15 Risk and Health & Safety Implications

15.1 The Council has agreed its risk management strategy which can be found on the website at http://www.threerivers.gov.uk with the climate emergency listed as a strategic risk.

15.2 The subject of this report is covered by the Climate and Sustainability service plan. Any risks resulting from this report will be included in the risk register and, if necessary, managed within this/these plan(s).

Nature of Risk	Consequence	Suggested Control Measures	Response	Risk Rating
The Council fails to act to reduce its' CO2 emissions	The council net zero target of 2030, corporate framework net zero carbon theme and requirements of the Climate and Emergency Sustainability Strategy are unlikely to be met and importantly the council will not be addressing the climate emergency and thus will contribute further to the increase in global warming and its' consequences.	For the Committee to note and continue to provide a mandate for officers to progress decarbonisation projects.	Treat	6
Damage to Batchworth Depot Offices Roof and / or Building during Solar PV installation	As with any Solar PV installation, there is an inherent risk the panels may damage the roof either during or post installation due to the added weight and pressure on the roof and building structure.	This risk will be mitigated by carefully reviewing the panel mounting system and installation method the solar PV design recommends. The roof construction records will be reviewed to ensure suitability for the system proposed.	Treat	6

15.3 The above risks are scored using the matrix below. The Council has determined its aversion to risk and is prepared to tolerate risks where the combination of impact and likelihood scores 6 or less.



Impact Score	Likelihood Score
4 (Catastrophic)	4 (Very Likely (≥80%))
3 (Critical)	3 (Likely (21-79%))
2 (Significant)	2 (Unlikely (6-20%))
1 (Marginal)	1 (Remote (≤5%))

15.4 In the officers' opinion, of the new risks above, were they to come about, the following would seriously prejudice the achievement of the Strategic Plan and are therefore strategic risks. The management of strategic risks are reviewed by the Policy and Resources Committee.

Background Papers

APPENDICES / ATTACHMENTS

Appendix 1: Sustainability Financial Appraisal
Appendix 2: Short Equality Impact and Outcome Assessment
Appendix 3: Climate and Sustainability Impact Assessment

16.1

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