THREE RIVERS DISTRICT COUNCIL

Three Rivers House
Northway
Rickmansworth
Herts WD3 1RL

POLICY AND RESOURCES COMMITTEE

NOTICE AND AGENDA

For a meeting to be held in the Penn Chamber, Three Rivers House, Northway, Rickmansworth on Monday, 8 September 2025 at 7.30 pm

Members of the Policy and Resources Committee:-

Councillors:

Stephen Giles-Medhurst OBE (Chair)
Oliver Cooper
Stephen Cox
Steve Drury
Vicky Edwards
Rue Grewal
Philip Hearn
Sarah Nelmes (Vice-Chair)
Chris Lloyd
Chris Mitchell
Louise Price
Reena Ranger
Jon Tankard

Joanne Wagstaffe, Chief Executive
Friday, 29 August 2025

The Council welcomes contributions from members of the public on agenda items at the Policy and Resources Committee meetings. Details of the procedure are provided below:

For those wishing to speak:
Members of the public are entitled to register and identify which item(s) they wish to speak on from the published agenda for the meeting. Those who wish to register to speak are asked to register on the night of the meeting from 7pm. Please note that contributions will be limited to one person speaking for and one against each item for not more than three minutes.

In the event of registering your interest to speak on an agenda item but not taking up that right because the item is deferred, you will be given the right to speak on that item at the next meeting of the Committee.

Those wishing to observe the meeting are requested to arrive from 7pm.

In accordance with The Openness of Local Government Bodies Regulations 2014 any matters considered under Part I business only of the meeting may be filmed, recorded, photographed, broadcast or reported via social media by any person.

Recording and reporting the Council's meetings is subject to the law and it is the responsibility of those doing the recording and reporting to ensure compliance. This will include the Human Rights Act, the Data Protection Legislation and the laws of libel and defamation.

10. **South Oxhey Leisure Centre Solar Panels Business Case** (Pages 3 - 46)

General Enquiries: Please contact the Committee Team at committeeteam@threerivers.gov.uk

Three Rivers District Council

Policy & Resources Committee Report Outline Business Case for the Installation of Rooftop Solar PV at South Oxhey Leisure Centre

Date: 08/09/25

THREE RIVERS DISTRICT COUNCIL

Policy & Resources Committee Report
8th September 2025

PART I

Outline Business Case for the Installation of Rooftop Solar PV at South Oxhey Leisure Centre

1 Summary

1.1 This report proposes that rooftop solar PV is installed at South Oxhey Leisure Centre, funded by council capital budget and repaid through a Power Purchase Agreement[1] with Sports and Leisure Management Ltd (SLM).

1.2 A previous version of this report, based on an estimated cost of £118,421, was considered by the Climate Change, Leisure and Housing Committee on 2nd July 2025. This updated version of the report features an actual cost of £111,202 following the completion of a procurement process.

1.3 This report recommends that the Policy & Resources Committee approve the installation of rooftop solar PV at South Oxhey Leisure Centre as outlined in the Outline Business Case, which can be found in Appendix 1.

2 Details

2.1 Three Rivers District Council are committed to achieving net zero by 2030 for our own emissions and to inspire and enable 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 3rd biggest concern for households.

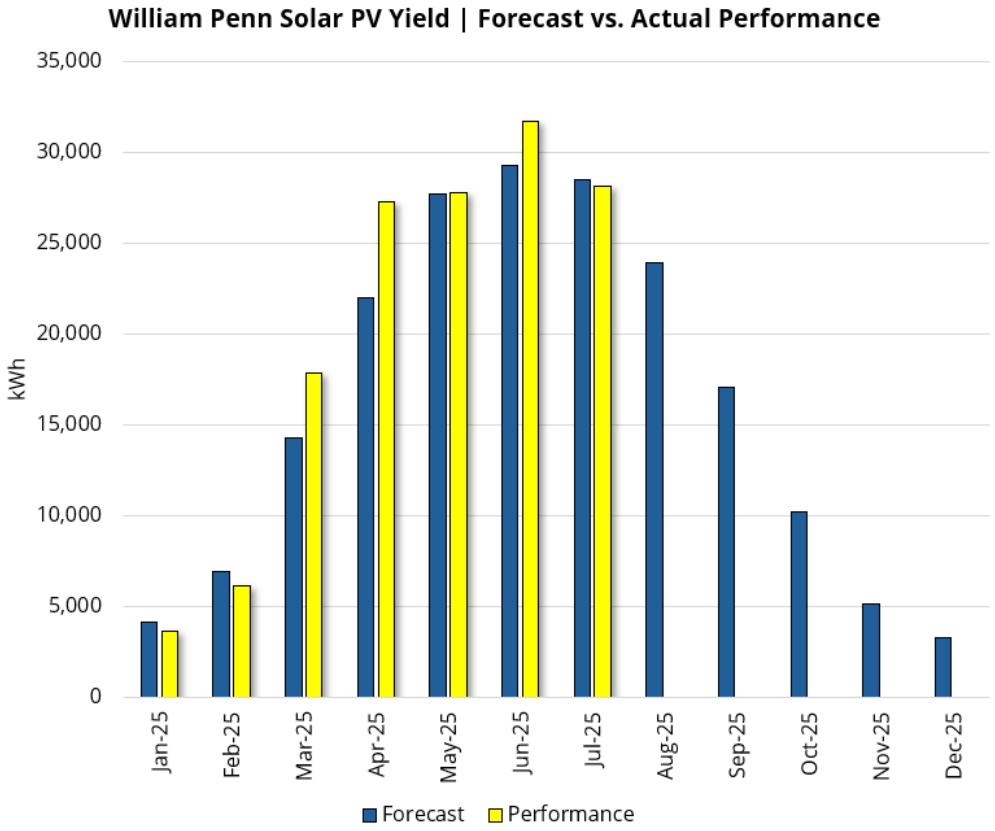
2.2 Most of the council's carbon emissions are emitted from two main sources 1) council buildings (including leisure centres) and 2) council vehicle fleet. To achieve net zero, the council must reduce carbon emissions from its vehicle fleet by ~850 tonnes per year by 2030 and reduce carbon emissions from its "core buildings" (excluding small buildings like pavilions) by ~838 tonnes per year by 2030.

2.3 In 2022, the Association for Public Service Excellence (APSE) conducted a survey of the council's core buildings to establish a baseline of emissions. The survey revealed that the core buildings emitted 942 tons (t) of carbon dioxide (CO_2) in the 2019/20 fiscal year. APSE also projected a trajectory towards net-zero based on the completion of a suite of building decarbonisation projects. One of the projects recommended by APSE was the installation of rooftop solar PV at South Oxhey Leisure Centre (SOLC).

2.4 Since then, several decarbonisation projects have been implemented (or planned) across the council estate, which are expected to result in savings of 104 tCO_2. Most recently, a 500-panel rooftop solar PV system was installed at William Penn Leisure Centre which by August 12th 2025 over this calendar year

[1] A **power purchase agreement (PPA)** is a **long-term contract** between an electricity generator and a buyer. In this agreement, the buyer agrees to purchase electricity at a pre-negotiated price for a specified duration, usually ranging from 5 to 20 years. The PPA outlines the terms of energy delivery and pricing, ensuring a stable revenue stream for the energy supplier.

has saved over £24,000 and 62 tonnes of CO2 and is performing 10% ahead of forecast at the end of May. See Figure 1.



2.5 The rooftop solar PV at William Penn Leisure Centre was funded by a grant from the Swimming Pool Support Fund and Sport England. The council also applied to Sport England for a grant for rooftop solar PV at SOLC, but our application was unsuccessful.

2.6 SOLC consumes 440,000 kWh of electricity per year and is one of the biggest electricity consuming buildings in the council estate. Therefore, the installation of rooftop solar PV would have a big impact on the council's efforts to become net zero by 2030.

2.7 As such, council officers have been working to 1) confirm the feasibility and cost of installing rooftop solar PV at SOLC and 2) exploring alternative potential fundings sources.

2.8 One potential funding source officers have explored is using council capital budget to fund the solar PV, repaid through a Power Purchase Agreement (PPA).

2.9 A Power Purchase Agreement (PPA) is a financial arrangement whereby the council would install and fund the solar PV and agree to sell SLM the solar electricity at a unit rate of £0.1393 pence per kWh which aligns to Schedule 18 (Utilities) of the leisure contract. PPA's are commonly used in conjunction with solar PV. Schedule 18 of the of Leisure Contract addresses risk arising from utility tariffs. The current rate of 13.93p is the original 11p rate agreed in Schedule 18 with indexation applied each year since 2018. This rate will increase each year with new indexation and will be reflected within the contract variation if the solar install goes ahead.

2.10 A PPA requires specialist legal advice to setup which will cost £2,900. Proper repair and maintenance (which would be the council's responsibility) is important.

2.11 The Council will need to procure a maintenance and repair contract to keep the solar PV operational. The projected cost of £1,000 per year this is likely to increase in line with the utility price indexation. At present SLM have sole responsibility for maintenance at South Oxhey Leisure Centre so this will also require a variation to the existing SLM contract.

2.12 The current Leisure Services Contract with SLM expires in 2038. A new price for the solar electricity will form part of the negotiations with the new Leisure Services Contract provider. A normal PPA unit rate is based on the market rate of electricity at the time the PPA is agreed. PPA unit prices are typically ~5p less than the market rate, to incentivise the use of a renewable tariff. The present open market price to supply William Penn is 20p, which would equate to a potential PPA rate of 15p/ kwh.

2.13 The Outline Business Case can be found in Appendix 1.

2.14 Solar PV Design

2.15 Following approval to proceed from the Climate Change, Leisure and Housing Committee on 2nd July 2025 a competitive tender process was completed, supported by Watford Borough Council.

2.16 The council received twenty-four tender proposals which were scored on quality (60%) and price (40%). The highest scoring proposal was submitted by Geo Green Power.

2.17 Geo Green Power are a Microgeneration Certification Scheme (MCS) accredited solar PV installer established in 2001 and based in Loughborough.

2.18 Geo Green Power previously installed a solar PV system at Whitwick & Coalville Leisure Centre in Leicestershire which is operated by SLM. SLM were asked for feedback and stated their experience of working with them was very positive and they support the appointment of Geo Green Power.

2.19 Geo Green Power have proposed a 145.60 kWp solar PV system comprising of 320 455w PV panels. The panels will be connected to 1 Solar Edge Invertor which will convert Direct Current (DC) electricity into mains electricity (AC).

2.20 Figure 2 identifies the roof area where the proposed solar PV system will be installed:

Figure 2 Proposal Solar PV Locations

2.21 The solar panels will be installed using the Van der Valk system which is a ballasted (non-penetrative) modular roof mounting system. Using the Van der Valk system will help avoid damage to the leisure centres roof.

2.22 More information on the proposed solar PV system and how it will be installed can be found in the Outline Business Case (Appendix 1).

2.23 The Geo Green Power proposal was competitive on price when compared to the other proposals. However, it scored higher on quality because it was the best technical solution when considering the council will be selling the solar electricity to SLM through a Power Purchase Agreement (PPA).

2.24 Under a PPA, the council will own the PV system and be responsible for its ongoing maintenance and repair. A PPA is a contractual arrangement between an energy provider and a buyer, and failure to properly maintain the system could lead to a contractual dispute between the council and SLM. To mitigate this risk, it is in the council's interest to adopt a solution that enhances reliability and reduces the likelihood of system failure. This may include installing high-quality equipment, securing extended product warranties, and/or entering into an annual maintenance and repair agreement.

2.25 The Geo Green Power proposal features high quality components backed by extended warranties (panels 30-years, invertor 20-years, optimizers 25-years, mounting system 20-years).

2.26 The proposal also features optimisers which make the panels touch-safe during maintenance or in the event of a critical incident and adds a rapid shutdown button also known as a "firefighters switch". Optimizers also add enhanced monitoring functionality which helps proactive maintenance.

2.27 Geo Green Power have also offered a free annual health check service for two years to ensure the panels are cleaned, maintained and operating at optimum efficiency. Thereafter we will secure a maintenance contract.

2.28 Outline Business Case Summary

2.29 The setup of a PPA requires specialist legal advice at a confirmed cost of £2,900. Proper repair and maintenance (which would be the council's responsibility) is important, failing to keep the solar PV operational could invalidate the PPA. While the Geo Green Power proposal features a free annual health check

service and extended equipment warranties, it is sensible to anticipate some additional maintenance and repair costs. Therefore, the council should anticipate solar PV maintenance and repairs projected to cost ~£1,000 per year. £5,400 has been allocated to cover the cost of procurement and installation.

2.30 The quoted cost of the rooftop solar PV is £102,902 and is predicted by Geo Green Power to generate PPA revenue of £17,823 per year.

2.31 Additionally, the council is forecasted to benefit from a £9,659 revenue saving per year from a reduction in the subsidy it pays SLM under the utility indemnification clause of the leisure contract.

2.32 The total cost of the solar PV is £111,202 (solar PV cost + consultancy cost + PPA setup cost) plus an ongoing repair and maintenance cost of £1,000 per year.

2.33 The total benefit to the council is therefore forecasted to be £26,482 per year. The capital financing costs are estimated to be £8,340 resulting in a net income of £18,141 per year. Excluding capital financing charges there is a payback period of 4.9 years after allowing for interest costs of £3,892 per year. The net present value is £314,262 after 25 years. Appendix 4 provides a detailed financial appraisal.

2.34 The inverter may need to be replaced once during the 25-year period, and cost £14,632 at today's prices, which is less than the revenue for one year. This would need a contingency from year 20 when the warranty expires.

2.35 The rooftop solar PV is forecasted to save 25.73 tCO_2 per year and 772 tCO_2 over its lifetime. The estimated embodied carbon of the rooftop solar PV is 86 tCO_2 resulting in a carbon payback period of 3.3 years.

2.36 The rooftop solar PV will be owned by the council and therefore will not be impacted by the end of the leisure contract with SLM. Additionally, SLM have agreed to the submission of this OBC and entering a PPA with the unit rate aligned to the leisure contract.

3 Options and Reasons for Recommendations

3.1 The council has the option of not installing rooftop solar PV at SOLC. 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.

3.2 The council has the option to wait until more grant funding becomes available. However, at the time of writing no grant funding is available. Please note that grant funding is often awarded through a competitive process, so even if eligible grant funding becomes available, there is no guarantee the council will be successful in its grant application.

3.3 The council explored and proposed to SLM the option of funding the rooftop solar PV at SOLC through a council loan to SLM and repaid through a management charge increase. However, SLM have stated their preferred approach is using a PPA rather than a council loan.

3.4 Due to the availability of capital budget for council building decarbonisation, the lack of available grant funding, SLM's preference for a PPA approach and that achieving net carbon zero is one of four core pillars of the corporate framework,

our recommended approach is to use capital budget to fund the solar PV at SOLC, repaid through a PPA with SLM.

4 Policy/Budget Reference and Implications

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

4.2 Installing rooftop solar PV at SOLC will contribute to 3 key themes in the Corporate Framework 2023-2026:

4.3 "Net Carbon Zero & Climate Resilient": The rooftop solar PV will remove 24.43 tCO_2 annually and 1,122 tCO_2 over it's lifetime. The council class carbon emissions from Leisure Centres as Scope 3 (indirect) emissions. Therefore, reducing SOLC's carbon emissions will support the council's commitment to be net zero by 2030.

4.4 "Provide responsive and responsible local leadership": By installing rooftop solar PV on one of our core buildings we will show residents and businesses that we are leading by example and will encourage others to follow.

4.5 "Support and enable sustainable communities": The rooftop solar PV will help improve both the environmental and financial sustainability of SOLC. SOLC is an important community building which rooftop solar PV will help make cleaner, greener and more resilient.

5 Financial Implications

5.1 It is recommended that existing council capital budget ringfenced for net zero projects is used to fund this project and therefore be considered by the Policy & Resources Committee on the 8th September 2025.

6 Legal Implications

6.1 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.

6.2 Installation of rooftop solar PV at SOLC will likely require a contract variation with SLM and may require modifications to the lease agreement with Hertfordshire County Council. Officers have reviewed the legal implications and do not believe they stop the installation of rooftop solar PV.

6.3 A contract will be required between the procured contractor and TRDC.

7 Staffing Implications

7.1 None

8 Equal Opportunities Implications

8.1 A Short Equality Impact and Outcome Assessment has been completed and can be found at Appendix 2. There are no negative impacts identified as arising from the project.

9 Climate Change and Sustainability Implications

9.1 A sustainability impact assessment can be found at Appendix 3 with an average total score of 3.00

Climate and Sustainability Impact Assessment Summary	
Homes, buildings, infrastructure, equipment and energy	3.50
Travel	N/A
Goods and Consumption	2.50
Ecology	N/A
Adaptation	N/A
Engagement and Influence	3.00
Total Overall Average Score	**3.00**

10 Community Safety Implications

10.1 None.

11 Public Health implications

11.1 None.

12 Customer Services Centre Implications

12.1 None.

13 Communications and Website Implications

13.1 Once installed the website will be updated, and communication will be required.

14 Risk and Health & Safety Implications

14.1 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.

14.2 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).

14.3

Nature of Risk	Consequence	Suggested Control Measures	Response	Risk Rating
The Council fails to act to reduce its' CO_2	The council net zero target of 2030, corporate framework net zero carbon theme and	For the Committee to note and continue to provide a mandate for officers to progress	Treat	6

emissions	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.	decarbonisation projects.		
Damage to the leisure centre roof due to solar PV installation.	There is an inherent risk with solar PV of damaging the roof either during installation or afterwards because of the additional weight.	The panel mounting system specified is non penetrative which helps avoid damage to the roof during installation. The solar PV installer will commission a structural roof survey before installation to confirm the roof can support the weight. The survey will be included in the total cost and will be shared with TRDC before installation.	Treat	6

14.4 In officer's opinion the risk that the council fails to act to reduce its emissions would prejudice the achievement of the Strategic Plan and therefore presents a strategic risk.

Recommendation

14.5 That:

The Policy & Resources Committee approve the installation of rooftop solar PV at South Oxhey Leisure Centre as outlined in this report and Outline Business Case.

The Policy & Resources Committee provide delegated authority to the Assistant Director For Environment to appoint the recommended solar PV installer at a cost of £102,902 (excl. VAT).

Report prepared by: Joanna Hewitson, Climate and Sustainability Strategy Officer

Background Papers

None

APPENDICES / ATTACHMENTS

Appendix 1: Outline Business Case for the Installation of Rooftop Solar PV at South Oxhey Leisure Centre
Appendix 2: Short Equality Impact and Outcome Assessment

Appendix 3: Climate and Sustainability Impact Assessment
Appendix 4: Sustainability Finance Pro Forma

THREE RIVERS DISTRICT COUNCIL

This page is intentionally left blank

Programme/Project Information	
Programme/Project/ Name	Installation of rooftop solar PV at South Oxhey Leisure Centre funded by council capital budget and repaid through a Power Purchase Agreement with Sports and Leisure Management Ltd.
Service/Team	Climate Change and Sustainability / Community Services (Leisure)
Outline Business Case Author (Name and job title)	Joanna Hewitson (Climate Change & Sustainability Strategy Officer)
Date Outline Business Case drafted	13/08/25
Project Sponsor (Name and job title)	Emma Sheridan, Associate Director for Environment
Programme or Project Manager (Name and job title)	Joanna Hewitson Climate Change & Sustainability Strategy Officer With support from Kelly Barnard

1. Executive Summary & Recommendations

1.1 This Outline Business Case (OBC) recommends that rooftop solar photovoltaic (PV) is installed at South Oxhey Leisure Centre (SOLC), funded by council capital budget and repaid through a Power Purchase Agreement with Sports and Leisure Management Ltd (SLM).

1.2 The feasibility of rooftop solar PV at SOLC has been evaluated from a technical, financial and legal (including planning permission) perspective. The feasibility study showed that the installation is feasible and that SOLC is a good candidate for rooftop solar PV.

1.3 A Power Purchase Agreement (PPA) is a financial arrangement whereby the council would install and fund the solar PV and agree to sell SLM the solar electricity at a unit rate of £0.1393 pence per kWh which aligns to Schedule 18 (Utilities) of the leisure contract. PPA's are commonly used in conjunction with solar PV.

1.4 A PPA requires specialist legal advice to setup which will costs £2,900. Proper repair and maintenance (which would be the council's responsibility) is important, failing to keep the solar PV operational could invalidate the PPA. Therefore, the council would seek to enter a solar PV maintenance and repair contract projected to cost ~£1,000 per year. At present SLM have sole responsibility for maintenance at South Oxhey Leisure Centre so this will also require a variation to the existing SLM contract.

1.5 To enable the procurement and installation of the solar PV, £5,400 of external consultancy is required.

1.6 The cost of the rooftop solar PV is £102,902 and is predicted to generate PPA revenue of £17,823 per year.

1.7 Additionally, the council is forecasted to benefit from a £9,659 revenue saving per year from a reduction in the subsidy it pays SLM under the utility indemnification clause of the leisure contract.[1]

[1] Based on 2023/24 electricity consumption and price figures supplied by SLM.

1.8 The total cost of the solar PV is £111,202 (solar PV cost + consultancy cost + PPA setup cost) plus an ongoing repair and maintenance cost of £1,000 per year.

1.9 The total benefit to the council is therefore forecasted to be £26,482 per year. The capital financing costs are estimated to be £8,340 resulting in a net income of £18,141 per year. Excluding capital financing charges there is a payback period of 4.9 years after allowing for interest costs of £3,892 per year. The net present value is £314,262 after 25 years. Please see Appendix 4 for a more detailed financial appraisal.

1.10 The rooftop solar PV is forecasted to save 25.73 tonnes of CO_2 (tCO_2) per year and 772 tCO_2 over its lifetime. The estimated embodied carbon of the rooftop solar PV is 86 tCO_2 resulting in a carbon payback period of 3.3 years.

1.11 The rooftop solar PV will be owned by the council and therefore will not be impacted by the end of the leisure contract with SLM. Additionally, SLM have agreed to the submission of this OBC and entering a PPA with the unit rate aligned to the leisure contract.

1.12 We recognise that there are logistical and administrative questions that need to be addressed. For example: how SLM will be charged for the solar electricity, where will the maintenance and repair budget reside and who will administer it, how will maintenance be scheduled with SLM, how will the existing contract be changed to reflect that the council will repair and maintain the solar PV. Officers are working to address these questions but do not consider them to be a blocker to project delivery.

1.13 The installation of solar PV at SOLC will complement the recent installation of the 500-panel rooftop solar PV at William Penn Leisure Centre funded by a grant from the Swimming Pool Support Fund and Sport England which at the time of writing has saved over £24,000 and 62 tonnes of CO_2 this calendar year.

2. Objectives

2.1 The objective of this project is to contribute to the council having a net zero building estate and to meet its ambitions, as set out in the approved Climate Change and Sustainability Strategy, where the council committed to achieving net zero by 2030 for our own operational emissions. An important element of the council's ambition to achieve net zero is the decarbonisation of council-owned buildings. The installation of rooftop solar PV at SOLC will support the council's corporate plan objective to achieve carbon net zero.

3. Background and context

3.1 In 2022, the Association for Public Service Excellence (APSE) completed energy surveys of the council's core buildings. The APSE surveys identified a range of potential projects that could reduce the carbon emissions of the buildings. APSE recommended the installation of rooftop solar PV at SOLC.

3.2 In 2023, a structural roof survey was completed which raised no concerns about the installation of rooftop solar PV at SOLC.

3.3 In 2024, a study was completed to evaluate the feasibility of rooftop solar PV at SOLC, compare rooftop solar PV to a potential car park solar canopy and identify which option should be prioritised. Rooftop solar PV was identified as the priority. Please note that the installation of rooftop solar PV at SOLC does not negate the opportunity for a solar canopy. Combined, both solar PV systems would only generate ~50% of SOLC's electricity needs. Additionally, discussions with the District Network Operator suggest that local electricity grid upgrades are not required for the installation of rooftop solar PV or a solar canopy.

3.4 SOLC has high and consistent energy demand which makes it a suitable consumer of rooftop generated solar electricity. SOLC has a projected demand for electricity imports of 546.4 MWh per year, which includes the current metered demand (440.0 MWh per year) and the prospective demand from 3 new fast EV charging points (106.4 MWh per year).[2] The building currently has a 14.25 kW rooftop solar array, which generates an estimated 17.4 MWh per year. 100% of this generation is self-consumed by the SOLC, behind-the-meter. Currently, 97% of electricity consumption is from the grid, and 3% from self-consumed rooftop solar generation.

3.5 Figure 1 and Table 1 show the rooftop solar PV design proposed by Geo Green Power following a procurement process. The red line identifies the existing rooftop solar PV.

Figure 1 Proposed Rooftop Solar Design

System	
PV Modules	320
Inverters	1
Optimizers	162
Installed DC Power	145.65 kWp
Benefits	
Annual Energy Production	133 MWh
Annual tCO_2 Saving	25.73

Table 1 Proposed Rooftop Solar Design

3.6 The cost of the rooftop solar PV system described above is £102,902 (excl. VAT).

[2] MegaWatt Hours

3.7 The feasibility of rooftop solar PV has been evaluated by scoring it across three different categories of potential constraint:

- Technical Constraints
- Financial Constraints
- Legal Constraints (including planning constraints).

3.8 Each potential constraint has been given a severity score. A lower score is a better score.

- 0 = Unconstrained, no technical constraint at the site.
- 1 = Slightly constrained, may limit viability or require mitigation.
- 2 = Constrained, may limit viability and will require mitigation.
- 3 = Highly Constrained, will limit viability and require mitigation.
- 4 = Very Highly Constrained, viability is poor and require significant mitigation.
- 5 = Completely constrained, site unviable due to constraint.

3.9 South Oxhey Leisure Centre is unconstrained for rooftop solar PV from a technical perspective. Table 4 provides an overview of the key technical constraints:

Constraint	Score	Description
Construction	1	A structural survey of the roof has been completed. The score assumes the roof can support the system without modification.
Shading	1	There is very limited shading from trees to the north-east of building. The impact to energy generation is not anticipated to be meaningful.
Access	1	A roof safety report suggests no floor to gutter scaffold is needed. A permanent ballasted handrail is installed on the north roof. Temporary edge protection will be required on the south roof.
Energy Networks	1	Due to high on-site demand, minimal export capacity will be required.
Annual Generation	2	The system is forecasted to generate ~23% of SOLC's energy needs.
Local Consumption Generation	1	~94% of the generated energy is forecasted to be used by SOLC.

Table 4 SOLC Technical Constraints Score

3.10 South Oxhey Leisure Centre is unconstrained for rooftop solar PV from a financial perspective. Table 5 provides an overview of the key financial constraints:

Constraint	Score	Description
Capital Cost	1	The capital cost of rooftop solar is forecasted to be relatively low but will be confirmed through an open and competitive tender process.
Capital Payback Period	1	The rooftop solar is forecasted to break even in 4.9 years.

Constraint	Score	Description
Carbon Savings (Lifetime, tCO_2)	2	The annual tCO_2 saving of 24.43 represents 3% of TRDC's annual reduction target for its core buildings (838 tCO_2) to achieve net zero.
Cumulative Net Income (25-year)	0	The Cumulative Net Income is £534,929 suggesting the solar PV will generate significant value of its 25-year lifetime.
Internal Rate of Return (IRR)	1	The IRR is 20% which is above the 3.5% discount rate recommended by the government's green book guidance.
Net Present Value (NPV)	1	The NPV is £313,528 after 25 years which suggests a sound investment.

Table 5 SOLC Financial Constraints

3.11 South Oxhey Leisure Centre is unconstrained for rooftop solar PV from a legal and planning perspective. **Error! Reference source not found.**5 provides an overview of the key legal and planning (under permitted development) constraints:

Constraint	Score	Description
Glare impact on neighbours	1	The Leisure Centre roofline is above the sightline of the neighbouring properties except for Alderwood House (owned by TRDC) located to the south-west.
Proximity to neighbours	0	Not applicable to rooftop solar.
Highways Alteration	0	Not applicable to rooftop solar.
Cultural Heritage	0	Minimal conservation area or other concerns at site.
Environmental Heritage	0	Not applicable to rooftop solar.
Title Issues \ Legal Covenants	0	While there is a complex lease agreement with Hertfordshire County Council, the Leisure Centre is owned by TRDC.

Table 6 SOLC Legal & Planning Constraints

3.12 South Oxhey Leisure Centre is a relatively unconstrained location and a good candidate for rooftop solar PV as shown in Table 6.

Constraints Summary	
Technical Constraints	8
Financial Constraints	6
Legal Constraints	1
Total Constraints Score	**14**

Table 6 Constraints Score Summary

3.13 It is recommended that that rooftop solar PV is installed at SOLC, funded by a Power Purchase Agreement with Sports and Leisure Management Ltd (SLM).

3.14 SLM have agreed to enter a PPA with the unit rate aligned to the leisure contract.

3.15 The leisure centre operator contract with SLM features a Utility Indemnification Clause whereby the council subsidise the leisure centres electricity costs when the price of electricity is high. In 2023/24, the council paid SLM £32,858 to subsidise the electricity costs for SOLC. If the rooftop solar PV had been installed the council would have paid ~£23,199, which is a saving of £9,659 to the council.

3.16 Table 6 shows the financial proposition of the solar PV based on the cost of £102,920 and using a PPA.

Indicative Capital Cost (inc consultancy and PPA fees)	£111,202
Forecasted PPA Annual Revenue (at £0.1393 per kWh)	£17,823
Council Annual Utility Indemnity Saving (Based on 23/24)	£9,659
Indicative Annual Repair & Maintenance Cost	£1,000
Annual Net Income before Capital Financing Costs	£26,782
Annual Capital Financing Costs	£8,340
Capital Payback Period (in years)	4.9
Net Present Value (25 years at 3.5% discount rate)	£314,262

Table 6 Financial Proposition

3.17 Please see Appendix 4 for a more detailed financial appraisal.

3.18 The inverter may need to be replaced once during the 25-year period, and cost £14,632 at today's prices, which is less than the revenue for one year. This would need a contingency from year 20 when the warranty expires.

3.19 Installing rooftop solar PV at SOLC will contribute to 3 key themes in the Corporate Framework 2023-2026:

3.20 "Net Carbon Zero & Climate Resilient": The rooftop solar PV will remove 24.43 tCO2 annually and 1,122 tCO2 over its lifetime. The council class carbon emissions from Leisure Centres as Scope 3 (indirect) emissions. Therefore, reducing SOLC's carbon emissions will support the council's commitment to be net zero by 2030. The programme to decarbonise council buildings is set out in the Climate Emergency and Sustainability Strategy (2023-2027).

3.21 "Provide responsive and responsible local leadership": By installing rooftop solar PV on one of our core buildings we will show residents and businesses that we are leading by example and will encourage others to follow.

3.22 "Support and enable sustainable communities": The rooftop solar PV will help improve both the environmental and financial sustainability of SOLC. SOLC is an important community building which rooftop solar PV will help make cleaner, greener and more resilient.

4. Options

4.1 Please see next page.

	Option 1 – Do Nothing	Option 2 – Recommended	Option 3 – Wait for grant funding
Description of the Option *A brief description including what is in and out of scope*	Do not install rooftop solar PV at SOLC.	Rooftop solar PV is installed at SOLC, funded by the council and repaid through a Power Purchase Agreement with SLM.	Wait for grant funding to become available to fund the rooftop solar PV at SOLC negating the need for the council to fund the solar PV.
Timing *Approximate start, end and delivery dates Include key milestones*	N/A	Corporate Management Team on 27/05/25. Joint Leadership Team on 05/06/25 (Virtual) Climate Change, Leisure and Housing Committee on 02/07/25. Solar PV Procurement – July 25 Policy and Resources Committee on 08/09/25. Sign PPA Agreement – Q4 2025 Solar PV Installation – Q1 2026	Timing unknown. At the time of writing no grant funding is available. William Penn Leisure Centre was funded by Phase 2 of the Swimming Pool Support Fund. However, there is no evidence that Sport England will offer another phase of this COVID-related grant. Please note that grant funding is often awarded through a competitive process, so even if eligible grant funding becomes available, there is no guarantee the council will be successful in its grant application.
Costs and resources Include capital and revenue costs Include staffing requirements	£0	£111,202 – forecasted solar PV and consultancy costs. £1,000 – forecasted annual repair and maintenance cost. Please note that the exact cost of the rooftop solar PV will be confirmed through contractor quotations consideration by the Policy & Resources committee.	£0
Cashable Benefits *High level benefits that will deliver savings against a specific budget code*	N/A	£17,823 - forecasted annual PPA revenue (at £0.1393 per kWh). £9,659 – forecasted council annual utility indemnity saving	None – until grant funding becomes available.

Non-Cashable Benefits *Benefits such as efficiency savings and increased customer satisfaction*	None	25.73 Scope 3 tCO_2 emissions saved per year. 772 lifetime Scope 3 tCO_2 emissions savings. Demonstrates best practice.	None – until grant funding becomes available.

Risks and Opportunities *High level risks and opportunities associated with the option*	Risks: Strategic Risk 10 – Failure to deliver net-zero carbon commitments - Impacts negatively on the council's ability to achieve net zero by 2030. Opportunities: None	Risks: Please note that this option is relatively low risk because the council and SLM would enter the PPA before installation of the solar PV. Additionally, PPA's are typically long-term contractual agreements, and it is envisaged the PPA would run until the end of the leisure contract and offer long-term security to both the council and SLM. There is an inherent risk with solar PV of damaging the roof either during installation or afterwards because of the additional weight. This risk will be mitigated by using a non-penetrative ballast mounting system. The solar PV installer will commission a structural roof survey before installation to confirm the roof can support the weight. The survey will be included in the total cost and will be shared with TRDC before installation. The property team will have ensure compliance with the design Proper repair and maintenance (which would be the council's responsibility) is important, failing to keep the solar PV operational could invalidate the PPA. Therefore, the council would seek to enter a solar PV maintenance and repair contract to cover this risk. This will be managed by Leisure contract officer. The solar PV could generate less electricity than forecast which would reduce the PPA revenue	Risks: No grant funding becomes available for which the project is eligible, or the council is not successful in its grant application resulting in: Strategic Risk 10 – Failure to deliver net-zero carbon commitments - Impacts negatively on the council's ability to achieve net zero by 2030. Opportunities: In December 2024 the UK Government published the Clean Power 2030 Action Plan. The mass deployment of solar PV is a key strategic action. While the Action Plan doesn't promise new, or more, solar PV grants, it is reasonable to assume that solar PV grants will be available in the future.

		to the council and increase the subsidy it pays to SLM under the utility indemnification clause. Alternatively, the solar PV could overperform forecast and generate more benefits than estimated in this OBC. A small risk also exists because of the complex building lease arrangements, especially when connected to Hertfordshire County Council, that could delay installation of the solar PV. Opportunities: The opportunity is for the council to install solar PV on one of the council's biggest electricity consuming buildings.	

5. Engagement with support services

5.1 The Community Services and Climate Change & Sustainability teams collaborated to create this OBC.

5.2 The Property & Asset Manager has been engaged with regards to the buildings lease agreement.

5.3 SLM have been engaged throughout the process of creating this OBC and have agreed to enter into a PPA, if approved by the council.

5.4 The Leisure Assets Manager has been a contributor to the business case and that team will manage the ongoing maintenance contract and invoicing requirements.

5.5 The property team are recruiting a Building Surveyor who will have requisite skills to oversee the design and installation.

6. Data Protection

6.1 Not required.

7. Equalities Impact

7.1 A Short Equality Impact and Outcome Assessment has been completed. There are no negative impacts identified as arising from the project.

8. Sustainability Impact

8.1 The Climate and Sustainability Impact Assessment has been completed as per the table below.

8.2 The project scores highly in the homes, buildings, infrastructure, equipment and energy section as it will improve energy efficiency and reduce grid electricity use.

8.3 The project scores highly in the goods and consumption section because solar PV panels can be recycled.

8.4 The project scores highly in the engagement & influence section as installing solar PV on a community building and point of local interest will demonstrate best practice.

8.5 All other sections are not applicable due to limited nature of the project.

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	3.00
Total Overall Average Score	**3.13**

9. Decision making and governance

9.1 This OBC has been reviewed by Associate Director for Environment and Director of Finance.

9.2 This OBC has been approved by:

9.3 Corporate Management Team on 27/05/25.

9.4 Joint Leadership Team on 05/06/25 (Virtual).

9.5 Climate Change, Leisure and Housing Committee on 02/07/25.

9.6 This OBC will now be considered by the Policy and Resources Committee on 08/09/25.

10. Next steps

10.1 If agreed:

- Recommend that the Policy & Resources Committee approve the installation of rooftop solar PV at South Oxhey Leisure Centre as outlined in this Outline Business Case and accompanying committee report.

Meeting where authority to proceed was obtained	Date of meeting

Short Equality Impact and Outcome Assessment (EIA)

EIAs make services better for everyone and support value for money by getting services right first time.

EIAs enable us to consider all the information about a service, policy or strategy from an equalities perspective and then action plan to get the best outcomes for staff and service-users[1] .They analyse how all our work as a council might impact differently on different groups [2]

They help us make good decisions and evidence how we have reached these decisions.[3]

See end notes for full guidance. For further support or advice please contact the Community Partnerships Team

Equality Impact and Outcomes Assessment (EIA) Template

First, consider whether you need to complete an EIA, or if there is another way to evidence assessment of impacts, or that an EIA is not needed [4]

Title [5]	Installation of Solar PV at South Oxhey Leisure Centre.	**ID No [6]**	CC003
Team/Service[7]	Climate Change and Sustainability / Community Services		
Focus of EIA [8]	The installation of rooftop solar PV at South Oxhey Leisure Centre. Installation of solar PV will reduce the leisure centres electricity consumption and help lower energy costs and carbon emissions.		
Assessment of overall impacts and any further recommendations [9]			
The project has no negative impacts on equality, diversity and inclusion. The project has a positive impact on equality, diversity and inclusion because it reduces utility costs for South Oxhey Leisure Centre helping improve the financial sustainability of a building used by the community.			
Potential Issues		**Mitigating Actions**	
There are no negative impacts identified as arising from the proposal.		Not Applicable	
Actions Planned [10]			
None.			

EIA sign-off: (for the EIA to be final an email must sent from the relevant people agreeing it or this section must be signed)

Equality Impact Assessment officer: Joanna Hewitson  **Date:** 17/01/2025

Equalities Lead Officer: Shivani Davé **Date:** 17/01/2025

Guidance end-notes

---

[1] The following principles, drawn from case law, explain what we must do to fulfil our duties under the Equality Act:

- Knowledge: everyone working for the council must be aware of our equality duties and apply them appropriately in their work.
- Timeliness: the duty applies at the time of considering policy options and/or before a final decision is taken – not afterwards.
- Real Consideration: the duty must be an integral and rigorous part of your decision-making and influence the process. • Sufficient Information: you must assess what information you have and what is needed to give proper consideration.
- No delegation: the council is responsible for ensuring that any contracted services which provide services on our behalf can comply with the duty, are required in contracts to comply with it, and do comply in practice. It is a duty that cannot be delegated.
- Review: the equality duty is a continuing duty. It applies when a policy is developed/agreed, and when it is implemented/reviewed.
- Proper Record Keeping: to show that we have fulfilled our duties we must keep records of the process and the impacts identified.

NB: Filling out this EIA in itself does not meet the requirements of the equality duty. All the requirements above must be fulfilled or the EIA (and any decision based on it) may be open to challenge. Properly used, an EIA can be a tool to help us comply with our equality duty and as a record that to demonstrate that we have done so.

[2] Our duties in the Equality Act 2010

As a council, we have a legal duty (under the Equality Act 2010) to show that we have identified and considered the impact and potential impact of our activities on all people with 'protected characteristics' (age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, sexual orientation, and marriage and civil partnership.

This applies to policies, services (including commissioned services), and our employees. The level of detail of this consideration will depend on what you are assessing, who it might affect, those groups' vulnerability, and how serious any potential impacts might be. We use this EIA template to complete this process and evidence our consideration

The following are the duties in the Act. You must give 'due regard' (pay conscious attention) to the need to:

- avoid, reduce or minimise negative impact (if you identify unlawful discrimination, including victimisation and harassment, you must stop the action and take advice immediately).
- promote equality of opportunity. This means the need to: – Remove or minimise disadvantages suffered by equality groups – Take steps to meet the needs of equality groups – Encourage equality groups to participate in public life or any other activity where participation is disproportionately low – Consider if there is a need to treat disabled people differently, including more favourable treatment where necessary
- foster good relations between people who share a protected characteristic and those who do not. This means: – Tackle prejudice – Promote understanding

[3] EIAs are always proportionate to:

- The size of the service or scope of the policy/strategy
- The resources involved
- The numbers of people affected
- The size of the likely impact

- The vulnerability of the people affected

The greater the potential adverse impact of the proposed policy on a protected group (e.g. disabled people), the more vulnerable the group in the context being considered, the more thorough and demanding the process required by the Act will be.

[4] When to complete an EIA:

- When planning or developing a new service, policy or strategy
- When reviewing an existing service, policy or strategy
- When ending or substantially changing a service, policy or strategy
- When there is an important change in the service, policy or strategy, or in the city (eg: a change in population), or at a national level (eg: a change of legislation)

Assessment of equality impact can be evidenced as part of the process of reviewing or needs assessment or strategy development or consultation or planning. It does not have to be on this template, but must be documented. Wherever possible, build the EIA into your usual planning/review processes.

Do you need to complete an EIA? Consider:

- Is the policy, decision or service likely to be relevant to any people because of their protected characteristics?
- How many people is it likely to affect?
- How significant are its impacts?
- Does it relate to an area where there are known inequalities?

How vulnerable are the people (potentially) affected? If there are potential impacts on people but you decide not to complete an EIA it is usually sensible to document why.

[5] Title of EIA: This should clearly explain what service / policy / strategy / change you are assessing

[6] I**D no:** The unique reference for this EIA. This will be added by Community Partnerships

[7] **Team/Service**: Main team responsible for the policy, practice, service or function being assessed

[8] **Focus of EIA**: A member of the public should have a good understanding of the policy or service and any proposals after reading this section. Please use plain English and write any acronyms in full first time - eg: 'Equality Impact Assessment (EIA)'

This section should explain what you are assessing:

- What are the main aims or purpose of the policy, practice, service or function?
- Who implements, carries out or delivers the policy, practice, service or function? Please state where this is more than one person/team/body and where other organisations deliver under procurement or partnership arrangements.
- How does it fit with other services?
- Who is affected by the policy, practice, service or function, or by how it is delivered? Who are the external and internal serviceusers, groups, or communities?
- What outcomes do you want to achieve, why and for whom? Eg: what do you want to provide, what changes or improvements, and what should the benefits be? • What do existing or previous inspections of the policy, practice, service or function tell you?
- What is the reason for the proposal or change (financial, service, legal etc)? The Act requires us to make these clear.

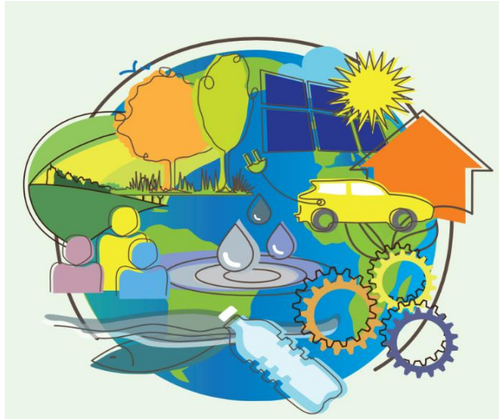
[9] **Assessment of overall impacts and any further recommendations**

- Make a frank and realistic assessment of the overall extent to which the negative impacts can be reduced or avoided by the mitigating measures. Explain what positive impacts will result from the actions and how you can make the most of these.
- Countervailing considerations: These may include the reasons behind the formulation of the policy, the benefits it is expected to deliver, budget reductions, the need to avert a graver crisis by introducing a policy now and not later, and so on. The weight of these factors in favour of implementing the policy must then be measured against the weight of any evidence as to the potential negative equality impacts of the policy,
- Are there any further recommendations? Is further engagement needed? Is more research or monitoring needed? Does there need to be a change in the proposal itself?

[10] **Action Planning:** The Equality Duty is an ongoing duty: policies must be kept under review, continuing to give 'due regard' to the duty. If an assessment of a broad proposal leads to more specific proposals, then further equality assessment and consultation are needed.

This page is intentionally left blank

Climate and Sustainability Implications Toolkit



THREE RIVERS DISTRICT COUNCIL

This toolkit is a self-assessment to help officers think about how their policies, projects, procurements, commissioning and services can align with Three Rivers' Climate Emergency and Sustainability Strategy. It also supports report authors to draft the environmental implications section on decision reports, now required on decisions over £50,000 and procurement strategy reports.

How to use the tool

The self-assessment is intended to help officers reflect critically on their project or service's environmental impact. We recommend you answer all the questions, even if the answer is 'not applicable'. It is a reflective tool, not a framework for approving or rejecting a decision, so it will work best if each question is considered honestly and carefully.
We envision this tool will be used early in the design of a project/policy/procurement to identify areas where environmental harms can be mitigated, and environmental benefits enhanced. If you would like advice, please discuss with your Head of Service, and contact the Climate and Sustainability Team if necessary.
Once you are happy that your proposal is optimised, then complete this form, and copy the results in each section in to your decision report (committee/synopsis report) where applicable.

The next tab presents a set of questions about the proposal on a range of sustainability criteria. Each answer is colour-coded to indicate its environmental impact as below:

Colour code	Recommendation
Dark green (4)	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.
Light green (3)	Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.
Yellow (2)	Some negative impacts sustainability. Recommendation to review these aspects and find mitigations where possible.
Red (1)	Considerable inconsistency with the council's sustainability objectives. Strong recommendation to review these aspects and find mitigations.
Grey (0)	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.

Once you've selected your answer in the "Impact" column (C), then give the relevant score in the "Score" column (E). Higher scores indicate more sustainable proposals.

These questions should be considered for services, goods and projects we procure as well as those we deliver directly. Delivery models, specifications and tender evaluation should be shaped to ensure our contractors are aligned with our sustainability and net-zero commitments.

Against each area, the toolkit presents prompts to highlight best practice suggestions and enable consideration of how negative impacts could be lessened on a project.

Climate and Sustainability Implications Toolkit designed and inspired by Jim Cunningham at Hammersmith and Fulham Council.

Version	Date
1	

TRDC Climate and Sustainability Impact Assesment

Score / Colour Code	Impact and Recommendation
Dark green (4)	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.
Light green (3)	Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.
Yellow (2)	Some possible negative impacts for sustainability. Recommendation to review these aspects and find mitigations where possible.
Red (1)	**Considerable inconsistency with the council's sustainability objectives. Strong recommendation to review these aspects and find mitigations.**
Grey (0)	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.

Guidance for use
Please answer all questions from the drop-down options in the 'impact' column (C), including 'not applicable' as needed.

Please email your completed copy of the form to Joanna.Hewitson@threerivers.gov.uk.

Key to the colour coding of answers is given at the top of the page.

Name of project/policy/procurement and date		Installation of Rooftop Solar PV at South Oxhey Leisure Centre (Business Case)
Brief description (1-2 sentences):		The proposal aims to install rooftop solar PV at South Oxhey Leisure Centre. *The assessment has been scored to show risk of not refinancing the climate change team (column E) , and the benefits (row f) of taking action to provide a finacially resileint workforce.*

Homes, buildings, infrastructure, equipment and energy

	Question	Impact (select from list)	Score (-1 to 4)	Justification or mitigation	Impact (select from list)	Revised Score (1-4)
1	**What effect will this project have on overall energy use (electricity or other fuels) e.g. in buildings, appliances or machinery?**	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4	Solar PV will reduce grid electricity use at South Oxhey Leisure Centre.	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4
2	**What effect will this project have on the direct use of fossil fuels such as gas, petrol, diesel, oil?**	Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.	3	Solar PV will support the transition from a gas boiler to a heat pump in the future.	Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.	3
3	**Does this project further maximise the use of existing building space? *E.g. co-locating services; bringing under-used space into use; using buildings out-of-hours***	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4	It uses the exisitng roof, optimising the exisitng infrstructure for energy generation	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4

4	**Will any new building constructed or refurbished be highly energy efficient in use? *(e.g. high levels of insulation, low energy demand per sq. m., no servicing with fossil fuels such as gas heating, EPC "A" or BREAM "excellent").***	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4	Solar PV will significantly improve the energy efficiency of the Leisure Centre by significantly reducing the requirement for grid electricity.	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4
5	**Does this make use of sustainable materials / unputs in your project? *E.g. re-used or recycled construction materials; timber in place of concrete***	Some possible negative impacts for sustainability. Recommendation to review these aspects and find mitigations where possible.	2	Solar PV panels are not made from recycled materials. However the embodied carbon used within the panels (25t) will be paid back within 4 years of operation	Some possible negative impacts for sustainability. Recommendation to review these aspects and find mitigations where possible.	2
6	**Does this use more sustainable processes in the creation of the project? *E.g. modular and off-site construction; use of electrical plant instead of petrol/diesel,***	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0
7	**Will this increase the supply of renewable energy? *e.g. installing solar panels; switching to a renewable energy tariff***	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4	Solar PV will increase the supply of renewable energy.	Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4
8	**Do any appliances or electrical equipment to be used have high energy efficiency ratings?**	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0
	Average Score		**3.50**			**3.50**

Travel

	Question	Impact	Score (0-4)	Justification or mitigation	Impact (select from list)	Revised Score (0-4)
9	Reducing travel: what effect will this project have on overall vehicle use?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable.	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0
10	Will this project use petrol or diesel vehicles or EV, hybrid?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable.	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0
11	Will this support people to use active or low-carbon transport? *E.g. cycling, walking, switching to electric transport*	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable.	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0

12	Will it be easily accessible for all by foot, bike, or public transport, including for disabled people?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable.	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0
13	Has the project taken steps to reduce traffic? *Using e-cargo bikes; timing activities or deliveries to be outside peak congestion times*	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable.	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0
	Average Score		**#DIV/0!**			**#DIV/0!**

Goods and Consumption

	Question	Impact	Score (0-4)	Justification or mitigation	Impact (select from list)	Revised Score (0-4)
14	Has this project considered ways to reuse existing goods and materials to the greatest extent possible, before acquiring newly manufactured	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
15	Does it reduce reliance on buying newly manufactured goods? *E.g. repair and re-use; sharing and lending goods between services or people; leasing or product-as-a-service rather than ownership*	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0
16	Does it use products and resources that are re-used, recycled, or renewable?	Some possible negative impacts for sustainability. Recommendation to review these aspects and find mitigations where possible.	2	all materials used within the solar panels can be recycled, but not quality is reduced so these reprcessed materials cannot be reused in solar panels	Some possible negative impacts for sustainability. Recommendation to review these aspects and find mitigations where possible.	2
17	Does it enable others to make sustainable choices within their lifestyles, or engage people about this?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
18	Is there a plan to reduce waste sent to landfill in manufacture?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0
19	Is the material used able to be re-used, re-purposed, or recyled at end of its life?	Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.	3	Yes. Solar PV panels can be recycled.	Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.	3
20	Has it taken steps to ensure any food it offers is more sustainable? *E.g. less and high-quality (high welfare) meat and dairy; minimises food waste;*	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
	Average Score		**2.50**			**2.50**

Ecology

	Question	Impact	Score (0-4)	Justification or mitigation	Impact (select from list)	Revised Score (0-4)
21	What effect does this project have on total area of non-amenity green/blue space? (Amenity green space = playing fields, play areas, sporting lakes	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0

22	Does the project create more habitat for nature? E.g. native plants, trees, and flowers	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
23	Does it make changes to existing habitats and have a negative impact on nature? *E.g. use of pesticides, reduced extent and variety of plants,*	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
24	Does it help people understand the value of biodiversity, and encourage residents to support it in their private and community spaces?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
	Average Score		**#DIV/0!**			**#DIV/0!**

Adaptation

	Question	Impact	Score (0-4)	Justification or mitigation	Impact (select from list)	Revised Score (0-4)
25	Does any planned project, construction or building use include measures to conserve water?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
26	Does anythe project , consider how to sustainably protect people from extreme weather?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
27	Has any planned building work or infrastructure considered how to mitigate flood risk? *E.g. Sustainable Drainage Systems (SuDS); de-paving*	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
28	Does any planned infrastructure or building work increase the overall footprint of hard surfacing? (as opposed to green or permeable surfacing)	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
29	Has the project considered its own resilience to future extreme heat, flood risk, or water shortage?	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area,	0	Not Applicable	Neutral or not applicable. Recommendation to consider how benefits could be achieved in this	0
	Average Score		**#DIV/0!**			**#DIV/0!**

Engagement and Influence

	Question	Impact	Score (0-4)	Justification or mitigation	Impact (select from list)	Revised Score (0-4)
30	Does this project raise awareness and understanding of the climate and ecological emergency, and the steps that people can take?	Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.	3	By installing rooftop solar PV on one of our core buildings we will show residents and businesses that we are leading by example and will encourage others to follow	Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.	3
	Average Score		**3**			**3**
	Total Overall Average Score		**3.00**			**3.0**

Now assesment is compelete copy and paste box into your business case, committee report. (under environmental implications 6).Whole assesment can be an appendix. Procurement tenders are expected to submit complete report with application.

Climate and Sustainability Impact Assesment Summary	
Homes, buildings, infrastructure, equipment and energy	3.50
Travel	#DIV/0!
Goods and Consumption	2.50
Ecology	#DIV/0!
Adaptation	#DIV/0!
Engagement and Influence	3.00
Total Overall Average Score	**3.00**

List 1		List 2	List 3
Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4	No	No
Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.	3	To some extent	N/A
Some possible negative impacts for sustainability. Recommendation to review these aspects and find mitigations where possible.	2	N/A	
Considerable inconsistency with the council's sustainability objectives. Strong recommendation to review these aspects and find mitigations.	-1		
Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0	Yes	Yes

Neutral or not applicable. Recommendation to consider how benefits could be achieved in this area, but otherwise proceed.	0		
Strong positive impacts for sustainability. Recommendation to proceed as is with this aspect.	4		
Some positive impact for sustainability. Recommendation to further enhance this aspect where possible and proceed.	3		
Some possible negative impacts for sustainability. Recommendation to review these aspects and find mitigations where possible.	2		
Considerable inconsistency with the council's sustainability objectives. Strong recommendation to review these aspects and find mitigations.	-1		

This page is intentionally left blank

Sustainability Fund Financial Appraisal

Project Name	**South Oxhey Leisure Centre Rooftop Solar PV (2025)**						
Project Description	**Installation of a 145.65 kWp solar PV system comprising of 320 455w PV panels onto the roof.**						
Investment Required	**£111,202**						
Benefits of Project	**The solar PV system will reduce grid electricity costs and carbon emissions.**						
Expected useful life of asset created (years)	**25**						
Financing Cost Interest Rate (PWLB 20 yer rate)	**5.63%**						
Discount rate for NPV (Treasury Red book)	**3.50%**						
	Year 0 £000	**Year 1** £000	**Year 2** £000	**Year 3** £000	**Year 4** £000	**Year 5** £000	**Subsequent Years** £000
Initial Investment							
Equipment	£102,902.0						
Costs of Installation	£0.0						
Project Management	£0.0						
Other Costs 1 (PPA Support)	£2,900.0						
Other Costs 2 (Consultancy Support)	£5,400.0						
Total Investment	£111,202.0						
Annual Costs							
Maintenance and cleaning		£1,000.0	£1,000.0	£1,000.0	£1,000.0	£1,000.0	£1,000.0
Total Costs		£1,000.0	£1,000.0	£1,000.0	£1,000.0	£1,000.0	£1,000.0
Income							
Income Stream 1 (PPA Revenue)		£17,823.0	£17,823.0	£17,823.0	£17,823.0	£17,823.0	£17,823.0
Income Stream 2 (Indemnity Clause Contribution Reduction)		£9,659.0	£9,659.0	£9,659.0	£9,659.0	£9,659.0	£9,659.0
Total Income		**£27,482.0**	**£27,482.0**	**£27,482.0**	**£27,482.0**	**£27,482.0**	**£27,482.0**
Net Income before Capital Financing Costs		**£26,482.0**	**£26,482.0**	**£26,482.0**	**£26,482.0**	**£26,482.0**	**£26,482.0**
Capital Financing Costs							
Interest		£3,892.1	£3,892.1	£3,892.1	£3,892.1	£3,892.1	£3,892.1
Minimum Revenue Provision		£4,448.1	£4,448.1	£4,448.1	£4,448.1	£4,448.1	£4,448.1
Revenue Budget Impact		**£18,141.9**	**£18,141.9**	**£18,141.9**	**£18,141.9**	**£18,141.9**	**£18,141.9**
Net Present Value							**£314,262.3**
Capital Payback Period (Years)							**4.9**

NPV

	0	1	2	3	4	5	6
Investment	-111202						
Net income		26482	26482	26482	26482	26482	26482
	-111202	26482	26482	26482	26482	26482	26482
NPV	£314,262.29						

7	8	9	10	11	12	13	14	15
26482	26482	26482	26482	26482	26482	26482	26482	26482
26482	26482	26482	26482	26482	26482	26482	26482	26482

16	17	18	19	20	21	22	23	24
26482	26482	26482	26482	26482	26482	26482	26482	26482
26482	26482	26482	26482	26482	26482	26482	26482	26482

25

26482
26482

This page is intentionally left blank