Oversight and Governance
Chief Executive's Department
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Published 28 February 2023

GROWTH AND INFRASTRUCTURE OVERVIEW AND SCRUTINY COMMITTEE – SUPPLEMENT PACK

Wednesday 1 March 2023
5.30 pm
Warspite Room, Council House

Members:
Councillor Riley, Chair
Councillor Coker, Vice Chair
Councillors Goslin, Hendy, Holloway, Hulme, Lugger, Noble, Partridge, Poyser, Salmon, Tippetts and Tofan.

Members are invited to attend the above meeting to consider the items of business overleaf.

This meeting will be webcast and available on-line after the meeting. By entering the Warspite Room, Councillors are consenting to being filmed during the meeting and to the use of the recording for the webcast.

The Council is a data controller under the Data Protection Act. Data collected during this webcast will be retained in accordance with authority's published policy.

For further information on attending Council meetings and how to engage in the democratic process please follow this link - Get Involved

Tracey Lee
Chief Executive

Growth and Infrastructure Overview and Scrutiny Committee

4. Chair's Urgent Business **(Pages 1 - 28)**

To receive reports on business which in the opinion of the Chair, should be brought forward for urgent consideration.

Growth and Infrastructure Overview and Scrutiny Committee

PLYMOUTH CITY COUNCIL

Date of meeting:	01 March 2023
Title of Report:	**Chelson Meadow Community Solar - Construction Loan**
Lead Member:	Councillor James Stoneman (Cabinet Member for Climate Change and Governance)
Lead Strategic Director:	Anthony Payne (Strategic Director for Place)
Author:	Paul Elliott
Contact Email:	Paul.elliott@plymouth.gov.uk
Your Reference:	
Key Decision:	Yes
Confidentiality:	Part I - Official

Purpose of Report

This business case seeks to secure an agreement to provide £16.3 million on the capital funding programme in order to provide a long term finance loan to Chelson Community Solar for the construction of Chelson Meadow solar farm. This is following the approval of the in principle business case for the Chelson Meadow Solar Farm in October 2022.

Recommendations and Reasons

It is recommended that:

1. Committee supports the business case being considered at cabinet.

Alternative options considered and rejected

If an external finance provider needed to be found it would delay the building of the solar farm, and the subsequent benefit that flow from this, by at least 12 months. This is due to the time taken to do the due diligence with an external provider and the constrained times of year the solar farm can be constructed.

The Council would miss the opportunity to secure a debt margin of approximately £1.3m if it does not provide the finance for the construction of the solar farm.

Relevance to the Corporate Plan and/or the Plymouth Plan

Directly feeds into the priority ‘A green sustainable city that cares about the environment’.

Implications for the Medium Term Financial Plan and Resource Implications:

The solar farm as a whole provides the opportunity to generate an income over the lifetime of the asset (up to 30 years). It also provides an opportunity for The Council to purchase the electricity generated, this will guarantee and provide certainty over its electricity costs over the long term. The loan in isolation will generate £1.3m of debt margin for the Council.

Financial Risks

The key risk is that Chelson Community Solar defaults on its repayments to the Council. This is mitigated by the ability to accurately forecast the solar farms power generation (and the income that flows from this). This forecasting has completed by leading external experts which provides confidence with regards to its accuracy. The business case within the appendix contains more detail on risks and mitigation.

Carbon Footprint (Environmental) Implications:
Hugely beneficial and positive impact in reducing the Council's carbon emissions predicted to be 60% of carbon emissions and providing 75% of the Council's electricity needs.

Other Implications: e.g. Health and Safety, Risk Management, Child Poverty:
** When considering these proposals members have a responsibility to ensure they give due regard to the Council's duty to promote equality of opportunity, eliminate unlawful discrimination and promote good relations between people who share protected characteristics under the Equalities Act and those who do not.*
H & S risks will be dealt with as part of the construction process. The conditional planning approval ensured that due regard was given to the impact of the solar farm on the city.

Appendices
**Add rows as required to box below*

Ref.	Title of Appendix	**Exemption Paragraph Number** (if applicable) *If some/all of the information is confidential, you must indicate why it is not for publication by virtue of Part 1of Schedule 12A of the Local Government Act 1972 by ticking the relevant box.*						
		1	2	3	4	5	6	7
A	CMCS Construction Loan Business Case							

Background papers:

**Add rows as required to box below*

Please list all unpublished, background papers relevant to the decision in the table below. Background papers are unpublished works, relied on to a material extent in preparing the report, which disclose facts or matters on which the report or an important part of the work is based.

Title of any background paper(s)	**Exemption Paragraph Number** (if applicable) *If some/all of the information is confidential, you must indicate why it is not for publication by virtue of Part 1of Schedule 12A of the Local Government Act 1972 by ticking the relevant box.*						
	1	2	3	4	5	6	7

Sign off:

Fin	DJN.22.23.392	Leg	MS/1/00001233/28.02.23	Mon Off	Click here to enter text.	HR	Click here to enter text.	Assets	Click here to enter text.	Strat Proc	Click here to enter text.

Originating Senior Leadership Team member: Anthony Payne

Please confirm the Strategic Director(s) has agreed the report? Yes

Date agreed: 14/02/2023

Cabinet Member approval: Councillor James Stoneman - email

Date approved: 20/02/2023

CAPITAL INVESTMENT BUSINESS CASE

Chelson Meadow Community Solar - Construction Loan

EXECUTIVE SUMMARY

The Executive Summary is a short summary of the Business Case and should be the last section you complete, this will enable you to extract or only the key facts from relevant sections i.e. 'project on a page'. The summary is a 'snapshot' of the business case which will need to tell the story and sell the proposal.

The Council and Plymouth Energy Community have an approved planning application to build a 13MW solar farm on the ex-landfill site at Chelson Meadow.

The solar farm creates the following opportunities for the Council:

- To reduce the Council's carbon emissions by approximately 60%, with 75% of the current electricity need being met by renewable energy.
- To protect the Council against energy price increases and volatility over a 20 year period through a Virtual Power Purchase Agreement with the solar farm.
- To future proof the Council against potential policy and legislative change relating to carbon emissions.
- To create a 50/50 joint venture with Plymouth Energy Community to build, own, and manage the solar farm. This will result in 50% of any surplus income returning to the Council.
- To generate an income over just under £1million over the life of the solar farm through a lease on the land which will be paid annually.
- To generate an income by offering construction finance and long-term debt to the project. By borrowing at PWLB rates and loaning onwards to the joint venture on commercial terms, the Council's debt margin would be up to c£1.3million over the life of the project.

This business case seeks to secure an agreement to provide £16.3 million on the capital funding programme in order to provide a long term finance loan to a joint venture for the construction of Chelson Meadow solar farm.

SECTION 1: PROJECT DETAIL

Project Value (indicate capital or revenue)	£16,373,236	**Contingency (show as £ and % of project value)**	5%
Programme	Low Carbon	**Directorate**	Place
Portfolio Holder	James Stoneman	**Service Director**	Paul Barnard
Senior Responsible Officer (client)	Kat Deeney	**Project Manager**	Paul Elliott
Address and Post Code	Ballard House	**Ward**	Plymstock Radford

Current Situation: *(Provide a brief, concise paragraph outlining the current situation and explain the current business need, problem, opportunity or change of circumstances that needs to be resolved)*

The in-principle business case for the construction of the solar farm at Chelson Meadow was approved in October 2022. This set out the 3 key elements in which the Council needs to be involved to make the project viable. These are:

1. Provide a long-term loan to the joint venture to enable construction and subsequent operation of the solar farm.
    - *This enables the Council to make a finance margin – by capturing the value between the rate the Council borrow at, and the increased rate the Council lend to the joint venture at on commercial terms.* At current rates t*he value of this is estimated to be £1.3m over 20 years.*

2. Create a joint venture with Plymouth Energy Community (PEC) to run and manage the solar farm.
    - *This enables the Council to benefit from a share of the surplus generated by the joint venture..*

3. Enter into a Virtual Power Purchase Agreement with Chelson Community Solar.
    - *The solar farm can provide locally generated green power equivalent to 75% of the council's electricity needs. By signing a long-term Virtual Power Purchase Agreement (VPPA) with the joint venture the Council will gain long-term security on energy prices as well as provide security of income for the project - giving additional confidence on the projects ability to repay finance loaned to the project. This provides the Council significant opportunity to hedge against long-term energy price increases as well as reduce its carbon emissions. This could be realised from Q2. 24/5 if construction commences in 2023.*

This business case considers the first point regarding providing a long-term loan to the project.

Proposal: *(Provide a brief, concise paragraph outlining your scheme and explain how the business proposal will address the current situation above or take advantage of the business opportunity)* **and** *(What would happen if we didn't proceed with this scheme?)*

There is an opportunity for the Council to provide long term finance for the project to enable construction and subsequent operation. Finance agreements must be in place for March 2023 at the very latest in order for construction to commence in 2023. A decision is therefore required as to whether the Council wishes to provide the loan.

The basic principle of the opportunity here is that the Council secures the finance from the PWLB at a rate (currently 5.5%) and then provide onward finance to the JV at a higher rate for the lifetime of the loan. This mechanism enables the solar farm to be built as well as generating an income from the debt margin. The table below sets out how a debt margin of more than £1.3 million could be made on a long-term debt offer over the life of the project.

Table 1 – illustration of income through providing finance to the project

Project cost	£16,373,236
Interest rate paid to PWLB	5.5%
Interest rate paid by JV	6.1%
PWLB loan term/type	20 years - annuity
Term of JV loan	20 years Year 1 – interest only during construction 15% Repaid by community share offer
Debt margin made by Council	£1,370,000

The above illustrates the income potential from the Council providing long-term finance to the scheme. It is worth noting that the Council have previously provided finance in a similar way to Plymouth Energy Community, which enabled the successful construction and completion of the solar farm at Ernesettle.

The above table has been populated with input from external technical experts, who have been in discussion with Council finance colleagues. Following a tender evaluation exercise a ceiling build cost of £16.3 (including contingency) has been calculated.

The loan will be structured in such a way that benefits the project, but also works within the financial mechanisms of PCC. The key points below illustrate this:

- The council can borrow from the PWLB at 5.5%
- The whole loan is offered at 6.1% to the Joint Venture.
- The first 12 months of the loan to the Joint Venture is interest only.
- 15% of the debt is repaid by PEC from a community share offer. PEC have an excellent track of raising finance via this method.

The preferred contractor has provided a construction programme which sees the commissioning of the site in July 2024 and uses a split construction phase over 15 months. The logic here is to complete as much of the works in the summer/autumn of 2023 including civils, structure install and below ground cabling. This is to avoid heavy ground works during the wettest months - and to comply with planning environmental planning conditions. Remobilisation then commences in April 2024 with the solar farm operational by 12th July 2024.

If this business case is taken in isolation, it is forecast to provide a debt margin income of £1.3m over the lifetime of the 20 year loan. However, as referenced above, the Council can achieve a far greater return and maximum benefit if this business case by entering into the land lease, the joint venture, and the power purchase agreement.

The provision of a loan on this basis is bound by financial legislative controls. The principal on being that the loan rate to CCS needs to reflect current market conditions. Finance colleagues have had significant input into this discussion and are comfortable that a loan rate of 6.1%. is an acceptable rate to reflect the market.

This business case seeks a commitment from the Council to provide a loan to Chelson Community Solar. The decision to sign the loan agreement will be delegated to the S151 officer and only occur on completion of the following:

- the submission of a detailed final report which includes the forecast net present value of each year in regards to the VPPA. This will provide increased confidence in the joint venture's ability to make the repayments.
- A risk workshop with Ernst and Young to ensure the Council is fully sighted on the potential risks and mitigation surrounding the agreement before signing.
- Receiving legal advice that the loan is compliant with subsidy control law (state aid).

The paper is being brought forward on the basis this is a loan on market terms but advice is being sought to confirm this and ensure compliance with subsidy control rules. Any decision to grant the loan will be subject to ensuring that the loan will be in compliance with subsidy control rules.

The above points will demonstrate the Council has undertaken significant due diligence on its decision regarding the virtual power purchase agreement.

Milestones and Date:		
Contract Award Date	Start On Site Date	Completion Date
March 2023	April 2023	July 2024

SECTION 2: PROJECT RISK, OUTCOMES AND BENEFITS					
Risk Register: *The Risk Register/Risk Log is a master document created during the early stages of a project. It includes information about each identified risk, level of risk, who owns it and what measures are in place to mitigate the risks (cut and paste more boxes if required).*					
Potential Risks Identified			*Likelihood*	*Impact*	*Overall Rating*
Risk	Increasing Construction costs over 15-month period		Medium	High	Medium
Mitigation	• Detailed illustrative cost breakdown of materials / equipment already provided by preferred contractor. • Use of QS to develop upper cost estimate for construction. • Contingency included within loan ask to cover unforeseen circumstances.		Low	Low	Low
Calculated risk value in £ (Extent of financial risk)	£0 (covered in contingency)				
Risk	Timely construction.		Medium	High	Medium

Mitigation	• Initial review carried out of construction partner programme for viability. • Programme workshop with expert consultant partners to refine programme for deliverability early in construction partner appointment process • Split construction period increases ability to absorb any slippage in construction works and allows for parts ordering delays • Beginning parts ordering early in spring 2023 • Using established project team including owners engineer and contract PM support to manage efficient schedule	Low	Low	Low
Calculated risk value in £ (Extent of financial risk)	£0				
Risk	Joint Venture defaults on payments – the business case for the solar farm does not stack up and its income it insufficient to meet its costs	Medium	High	Medium
Mitigation	• Solar farms are a tried and tested technology with known and predictable performance. • The financial model to assess viability of the business case has been developed and tested by an experienced team. • The option for the Council to sign up to a Virtual Power Purchase Power agreement with the joint venture provides in-house certainty over the ability for the joint venture to repay. • The council is an equal shareholder in the joint venture with an inherent ability to manage project performance alongside PECR who are experienced in solar farm performance management • PECR resourced appropriately to carry out day to day management of solar farm asset once constructed • EPC Wrap construction contract ensures performance of solar farm with warranties and damages requirements on construction partner if needed • Procure sufficiently well-resourced O&M contract to keep solar farm in good repair • Have a sufficiently well resourced team to secure the best prices for power sale from the solar farm	Low	Low	Low
Calculated risk value in £ (Extent of financial risk)	£0				
Risk	Planning conditions are not able to be discharged and construction spend (loan financed) has already begun	Low	Medium	Medium
Mitigation	• Planning conditions are deemed to be achievable by the project team. • Early engagement with planning team • Appointment of expert ecologist support • Re-engagement of flood risk specialist	Low	Low	Low

	• EPC contractor made accountable for relevant planning conditions. • Sufficient project team resource allocated to planning team condition discharge • Active engagement with Environment Agency – early engagement in foundation testing approach			
Calculated risk value in £ (Extent of financial risk)	£1.5million			
Risk	Council do not sign VPPA	Medium	Medium	Medium
Mitigation	Plan A • Using Ernst&Young as expert consultancy support to design VPPA process that works for the council. • Ensure reconciliation mechanism design allows council to manage risks of power purchase in an acceptable way. • Use of QS to develop upper cost estimate for construction allowing the creation of an upper cost estimate for the required strike price • Shared open book workstream to establish required strike price. Plan B • Seek alternative power sale agreement from the market. • Keep strike process as low as possible by keeping loan and construction costs low	Low	Medium	Medium
Calculated risk value in £ (Extent of financial risk)	£0			
Risk	CLP Envirogas do not sign tripartite agreement stopping project progression	Medium	High	Medium
Mitigation	• Extensive process of establishing agreement starting with HoT based understood CLP requirements • Taking liability from CLP from impact of installing solar farm on land where they already hold a business tenancy (i.e. any harm CLP cause the solar farm will be recovered from the councils share of the profit share agreement with CLP) • Proactive partnership working with CLP during project design stage	Low	High	Medium

Outcomes and Benefits
List the outcomes and benefits expected from this project. *(An **outcome** is the result of the change derived from using the project's deliverables. This section should describe the anticipated outcome)*

(A **benefit** is the measurable improvement resulting from an outcome that is perceived as an advantage. Benefits are the expected value to be delivered by the project, measurable whenever possible)	
Financial outcomes and benefits:	**Non-financial outcomes and benefits:**
• Long term loan generates debt margin of £1.3 m generated for the council • Commencement of construction possible in 2023 resulting in: o Short term energy bill savings for the Council should the Council decide to sign upto a Virtual Power Purchase Agreement	• Unlocks the ability for the Joint Venture to • 3,300 t/CO2 saved per year of operation • Potential to reduce the Council's carbon emissions by 60%.

Low Carbon	
What is the anticipated impact of the proposal on carbon emissions	Saving of 3,300 t/CO2 per year
How does it contribute to the Council becoming Carbon neutral by 2030	If the Council choose to utilise a virtual purchase power agreement with the joint venture, this will meet 75% of the council's current electricity demand. Overall this will reduce the Council's CO2 emissions by up to 60%.
Have you engaged with Procurement Service?	Yes
Procurement route options considered for goods, services or works	The initial procurement activity has been completed by Plymouth Energy Community on behalf of the project team. Now that the formation of the joint venture has been approved, the Joint Venture will be the 'employer' for the appointed contractor.
Procurements Recommended route.	External procurement
Who is your Procurement Lead?	External procurement
Is this business case a purchase of a commercial property	No
If yes then provide evidence to show that it is not 'primarily for yield'	N/A
Which Members have you engaged with and how have they been consulted *(including the Leader, Portfolio Holders and Ward Members)*	• Growth and Scrutiny Committee , and Audit and Governance committee briefings arranged for 23rd Feb 2023. • Project is on Leaders fwd plan. • Planning committee briefed and consulted. • Site visit and briefings for Environment portfolio holder.

SECTION 4: FINANCIAL ASSESSMENT
FINANCIAL ASSESSMENT: *In this section the robustness of the proposals should be set out in financial terms. The Project Manager will need to work closely with the capital and revenue finance teams to ensure that these sections demonstrate the affordability of the proposals to the Council as a whole. Exact amounts only throughout the paper - not to be rounded.*
CAPITAL COSTS AND FINANCING

Breakdown of project costs including fees surveys and contingency	Prev. Yr. £	22/23 £	23/24 £	24/25 £	25/26 £	26/27 £	Future Yrs. £	Total £
Construction costs	0	0	12,500,000	3,873,256				16,373,256
Total capital spend								

Provide details of proposed funding: *Funding to match with Project Value*								
Breakdown of proposed funding	**Prev. Yr. £**	**22/23 £**	**23/24 £**	**24/25 £**	**25/26 £**	**26/27 £**	**Future Yrs. £**	**Total £**
As above								
Total funding								

Which external funding sources been explored	As per the collaboration agreement between Plymouth Energy Community and Plymouth City Council the first source of funding to be explored for the construction was the Council. Should the Council decide not to provide the loan the external funding could be sought – though this would not be a guaranteed funding route and result in significant delays to the construction of the solar farm.
Are there any bidding constraints and/or any restrictions or conditions attached to your funding	No
Tax and VAT implications	None expected but to be confirmed with finance colleagues
Tax and VAT reviewed by	

REVENUE COSTS AND IMPLICATIONS	
Cost of Developing the Capital Project *(To be incurred at risk to Service area)*	
Total Cost of developing the project	£640,000
Revenue cost code for the development costs	
Revenue costs incurred for developing the project are to be included in the capital total, some of the expenditure could be capitalised if it meets the criteria	Y
Budget Managers Name	Paul Elliott

Ongoing Revenue Implications for Service Area							
	Prev. Yr. £	**22/23 £**	**23/24 £**	**24/25 £**	**25/26 £**	**26/27 £**	**Future Yrs. £**
Service area revenue cost							
Other *(eg: maintenance, utilities, etc)*							
Loan repayment *(terms agreed with Treasury Management)*		0	1,360,594	1,360,594	1,360,594	1,360,594	1,360,594
Total Revenue Cost (A)		0	1,360,594	1,360,594	1,360,594	1,360,594	1,360,594
Service area revenue benefits/savings							
Annual revenue income *(eg: rents, etc)*		0	1,472,104	1,472,104	1,472,104	1,472,104	1,472,104
Total Revenue Income (B) (debt margin and land rent)		0	1,472,104	1,472,104	1,472,104	1,472,104	1,472,104
Service area net (benefit) cost (B-A)			111,510	111,510	111,510	111,510	111,510
Has the revenue cost been budgeted for or would this make a revenue pressure	Revenue to be included in the capital total so no pressure overall.						
Which cost centre would the revenue pressure be shown	n/a		**Has this been reviewed by the budget manager**			Y	
Name of budget manager	Wendy Eldridge						
Loan value	£16,373,236	**Interest Rate**	5.5%	**Term Years**	20	**Annual Repayment**	£1,360,594
Revenue code for annual repayments	tbc						
Service area or corporate borrowing	Service						
Revenue implications reviewed by	Wendy Eldridge						

Version Control: *(The version control table must be updated and signed off each time a change is made to the document to provide an audit trail for the revision and update of draft and final versions)*				
Author of Business Case	**Date**	**Document Version**	**Reviewed By**	**Date**
Paul Elliott	07/10/2022	v 1.0		13/10/2022
	00/00/2022	v 2.0		00/00/2022

SECTION 6: RECOMMENDATION AND ENDORSEMENT

Recommended Decision

It is recommended that Cabinet:

- Approves the business case.
- Approves the principal of a £16,373,236 loan to Chelson Meadow Community Solar (subject to officers receiving legal advice that the loan is in compliance with subsidy control rules) on the basis set out in the report and delegates the authority for agreeing the final terms of the agreement to the S151 officer in consultation the monitoring officer.
- Approves the additional capital allocation of £15,953,236 to existing budget line of £420,000.
- Note that the S151 will sign the agreement subject to it not being signed as a deed. Where it is a deed it will be signed by the Monitoring Officer or other authorised signatory.

Cllr James Stoneman – Climate Change		***Strategic Director : Anthony Payne***	
Either email dated:	*20 February 2023*	**Either email dated:**	*14 February 2023*
Or signed:		**Signed:**	
Date:		**Date:**	

Growth and Infrastructure Overview and Scrutiny Committee

Date of meeting:	01 March 2023
Title of Report:	**Chelson Meadow Community Solar - Virtual Power Purchase Agreement**
Lead Member:	Councillor James Stoneman (Cabinet Member for Climate Change and Governance)
Lead Strategic Director:	Anthony Payne (Strategic Director for Place)
Author:	Paul Elliott
Contact Email:	Paul.elliott@plymouth.gov.uk
Your Reference:	
Key Decision:	Yes
Confidentiality:	Part I - Official

Purpose of Report

This business case seeks a commitment from the Council to enter into a Virtual Power Purchase Agreement with Chelson Community Solar (CCS).

Recommendations and Reason
It is recommended that:

- Committee supports the business case being considered at Cabinet

Alternative options considered and rejected
Entering into a VPPA with Chelson Community Solar is an essential factor in enabling the solar farm to be built. Without it the business case and financial models are not viable. Although CCS may be able to find another organisation interested in entering the VPPA , this would require more time and delay construction of the solar farm by at least 12 months.

Relevance to the Corporate Plan and/or the Plymouth Plan

Directly feeds into the priority 'A green sustainable city that cares about the environment'.

Implications for the Medium Term Financial Plan and Resource Implications:
The solar farm as a whole provides the opportunity to generate an income over the lifetime of the asset (30 years). Over the 30 years the project is forecast to generate an income of £480K. The VPPA will deliver short term financial benefits and be reviewed on annual basis. The benefits to the Council go beyond the income as it will also help us smooth out financial pressures from volatile energy markets.

Financial Risks

The key risk is that energy prices fall below forecast amounts, resulting in increased payments to Chelson Meadow Community Solar based on required strike price. To mitigate against this we have commissioned Ernst & Young to provide their market forecasts in order to give us the most informed intelligence available. As well as this annual monitoring of the VPPA to understand performance, coupled with periodic requests for market predictions from E&Y or similar, will help us to understand changes to predicted market trends and mitigate accordingly

The business case within the appendix contains more detail on risks and mitigation.

Carbon Footprint (Environmental) Implications:
Hugely beneficial and positive impact in reducing the Council's carbon emissions predicted to be 60% of carbon emissions and providing 75% of the Council's electricity needs.

Other Implications: e.g. Health and Safety, Risk Management, Child Poverty:
** When considering these proposals members have a responsibility to ensure they give due regard to the Council's duty to promote equality of opportunity, eliminate unlawful discrimination and promote good relations between people who share protected characteristics under the Equalities Act and those who do not.*
H & S risks will be dealt with as part of the construction process. The conditional planning approval ensured that due regard was given to the impact of the solar farm on the city.

Appendices
**Add rows as required to box below*

Ref.	Title of Appendix	**Exemption Paragraph Number** (if applicable) *If some/all of the information is confidential, you must indicate why it is not for publication by virtue of Part 1of Schedule 12A of the Local Government Act 1972 by ticking the relevant box.*						
		1	**2**	**3**	**4**	**5**	**6**	**7**
A	Chelson VPPA Business Case							

Background papers:

**Add rows as required to box below*

Please list all unpublished, background papers relevant to the decision in the table below. Background papers are unpublished works, relied on to a material extent in preparing the report, which disclose facts or matters on which the report or an important part of the work is based.

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	1	**2**	**3**	**4**	**5**	**6**	**7**

Sign off:

Fin	DJN.22.23.391	Leg	MS/2/00001233/28.02.23	Mon Off	Click here to enter text.	HR	Click here to enter text.	Assets	Click here to enter text.	Strat Proc	Click here to enter text.
Originating Senior Leadership Team member: Anthony Payne											
Please confirm the Strategic Director(s) has agreed the report? Yes Date agreed: 14/02/2023											
Cabinet Member approval: Councillor James Stoneman - email Date approved: 20/02/2023											

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CAPITAL INVESTMENT BUSINESS CASE

Chelson Meadow Community Solar - Virtual Power Purchase Agreement

EXECUTIVE SUMMARY

The Executive Summary is a short summary of the Business Case and should be the last section you complete, this will enable you to extract or only the key facts from relevant sections i.e. 'project on a page'. The summary is a 'snapshot' of the business case which will need to tell the story and sell the proposal.

The Council and Plymouth Energy Community have an approved planning application to build a 13MW solar farm on the ex-landfill site at Chelson Meadow.

The solar farm creates the following opportunities for the council:

- To reduce the Council's current carbon emissions by approximately 60%, with 75% of the current electricity need being met by renewable energy.
- To protect the Council against energy price increases and volatility over a 20 year period through a Virtual Power Purchase Agreement with the solar farm.
- To future proof the Council against potential policy and legislative change relating to carbon emissions.
- To create a 50/50 joint venture with Plymouth Energy Community to build, own, and manage the solar farm. This will result in 50% of any surplus income returning to the Council.
- To generate an income over just under £1million over the life of the solar farm through a lease on the land which will be paid annually.
- To generate an income by offering construction finance and long-term debt to the project. By borrowing at PWLB rates and loaning onwards to the joint venture on commercial terms, the Council's debt margin would be up to c£1.3million over the life of the project.

This business case picks up on the second point above and seeks to secure a commitment to sign a virtual power purchase agreement with Chelson Community Solar.

SECTION 1: PROJECT DETAIL

Project Value Revenue	Forecast to be £480,000 of income over the 30 year lifetime of the project	**Contingency (show as £ and % of project value)**	**n/a**
Programme	Low Carbon	**Directorate**	Place
Portfolio Holder	James Stoneman	**Strategic Director**	Anthony Payne
Senior Responsible Officer (client)	Kat Deeney	**Project Manager**	Paul Elliott
Address and Post Code	Ballard House	**Ward**	Plymstock Radford

Current Situation: *(Provide a brief, concise paragraph outlining the current situation and explain the current business need, problem, opportunity or change of circumstances that needs to be resolved)*

The in-principle business case for the construction of the solar farm at Chelson Meadow was approved in October 2022. This set out the 3 key elements in which the Council needs to be involved to make the project viable. These are:

1. Provide a long-term loan to the joint venture to enable construction and subsequent operation of the solar farm.
    - *This enables the Council to make a finance margin – by capturing the value between the rate the Council borrow at, and the increased rate the Council lend to the joint venture at on commercial terms.* At current rates t*he value of this is estimated to be £1.3m over 20 years.*

2. Create a joint venture with Plymouth Energy Community (PEC) to run and manage the solar farm.
    - *This enables the Council to benefit from a share of the surplus generated by the joint venture..*

3. Enter into a Virtual Power Purchase Agreement with Chelson Community Solar.
    - *The solar farm can provide locally generated green power equivalent to 75% of the council's electricity needs. By signing a long-term Virtual Power Purchase Agreement (VPPA) with the joint venture the Council will gain long-term security on energy prices as well as provide security of income for the project - giving additional confidence on the projects ability to repay finance loaned to the project. This provides the Council significant opportunity to hedge against long-term energy price increases as well as reduce its carbon emissions. This could be realised from Q2. 24/5 if construction commences in 2023.*

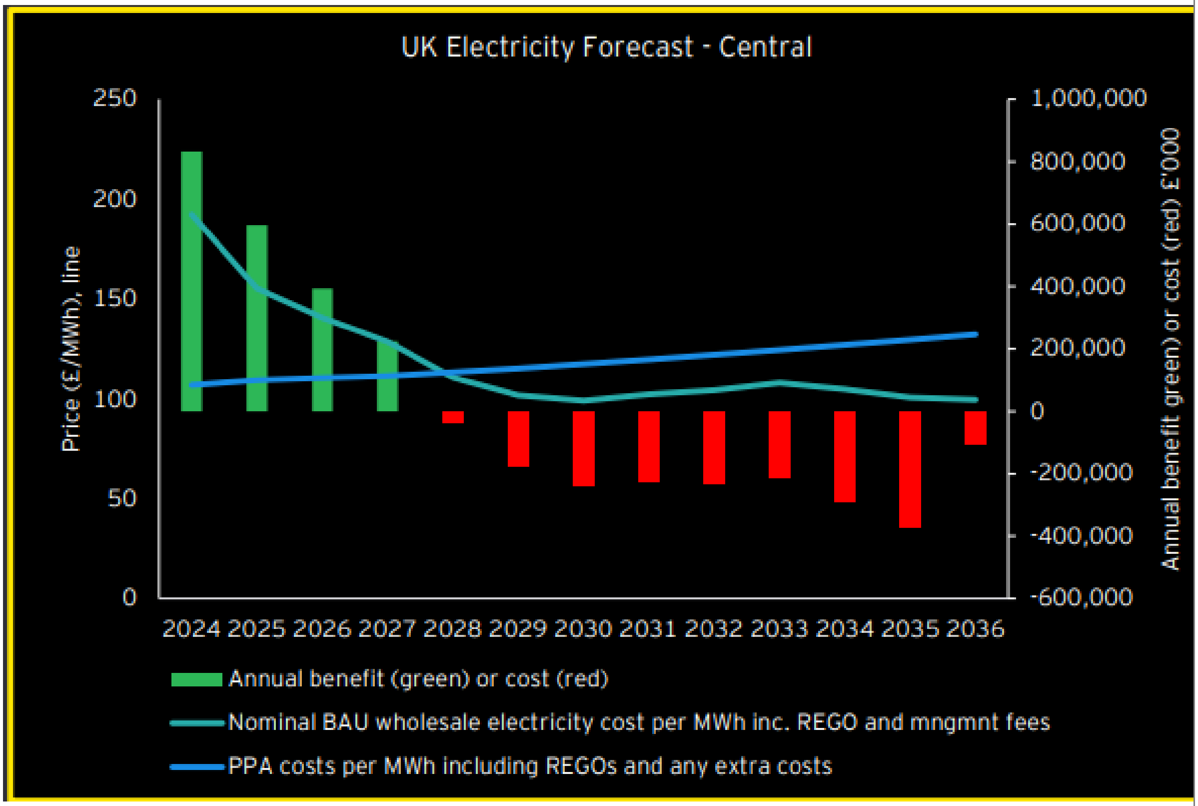
This business case considers the final point regarding signing up to a VPPA.

Proposal: *(Provide a brief, concise paragraph outlining your scheme and explain how the business proposal will address the current situation above or take advantage of the business opportunity)* **and** *(What would happen if we didn't proceed with this scheme?)*

There is an opportunity for the Council to benefit from a VPPA with Chelson Community Solar (CCS). A VPPA is purely a financial mechanism and agreement, that would allow the Council to hedge against energy prices. It is not the purchasing of actual power, and therefore will not affect the Council's current arrangements with it's energy procurement.

The agreement is based on a 'contracts for difference' approach - this sees both parties agree a 'strike price', if Chelson Community Solar is able to sell power to the grid above the strike price then PCC will receive an income for the value of the difference between the two. If the energy prices drop below the strike price then the Council would pay Chelson Community Solar the difference between the two values.

We have commissioned Ernst and Young to provide advice and guidance to forecast future energy costs and ultimately what an appropriate strike price would be. Ernst are Young are the leading global consultancy firm on energy costs and forecasting. This work is ongoing and will be used to negotiate a strike price should the Council choose to enter into a VPPA. The graph below provides a visual explanation of how the payments would play out if a strike price of £100 / MWh was agreed to 2036. Forecasting energy costs beyond this time period becomes subject to a greater degree of variables. The VPPA required on this project needs to be 20 years.



The light blue line represents wholesale costs – and forecasts that energy prices are set to reduce and stabilise from around 2030. The green bars represent the years that the joint venture can sell power for more than the strike price – and therefore a payment to the Council would be due. The red bars illustrate the reverse of this, where power is sold for less than the strike price and a payment from the Council to the joint venture would be due. The above model represents cost neutrality by 2036, i.e. it has not cost the Council anything over that time period.

Although the actual strike price is still to be determined the above diagram illustrates the concept of how a VPPA would work regardless of strike price. Ongoing work with Ernst and Young will enable the Council to negotiate the final strike price with the joint venture – with any agreement being subject to S151 and monitoring officer review prior to signing.

In order to mitigate against energy prices falling, and therefore de-risk the potential for the Council to be paying more to the joint venture than it receives, 3 key mechanisms will be introduced. The first is the ability to re-negotiate the strike price with the joint venture if energy prices change significantly. This gives the Council and the joint venture the ability to adapt to market conditions and ensures the VPPA is delivering good value. The second is quarterly monitoring and a robust annual review process. This will enable the Council to consider any surplus income generated that year, alongside revised energy cost forecasts, and make a decision on how it should be best utilised. Thirdly if energy prices drop and interest rates drop, refinancing and renegotiation of the VPPA strike price will be triggered.

Apart from the financial modelling above, the key element of the VPPA is that it provides the joint venture with certainty of income over the loan term. This is crucial for the joint venture, without this certainty they are unlikely to take the loan from the Council, and the solar farm will not get built. Conversely, by entering into the VPPA the Council mitigates the risk of the joint venture defaulting on it's loan re-payments.

In essence the commitment to signing a VPPA with the joint venture is an essential element in constructing and benefitting from the solar farm. Chelson Meadow Solar Farm represents a huge step forward in meeting our own internal and citywide carbon reduction targets, the VPPA also provides long term financial security against unforeseen energy cost rises again.

This business case seeks a commitment from the Council to agree a virtual power purchase agreement with Chelson Community Solar. The decision to sign the agreement will be delegated to the S151 officer and only occur on completion of the following:

- the submission of a detailed final report which includes the forecast net present value of each year in regards to VPPA.
- A risk workshop with Ernst and Young to ensure the Council is fully sighted on the potential risks and mitigation surrounding the agreement before signing.

Both the above points will demonstrate the Council has undertaken significant due diligence on its decision regarding the virtual power purchase agreement.

Milestones and Date:		
Contract Award Date	Start On Site Date	Completion Date
March 2023	April 2023	July 2024

SECTION 2: PROJECT RISK, OUTCOMES AND BENEFITS				
Risk Register: *The Risk Register/Risk Log is a master document created during the early stages of a project. It includes information about each identified risk, level of risk, who owns it and what measures are in place to mitigate the risks (cut and paste more boxes if required).*				
Potential Risks Identified		*Likelihood*	*Impact*	*Overall Rating*
Risk	Energy Prices fall below forecast amounts, resulting in increased payments to Chelson Meadow Community Solar based on required strike price	Medium	High	Medium
Mitigation	• Using Ernst&Young to provide their wholesale market forecasts with low, central and high scenarios. These are just predictions, but give us the most informed predictions available • Regular monitoring of the VPPA to understand performance. Periodic requests for market predictions from E&Y or similar to understand changes to predicted market trends. • Giving provision for the loan to be refinanced should interest rates drop which would in turn allow for a potential drop in the strike price	Medium	Medium	Medium

Calculated risk value in £ (Extent of financial risk)	Annual review will provide basis for this. Currently the project is expected to make a surplus of £480,000			
Risk	Timely construction of the solar farm. The forecast figures rely on the solar farm being commissioned in July 2024.	Medium	Medium	Medium
Mitigation	• Initial review carried out of construction partner programme for viability. • Programme workshop with expert consultant partners to refine programme for deliverability early in construction partner appointment process • Split construction period increases ability to absorb any slippage in construction works and allows for parts ordering delays • Beginning parts ordering early in spring 2023 • Using established project team including owners engineer and contract PM support to manage efficient schedule	Low	Medium	Low
Calculated risk value in £ (Extent of financial risk)	£350k (loss of summer income)			
Risk	The council is exposed to purchasing energy in a riskier way.	Low	Medium	Medium
Mitigation	• Ensure reconciliation mechanism design allows council to manage risks of power purchase in an acceptable way. • Using a VPPA rather than a sleeved PPA that doesn't leave council exposed to risk for purchase of consumption requirements beyond solar farm generation.	Low	Low	Low
Calculated risk value in £ (Extent of financial risk)	0			
Risk	The strike price is set higher than the joint ventures requirements.	Medium	High	Medium
Mitigation	• Strike price requirement has been modelled on an open book process by expert consultant working on behalf of the council and the future joint venture • The Council have a 50% ownership in CCS, 50% of any additional payments to CCS would flow back to PCC. The rest would go to PECR and by default local net zero and fuel poverty support	Low	Low	Low

Calculated risk value in £ (Extent of financial risk)	£0				
Risk	The open book costing process results in the project requiring an unachievable strike price		Medium	High	Medium
Mitigation	• Use of QS to develop upper cost estimate for construction allowing the creation of an upper cost estimate for the required strike price. • Shared open book workstream to establish required strike price • Consider other income streams in assessment of VPPA cost viability i.e. land rent, debt margin • Consider other benefits in assessment of viability of VPPA e.g. social value, biodiversity improvements, community benefit, additionality of carbon savings for the council		Low	Low	Low
Calculated risk value in £ (Extent of financial risk)	0				
Risk	Grid connection is not possible by July 2024		Medium	Medium	Medium
Mitigation	• Early and active engagement with National Grid • Appoint construction partner on design stage contract to allow for early design discussions with National Grid • Order key equipment for connection in early spring 2023		Low	Medium	Low
Calculated risk value in £ (Extent of financial risk)	£0				
Risk	CLP Envirogas do not sign tripartite agreement stopping project progression		Medium	High	Medium
Mitigation	• Extensive process of establishing agreement starting with HoT based understood CLP requirements • Taking liability from CLP from impact of installing solar farm on land where they already hold a business tenancy (i.e. any harm CLP cause the solar farm will be recovered from the councils share of the profit share agreement with CLP) • Proactive partnership working with CLP during project design stage		Low	High	Medium
Calculated risk value in £ (Extent of financial risk)	Not modelled				

Outcomes and Benefits	
List the outcomes and benefits expected from this project. *(An **outcome** is the result of the change derived from using the project's deliverables. This section should describe the anticipated outcome)* *(A **benefit** is the measurable improvement resulting from an outcome that is perceived as an advantage. Benefits are the expected value to be delivered by the project, measurable whenever possible)*	
Financial outcomes and benefits:	**Non-financial outcomes and benefits:**
• Protects the Council against energy cost increases over the long term. • Commitment to signing VPPA give the joint ventureCCS enough confidence to construct. This then realises £33K of land rent per annum, and £68K of debt margin on the loan.	• 3,300 t/CO2 saved per year of operation • Potential to reduce the Council's carbon emissions by 60%. • Provides long term security of energy costs

Low Carbon		
What is the anticipated impact of the proposal on carbon emissions	Saving of 3,300 t/CO2 per year	
How does it contribute to the Council becoming Carbon neutral by 2030	If the Council choose to utilise a virtual purchase power agreement with the joint venture, this is equivalent to 75% of the council's current electricity demand. Overall this will reduce the Council's CO2 emissions by up to 60%.	
Have you engaged with Procurement Service?		Yes
Procurement route options considered for goods, services or works	Procurement relating to VPPA is not required as it is a financial mechanism.	
Procurements Recommended route.	n/a	
Who is your Procurement Lead?	n/a	
Is this business case a purchase of a commercial property		No
If yes then provide evidence to show that it is not 'primarily for yield'	N/A	
Which Members have you engaged with and how have they been consulted *(including the Leader, Portfolio Holders and Ward Members)*	• Growth and Scrutiny Committee, and Audit and Governance committee briefings arranged for 23rd Feb 2023. • Project is on Leaders forward plan. • Planning committee briefed and consulted. • Site visit and briefings for Environment portfolio holder.	

SECTION 4: FINANCIAL ASSESSMENT

FINANCIAL ASSESSMENT: *In this section the robustness of the proposals should be set out in financial terms. The Project Manager will need to work closely with the capital and revenue finance teams to ensure that these sections demonstrate the affordability of the proposals to the Council as a whole. Exact amounts only throughout the paper - not to be rounded.*

CAPITAL COSTS AND FINANCING

Breakdown of project costs including fees surveys and contingency	**Prev. Yr. £**	**22/23 £**	**23/24 £**	**24/25 £**	**25/26 £**	**26/27 £**	**Future Yrs. £**	**Total £**
	0	0	0	0	0	0	0	0
Total capital spend	0	0	0	0	0	0	0	0

Provide details of proposed funding: ***Funding to match with Project Value***								
Breakdown of proposed funding	**Prev. Yr. £**	**22/23 £**	**23/24 £**	**24/25 £**	**25/26 £**	**26/27 £**	**Future Yrs. £**	**Total £**
As above								
Total funding								

Which external funding sources been explored	n/a
Are there any bidding constraints and/or any restrictions or conditions attached to your funding	No
Tax and VAT implications	None expected but to be confirmed with finance colleagues
Tax and VAT reviewed by	

REVENUE COSTS AND IMPLICATIONS	
Cost of Developing the Capital Project *(To be incurred at risk to Service area)*	
Total Cost of developing the project (solar farm as a whole)	£640,000
Revenue cost code for the development costs	

Revenue costs incurred for developing the project are to be included in the capital total, some of the expenditure could be capitalised if it meets the criteria	Y
Budget Managers Name	Paul Elliott

Ongoing Revenue Implications for Service Area							
	Prev. Yr. £	**22/23 £**	**23/24 £**	**24/25 £**	**25/26 £**	**26/27 £**	**Future Yrs. £**
Service area revenue cost							
Other (cost neutral over lifetime)							
Loan repayment *(terms agreed with Treasury Management)*		0	0	0	0	0	0
Total Revenue Cost (A)		0	0	0	0	0	0
Service area revenue benefits/savings							
Annual revenue income *Averaged mid point figure*		0	0	395,000	395,000	395,000	tbc
Total Revenue Income (B) (debt margin and land rent)		0	0	395,000	395,000	395,000	tbc
Service area net (benefit) cost (B-A)			0	395,000	395,000	395,000	tbc
Has the revenue cost been budgeted for or would this make a revenue pressure	Revenue to be included in the capital total so no pressure overall.						

Which cost centre would the revenue pressure be shown	n/a	**Has this been reviewed by the budget manager**	Y

Name of budget manager	Peter Walker

Loan value	n/a	**Interest Rate**	n/a	**Term Years**	n/a	**Annual Repayment**	n/a

Revenue code for annual repayments	tbc
Service area or corporate borrowing	n/a
Revenue implications reviewed by	Peter Walker

Version Control: *(The version control table must be updated and signed off each time a change is made to the document to provide an audit trail for the revision and update of draft and final versions)*				
Author of Business Case	**Date**	**Document Version**	**Reviewed By**	**Date**
Paul Elliott	07/10/2022	v 1.0		13/10/2022
	00/00/2022	v 2.0		00/00/2022

SECTION 6: RECOMMENDATION AND ENDORSEMENT

Recommended Decision

It is recommended that Cabinet:

- Approves the business case, including the requirement for quarterly monitoring and annual review of the Virtual Power Purchase Agreement.
- Agrees to enter into a Virtual Power Purchase Agreement with Chelson Community Solar on the basis set out in the report.
- Delegates authority for negotiation of the terms within the Virtual Power Purchase Agreement to the S151 officer in consultation the monitoring officer.
- Note that the S151 wills sign the agreement subject to it not being signed as a deed. Where it is a deed it will be signed by the Monitoring Officer or other authorised signatory.

Cllr James Stoneman – Climate Change and Governance		***Strategic Director : Anthony Payne***	
Either email dated:	*20 February 2023*	**Either email dated:**	*14 February 2023*
Or signed:		**Signed:**	
Date:		**Date:**	