

Decision Maker: **PORTFOLIO HOLDER FOR EXECUTIVE, RESOURCES AND CONTRACTS MANAGEMENT**

Date: For pre-decision scrutiny by the Executive Resources and Contracts PDS committee on the 24th March 2022

Decision Type: Non-Urgent Non-Executive Non-Key

Title: **NORTH BLOCK SOLAR PV INSTALLATION**

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Ward: Bromley Town

1. Reason for report

- 1.1. A Council Motion on 15th July 2019 unanimously approved a ten-year plan to ensure that the council achieves net zero carbon emissions by 2029. This has since revised to 2027 at a Full Council meeting on 28th February 2022).
- 1.2. This report sets out a proposal for the installation of a solar photovoltaic (PV) system on the rooftop of North Block building (located at the Civic Centre).
- 1.3. The Council can make use of Section 106 Carbon Offsetting contributions to fund energy/carbon reduction initiatives on its own estate.

2. RECOMMENDATION(S)

- 2.1. That the Portfolio Holder for Executive, Resources and Contracts (ERC) approves the proposal set out in this report to initiate and complete the procurement of a solar PV installation at the identified Civic Centre location, at an estimated whole life contract value of £119k, using the Council's s106 Carbon Offsetting Fund (COF) to finance the project. System design to meet these criteria is stipulated in the contract specification.
- 2.2. That the Portfolio Holder for ERC approves the use of the Fusion21 framework and delegates authority to the Contract Officer to appoint the preferred contractor which is evidenced through the tender evaluation process.

Impact on Vulnerable Adults and Children

1. Summary of Impact: None.
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Corporate Policy

1. Policy Status: Existing Policy
 2. Making Bromley Even Better: For residents to live responsibly and prosper in a safe, clean and green environment great for today and a sustainable future
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Financial

1. Cost of proposal: Estimated installation cost £100k; estimated whole life cost (25 years) £119k
 2. Ongoing costs: Annual average maintenance costs estimated at £770, offset by anticipated savings in energy costs
 3. Budget head/performance centre: TFM Admin Buildings – Civic Centre
 4. Total current budget for this head: £2.4m
 5. Source of funding: Installation cost met from S106 Carbon Offsetting Fund; recurring maintenance costs offset by energy budget savings
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Personnel

1. Number of staff (current and additional): N/A
 2. If from existing staff resources, number of staff hours:
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Legal

1. Legal Requirement: None: The Fusion 21 Framework allows all of the Fusion 21 members to enter Call-Off Contracts under the Framework. The Council is a member of Fusion 21 Framework, and therefore would appear to be eligible to enter into a call-off contract under that Framework as described in this report. The risks of the route being non-compliant for the Council would appear to be very low.
 2. Call-in: Applicable: Further Details
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Procurement

1. Summary of Procurement Implications: This report seeks to utilise the Fusion 21 Framework, in accordance with Clause 3.5 of the Contract Procedure Rules, the Head of Procurement has been consulted regarding the use of the Framework. The method of mini competition can be used under the terms of the framework, and in compliance with the Council's Contract Procedure Rules (Rule 3.6.1), the mini competition must be carried out using the Council's e-procurement system.
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Customer Impact

1. Estimated number of users/beneficiaries (current and projected): N/A
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Ward Councillor Views

1. Have Ward Councillors been asked for comments? Yes
2. Summary of Ward Councillors comments:

3. COMMENTARY

3.1. The London Plan 2016 (Policy 5.2) requires developers to reduce carbon emissions associated with major new residential and non-residential developments. The policy states that any on-site shortfall may be provided through a payment in lieu contribution to the relevant borough. Payments are secured through Section 106 agreements and contribute towards funding local carbon reduction projects off-site.

3.2. In line with current industry best practice, other councils (e.g. Southampton, Rotherham and Reading) have taken action to install rooftop solar PV systems to reduce on-site energy consumption to realise carbon and cost savings.

3.3. The installation will achieve operational efficiencies through reduced expenditure on energy usage.

3.4. BACKGROUND – SYSTEM AND CONTRACT DESIGN

3.4.1. The proposal is a “design, supply and install” contract tendered under the Council’s contract procurement rules. Bromley requires the design, supply and installation of a solar photovoltaic (PV) system(s) to the North Block roofs identified in Appendix 1. This also includes annual repair and maintenance of the solar PV systems on both a programmed and reactive basis. The annual operation and maintenance (O&M) regime will be costed in the pricing schedule and subsequently an indicative amount for 25 years (the lifetime of the contract) will be calculated to understand the financial implications for whole life costs.

3.4.2. Some systems may generate a surplus of energy that cannot entirely be consumed by North Block. This is most likely to be the case during the summer months on the weekends when office occupancy is low. In order that this surplus is not wasted (and therefore financial savings are not missed) several options will be appraised in the pricing schedule:

- **Master Meter Connection:** tenderers to include a price for additional works to connect the North Block sub-meter to the Civic Centre’s master meter. This will distribute the surplus energy to the wider site for self-consumption.
- **Battery Storage:** tenderers to include a price for a battery that would store the surplus energy. The energy will be distributed back to North Block when demand requires it.
- **100% North Block self-consumption:** tenderers to design a PV system that does not generate a surplus.

3.4.3. A design with 100% supply to North Block, without a master meter connection or battery installation, is desirable due to the lower capital costs and the relatively straightforward configuration of the system. Tenderers can tailor their systems (by downsizing) so there is no overgeneration and subsequent wasted surplus and will never exceed baseline consumption.

3.4.4. However, it is preferable to have a price for all three scenarios (100% supply, master meter connection, battery storage) so the evaluators can determine the costs and benefits of the above-mentioned approaches. This will allow evaluators to conclude which system with which model will deliver the most net savings to the Council over 25 years. Furthermore, this approach affords the market significant flexibility when delivering against the brief.

3.4.5. Grid export was considered too complicated for an expected system of such a size, including the officer time spent on annual contract management with the Distribution Network Operator and the additional costs subsequently incurred. Self-consumption is financially more attractive

than a grid export arrangement because the current export rate is about 5p/kWh, whilst consumption is 11p/kWh – hence it is preferable to use what is generated rather than selling it.

3.4.6. By using The Council's Carbon Offset Fund (COF), proposals are appraised by the cost to reduce one tonne of carbon, which is known as the carbon cost effectiveness. This is a simple calculation of the capital expenditure divided by the estimated amount of carbon saved. The carbon cost effectiveness is currently capped at £300 per tonne of carbon mitigated, and proposals must fall under this threshold if they are to be financed by the COF.

3.4.7. All technical specifications (electrical works, design, material used) and service levels shall be in accordance with industry standards. There will also be an evaluation of the installation warranties and equipment guarantees to protect the Council's investment.

3.4.8. An Operation and Maintenance (O&M) contract will be also be included, with suppliers are expected to provide a cost for this in the pricing schedule. This will ensure system optimisation and maximum accrual of financial savings.

3.4.9. As part of the tender, bidders will provide full details of the PV system to be installed and the subsequent maintenance and repair regimes. Submissions will include:

- Scale drawings of the proposed system
- Anticipated yearly kWh output
- Yearly and lifetime (gross) financial savings
- Carbon savings
- Yearly and whole life costs
- Net lifetime savings
- Panel degradation
- Robust annual O&M contract
- A carbon cost-effectiveness capped at £300 per tonne mitigated

3.5. DATA ANALYSIS AND SERVICE PROFILE

3.5.1. Benchmarking will require historic yearly civic centre consumption data including:

- total kWh consumption
- billing data (including climate change levy charges)
- Half hourly sub-meter data where possible

3.5.2. Outcome requirements: installation of solar PV system to realise demonstrable reductions in all monitored indicators highlighted in paragraph 3.4.9 with specific attention to the financial and carbon savings. A programmed maintenance and repair regime, embodied by an O&M contract, will also be established to ensure system efficiency.

3.5.3. The operational lifetime of the system must be at least 25 years, with guarantees put in place to this effect.

4. POLICY IMPLICATIONS

4.1. The most significant policy driver is the Council's Net Zero Carbon 2027 target, facilitated by the Carbon Management Team. The *Making Bromley Even Better* corporate strategy, the *Transforming Bromley Agenda* and the Accommodation strategy are also relevant. Aligning with the Transforming Bromley Agenda, the proposal to install a solar PV system complements the following corporate priorities:

- **Responsible Financial Management Strategy:** reduced future costs to the council through lower energy bills.
 - **Maintaining Organisational Resilience:** A 25-year installation with forecasted output provides stability to external electricity price shocks.
 - **Modern, Efficient and Flexible Work Environment:** As part of the accommodation strategy to modernise Civic Centre buildings.
 - **Effective Resident Engagement:** Demonstrates our environmental commitments to the wider public.
 - **Improving the Public Realm, maintaining our Green Spaces and Promoting Economic Growth:** Procuring sustainably will realise cost savings in addition to safeguarding the environment and promoting a green recovery.
- 4.2. Ambition Four in the Making Bromley Even Better strategy further commits to the Council's Net Zero 2027 target, the promotion and use of renewable energy and the commitment to generate financial savings through sustainability projects.

5. SUMMARY OF THE BUSINESS CASE

- 5.1.1. Energy consumption varies by time of day, but is 24 hours, 7 days a week and running costs are significant. The financial year 2019/20 saw the Civic Centre consume 2,321,640 kWh of electricity, which cost the Council £274k.
- 5.1.2. Based on soft market testing and quotes received from industry, the average capital expenditure for such an installation is £100k, with annual operation and maintenance (O&M) charges averaging £770. **Therefore, the average whole life cost is estimated at £119k.** The estimated (25 year) *gross* lifetime savings to the Civic Centre's electricity budget averages £300k, based on average system size and yearly output of 88 kWp, with a 77,043 kWh respectively. **Average net lifetime savings (after deducting capital expenditure and the annual O&M costs) are estimated at £181k over 25 years.**
- 5.1.3. Importantly, annual savings are not fixed and increase periodically as the price of electricity is expected to rise. However, this is partly offset as each system's panel efficiency degrades year-on-year resulting in less kWh output and therefore less annual financial savings. **Payback is therefore not a simple capex/net annual savings as these variables must be taken into account.** The soft market testing obtained various quotes from industry and have provided anywhere between 6-12 years payback times. Such a variation is due to the different sizes of the arrays proposed and the prices quoted. These quotes also used different assumptions for panel degradation, fuel inflation etc. when providing these payback times. When these assumptions are standardised, payback averages 10-11 years.
- 5.1.4. It should be noted that the electricity rate for the Civic Centre until September 2022 is priced at a 10.5p per kWh. But future costs are expected to be higher when the energy contract is up for renewal. Recent energy price shocks make for a robust case for stronger resiliency to a volatile market. However, it is important to note that baseload consumption figures since March 2020 will have been affected by the impact of Covid-19 on use of the Civic Centre. In addition, the Council is currently undertaking a review of its Operational Property which will include the Civic Centre. While the future scope of occupation remains to be determined, the change in flexible working arrangements is likely to be long term and therefore energy consumption at the Civic Centre will reduce from pre-Covid levels. The Carbon Management Team have factored this reduced consumption in through half hourly billing data analysis.

5.1.5. Currently, the cost of Civic Centre energy consumption is budgeted for and managed by the Facilities Management Team within Property Services.

	Average System
Estimated PV Yearly output (kWh)	77,043
Estimate system size kWp	88
CapEx costs (including replacement inverter)	C£100k
Whole life cost of PV installation	c£119
Gross Lifetime Savings (25 years)	c£300k
Net Lifetime Savings	c£181
Net First Year Savings	£7.9k
Payback Time (Years)*	10
CO2 Savings Tonnes (25 years) DEFRA 2020 EF	465
Price of Carbon £ per tCO2e (COF price capped at £300)	£251

5.2. Carbon Offset Funds

5.2.1. The estimated capital expenditure of the project is £100k, with subsequent annual costs for operation and maintenance programmes. The use of the Council's Carbon Offset Fund is the intended financial mechanism the Carbon Management Team (CMT) will use to fund the initial investment. The annual financial savings accrued will pay for the O&M contract ensuring the system is self-sustaining. As mentioned in paragraph 5.1.2, once deducting the original capital expenditure and the on-going annual O&M contract costs, net average lifetime savings are estimated at £181k. All system proposals must meet the offset criteria including but not limited to the carbon cost effectiveness, stipulated in paragraph 3.4.6.

5.2.2. Designing the PV systems to meet the carbon cost effectiveness criteria, as highlighted in paragraph 3.4.6, is a requirement that tenderers must meet and is further stipulated in the contract specification. The payback period will depend on the final contract value and the actual annual savings generated.

5.2.3. As mentioned above, payback is not a simple Capex/annual savings as variables such as panel degradation, inflation and proposed system size must be considered. Various quotes in industry have provided anywhere between 6-12 years payback times. Such a variation is due to the different sizes of the arrays proposed and the prices quoted. For fairness, when standardising these assumptions and variables, payback averages 10-11 years. Some proposals may exceed to the £119k whole life contract value and/or have a payback period that exceeds 10 years. Providing that the carbon cost effectiveness criteria is met, the funds may still be used in this regard. However, if such an eventuality were to occur the Contract Officer will raise these issues of increased contract value and payback period with the Portfolio Holder to determine whether to proceed on such a basis.

6. FINANCIAL IMPLICATIONS

6.1 Based on soft market testing by officers, the estimated capital cost for installation is a c£100k, to be funded from Section 106 carbon offsetting contributions, and will require an addition to the Capital Programme to be approved by the Executive. Total operation and maintenance costs over 25 years are estimated at £19k, an average of £770 p.a., but could vary depending on the level of service required and tender prices. Whole life costs over 25 years are therefore estimated at c£119k but will depend on the outcome of the procurement exercise.

- 6.2 However, annual running costs will be more than offset by savings in electricity costs which, over 25 years have been estimated at £300k, an average of c£12k p.a.
- 6.3 Estimated savings in energy costs have been based on the Council's current energy contract prices, which are fixed only until September 2022. A conservative estimate of energy price increases of 3% p.a. averaged over 25 years have been assumed in estimating, although it is not possible to determine whether the expected significant contract price increase in September 2022 will be offset in the longer term by lower increases to achieve this 25-year average. Any variations to these assumptions will affect the actual level of savings generated. For example, if the Council's energy contract price increases by 50% from September 2022, the savings in year one would increase from £7k to £12k. Similarly, if longer term energy price inflation averages, say, 5% over the 25-year period, estimated average savings would increase to £15k p.a.
- 6.4 Once the Council has received quotations for this contract, officers will need to re-run the business case to ensure that the scheme at the tendered price remains viable. Once this is confirmed and the contract has been awarded, the annual projected net savings will need to be reflected in the Council's financial forecast and the necessary budget adjustments made.

7 PROCUREMENT IMPLICATIONS

- 7.2 The Council could choose to undertake a fresh procurement exercise independent of available frameworks. However, Bromley officers do not currently have the capacity nor technical knowledge to undertake this, so it is not recommended to pursue this option.
- 7.3 A further option would be to not undertake any procurement and not award a contract, this would mean the Borough would be unable to effectively commit to its carbon reduction policies and would not realise any cost savings.
- 7.4 A further option would be to make use of the Fusion 21 framework and run a mini-competition exercise led by LB Bromley.
- 7.5 A further option would be to make use of the ESPO Renewable Energy Solutions Framework (Lot 1 – The Supply and Installation of Solar PV Systems) and run a mini-competition exercise led by LB Bromley. This option is viable, but the Gateway Officer considers this option as less up to date and less flexible than its Fusion 21 counterpart.

7.6 PREFERRED OPTION

- 7.6.1 The preferred option would be to make use of the Fusion 21 framework and run a mini-competition exercise led by LB Bromley.
- 7.6.2 The evaluation process would select the Most Economically Advantageous Tender (MEAT). The "MEAT" will be determined as the highest evaluated score in a 40:60 combination of Quality and Financial scores respectively. A Commercial response will also be included, and this will cover the acceptance of the proposed Call-Off Contract on a pass/fail basis.
- 7.6.3 It is recommended that the scoring methodology is changed in the *Instructions to Tenderers* document, as the financial marking currently rewards submissions on a lowest cost basis. Due to the invest to save nature of the proposed project, it is recommended that the methodology rewards those systems that can provide the most attractive net lifetime savings to the council over the contract's lifetime. This will in effect demonstrate MEAT in a more appropriate manner.

7.6.4 The proposed framework will deliver against the Council's Net Zero 2027 Target whilst complementing the corporate strategies such as Transforming Bromley Agenda. The framework guarantees system performance of a minimum of 80% efficiency after 20 years.

7.7 PROCUREMENT RULES

7.7.1 This report seeks to utilise the Fusion 21 Framework, in accordance with Clause 3.5 of the Contract Procedure Rules, the Head of Procurement has been consulted regarding the use of the Framework.

7.7.2 The Council is able to make use of the Fusion 21 Framework and has been properly included on the Contract Notice. A call off is permitted under the terms of the framework. For each requirement, an order form and template call off contract must be completed.

7.7.3 For the requirements set out above, the method of mini competition can be used under the terms of the framework, and in compliance with the Council's Contract Procedure Rules (Rule 3.6.1), the mini competition must be carried out using the Council's e-procurement system.

7.7.4 As the contract value is over £25K, an award notice will need to be published on Contracts Finder.

7.7.5 The actions identified in this report are provided for within the Council's Contract Procedure Rules, and the proposed actions can be completed in compliance with their content.

8 LEGAL IMPLICATIONS

8.2 Insurance policies must be considered. Please note that the Civic centre is insured under Item 1 of 'PROPERTY DAMAGE SPECIFICATION 3' (Page 29 of 37 of schedule doc). The North Block is insured under the Civic centre with a sum insured of £81m. The Insurance and Risk manager has advised that once the specifics on the chosen design have been determined, the underwriter of the council's property insurer will be contacted for a view on any potential issues. Insurance policies must also remain unaffected, and works must be covered under existing policy. The contractors undertaking the work must have adequate public liability insurance to cover any potential damage to the North block. Therefore, in the event of a loss due to any negligent work, the Council would be in a position to make a claim against the contractors public liability insurance policy.

8.3 The Fusion 21 Framework allows all of the Fusion 21 members to enter Call-Off Contracts under the Framework.

8.4 The Council is a member of Fusion 21 Framework, and therefore would appear to be eligible to enter into a call-off contract under that Framework as described in this report. Council Officers may wish to check (if they feel it is necessary): (1) whether there is any exceptional reason why the Council (as a member of the Framework) is ineligible to use the Framework (there is no obvious reason, and Fusion 21 has not indicated any such reason); and (2) whether Fusion 21 has correctly procured the Framework to ensure the Framework is a compliant route for the Council the Council use.

8.5 The risks of the route being non-compliant for the Council would appear to be very low given (a) the Council has not been made aware by Fusion 21 of any successful challenge to the procurement by a dissatisfied operator (and any such challenge would now be too late) and (b) the fact that Fusion 21 holds itself out as expert in the conduct of compliant public procurements.

8.6 While there are some aspects of the Fusion 21 Framework Agreement with which we may take issue (e.g. termination, caps on liability), there is no obvious 'showstopper' reason why the Council should not use the Framework Agreement.

8.7 In using the Fusion 21 Framework Agreement:

- The Council must comply with the requirements of schedule 14 and schedule 15 of the Framework Agreement in the conduct of any mini-competition from the Framework. These procedures appear reasonable, though the Council has relied on the expertise of Fusion 21 to ensure these procurements are legally compliant. We might take some issue with the procedures. For example, paragraph 1.1 in schedule 14 seems to allow the member conducting the mini-competition some discretion as to which Framework providers are to be invited to participate. We would ordinarily take the view that the Council must invite all Framework providers (i.e., it cannot arbitrarily exclude anybody). However, it seems Fusion 21 has taken a different view, and the right to exclude some providers from participating appears to be permitted.
- The Council must comply with schedule 3 regarding the form of the Call-Off Contract which the Council is to use for this mini-competition. For further competitions, the requirements are as follows

For Further Competition Call-off Contracts

Any form of contract stipulated in a Further Invitation that is broadly commensurate with the above forms of contract.

- The 'above contracts' for this purpose are any of the following:
 - A Member's Standard Terms / Purchase Order
 - JCT Measured Term Contract 2016 incorporating Fusion21's JCT MTC Schedule of Amendments contained in Schedule 19 (as may be updated following a new JCT release in accordance with the procedure in Schedule 9)
 - JCT Minor Works Building Contract 2016
 - JCT Intermediate Building Contract 2016
 - NEC4 Term Service Contract
 - NEC4 Term Service Short Contract
 - ACA TPC2005 Standard Form of Contract for Term Partnering (Amended 2008)
 - Model Services Contract (England & Wales) by the Government Legal Department
- There are parts of the Framework Agreement which apply to Call-Off Contracts. However, if there is any inconsistency between those parts of the Framework Agreement which apply to our Call-Off Contract and anything we put in our own Call-Off Contract, then our own Call-Off Contract takes priority. Accordingly, the Council may override the Framework Agreement as it sees fit.
- The Council's Officers should consider which of the above contracts should be used for this procurement, in consultation with Procurement and Legal officers if considered necessary.

9 PROPERTY CONSIDERATIONS

9.1 The Council owns the freehold on the retained Civic Centre site which includes the North Block. There are no leasing or licensing arrangements on the Civic Centre site that would be impacted by the proposals set out in this report.

- 9.2 As identified in paragraph 6.1 of the report, the solar PV installations would create an ongoing operation and maintenance costs estimated at £770pa. There is not sufficient capacity within the existing Repairs and Maintenance budget to manage any additional and new maintenance liabilities therefore the Repairs and Maintenance budget will need to be increased at the point of installation. The report identifies that this will be off-set by the revenue savings generated on the council's energy bills.
- 9.3 The Council is currently undertaking a review of its Operational Property with the objective of identifying its optimal operational estate. It is unlikely that the Review will undermine the proposals to invest in solar PV installations on the roof of North Block. Additionally, the ten-year management and maintenance plan for the North Block does not envisage a requirement to undertake any significant or intrusive repair or replacement works to the roof, however it should be noted that this may be required during the lifecycle of the solar PV installations and that this could result in temporary removal and re-installation.
- 9.4 In the Local Plan, the Civic Centre site (Site 1) is allocated as a site with potential for partial redevelopment. Orientation of the solar PV installations will need to consider any potential impacts of shadowing that might be caused by schemes delivered in accordance with the planning policy.
- 9.5 The Corporate Landlord Officer Board have reviewed and supported the proposals as set out in the report, subject to a review of the business case prior to any recommended contract award. Officers should ensure that the property division are updated as the project progresses.

Non-Applicable Sections:	Impact On Vulnerable Adults And Children Personnel Implications
Background Documents: (Access via Contact Officer)	Appendix I: North Block Roof Plans