

**Meeting:** Cabinet **Date:** 11 June 2024

**Wards affected:** Churston with Galmpton

**Report Title:** Brokenbury Solar Farm

**When does the decision need to be implemented?** Immediately

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## 1. Purpose of Report

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- 1.1 To provide an update as considerable time has passed since the original decision (May 2020) and to seek updated authorisation for prudential borrowing to bring the project forward, subject to the income generating a positive margin. The margin will be defined on completion of procurement and a final refinement of project costs.
- 1.3 An overall scheme budget of £2,750,000 has previously been approved by Cabinet in May 2020 subject to conditions set out below (6.1, 6.2 & 6.3 within the Introduction section). The latest project costs remain within budget.
- 1.4 For background reading the previous cabinet papers (May 2020) can be found in appendix 2.

## 2. Reason for Proposal and its benefits

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- 2.1 On 24 June 2019, Torbay Council declared a 'Climate Emergency'. Torbay Council is a partner of and supports the work of the Devon Climate Emergency Response Group, which is aiming to produce a collaborative Devon-wide response to the climate emergency to achieve net zero carbon emissions by 2050 and prepare Devon for the necessary adaptation to infrastructure and services required to respond to climate change.
- 2.2 Torbay Council's current Energy and Climate Change Strategy describes how the Council will help minimize the economic, social and environmental costs of climate change by demonstrating leadership and providing encouragement in working toward emission reductions and resilience to our changing climate.
- 2.3 The UK government also has a net zero strategy "Build Back Greener". This strategy sets out policies and proposals for decarbonising all sectors of the UK economy to meet Central Governments net zero target by 2050. Renewable energy including solar power forms part of this strategy.
- 2.4 The proposed solar farm would allow the end user to buy and use sustainable electricity generated on Torbay Council owned land to power the end users site. The identified end users' site serves residents throughout Torbay. Delivery of the solar farm would be a positive step towards meeting the targets set out in the Climate Change Strategy.
- 2.5 The objective is to provide a 2MWP solar farm to generate renewable energy over a 25-year period which will:
- Contribute to Torbay's net zero target by reducing our carbon footprint by 458.75 tonnes of CO<sub>2</sub> a year or 11,468.75 tonnes of CO<sub>2</sub> over a 25-year period. These figures are approximate based on average sunlight.
  - Generate a surplus for Torbay Council. The detail of which is available within exempt appendix 1
- 2.6 The business case has been considered by Capital and Growth Board and is now recommended to Cabinet for approval.

## 3. Recommendation(s) / Proposed Decision

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- 3.1 That subject to 3.2. below the Director of Pride in Place be authorised to proceed with the project to deliver a solar farm at Brokenbury.
- 3.2 That Cabinet recommends to Council that up to £2,750,000 of prudential borrowing be approved subject to securing a unit rate per MWh that exceeds the loan repayments, covers projected maintenance and other operational and equipment replacement costs and provides an appropriate surplus per annum over the life of the scheme commensurate with level of risk.

- 3.3 That the Chief Executive in consultation with the Leader of the Council, Finance Director and Cabinet Member for Finance should review and agree the final business plan after the EPC tender and PPA stage are complete and subject to that agreement is then authorised to agree and finalise the detailed terms and enter into contract with SWW or another purchaser of the electricity.

## **Appendices**

Appendix 1: Exempt appendix – financial summary

Appendix 2: Exempt - The previous May 2020 Cabinet papers with appendices.

## **Background Documents**

Cabinet Paper 19<sup>th</sup> May 2020 *“Briefing Document for creation of solar farm on land at Brokenbury funded from the Economic Growth Fund to assist with the Council’s Climate Change Strategy.”*

### 1. Introduction

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- 1.1 On 19 May 2020 the cabinet approved funding for a solar farm at Brokenbury. The title of the report that went to cabinet is *Briefing Document for creation of solar farm on land at Brokenbury funded from the Economic Growth Fund to assist with the Council's Climate Change Strategy*.

The cabinet approved the following:

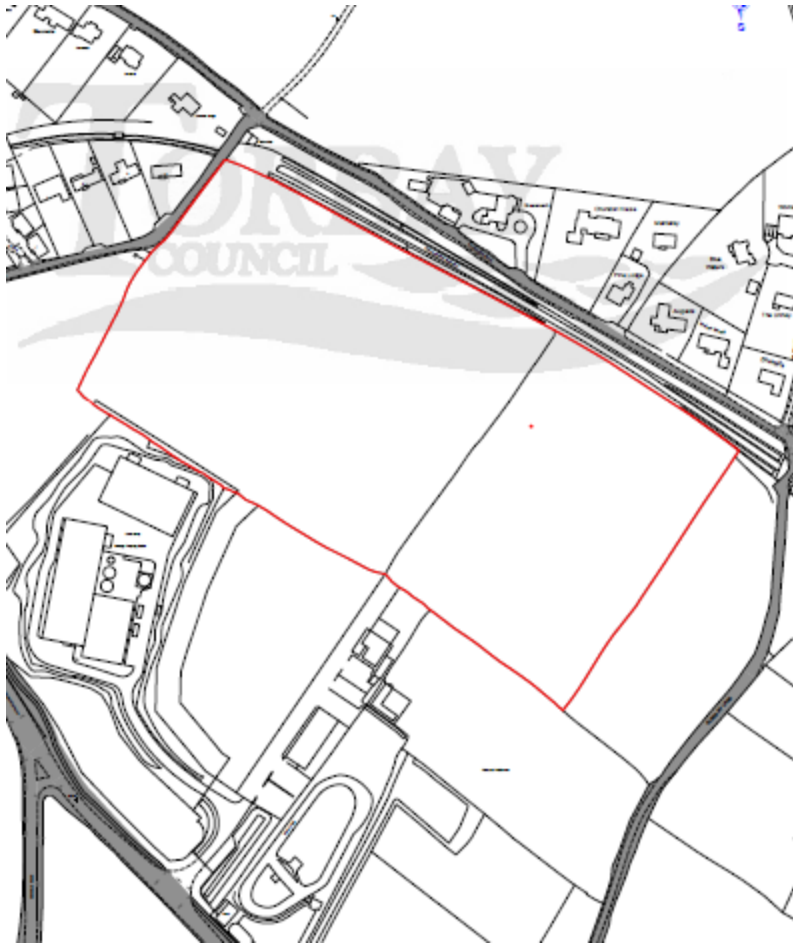
*6.1 That the Chief Executive in consultation with the Leader of the Council and Chief Finance Officer be authorised to approve the detailed business case once the design and due diligence phase has been complete and in any event must meet the financial criteria set for the Economic Growth Fund*

*6.2 That, subject to 6.1 is approved that up to £2,750,000 from the Economic Growth Fund be allocated to develop a solar farm on either the 10acre or 16.66acrea site at Brokenbury Farm. Any development is subject to due diligence.*

*6.3 That the Chief Executive be authorised to agree and finalise the detailed terms with SWW, or another purchaser of the electricity.*

Since the original approval the Economic Growth Fund is no longer in existence and due to the high level of existing Council borrowing, and viability and affordability issues across a number of approved capital projects, the Council has renewed its approach to setting a Capital Investment Plan for 2024/25, only detailing the specific stages, (gateways), of individual projects based on the corresponding funding available. To provide a greater understanding of the deliverability, and timing, of progressing key work, the Council has adopted an approach whereby initial funding is only allocated to projects to progress them to either Outline, or Final Business Case stage. This approach is intended to provide greater control over the Capital Programme.

- 1.2 Up to date financial projections which include total scheme cost (currently estimated at £2,275,000) confirm that the project remains within the previously approved £2,750,000 and subject to the agreed unit price a surplus can be made.
- 1.3 The two fields at Brokenbury (edged red below) are located off Bridge Road and to the north and east of the Southwest Water (SWW) treatment plant in Churston. The fields extend to 16.66 acres.



- 1.4 The previous cabinet paper (Appendix 2) from May 2020 explains that a private wire solar scheme at the pair of fields at Brokenbury can provide power to the adjacent Southwest Water treatment plant.
- 1.5 Planning consent has been obtained on 18.11.22 reference P/2021/0658. This is for a 2MWp solar farm. The consent has been granted for a 3-year time period whereby work must have started (but not completed). The below plan forms part of the planning consent and shows the location of the solar panels in blue.



- 1.6 A grid connection to export power up to 499kv has been accepted in December 2021. This allows the private wire from the solar farm to connect to the water treatment works whilst

using the existing grid connection for any export of excess power into the national grid capped at 499kv. The solar farm has been designed to meet the power requirements of the treatment works but at times there may be excess power that the treatment works cannot use which can be exported into the national grid.

- 1.7 The Heads of Terms (HoTs) for the Power Purchase Agreement (PPA) have been signed by both parties. They are not legally binding but do show a commitment toward the project and enable the Power Purchase Agreement discussions to proceed. Legal advice received in relation to the next phase is that the Power Purchase Agreement should only be signed in tandem with the EPC and O&M contract. One should not be signed without the other and both must accord with the obligations of the other. Solicitors are advising on the commercial EPC contract and the Power Purchase Agreement.
- 1.8 As the HOTS have developed it is clear that the end user wants confidence of delivery and there will be performance expectations set out in the agreement which will include matters such as the performance of the solar panels and the power output provided, commissioning of the installation within an agreed period with potential for termination if not achieved by a set date, and losses if the agreement is terminated
- 1.9 The financial appraisals to date have been produced to test different unit prices for the solar power to be sold. The unit price will be agreed through the Power Purchase Agreement. The Power Purchase Agreement can progress now the HOTS are signed. In principle the terms upon which the power would be sold to the end user are:
  1. A 25-year power purchase agreement (PPA). This is confirmed in the signed HOTS.
  2. The end user will buy 100% of all power generated from the planning approved site. A unit price of £ per MWh is stated within the HOTS although once the procurement is complete and the final build costs are known there may be a need to revisit this.
  3. Torbay Council will develop the solar array at its own cost, estimated at £2,275,000 (the EPC and O&M tender has not been run yet which will constitute the biggest cost to the scheme).
  4. Based on the planning consented scheme the end user would pay Torbay Council for the power the solar farm would generate, over a 25-year period. The unit price will be index linked over the 25 years. The unit price has not been agreed yet and would need to be agreed through the Power Purchase Agreement (PPA). Before the PPA can be drafted for a final time and signed, a successful EPC and O&M tender process must be completed with a final tender price agreed which will demonstrate the viability of the project.
- 1.10 The end user will be contractually obliged to purchase 100% of the power produced by the solar farm at the rate agreed.

- 1.11 The solar panels typically have a useable life span of up to 40 years. The efficiency of the panels reduces with their age. Typically, they are guaranteed to achieve 80 to 85% efficiency after 25 years. Degradation will be fully modelled as part of the due diligence during the tender stage with the EPC and O&M contractor.
- 1.12 After 25 years the PPA with the end user could be renegotiated but this not guaranteed. As such a full repayment model is set over the 25 yr contract period.
- 1.13 All of the capital required to develop the solar farm will be repaid over the 25yr term, matching the length of the agreement and therefore if there is a new agreement post yr 25 then the surplus to the Council from year 26 will be higher as the loan will have been repaid.

## 2. Options under consideration

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- 2.1 Build out the planning consented scheme after negotiating the Power Purchase Agreement and receiving EPC and O&M tender responses which confirm that the scheme is viable.
- 2.2 As an alternative to the private wire connection with an end user there is the potential to sell the renewable power direct to the national grid.

The wider grid network has limited capacity. The earliest possible connection may not be until 2028 but this is likely to extend out to 2036 when more capacity within the network is expected. The issue with the wider network is that it needs upgrading to be able to handle significant extra capacity. Such upgrades delay the timeframe for a connection to be made. In addition to the programme delays there are also financial considerations. To connect to the grid will cost at least £250k (Sep 21 estimate – this is likely to be more now). Furthermore the unit price when feeding into the national grid is likely to be considerably less when compared to a private wire end user scenario which would make the project unviable.

## 3. Financial Opportunities and Implications

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- 3.1 The Council had previously earmarked £2,750,000 from the Economic Growth Development Fund, however this was some years ago and following Council approval of the Capital budget prudential borrowing is now required as opposed to the use of the growth fund.
- 3.2 The next phase of work will consist of procurement EPC and O&M contractor and is estimated to require a budget of £42,900. This will include a period of technical design with the selected preferred supplier. Following this technical stage a Full Business Case (FBC) will be submitted and approved by CGB as a final viability check before committing to a contract.

- 3.3 The project and all its remaining phases are within the previously approved budget. The money will be borrowed on the Public Works Loan Board. The capital cost summary and ongoing revenue costs are detailed at exempt Appendix 1
- 3.4 The financial loans costs are repaid over the 25 year PPA period. The unit price charged for the electricity will cover the Councils loan repayment costs and further details of this can be found in the exempt financial summary appendix 1.

## 4. Legal Implications

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- 4.1 The first draft of the Power Purchase Agreement is currently being drafted by the end user. In principle the terms upon which the power would be sold to the end user are:
- A 25-year power purchase agreement (PPA). This is confirmed in the HOTS.
  - The end user will buy 100% of all power generated from the planning approved site. A unit price of is stated within the HOTS.
  - Torbay Council will develop the solar array at its own cost, estimated at £2,275,000 (the EPC and O&M tender has not been run yet which will constitute the biggest cost to the scheme).
  - Based on the planning consented scheme end user will pay Torbay Council for the power the solar farm would generate. The unit price has not yet been finalised but the amount charged will be in excess of the Councils loan repayments and running costs.

## 5. Engagement and Consultation

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- 5.1 Public consultation for the project has been carried out in line with the usual planning application process.
- 5.2 The key stakeholder and end user of the renewable energy, has been closely engaged with both during the strategic work up of the project which is ongoing.
- 5.3 A comms plans will be produced by Torbay Council comms team once a committed start on site date is defined. This will likely include local news and social media messages which will be updated as we progress through key stages of delivery.



## 6. Purchasing or Hiring of Goods and/or Services

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- 6.1 The solar project is at a stage where an EPC and O&M contractor must be appointed through a tender process in order to progress but can only be appointed in tandem to the signing of the Power Purchase Agreement.
- 6.2 These contractors would then be responsible for acquiring the various components and delivering the scheme. .

### Market analysis

- 6.3 The solar consultant has looked at comparable solar scheme costs that are reflected in the financial appraisal. The comparable solar farms are of a similar MW rating to the Councils to 2MWp scheme. The comparable schemes are either live or recently completed.
- 6.4 The costs from the comparable schemes provided by the solar consultant have informed the build costs contained within the financial appraisal.
- 6.5 The operating costs have been discussed with the solar consultant who has provided advice on comparable sized schemes. The O&M contract will be initially provided by the EPC contractor for a period of 2 years. After 2 years should the council be happy it could reappoint the same contractor or look to appoint another contractor.

### Route to market

- 6.6 The Councils procurement team have identified the CCS framework as having a lot specific for EPC and O&M contractors. The solar consultant has reviewed the list of contractors on the CCS Framework. The CCS Framework has been approved as a compliant and appropriate route to market by the procurement team. There is no cost for the Council to use the framework. The cost is passed on to the contractor which will be reflected in the contractor's tender response.
- 6.7 Using the framework ensures there has already been an element of pre selection using robust quality and price criteria and furthermore reduces the number of potential bidders to a more manageable amount.
- 6.8 Using this framework is more likely to produce more committed responses from providers on the framework than in an open competition procedure where it is common to receive interest with no real potential behind them. As we will know the details of potential bidders in advance of the procurement process commencing targeted market engagement activities can be undertaken to establish the potential level of respondents.

## 7. Tackling Climate Change

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- 7.1 The following text is an extract from the Council's Climate Change Strategy which remains in force:

*Climate change is having a major impact on our planet. On 24 June 2019, Torbay Council declared a 'Climate Emergency'. Torbay Council is a partner of and supports the work of the Devon Climate Emergency Response Group, which is aiming to produce a collaborative Devon-wide response to the climate emergency to help us get to net zero carbon emissions by 2050 at the latest and also prepare Devon for the necessary adaptation to infrastructure and services required to respond to climate change.*

- 7.2 Torbay Council's current Energy and Climate Change Strategy for Torbay describes how we aim to help minimize the economic, social and environmental costs of climate change in the Bay by demonstrating leadership and providing encouragement in working toward emission reductions and resilience to our changing climate.
- 7.3 The UK central government also has its net zero commitments called: Net Zero Strategy: Build Back Greener. This strategy sets out policies and proposals for decarbonising all sectors of the UK economy to meet Central Governments net zero target by 2050. Renewable energy including solar power forms part of this strategy.
- 7.4 The solar farm would allow the end user to buy and use sustainable electricity generated on Torbay Council owned land to power its site. Its site serves residents throughout Torbay. It would be a positive step, towards meeting the targets set out in the Climate Change Strategy.
- 7.5 The project will contribute to Torbay's net zero target by reducing our carbon footprint by 458.75 tonnes of CO<sub>2</sub> a year or 11,468.75 tonnes of CO<sub>2</sub> over a 25-year period. These figures are approximate based on average sunlight.

## 8. Associated Risks

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- 8.1 If the end user does not sign the PPA there will be abortive costs. To date £212,240.87 has been spent with a further £25,417.49 committed. The next phase is estimated to cost £42,900 leading to potential overall abortive costs of £280,557. There are no competing private wire schemes in the area. Negotiations have been positive throughout and it is considered that this scenario is unlikely.
- 8.2 The EPC contract and PPA contract must be signed in tandem to ensure the obligations within each can be met when viewed in the round. This will involve some co-ordination internally and externally and potentially could add time to the programme. Progress has been slow during the HOTS discussions.

- 8.3 Inflation has meant that the longer it has taken to deliver the solar farm the higher the build costs, further prolongation of the programme will increase the scheme costs further.
- 8.4 The end user has made obligations within the HOTS that need to be reflected in any unit price agreement. The figures (£) will be negotiated through the Power Purchase Agreement. The greater the requested obligations the greater the unit price requested by the Council to cover the associated risks. The Council has considered fire risk. The transformer station design will be robust in consideration of fire suppression. A fire detection system (sprinklers) can be incorporated into the transformer station. The EPC contractor when carrying out the detailed design work will look at the overall design to reduce fire risk. The O&M contractor will ensure regular inspections are made on site. These actions will reduce fire risk and the likelihood of liquidated damages on the basis of the solar farm not being operational.

## 9. Equality Impacts - Identify the potential positive and negative impacts on specific groups

|  | Positive Impact | Negative Impact & Mitigating Actions | Neutral Impact |
|--|-----------------|--------------------------------------|----------------|
| Older or younger people  |                 |                                      | x              |
| People with caring Responsibilities  |                 |                                      | x              |
| People with a disability   |                 |                                      | x              |
| Women or men   |                 |                                      | x              |
| People who are black or from a minority ethnic background (BME) (Please note Gypsies / Roma are within this community) |                 |                                      | x              |
| Religion or belief (including lack of belief)  |                 |                                      | x              |
| People who are lesbian, gay or bisexual  |                 |                                      | x              |
| People who are transgendered   |                 |                                      | x              |
| People who are in a marriage or civil partnership  |                 |                                      | x              |

|   |  |  |   |
|---|--|--|---|
| Women who are pregnant / on maternity leave   |  |  | x |
| Socio-economic impacts (Including impact on child poverty issues and deprivation)                       |  |  | x |
| Public Health impacts (How will your proposal impact on the general health of the population of Torbay) | Clean energy will prevent the use of fossil fuel alternative and help to sustain a cleaner atmosphere and environment for all in the local area. |  |   |

## 10. Cumulative Council Impact

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10.1 None

## 11. Cumulative Community Impacts

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11.1 None