

This Report will be made public on 31 January 2025



Report Number **C/24/68**

To: Cabinet
Date: 10th February 2025
Status: Key Decision
Responsible Officers: Andy Blaszkowicz - Director of Housing and Operations
Martin Kerslake – Low Carbon Advisor
Cabinet Member: Councillor Martin, Leader of the Council and Cabinet Member for Otterpool Park and Planning Policy
Councillor Scoffham, Cabinet Member for Climate, Environment and Biodiversity
Councillor Speakman, Cabinet Member for Assets and Operations

SUBJECT: OTTERPOOL PARK: SOLAR PARK AND SMART GRID BUSINESS CASE UPDATE

SUMMARY:

This report presents the work undertaken following approval of the recommendations in cabinet report C/23/66 in December 2023 and brings members up to date with the business case for the solar park and connected smart grid at Otterpool Park. The report examines the requirements to develop the electricity infrastructure to supply residents and businesses located in Otterpool Park recognising the environmental and economic context. The success criteria of the business case includes; creating a credible pathway to a net-zero exemplar development, optimising the Council's / Otterpool Park LLP's income, minimising any governance risk and having no capital investment requirement for the Council.

The preferred solar park developer SNRG Ltd working with Otterpool LLP and the Council have identified that the combination of the smart grid and solar park (phase 1) meet the success criteria listed above for the Council.

REASONS FOR RECOMMENDATIONS:

In response to the approved recommendations 2a, 2b and 3 of the Cabinet Report C/23/66 ([Cabinet report DRAFT Otterpool Solar Farm AB Final Version 1.pdf](#)) this report presents the review of the business models for the provision of the solar park (phase 1) and the associated independently owned, smart grid electricity infrastructure that recognises the Council's role as the key landowner working in

partnership with the preferred solar park provider and the existing electricity grid developer.

The recommended approach has been independently reviewed to ensure the proposal is compliant with industry Regulatory Codes, adopts scalable technologies and governance models that combine to mitigate the financing and operational risks of providing the Otterpool Park electricity infrastructure.

The recommended model provides a sustainable annual income and a pathway to net zero in operation, where the external investors, Council / Otterpool LLP and future Otterpool Park residents share the benefits of the combined solar park and smart grid infrastructure over the lifetime of Otterpool Park.

RECOMMENDATIONS:

- 1. To receive and note this report C/24/68.**
- 2. To approve the recommended business model as set out in section 2 of this report.**
- 3. To note that a full and thorough legal review of the Options Agreement and Heads of Terms will be undertaken.**
- 4. To provide delegated authority to the Director of Housing and Operations and the Council's S151 Officer following the legal review to sign the Options Agreement and Heads of Terms with the preferred solar park provider, SNRG Ltd, to enable them to apply for planning consent.**
- 5. To provide delegated authority to the Director of Housing and Operations to enter into a lease on council-owned land shown edged in red in appendix 1 for Phase 1 of the Solar Park, following the award of planning consent.**

1. BACKGROUND

- 1.1. Otterpool Park, a new garden town, will be central to shaping a sustainable future for the District. It is recognised as a priority within the Council's Corporate Plan 2021-30 'Creating Tomorrow Together' and will make a significant contribution to achieving positive outcomes for:

Service Ambition 1: Positive community leadership

Service Ambition 2: A thriving environment

Service Ambition 3: A vibrant economy

Service Ambition 4: Quality homes and infrastructure.

- 1.2. The Council's long-term commitment to developing a new and sustainable community is supported by the proposal to deliver sustainably generated electricity to residents and businesses from a privately-owned smart grid comprising on-roof solar PV panels and local battery storage augmented by a direct connection to a solar park on Council-owned land to the south west of and outside of the Otterpool Park land allocation that will also connect to the national grid operated by UKPN.
- 1.3. Cabinet report C/23/66 noted the results of the soft market test conducted by Stantec on 25th May 2023 and approved the appointment of SNRG as the preferred investor, developer and operator of the solar park (phase 1).

- 1.4. Cabinet report (C/23/66) noted the value of SNRG's smart grid proposal and the need to continue negotiations to refine the model to maximise the benefits of the smart grid and solar park combination and reach the point where Otterpool LLP are ready to appoint SNRG Ltd as the preferred 'smart grid' developer.
- 1.5. The options for this business case have been structured with consideration of the following success criteria:
 - Early Net-Zero pathway
 - Mitigated risk to the Council to be very low
 - No detriment to land value
 - No Council capital investment
 - On-going revenue receipts to Council as landowner
 - Secure a long-term tariff reduction compared to market rates for residents
 - Future-proof, resilient and compliant structure with robust business model
 - Phased investment profile aligned with the Otterpool Park housing build-out
 - Investment servicing and operational accountability with SNRG
 - Expandable model to exploit future renewable opportunities
 - Any transfer of asset ownership is contractual, and supplies remain uninterrupted, and residents are protected by the OFGEM Regulatory Code
 - Model has a community focus and offers opportunity for community ownership
- 1.6. This report seeks approval for the strategic direction of the business model in readiness for the final independent legal review of the Options Agreement, Heads of Terms for the solar park (phase 1) and the appointment of SNRG as the preferred developer of both the solar park (phase 1) and smart grid infrastructure.
- 1.7. Cabinet report (C/23/66) outlined the proposal to deliver sustainable electricity infrastructure comprising of a solar park on land adjacent to Otterpool Park with a direct link to a new smart grid and independently owned electricity distribution network with battery storage throughout the Otterpool Park Phase 1 development.
- 1.8. The report recognised that phase 1 of the solar park would provide up to 50% of the annual average energy demand from the homes, shopping centre and local business areas developed as phase one of the Otterpool Park development. The balance of net zero electricity will be procured by SNRG contracting with national renewable power suppliers using industry Power Purchase Agreements at wholesale prices and importing into the Otterpool SmartGrid. Otterpool Park aspires to be 100% net zero (in operation) and with a model that allows the flexibility to consider future opportunities to invest in additional onsite or near-site generation.
- 1.9. Since approval of Cabinet Report (C/23/66) in December 2023 officers have been working closely with the preferred bidder to develop the model further to establish a true pathway to net-zero (in operation) for the whole development. The original projected residential annual electricity demand per home has been revised to align with the Future Homes Standard which recognises the improved energy efficiency standards and the impact of home EV charging.

1.10. In order to achieve this, the solar park with the addition of roof top solar and local battery storage, all connected to the smart grid, will put the development firmly on the path to net-zero (in operation) but onsite generation will not be enough to achieve net-zero (in operation) across the whole development in the years to come. To achieve net zero (in operation) SNRG SmartGrid Company will contract to import the balance of renewable electricity requirements into the SmartGrid under industry Power Purchase Agreements (PPA's). This model will create a fully sustainable development and has the flexibility to invest further in on-site generation as opportunities arise.

1.11. The table below shows projections of demand and the sources of supply throughout the development period. This does not include the potential development of phase 2 of the solar park at this stage.

Years	Connected homes	TOTAL DEMAND	SUPPLIED FROM	
Start date = 2027	cumulative build out	Ave Annual demand MWh	SmartGrid and solar park (p1) (MWh)	Green Energy Contracts (PPA, MWh)
2	199	1,692	796	896
5	1090	9,265	4,360	4,905
10	2546	21,641	10,184	11,457
15	3965	33,703	15,860	17,843
30	8500	72,250	34,000	38,250

Note: assumptions:

- 100% of homes opt in to be connected to the smart grid and have electric heating with home EV charging, giving an assumed total average demand of 8.5MWh per home per year (Future Homes Standard for 3-bed semi-detached with heat pumps and EV charging).
- Average of 4kWp per home generation is connected either as solar PV on residential roof tops, or for those without rooftop solar the 4kWp is supplied from the solar park.
- Balance from PPAs contracted by SNRG with 100% green national energy suppliers at wholesale prices and imported into the smart grid.
- The model supports future opportunities to invest in additional onsite generation as it becomes available that will displace imported green power on a kWh by kWh basis.

2. RECOMMENDED BUSINESS MODEL

- 2.1. The contract for the installation of the private, main Otterpool Park grid (including the UKPN grid connection) has already been awarded by Otterpool LLP to Networx Utilities Limited (NUL) following a competitive tender process.
- 2.2. Under the terms of the existing contract NUL will appoint Utility Assets Limited (UAL) to adopt the entire grid for all connections and operations. UAL is the Independent Distribution Network Operator (IDNO) for Otterpool Park.
- 2.3. SNRG will create, adopt and operate the smart grids embedded within the private network. UAL will adopt and operate the non-smart grid portion, which includes the connection with the national grid and the interconnections between the smart grids.
- 2.4. SNRG will fully fund and construct the smart grid (infrastructure to supply homes and businesses), the solar park and all roof top solar working closely with the incoming developers.
- 2.5. SNRG will create and fully fund an industry-compliant, privately-owned smart grid governance structure. The Council or Otterpool LLP will not provide any capital investment.
- 2.6. SNRG will fund, own and operate the solar park and connection to the smart grid serving Otterpool Park, and remain fully accountable for servicing the investment, delivery, performance, compliance, customer satisfaction and all financial transactions. The Council will have no ongoing financial liability. SNRG will also be responsible for all land management and maintenance requirements associated with the land ownership of the solar park which will be detailed in the lease agreement.
- 2.7. SNRG will apply for the relevant consents for the solar park (phase 1) and connect directly to the Otterpool Park SmartGrid and onwards through the existing IDNO connection to UKPN's national grid. There is minimal planning risk to the Council associated from submitting the planning application as this lies with SNRG, however the Council as Local Planning Authority (LPA) needs to be mindful of the risk (and cost) of any potential judicial review (JR).
- 2.8. SNRG will be expected to enter into a Planning Performance Agreement with the council as LPA. Discussions have taken place with the LPA around the potential risk of JR. The LPA will commission independent planning legal expertise to oversee the application process to minimise this risk. SNRG have confirmed that they will cover the cost of this commission. See further detail in section 5.3, Options Agreement.
- 2.9 The existing contract with NUL is set up to pay a grid connection fee of £1,793 per property to the Otterpool LLP. The connection fee is paid by the incoming developers upon the connection of each home. The contract will be amended by Otterpool LLP to include SNRG as one of the parties that can adopt the network (i.e. the SmartGrid) from NUL and receive the connection fee from the developer.

- 2.10 Under this recommended contractual arrangement SNRG will pay directly to the Otterpool LLP a reduced grid connection fee of £1,176 per property connected to the smart grid. The balance of the grid connection fee (£617) will remain within SNRG's SmartGrid Company to fund cashflow and reserves. In return the Otterpool LLP will receive an additional annual, index-linked royalty payment of £57 per connected home until 2058 (Otterpool scheme completion) which then reduces to £12 per annum at current value which, with the indexing assumptions, equates to an estimated £25 per property per annum from 2058 which continues to be index-linked and paid in perpetuity.
- 2.11 For any homes not connected to the smart grid Otterpool LLP will receive the one-off connection fee of £1,793 from NUL, but no annual royalty. This underpins the Otterpool LLP income in the event that developers opt out of connecting to the smart grid.
- 2.12 The shared benefits of the recommended model are designed to encourage developers to connect to the smart grid from the outset and for householders to remain with the smart grid over time.
- 2.13 The recommended combination of connection fee and annual royalty payment will generate £21m over the 30 year build out period until 2058 for the Otterpool LLP.
- 2.14 The alternative and existing option of retaining the full connection fee would generate £15m to 2058 and nothing thereafter. See income table 6.2 below.
- 2.15 The annual rent paid by SNRG for the solar park land (phase 1) is £120k from the point that planning permission is granted, and the lease is entered into.
- 2.16 The Council will forego the current agricultural land rent of £ 9,370 per annum in favour of the rent of £120,000 per annum for the solar park (phase 1) with 5 yearly upwards rent reviews.
- 2.17 Further consideration needs to be given to whether the solar park land and associated income transfers over to the Otterpool LLP or appropriate body at a future point in time as the development progresses to safeguard the income for development purposes.
- 2.18 The financial summary of the recommended model is shown in the table below and assumes that 8,500 homes are connected to the smart grid. The solar park rent excludes the impact of any upwards rent review whilst the royalty payments are index-linked:

Income projections from the recommended model

Source	Payable	Rate	30-year value (after build-out and 8,500 homes connected to smart grid)
Rent for solar park (phase 1)	Annual rent	£120,000	£ 3.6m

One-off royalty for smart grid connection	On connection per home	£ 1,176	£ 10.0m
Ongoing royalty per home connected to the smart grid	Annual per connected home	£ 57	£ 11.2m
Total			£ 24.8m

- 2.19 Otterpool Park residents will receive a tariff reduction of a minimum of 15% against an agreed published benchmark which is fully costed within the model.
- 2.20 Otterpool Park residents can also opt out of the smart grid connection at any time should they wish to find an alternative supplier and forego the discounted SNRG SmartGrid tariffs. At a later date the householder can then elect to return to the SNRG SmartGrid Company should they wish.
- 2.21 Otterpool Park housebuilders will receive approximately a £4,000 per house cost reduction (at current rates) as SNRG will fund the on-roof solar PV. This will help the developers to achieve the required carbon emission standards under current and future building regulations. Developers can opt out of the on-roof solar PV installation and connection to the smart grid (and forego the cost savings) and instead connect to the traditional grid managed by the IDNO should they so wish.
- 2.22 Net zero (in operation) is achieved by the model by:
- Combining on-site electricity generation via roof-top solar with battery storage and solar park (phase 1) that will generate approximately 50% of the average annual demand of the 8,500 homes,
 - Balancing loads using the SNRG SmartGrid Company to contract with national suppliers and import renewable energy through the national grid connection with UKPN and into the SNRG SmartGrid using industry Power Purchase Arrangements (PPAs). All costs and associated risks and liabilities are with SNRG.
 - Exploring future opportunities to invest in additional on-site renewable energy generation, potentially extending the solar park (phase 2), identifying additional locations for on-site generation, adopting new technologies that have a higher efficiency and greater output than the current solar PV panels that will displace the imports under the PPAs.
- 2.23 Biodiversity net gain is embedded in the design of the solar park as detailed in C/23/66 including providing space that will: accommodate sheep grazing under the solar panels; expand footpaths; create hedgerows for wildlife; and plant community orchards.
- 2.24 The model is both future proofed and fully compliant and with the flexibility to adapt and embrace new technologies and future opportunities such as public electric vehicle charging and the extension of Otterpool Park.

3 RECOMMENDED MODEL – ‘FOR AND AGAINST’ SUMMARY

- 3.1 The risk profile and mitigation for the recommended model is low compared to the rejected options that are considered in section 6 of this report that are classed as medium and high risk: The project risk profile and mitigations are considered in section 7 of this report.
- 3.2 The recommended model provides a long-term revenue stream by exchanging a marginal reduction in the smart grid connection fee rate for an on-going index-linked annual royalty payment for every home that remains connected to the SNRG SmartGrid. The impact of the annual index-linked royalties is to deliver a significant increase in overall contracted revenues to the Otterpool LLP over the lifetime of the Otterpool Park smart grid.
- 3.3 The recommended model when implemented will generate 50% of the annual average demand for the 8,500 homes onsite and meet the outstanding electricity demand from imports of renewable electricity. The model has the flexibility to invest in future opportunities and displace imports from the national grid and increase the on-site renewable energy. For example, this might include development of an additional connected solar park (phase 2), expansion of on-site generation or new technologies.
- 3.4 A key risk for the recommended model is that developers or householders elect to connect to the IDNO grid rather than the SNRG SmartGrid. The recommended model mitigates the impact on long-term revenues as summarised in the table below and detailed in section 7.

Recommended Model	First 10 years build out		First 30 years build out		Years 31-80 royalty
	Homes	Total value (£m)	Homes	Total value (£m)	Annual indexed value P.A (£k)
Scenario 1 – Affordable Housing connected to SNRG SmartGrid 22% connect to SNRG SmartGrid	2600	£ 6.34m	8500	£20.15m	£ 44k
Scenario 2 – Most homes connected to SNRG SmartGrid 80% connect to SNRG SmartGrid	2600	£ 5.87m	8500	£ 23.7m	£ 158k
Scenario 3 – All homes connected to SNRG SmartGrid, 100% connect to SNRG SmartGrid	2600	£ 5.70m	8500	£ 24.8m	£ 197k

- 3.5 The review of the recommended model highlights the following strengths and weaknesses:

FOR	AGAINST
No investment required from the Council / OP LLP	Limited number of experienced smart grid participants in residential markets (currently)
All OP LLP / Council income is contracted as rents or royalties	Early OP LLP / Council income marginally reduced and exchanged for a much larger longer-term revenue stream.
Council / OP LLP income optimised whilst risks are minimised	
Residents receive a minimum of 15% discount against other local tariffs.	
Residents can choose to opt out	
Developers save c£4,000 per plot (cost of PV) and on-roof solar PV is a key contributor to achieve their mandatory carbon emissions reductions	
Developers can opt out and fully fund their mandatory carbon emissions targets and OP LLP will receive payments from the existing IDNO connections	
Pathway to net zero in operation: - SNRG SmartGrid with renewable imports delivers 100% net zero - Solar park (phase 2) option generates a further 25-35% of demand onsite and displaces an equivalent amount of grid import	

4 RECOMMENDED MODEL - TIMELINE – KEY CHECKPOINTS

Date	Activity
February 2025	Appointment of SNRG as preferred smart grid provider
	SNRG commence pre-planning process for solar park (phase 1)
March 2025	Contract amended with existing Independent Distribution Network Operator to align with recommended model
	Approval of Heads of Terms and Options Agreement for solar park (phase 1)
March / April 2025	SNRG commence planning application
January 2028	First smart grid connection of c150-250 homes energised
	First panels of solar park for the first smart grid are energised (subject to consents)

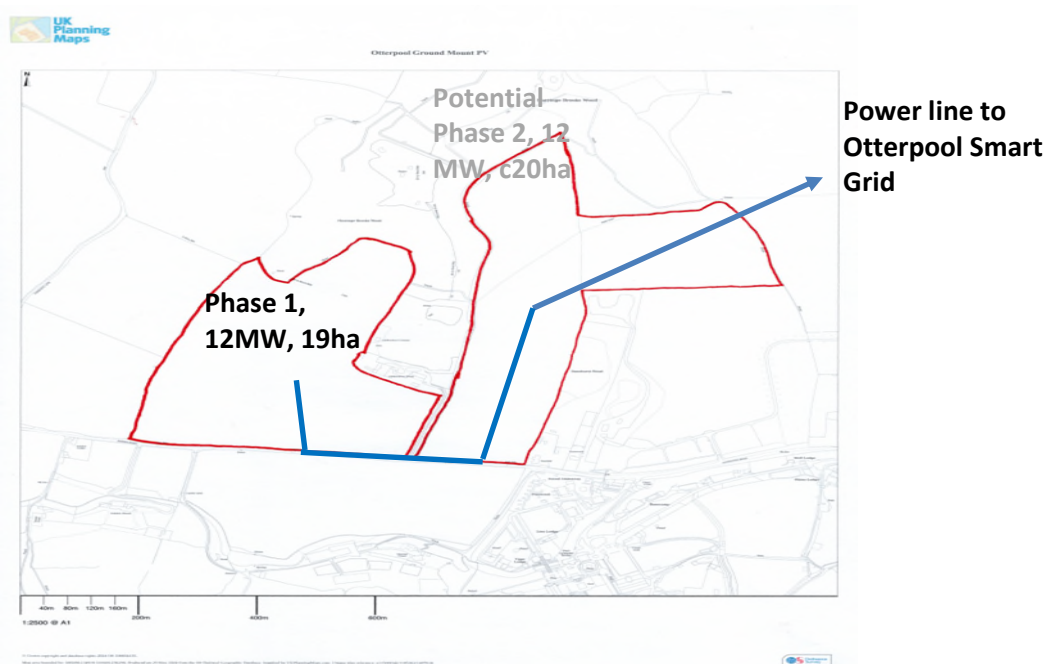
5 OPTIONS AGREEMENT / HEADS OF TERMS / FINANCIAL & LEGAL REVIEW

- 5.1 The Options agreement for the solar park land and the Heads of Terms are in an advanced position that reflects the business case set out as the agreed option in this report. The report seeks delegated authority to the Director of Housing and Operations to enter into the agreements following full and thorough financial and legal reviews and approval of the Council's S151 Officer. Officers will be supported by external expert consultants including Stantec and specialised lawyers.
- 5.2 The budget to undertake the legal review was approved as part of the previous cabinet report (C/23/66).

5.3 Options Agreement (Solar Park land) – Headline terms

5.3.1 The following headline terms have been received from SNRG for the solar park options agreement which will undergo a thorough legal review.

- Optioned land for the solar park is the proposed area edged in red entitled 'Phase 1 12MW 19ha' and the wayleave for the connection to the SNRG SmartGrid. This excludes the 'Potential Phase 2 area 12MW, 20ha' at this point in time.
- The wayleave below is indicative and will be confirmed within the planning application. If the cable route runs through the highway to the south a section 278 agreement will be entered into with the highway authority. SNRG will be responsible for agreeing the route and entering into the agreements with the relevant landowners.



- The purpose of the Options Agreement is to obtain the necessary planning consents for the solar park (phase 1) and generation of 12MWp of solar power with associated connections and wayleaves over adjacent land.
- SNRG are responsible for all the costs of the planning application, the pre-planning, the consultations, the design work and must evidence the net biodiversity gain.
- All costs, losses, damages, compensation and fees for the access of land are for SNRG alone, including compensation for unharvested crops. The council is indemnified in full.
- The option period is 4 years from signing, however, where planning approval is pending it can be extended by a further 2 years. Note that the planning application is to be submitted within 12 months, unless otherwise agreed.
- SNRG will pay the Council up to £50k towards the costs of negotiating the solar farm options agreement and lease.
- SNRG will pay the Council up to a further £50k towards the cost of conducting a legal assessment of the solar farm planning process.
- FHDC will have freedom to allocate those sums between either activity. For example, if the lease and option agreement costs £30k, the remaining £20k can be allocated towards the costs of the legal assessment of the solar farm planning process to bring the total available to £70k.
- SNRG is also willing to cover any additional legal expenses associated with the above and any subsequent legal expenses incurred in relation to a judicial review of the planning application, subject to agreeing a reduction in the amount of asset value paid by the SNRG group to adopt the Otterpool Park electrical network. The mechanism for this will be detailed in the Options Agreement.

5.4 Heads of Terms – Key Points:

The following outline Heads of Terms have been received from SNRG which will undergo a thorough legal review.

5.4.1 Solar park (phase 1)

- 12MWp Solar Farm with designated undisturbed spaces co-designed with the community to create multiple wildlife habitats and the potential for sheep grazing with community orchards and footpaths.
- Plans subject to the approval of the Local Planning Authority.

- Lease for an initial 35-year term together with a mutual option for renewal at 5 year intervals subject to a longstop of 99 years.
- Base rent at £2,500 per acre, including the wildlife habitat, equates to £120,000 per annum, payable in advance on commencement of the lease and thereafter quarterly in areas with 5-year rent reviews (upwards only) and in line with changes in the Consumer Price Index (CPI) until the end of the decommissioning period and reinstatement as agricultural land.
- SNRG will pay all rates and be accountable for insuring and securing the site and are responsible for the build and all on-going maintenance and repair costs.
- SNRG will provide a decommissioning and reinstatement bond to be held in ESCROW, with 5-yearly independent assessment of costs and the bond value adjusted accordingly.
- SNRG have the right to assign the lease and all covenants to a third party subject to council consent.

5.4.2 SmartGrid

- Each SmartGrid of c150-250 homes includes a connection and Connection Agreement to the IDNO and a connection directly to the solar park.
- Networkx Utilities Ltd (NUL) are already appointed by Otterpool LLP to build the physical grid and to appoint the grid operator Utility Assets Limited (UAL) to adopt the full operational grid.
- SNRG will create a new ESCO distribution company in readiness to adopt and operate the SNRG SmartGrid infrastructure. UAL will adopt the non-smart grid portion.

5.5 Legal Review

5.5.1 The Council's legal services team will appoint a suitable legal specialist to undertake a full review of the Options Agreement and Heads of Terms for the solar park (phase 1) prior to any agreement being entered into and any grant to SNRG to proceed to pre-planning, consultation and planning application.

5.5.2 Legal specialists commissioned by the Otterpool LLP will negotiate the amendment of the existing contractual agreement with Networkx Utilities Ltd (NUL) to include SNRG as one of the parties that can adopt the network (i.e. the SmartGrid) from NUL and receive the connection fee from the developer.

5.6 Financial Review

5.6.1 The Council's financial services team will conduct a full financial review of the proposed contractual arrangement which will be signed off by the Council's S151 Officer. This will be supported by Stantec who carried out the original soft market testing exercise and an independent review of the recommended business model.

5.6.2 Once entered into, the proposed contractual arrangement with the solar park and smart grid supplier will be managed by the Corporate Estates Team within the Housing and Operations Directorate and overseen by the Director of Housing and Operations.

6 OTHER OPTIONS CONSIDERED AND NOT RECOMMENDED

Option 1

6.1 SNRG fully fund and develop the solar park (phase 1) and connect to the independently owned wires of the already contracted Otterpool Park Independent Distribution Network Operator (IDNO) and through Otterpool Park to the connection to the national grid (UKPN). This option does not include the smart grid, roof-top solar or local battery storage.

6.2 The council does not directly invest in the project and will receive an annual rent for the solar park and a connection fee per home from the IDNO. This is shown in the table below:

Income (modelled)	Payable	Rate	30-year value (after build-out and 8,500 homes connected to IDNO traditional grid)
Rent for solar park (phase 1)	Annual rent	£ 120,000	£ 3.6m
Grid connection contractual payment	On connection of the home	£ 1,793	£ 15.3m
Total			£ 18.9m

6.3 The option was rejected on the following grounds:

- Net zero in operation aspirations of Otterpool Park are not achieved as every resident will need to contract with an existing national electricity supplier and may not elect to use 'green tariffs'.
- Sub-optimal revenue stream to the OP LLP / Council.
- Resident tariffs will be those offered by national suppliers - so there are no direct cost savings available to the residents of Otterpool Park.

- Solar park (phase 1) maximum annual output will meet 100% of the annual average electricity demand of 1,400 homes (Future Homes Standard) but must be exported under a wholesale contract to the UKPN national grid.
- Requirement to construct a direct connection to the UKPN national grid to export and sell the renewable power at wholesale rates.
- Onsite solar PV is only installed at the discretion of the individual developers, noting that the 22% social homes will have solar PV installed.
- Smart grid benefits not realised.

Option 2

- 6.4 The OP LLP / Council participates in the SNRG SmartGrid Joint Venture Company as a minority shareholder (20% of equity) and receives shareholder dividends as well as the land rental for the solar park (phase 1).
- 6.5 The investment assumptions and modelling suggest a commercial IRR of around [REDACTED] and projected dividend income stream over the 30 years of the build out period of [REDACTED]. However, the dividend stream is dependent on both internal and external drivers and is not guaranteed.
- 6.6 To pay for the equity stake the Council will forego the asset value associated with the connection fee of £1,793 per home from the existing Independent Distribution Network Operator. The connection fee will be paid to SNRG as homes are connected over the build out period. This will be a cost of £15.3m for 8,500 homes which will form the OP LLP's / Council's equity stake in the JV Company.

Income (modelled)	Payable	Rate	30-year value (after build-out and 8,500 homes connected to SNRG SmartGrid)
Rent for solar park (phase 1)	Annual rent	£ 120,000	£ 3.6m
Ongoing dividend modelled	Annual by shareholding	£ variable	[REDACTED]
Cost	Payable	Rate	30-year cost
Foregone smart grid connection fee per home	Existing royalty from IDNO diverted to SNRG	£1,793 contracted	£ 15.3m
Total / net position			[REDACTED]

6.7 As an equity partner in the JV Company there will be inherent risks and liabilities shared with other equity shareholders and not limited to shared accountability as follows:

- Financial performance of the JV
- Operational performance of the JV
- Customer engagement, invoicing and bad debt
- Maintaining regulatory compliance
- Approving energy procurement strategy, contracts with financial charges

6.8 This option, as modelled, offers a marginal financial benefit over the recommended option but includes:

- Unacceptable risks to the OP LLP / Council
- Uncertainty in the dividend stream and value
- Investment requirement of £15.3m from the asset value paid over the build-out period
- Managing the complexity of governance and compliance

7 RISK ANALYSIS OF OPTIONS AND MITIGATION

7.1 The following table considers the risks and mitigation of the recommended option against the other options detailed in this report against the project success criteria as set out in paragraph 1.5.

7.2 Risk and Mitigations

Issue / Risk	Mitigation Recommended Model	Mitigation Rejected Option 1	Mitigated Rejected Option 2
	Solar Park and SNRG SmartGrid	Solar Park and existing distribution grid	Solar Park and SNRG SmartGrid with FHDC as a minority shareholder
Land value adversely impacted	Developer costs reduced by c£4,000 per plot	No structural mechanism to embed on-site generation as renewables at the discretion of the developer.	Developer costs reduced by c£4,000 per plot
Council investment required	No requirement for FHDC investment nor operational involvement. Annual rents and royalties are contracted with legal remedies and escalation in place.	No requirement for FHDC investment nor operational involvement. Annual rents and royalties are contracted with legal remedies and escalation in place.	FHDC / OP LLP invest £15m from the asset value to purchase a minority (20%) equity stake in the Smart Grid Energy Supply Company in return for uncertain shareholder dividends.
Fails to deliver early net-zero-in-operation	Pathway to 100% net zero in operation. Smartgrid generates 50% of average annual demand, a further 25%	Individual decision by private residents to purchase power from existing national suppliers – the output from the solar	Pathway to 100% net zero in operation. On-roof solar generates 50% of average annual demand, additional 25%

	from solar park(p1) and the balance from grid or solar park (p2). Lowest cost on-site energy generation.	park (phase1) will only meet average demand for the equivalent of c2,100 homes and exported to the UKPN grid to the national buyers	from solar park(p1) and balance from grid or solar park (p2). Lowest cost on-site energy generation.
No discounted energy tariffs	Model incentivises SNRG to retain customers by pass-through benefits from lowest cost on-site renewable generation and reduced distribution costs	Tariffs will be those offered by suppliers to the individual resident, no reduction for being in Otterpool and reduced distribution charges not available.	Model incentivises SNRG to retain customers by providing discounts and pass-through benefits from lowest cost on-site energy generation
Not resilient, non-compliant	Smart grid, storage & IDNO connection to the UKPN grid governed by OFGEM Codes . Structure allows for technology change	IDNO connection to the UKPN grid and to the homes governed by OFGEM regulations	Smart grid, storage & IDNO connection to the UKPN grid governed by OFGEM Codes . Structure allows for technology change
Investment not linked to the build-out	Avoids grid strengthening, with up to 50% of Otterpool demand generated on-site. Investment aligned with build out	Solar park requires a bigger grid connection to the national grid and may require grid strengthening	Avoids grid strengthening, with 50% of Otterpool demand generated on-site. Investment aligned with build out
Investment servicing and operational management not in place with SNRG	Financing from future revenues, SNRG JV operates under OFGEM Codes, SNRG has the expertise. Cashflow includes debt servicing	Traditional financing from future revenues, IDNO and JV operates under OFGEM Codes and contract.	Financing from future revenues, SNRG JV operates under OFGEM Codes, SNRG has the expertise. Cashflow includes debt servicing. Council acquires expertise over time.
Expandable model to exploit future renewable opportunities	Built in structural incentive to support other renewable generation and use Otterpool generation as a local company and potential for partial community ownership.	No structural incentive to support other renewable generation or use Otterpool generation other than through the current supplier and distribution company structure	Built in structural incentive to support other renewable generation and use Otterpool generation as a local company and potential for partial community ownership.
Community focus	Community focus – success for all parties is aligned with the success of the local infrastructure and acceptance by the community	No community focus – electricity suppliers are national companies	Community focus – success for all parties is aligned with the success of the local infrastructure and acceptance by the community.
Transfer of ownership (insolvency or asset sale)	Governed by legal agreement, with counterparty rights. Residents, output & income protected by power purchase agreement and OFGEM regulations and Code	Governed by legal agreement, with counterparty rights. Residents, output & income protected by power purchase agreement and OFGEM regulations and Code	Governed by legal agreement, with counterparty rights. Residents, output & income protected by power purchase agreement and OFGEM regulations and Code

Delays in planning and consents	SNRG contributes social value to residents through the solar park, smart grid and local environment	SNRG can only contribute social value to residents through the solar park activities. Solar Park requires a new/upgraded grid connection into the UKPN grid.	SNRG contributes social value to residents through the solar park, smart grid and local involvement
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7.3 In the event that only a proportion of the homes elect to connect to the smart grid there is a fall-back revenue position, rather than a zero income to the OP LLP / Council. The key risk to the Council of non-connection is to not achieve net-zero-in-operation.

7.4 The recommended model has a reduced SNRG SmartGrid connection fee offset by an annual royalty in perpetuity compared to the IDNO model's one-off connection fee, the net impact of which is to marginally reduce the value received over 10 years and significantly increase the 30-year value which is demonstrated in the tables below:

7.5 **EXAMPLE 1. Only the affordable homes connect to the SmartGrid. The rest of the site elects to connect to the IDNO network.**

- Annual index-linked royalty fee drops to £12/connection per annum (at current value): with the index linking, the modelled value in 2058 is approximately £25 per home connected.
- For year 31 the annual income from the index linked royalty fee is modelled at £44k per annum and is paid in perpetuity (assuming 22% homes remain connected).

Recommended Model			First 10 years build out		First 30 years build out	
Connections	Rate per home / park (£)	Payment frequency	Number of homes	Total value modelled (2,600 homes)	Number of homes	Total value modelled (8,500 homes)
IDNO connection	1,793	Once	2,028	£ 3.64m	6,630	£11.89m
Smart Grid connection	1,176	Once	572	£ 0.67m	1,870	£ 2.20m
Smart Grid royalty	57	Annual	572	£ 0.17m	1,870	£ 2.46m
Total Smart Grid value				£ 4.48m		£16.55m
Solar Park rent (P1)	120,000	Annual (uninflated)	1	£ 1.20m	1	£ 3.60m
Total value received				£ 5.68m		£ 20.15m

7.6 EXAMPLE 2. 80% of the houses are connected to the SmartGrid with the remaining 20% connected to the IDNO network.

- Annual index-linked royalty fee drops to £12/connection per annum (at current value): with the index linking the modelled value in 2058 is approximately £25 per home connected
- For year 31 the annual income from the index linked royalty fee is modelled at £158k and is paid in perpetuity (assuming 80% homes remain connected).

Recommended Model			First 10 years build out		First 30 years build out	
Connections	Rate per home/park (£)	Payment frequency	Number of homes	Total value modelled (2,600 homes)	Number of homes	Total value modelled (8,500 homes)
IDNO connection	1,793	Once	520	£ 0.93m	1,700	£ 3.05m
Smart Grid connection	1,176	Once	2,080	£ 2.45m	6,800	£ 8.00m
Smart Grid royalty	57	Annual	2,080	£ 0.062m	6,800	£8.96m
Total Smart Grid value				£ 4.00m		£20.01m
Solar Park rent (P1)	120,000	Annual	1	£ 1.20m	1	£ 3.60m
Total value received				£ 5.20m		£ 23.61m

7.7 EXAMPLE 3. 100% of the houses are connected to the SmartGrid.

- Annual index-linked royalty fee drops to £12/connection per annum (at current value): with the index linking the modelled value in 2058 is approximately £25 per home connected.
- For year 31 the annual income from the index linked royalty fee is modelled at £197k and is paid in perpetuity (assuming 100% homes remain connected).

Recommended Model			First 10 years build out		First 30 years build out	
Connections	Rate per home/park (£)	Payment frequency	Number of homes	Total value modelled (2,600 homes)	Number of homes	Total value modelled (8,500 homes)
IDNO connection	1,793	Once	0	£ 0.00m	0	£ 0.00m
Smart Grid connection	1,176	Once	2,600	£ 3.06m	8,500	£10.00m

Smart Grid royalty	57	Annual	2,600	£ 0.80m	8,500	£11.2m
Total Smart Grid value				£ 3.86m		£21.20m
Solar Park rent (P1)	120,000	Annual	1	£ 1.20m	1	£ 3.60m
Total value received				£ 5.06m		£ 24.8m

8. COMMUNICATIONS STRATEGY

- 8.1 Should Cabinet be minded to approve the recommendations as set out in this report an extensive communications strategy will be developed to commence prior to the planning application.

9. INDEPENDENT REVIEW OF RECOMMENDED MODEL

- 9.1 Stantec have supported the Council and the Otterpool LLP throughout this process. They carried out the original soft market testing and recommended SNRG as the preferred supplier.
- 9.2 Stantec have carried out an independent review of the recommended model which is attached as Appendix 2.
- 9.3 The conclusion of their review is included below at paragraph 9.4.
- 9.4 ***‘The prospect of local power generation on land already owned by the Council, and distribution within Otterpool Park are aligned with the Council’s own policy and are financially attractive. This reinforces the pathway towards achieving Net Zero.***

The opportunity remains subject to a successful planning application and decision, and will need to assess compliance with policy and environmental impacts, such as landscape and visual impact, ecology, loss of agricultural land and access.

This cabinet paper recommends completion of an options agreement with SNRG which will allow the design to be progressed and an independent planning application to be submitted to the Council for consideration.

Based upon the information contained within this cabinet report and our own technical experience of work on the Otterpool Park project over the past 3 years, we support the recommendations. We believe (subject to planning) that this opportunity presents a leading example of what can be achieved as renewable energy options are increasingly prioritised and reduce carbon emissions locally.’

10. CONCLUSION

- 10.1 The recommended model is clearly aligned with the Council's strategy and vision for Otterpool Park and creates the clearly defined pathway to energy net zero in operation using a combination of on-site generation assets, solar park (phase 1) and purchases of renewable power from national suppliers through the grid.
- 10.2 The homeowners that connect to the SNRG SmartGrid will benefit from a minimum of a 15% discount on their energy tariffs and retain the ability to connect to alternative energy suppliers.
- 10.3 No investment is required from the Council.
- 10.4 The Council / OP LLP receives a contracted revenue stream over the lifetime of the project comprising: annual rent for the solar park (phase 1, with a 5-yearly rent review); one-off smart grid connection fees; and annual index-linked royalty payments in perpetuity.
- 10.5 The sum received over the 30-years with the recommended option is only marginally less than the shareholder option which includes significant investor and operator risks and liabilities for the council / OP LLP as a shareholder.
- 10.6 The model is commercially robust and scalable within Otterpool Park to facilitate other opportunities that may arise in the future, including public EV charging, additional onsite solar generation and any extension of Otterpool Park.
- 10.7 The model is deliverable and provides resilience and protection from failure of electricity supplies to the residents and is fully compliant in both technical build and operational activity with the OFGEM Regulatory Code.
- 10.8 The council demonstrates net-zero carbon leadership and improves the outcomes for both residents and the environment.

11. LEGAL/FINANCE AND OTHER CONTROLS/POLICY MATTERS

11.1 Legal Officer's Comments (NM)

There are no legal implications arising directly from this report. The legal work will need to be outsourced due to its specialist nature and our in-house legal team can assist with this instruction.

11.2 Finance Officer's Comments (LM)

There are no direct capital financing implications to the council for the delivery of the Otterpool Solar Park and Smart Grid as this will be fully funded by SNRG, they will be responsible for the design, build, ongoing maintenance and operation of the Solar Park throughout the lifetime of the

facility. The land will be fully remediated to its current site condition and returned back to the Council at the end of the agreed lease.

Revenue funding will be required to appoint legal and specialist consultants to support the Council in the negotiation and finalisation of the Options Agreement, Land Lease and planning. SNRG have agreed to underwrite the Council's costs up to a cap of £100k which is currently estimated to be sufficient to complete these agreements therefore there is no requirement for the Council to provide additional revenue funding to support the negotiation or delivery of the Solar Park.

The current rent received for the land will not be lost to the Council as this will continue to be received until such time as SNRG take ownership.

SNRG are also underwriting cost that the Council would be liable to fund should a Judicial Review of the Planning Application arise. This will be capped and recoverable from future income from the network asset values (to be agreed and detailed within the Options Agreement).

The recommended option provides the Council with significant income streams over the lifetime of the Solar Park and Smart Grid and represents a low risk option when compared directly with the other options which have been considered and not recommended.

11.3 Diversities and Equalities Implications (GE)

There are no equality and diversity implications directly arising from this report. The proposed model provides a clear pathway to net zero in operation that will be of benefit to future residents and business owners in providing cleaner energy at Otterpool Park. The reduction in the residential tariff will support the drive to alleviate fuel poverty.

11.4 Climate Change Implications (AT)

The recommended model aligns with Folkestone and Hythe District Council's carbon reduction plans and commitment to net zero. By utilising a solar park during construction, the building process can significantly reduce its emissions while addressing the Council's goal of reducing emissions from new developments. Once occupied, the homes connected to the solar park and smart grid will greatly decrease their carbon impact, supporting the council's aim to lower residential energy consumption and emissions. The recommended model ensures house building targets, embeds Biodiversity Net Gain, incorporates renewable energy adoption, and overall carbon reduction for the district.

12. CONTACT OFFICERS AND BACKGROUND DOCUMENTS

Councillors with any questions arising out of this report should contact the following officer prior to the meeting:

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13. APPENDICES

Appendix 1: Site Plan

Appendix 2: Stantec review of Recommended Model / Cabinet Report