

Agenda Item No: 12
Report To: Cabinet
Date of Meeting: 21st February 2019
Report Title: Solar Farm Project
Report Author & Job Title: Giles Holloway
Development and Regeneration Manager
Portfolio Holder Cllr Graham Galpin
Portfolio Holder for: Corporate Property and Projects

Summary: The report proposes a solar farm on land in Council ownership as the optimal use for a 50 acre site located in Shadoxhurst. This proposal would to deliver an income generating project which will provide a return (IRR) including all costs of 6.7%. The use of the land generates significant income to the Council. The proposal will have low environmental impact, allows grazing to continue and promotes sustainable production of sustainable green electricity.

The proposal is predicated on the Local Planning Authority approval of the detailed planning application for the site.

Key Decision: Yes

Significantly Affected Wards: Shadoxhurst and Kingsnorth

Recommendations: Cabinet recommends to Council to

- I. Agree that, subject to planning approval and public consultation, a solar farm is the optimal use for the site in which provides a significant income stream to the Council, in doing so further diversifies the Council's Corporate Property Portfolio.
- II. Approval to spend £5.94m as outlined within the report and give delegation to the Director of Finance and Economy in conjunction with the Portfolio Holder for Finance to agree the optimal funding solution.
- III. to delegate authority to the Head of Legal & Democracy and the Head of Corporate Property and Projects to agree and enter into all documents required to give effect to the above recommendations

Policy Overview: Income generator to maintain services in doing so provides

both sustainable and green energy

Financial Implications:

Further assist in providing income to support the Council's Medium Term Financial Plan. There will be the need to mitigate risks of delivering project and have planned maintenance in place to ensure continuity of energy production.

Legal Implications

Permission from District Network Authority to connect to power network.

Equalities Impact Assessment

In attached appendix (not yet)[add]

Other Material Implications:

Procurement and contracts with contractors and consultants in this particular sector.

Background Papers:

None

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Appendix A – Site Location Plan and Aerial View

Appendix B – Financial Appraisal of Site

Appendix C – Equalities Impact Assessment

Report Title: Solar Farm Project

Introduction and Background

1. The Council has purchased a 50 Acre site in 2017; currently the land is used for grazing and has a tenant. This does not appear to be the optimal use for this land. There is little scope for alternative agricultural use, this is reinforced by a Natural England versatility grading.
2. The Council procured advice from the Association for Public Service Excellence (APSE) in order to understand if there is an opportunity to install and harvest the power and/or any potential income from a solar arrays on this site. This brief was amended and were advised this type of project takes time to reach fruition and there can be good reason for not proceeding with some sites. As part of the brief ,others sites were appraised and this site was considered as the preferred location
3. Sites were surveyed along with other Council property for its potential. Based on the criteria below this site was deemed to be a good location as a solar farm. Constraints considered were:
 - a. Shading by planting or buildings on any potential solar array.
 - b. Topography if site.
 - c. Proximity to development and visual impact.
 - d. Site boundaries with respect to reducing visual impact.
 - e. Quality of the land when agricultural.
 - f. Capacity of the local power network.
4. APSE met with all stakeholder Services within the Council. The size of the project and anticipated interests from the community, concludes a feasibility of any site is critical.in fully understanding the issues to be resolved, a number of services within the Council were consulted
5. :
 - a. Planning and Development – Appropriate pre application advice.
 - b. Finance – Would the funding be available if approved.
 - c. Corporate Property and Projects – Facilities management of asset
 - d. Legal Services – Understanding the ownership and constraints of the land.
 - e. Media Services – Awareness of the project and handling issues, projects of this type can be controversial, they are unusual and require additional information circulated and consultation.
6. APSE an industry expert has reported on the suitability of the site, submission of business model and advice of next steps.

Proposal/Current Position

7. The initial 50 Acre site considered in Shadoxhurst has support from all stakeholder within the Council and passes the assessment made by APSE.

Site location and aerial view in Appendix A. Other sites brought forward had positives, some could be reviewed at a later date, but were not seen as viable at this time.

8. The location is a semi-rural site away from the local roads; so visual impact is low. The trees and hedges to the perimeter of the site further obscure the view of the site. The size of the site enables the system to be in a position which is not shaded while being screened by the boundary treatment.
9. The location of the site is at the end of a lane and has direct access onto the highway. There is an opportunity to connect with the National Grid at this point and the development nearby would suggest the infrastructure will be adequate for the installation. The access is also sufficient to allow access for the plant for the installation of the array.
10. The proposal is for a system just under a Mega Watt (900KWh system) in size and would feed the National grid direct. There is not an opportunity to supply an industrial or commercial property in the locality. The size of the system means that the rate earned by selling to the grid is basic, but it is expected to change as the network requires greater resilience as power stations continue to age without replacement.
11. The type of installation will be rows of frames each holding several panels. Each frame will have a single stanchion and foundation pile to secure. This means there is minimal damage to the ecology of the field and grazing can continue after the installation. There is not a substantial financial barrier to changing the use of the field sometime in the future.
12. This scheme will be subject to a full planning process and an application will need to be submitted and considered. APSE were satisfied that the Council has sufficient resource to make a planning application for this system with the appropriate advice.
13. APSE have submitted a report and business plan to support the 9MWh system with all electricity sold to the grid. The calculations shows this proposal is viable. The internal rate of return with all development costs accounted for has been calculated to be just under 7% (6.7%). [include the APSE report?]
14. This project will generate an estimated £7M over a 25 year period once all capital costs, repairs maintenance and interest on any borrowing.
15. The capital costs construction a solar farm are limited to the installation of the panels and the plant to collect and convert the electricity generated from the panels to AC which can be used by the National Grid. The installation of the frames and plant will be £600 per KWp, which is a current and generally consistent costs for the efficiency and cost of panels at the moment. There are other costs associated with grid connection; £50 KWp, planning fees and advice to enable robust planning application and procurement processes which are of equal magnitude £45k as a lump sum.

Implications and Risk Assessment

16. The Council has received numerous reports on air quality and the shift to sustainable energy is a key element to tackling air quality issues. The project will also support the reduction of the boroughs carbon footprint and contribute toward tackling the climate change agenda.
17. The impact on Wildlife of schemes of this nature has been proved to be minimal. The Panel frames have minimal foundations reducing their impact and enabling the site to be returned to its original condition at the end of the project. The space under the panels can create additional habitat to support the species diversity. It would also be possible to maintain grazing under the panels if necessary.
18. There can be concerns over the impact of these schemes on the appearance of the area. This would be managed through the inspection and maintenance of the site boundary and where needed these could be enhanced. Third party advice has suggested that the site is suitable for a scheme with minimal impact on the local environment.
19. Planning Consent – Pre application advice and consultations is required to make sure the application is comprehensive and robust.
20. Network capacity – Make DNO (District Network Operator) application. There is development in the location and indication are the network can accommodate the size of system. The Solar farm will also contribute towards maintain the stability of the network, using local generation to maintain power supplies.
21. Technical Performance – Employing qualified persons to specify work so the system size can be achieved.
22. Site based Issues – Appropriate surveys to understand conditions on site to reduce risk.
23. Contract failure in delivery – Robust procurement process
24. Weather damage and security – Appropriate design, buying the right products and insurance.
25. Plant and equipment Warranties – Advise on appropriate warranties

Equalities Impact Assessment

26. Members are referred to the attached Assessment at Appendix 3. There are no adverse impacts identified.

Consultation Planned or Undertaken

27. Ward members have been consulted and are supportive of the project.
28. Key Council Services consulted to enable appropriate resource management.

29. Key Council services and members will be updated at significant milestones in the project.
30. These type of developments can be controversial, because of size and lack of information, this will need to be carefully handled. Local consultation with Parish Council/s and community we will expect to complete a voluntary consultation process which we will use to inform the planning application. If we proceed to a formal planning application then there will be a further statutory consultation process which will inform the Local Planning Authorities decision.

Other Options Considered

31. Other development is limited because of location.
32. Continue to graze land with current tenant.

Reasons for Supporting Option Recommended

33. Shows the Council as a leading in sustainable energy production and reinforcement of the district network.
34. Approval of this stage will allow Officers to consult with the public on the scheme and its design to inform the strategic approach to the site.
35. Income generating project, supporting the Councils entrepreneurial ethos and securing future Council services in a challenging economic climate.

Next Steps in Process

36. Mitigate the risks identified (see 12-19 above).
37. Design and submit a planning application. Some expertise will be sought to make a sound and robust application.
38. With greater knowledge of the industry, procure main contractor for the installation of the array.

Conclusion

39. This is an income generating project which has shown it is viable at this 50 acre site in Shadoxhurst. This report seeks approval to proceed with the proposed 9MWh solar farm which also shows the Council as a lead in sustainable and renewable projects.
40. This report also seeks support in recommending prudential borrowing to enable the delivery of this scheme with the knowledge of an estimated 11 year payback period and a project IRR of 6.7%.
41. The project team would seek to mitigate the risks identified and submit a planning application for the solar farm. Further expertise would also be sought

at planning and procurement stage from APSE (Association for Public Service Excellence).

42. There should also be a renewables strategy for existing assets, new acquisitions and new buildings constructed by the Council; to reduce the Councils carbon foot print, show its commitment to sustainable energy and reducing fuel costs of civic property and look at ways of sharing any savings with the local community.

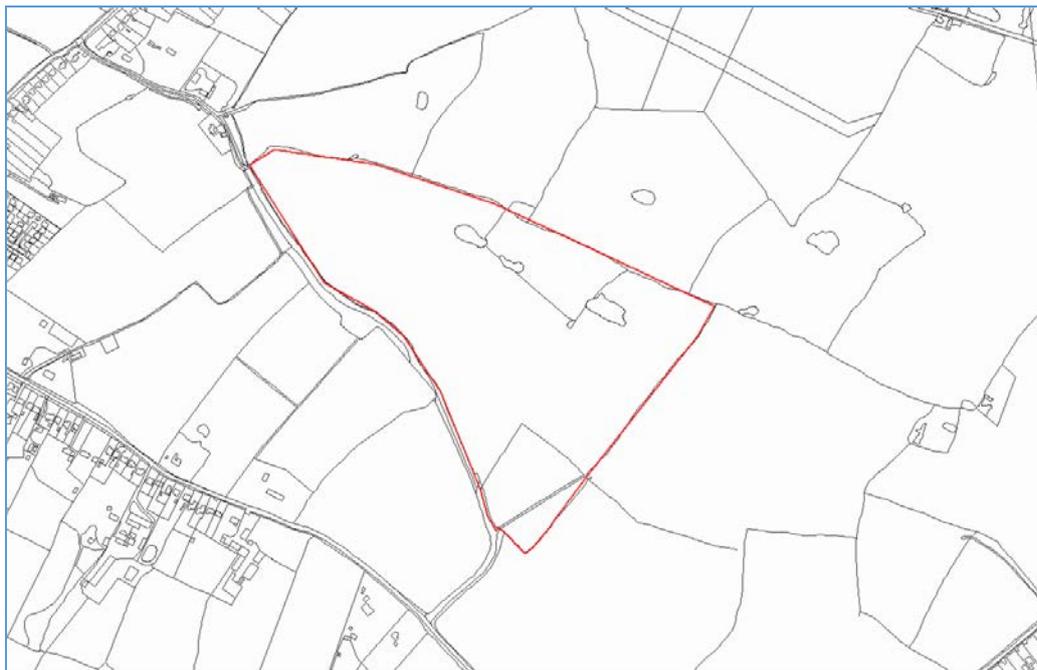
Portfolio Holder's Views

43. This project is a vital part of improving air quality by producing electricity through photovoltaic generation. The project will also make a significant contribution to the financial sustainability of our Council.
44. I am content that there will be comprehensive local consultation as part of the planning process to ensure residents support the solar generation as detail.

Contact and Email

45. Giles Holloway - Development and Regeneration Manager Corporate Projects and Property E:giles.holloway@ashford.gov.uk , M:07766258351

Appendix A– **Site and location plan**



Plan of Land at the end of Blindgrooms Lane Shadoxhurst



Aerial view of Land at the end of Blindgrooms Lane Shadoxhurst

Appendix B – Financial Appraisal of Site

Owner of Solar Photovoltaic Power Plant	
Name	9mWp Ground Mounted Project - 100% Grid sales
Company:	0
Address	Blindrooms Lane

Project Summary	
Business Model:	Export Electricity
Type of Installation	Ground Mounted
Average Plant Size	9,000.00 kWh
Electricity Generated	9,177,300.00 kWh/p.a
Irradiation Per kWp	1030 kWh/kWp
Radiation Database	Classic PVGIS

Revenue Streams		
None	0	£/kWh
PPA	0.05	£/kWh

Project Financial Ratios	
Project IRR	<u>6.68%</u>
Equity IRR	<u>31.9%</u>

Capital Structure			
Costs	£	5,850,000.00	
Development costs	£	90,000.00	
Total Costs	£	<u>5,940,000.00</u>	
Leveraging Options			
Equity (Investment)	0%	£	-
Debt	100%	£	5,940,000.00
Nominal Debt Interest Rate		£	0.04

Financials			
		1st 12 months	25 Years Total
Electricity Generated	kWhrs	9,177,300.00	218,750,157.87
Incentive		£ -	£ -
PPA		£ 458,865.00	£ 20,673,834.59
Offset Electricity Saving/Private wire benefit		£ -	£ -
Insurance		£ 27,000.00	£ 922,259.63
(CBT) Per MW		£ -	£ -
Gross Income		£ 458,865.00	£ 20,566,023.59
Leveraged			
Investment		£ -	
Net Profit		<u>£ 7,067,665.65</u>	
Unleveraged			
Investment		£ 5,940,000.00	
Net Profit		<u>£ 9,585,188.53</u>	

Equality Impact Assessment

Appendix 3 to February Cabinet report

1. An Equality Impact Assessment (EIA) is a document that summarises how the council has had due regard to the public sector equality duty (Equality Act 2010) in its decision-making. Although there is no legal duty to produce an EIA, the Council must have **due regard** to the equality duty and an EIA is recognised as the best method of fulfilling that duty. It can assist the Council in making a judgment as to whether a policy or other decision will have unintended negative consequences for certain people and help maximise the positive impacts of policy change. An EIA can lead to one of four consequences:

- (a) No major change – the policy or other decision is robust with no potential for discrimination or adverse impact. Opportunities to promote equality have been taken;
- (b) Adjust the policy or decision to remove barriers or better promote equality as identified in the EIA;
- (c) Continue the policy – if the EIA identifies potential for adverse impact, set out compelling justification for continuing;
- (d) Stop and remove the policy where actual or potential unlawful discrimination is identified.

Public sector equality duty

2. The Equality Act 2010 places a duty on the council, when exercising public functions, to have due regard to the need to:
- (a) Eliminate discrimination, harassment and victimisation;
 - (b) Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
 - (c) Foster good relations between persons who share a relevant protected characteristic and persons who do not share it (ie tackling prejudice and promoting understanding between people from different groups).

3. These are known as the three aims of the general equality duty.

Protected characteristics

4. The Equality Act 2010 sets out nine protected characteristics for the purpose of the equality duty:
- Age
 - Disability
 - Gender reassignment
 - Marriage and civil partnership*
 - Pregnancy and maternity
 - Race
 - Religion or belief
 - Sex
 - Sexual orientation

*For marriage and civil partnership, only the first aim of the duty applies in relation to employment.

Due regard

5. Having 'due regard' is about using good equality information and analysis at the right time as part of decision-making procedures.
6. To 'have due regard' means that in making decisions and in its other day-to-day activities the council must consciously consider the need to do the things set out in the general equality duty: eliminate discrimination, advance equality of opportunity and foster good relations. This can involve:
- removing or minimising disadvantages suffered by people due to their protected characteristics.
 - taking steps to meet the needs of people with certain protected characteristics when these are different from the needs of other people.
 - encouraging people with certain protected characteristics to participate

in public life or in other activities where it is disproportionately low.

7. How much regard is 'due' will depend on the circumstances. The greater the potential impact, the higher the regard required by the duty. Examples of functions and decisions likely to engage the duty include: policy decisions, budget decisions, public appointments, service provision, statutory discretion, decisions on individuals, employing staff and procurement of goods and services.
8. In terms of timing:
 - Having 'due regard' should be considered at the inception of any decision or proposed policy or service development or change.
 - Due regard should be considered throughout development of a decision. Notes shall be taken and kept on file as to how due regard has been had to the equality duty in research, meetings, project teams, consultations etc.
 - The completion of the EIA is a way of effectively summarising this and it should inform final decision-making.

Case law principles

9. A number of principles have been established by the courts in relation to the equality duty and due regard:
 - Decision-makers in public authorities must be aware of their duty to have 'due regard' to the equality duty and so EIA's must be attached to any relevant committee reports.
 - Due regard is fulfilled before and at the time a particular policy is under consideration as well as at the time a decision is taken. Due regard involves a conscious approach and state of mind.
- A public authority cannot satisfy the duty by justifying a decision after it has been taken.
- The duty must be exercised in substance, with rigour and with an open mind in such a way that it influences the final decision.

- The duty is a non-delegable one. The duty will always remain the responsibility of the public authority.
- The duty is a continuing one so that it needs to be considered not only when a policy, for example, is being developed and agreed but also when it is implemented.
- It is good practice for those exercising public functions to keep an accurate record showing that they have actually considered the general duty and pondered relevant questions. Proper record keeping encourages transparency and will discipline those carrying out the relevant function to undertake the duty conscientiously.
- A public authority will need to consider whether it has sufficient information to assess the effects of the policy, or the way a function is being carried out, on the aims set out in the general equality duty.
- A public authority cannot avoid complying with the duty by claiming that it does not have enough resources to do so.

The Equality and Human Rights Commission has produced helpful guidance on "Meeting the Equality Duty in Policy and Decision-Making" (October 2014). It is available on the following link and report authors should read and follow this when developing or reporting on proposals for policy or service development or change and other decisions likely to engage the equality duty. [Equality Duty in decision-making](#)

Lead officer:	Giles Holloway
Decision maker:	Cabinet
Decision: <ul style="list-style-type: none"> • Policy, project, service, contract • Review, change, new, stop 	<p>Agree that, subject to planning approval and public consultation, a solar farm is the optimal use for the site in which provides a significant income stream to the Council, in doing so further diversifies the Council's Corporate Property Portfolio.</p> <p>Approval to spend £5.94m as outlined within the report and give delegation to the Director of Finance and Economy in conjunction with the Portfolio Holder for Finance to agree the optimal funding solution.</p> <p>to delegate authority to the Head of Legal & Democracy and the Head of Corporate Property and Projects to agree and enter into all documents required to give effect to the above recommendations</p>
Date of decision: The date when the final decision is made. The EIA must be complete before this point and inform the final decision.	21 st February 2018
Summary of the proposed decision: <ul style="list-style-type: none"> • Aims and objectives • Key actions • Expected outcomes • Who will be affected and how? • How many people will be affected? 	<p>The report proposes a solar farm on land in Council ownership as the optimal use for a 50 acre site located in Shadoxhurst. This proposal would to deliver an income generating project which will provide a return (IRR) including all costs of 6.7%. The use of the land generates significant income to the Council. The proposal will have low environmental impact, allows grazing to continue and promotes sustainable production of sustainable green electricity.</p> <p>The proposal is predicated on the Local Planning Authority approval of the detailed planning application for the site.</p>
Information and research: <ul style="list-style-type: none"> • Outline the information and research that has informed the decision. • Include sources and key findings. 	<p>The following policies have been identified and this project address the ambitions of the Council. Sustainable development, promoting environment excellence and leading by example with renewable energy.</p>
Consultation: <ul style="list-style-type: none"> • What specific consultation has occurred on this decision? 	<p>Consultation has taken place with colleagues in Legal Services, Planning and Development, Finance, and Corporate Property Services, and ward members.</p>

<ul style="list-style-type: none"> • What were the results of the consultation? • Did the consultation analysis reveal any difference in views across the protected characteristics? • What conclusions can be drawn from the analysis on how the decision will affect people with different protected characteristics? 	<p>The consultation has been to identify if in principle this site could support this kind of development, understand the processes and procedures required to bring the project to fruition. Identifying adequate and appropriate resource to deliver and maintain.</p> <p>Further consultation will be carried out with ward members and the communities in and adjacent to the development. This will be voluntary process prior to the statutory consultation of the planning process.</p>
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Assess the relevance of the decision to people with different protected characteristics and assess the impact of the decision on people with different protected characteristics.

When assessing relevance and impact, make it clear who the assessment applies to within the protected characteristic category. For example, a decision may have high relevance for young people but low relevance for older people; it may have a positive impact on women but a neutral impact on men.

Protected characteristic	Relevance to Decision High/Medium/Low/None	Impact of Decision Positive (Major/Minor) Negative (Major/Minor) Neutral
<u>AGE</u> Elderly	High	Neutral
Middle age	High	Neutral
Young adult	High	Neutral
Children	High	Neutral
<u>DISABILITY</u> Physical	High	Neutral
Mental	High	Neutral
Sensory	None	Neutral
<u>GENDER RE-ASSIGNMENT</u>	None	Neutral
<u>MARRIAGE/CIVIL PARTNERSHIP</u>	None	Neutral
<u>PREGNANCY/MATERNITY</u>	None	Neutral
<u>RACE</u>	None	Neutral
<u>RELIGION OR BELIEF</u>	None	Neutral

<u>SEX</u> Men	None	Neutral
Women	None	Neutral
<u>SEXUAL ORIENTATION</u>	None	Neutral

<p>Mitigating negative impact:</p> <p>Where any negative impact has been identified, outline the measures taken to mitigate against it.</p>	There is nothing to mitigate
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<p>Is the decision relevant to the aims of the equality duty?</p> <p>Guidance on the aims can be found in the EHRC's Essential Guide, alongside fuller PSED Technical Guidance.</p>	
Aim	Yes / No / N/A
1) Eliminate discrimination, harassment and victimisation	N/A
2) Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it	N/A
3) Foster good relations between persons who share a relevant protected characteristic and persons who do not share it	N/A

<p>Conclusion:</p> <ul style="list-style-type: none"> Consider how due regard has been had to the equality duty, from start to finish. There should be no unlawful discrimination arising from the decision (see guidance above). Advise on whether the proposal meets the aims of the equality duty or whether adjustments have been made or need to be made or whether any residual impacts are justified. 	<p>Due regard has been considered throughout this proposal to each protected group.</p> <p>No unlawful discrimination has arisen from the decision.</p> <p>The effect on the community will be positive due to the aims of the programme delivery. No adjustments required.</p>
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<ul style="list-style-type: none">• How will monitoring of the policy, procedure or decision and its implementation be undertaken and reported?	The programme will be monitored by a Project group with regular updates to our Portfolio Holder.
EIA completion date:	6 th February 2019