Report to:	**Cabinet**
Date:	**5 December 2018**
Title:	**Sustainable Energy Investment Feasibility**
Report of:	**Ian Fitzpatrick, Director of Planning & Regeneration**
Cabinet member:	**Councillor Isabelle Linington, Cabinet Member for Environmental Impact**
Ward(s):	**All**
Purpose of report:	**To approve funding to commission Clear Sustainable Futures to determine if there is an investable business case for the deployment of sustainable energy generation technology on 2 projects at Sutton Road and Avis Way.**
Decision type:	**Key**
Officer recommendation(s):	**(1) Delegate authority to the Chief Finance Officer and Director of Planning and Regeneration, in consultation with the Cabinet Member for Environmental Impact to fund up to £25,000 for the commissioning of Clear Sustainable Futures to undertake the feasibility study of deploying sustainable energy generation at the Avis Way and Sutton Road development sites** **(2) To note that a similar request is being made to Eastbourne Borough Council to progress viability analysis on their project at the Sovereign Leisure Centre and that the work is being conducted concurrently with knowledge being shared.**
Reasons for recommendations:	**To reduce the carbon emissions of council developments; to enable the sites to become a prosumer (a producer and consumer) of electricity and heat to reduce ongoing utility costs whilst also enabling income generation through provision of emerging grid flexibility services; to mitigate the impact of each development on the electrical grid and reduce utility costs.**
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1 Introduction

1.1 The current pipeline of redevelopment projects being undertaken by Lewes and Eastbourne councils and delivered by Clear Sustainable Futures provides an opportunity for the inclusion of clean energy generation technology that will provide for the site's own needs, could produce an excess to generate income and potentially provide flexibility services to the grid.

This will mean that the development can negate high electrical connection costs, reduce reliance on grid supplied utilities thus insulating against future price rises, can potentially store renewably-generated energy for use at other times and even generate an income through selling the power back to the grid or to tenants.

In the 12 months to October 2018 the average carbon intensity of the UK Grid has been 260g/kWh, which is the figure that moves gas fired CHP (combined heat and power boilers) to being the highest carbon source of heat. This essentially means that grid electricity is now cleaner than gas.

1.2 Lewes District Council Projects

Sutton Road, Seaford
This project is at an early stage of development. Detailed design is expected to start in April 2019, start on site in November 2019, with completion of work in summer 2021. This site has similar energy requirements to the Sovereign Centre in Eastbourne so the business case at section 6 provides the energy solution proposed at this site for background and to illustrate that a similar solution incorporating heat pumps and solar panels could be financially viable here.

Avis Way Waste Depot
As with Sutton Road, this project is at an early stage of development, detailed design is expected to start in March 2019, start on site in summer 2019 and completion at the end of 2020. This site could incorporate energy generation technology, such as PV panels, see business case at section 6.

2 Proposal

2.1 It is proposed that CLEAR Futures (LDC and Clear Sustainable Futures together) complete a business case for Sutton Road and Avis Way to consider the technical, financial and contractual aspects of a suitable energy generation solution at each site.The cost for non LDC resources, CSF and external parties, would be up to £25,000.

It should be noted that subject to successful conclusion of this study it is expected justification for investment in similar interventions on other projects, such as Newhaven Town Centre, and College campus sites, would likely flow

without the need for additional funding.

3 Outcome expected and performance management

3.1 The outcome would be a full viability analysis for the preferred low carbon energy solution for the site – if this is financially viable, the business case will then be presented to Cabinet for approval if required.

If the results are positive it is likely that the justification for investments at other sites would flow without the need for additional funding.

3.2 The feasibility study will be project managed by Clear Futures.

4 Consultation

4.1 Information about this proposal has been shared with Wave Leisure.

5 Corporate plan and council policies

5.1 Corporate Plan: We expect the district to remain a clean and beautiful place to live, work and visit, as a result of continued effort to protect the quality of the local environment.

5.2 Clear Futures, the joint collaboration between Eastbourne and Lewes Councils and private sector organisations, has been purposefully procured to deliver local energy and sustainability ambitions over the next 20-30 years.

6 Business case and alternative option(s) considered

6.1 **Sutton Road, Seaford**

The expected gross internal area (GIA) of the whole development is 7,830 sqm, and although there is no building energy model available at this time it is reasonable to assume that the energy requirements of this development is of the same order of magnitude as that of Sovereign Leisure Centre, Eastbourne, and for information purposes detail of this project is included below.
It is reasonable at this stage to conclude also that the high level cost and benefits will also be of the same order of magnitude for a heat pump for heat, and self-generated electricity conserved on site by some battery capacity, producing a similar investment case.

The current design for the Sovereign Centre in Eastbourne has a gross internal floor area of 6,200sqm and comprises a heating system which is the ‘minimum Capex Design’ and includes a gas fired CHP engine and large gas boilers. For which the latest cost plan includes a total of £350k of cost for this equipment. The RIBA Stage 3 Building energy model predicts that the energy consumption of the leisure centre will be 1,263,000kWhr per year (split 885,000kWh heat and 377,000kWh electric). Wave Leisure currently pay approximately 2.7p/kWh for gas and 11.7 for electric (including Climate Change Levy) on their large consumption sites. This represents an annual spend of £23,895 on gas and £44,100 on electric; a total energy spend of £68k per annum at the new centre

If a heat pump alternative was used for heat providing heat at an efficiency rating CoP (Coefficient of Performance) of 3.5, then total resulting electric cost for heating would be £29,500.
If the leisure centre was commissioned prior to end March 2021, it is estimated that an annual Renewabale Heat Incentive (RHI) of £74,500 would be earned. Moving from gas sourced heat to electric heat from a heat pump, would therefore provide a benefit of approximately £68,895 (RHI less difference between grid gas and grid electricity cost) per annum to fund the additional cost of investment.
The investment cost of installing enough PV panels to generate 100% of the site electric demand once the site is fully electric, would be approximately £672,000 which would negate the need for importing the equivalent grid electricity costing circa £74,000 per annum.

Avis Way Waste Depot
Unlike the other 2 sites under consideration, this is a facility that will be used by LDC, it is significantly smaller at a GIA of circa 1,000. It will as a result have a proportionately lower heat and electric demand.

However its location on the Avis Way Industrial estate in the Enterprise Zone, occupying as it does part of the LDC-owned commercial estate, enables the potential of investing in energy assets more widely across the LDC Commercial estate to be investigated.

Subject to a case being made for the investment in onsite generation of power at Avis Way there is interest from CloudConnx for siting a small (2,000 sq ft) datacentre on the site which would bring with it Gigabit speed data connection for local businesses and residents. This woud be investigated in more detail as part of this study.

After repayment of capital there would result in ether a cost saving to the councils (for council occupied space) or a revenue opportunity (in the case of leased commercial space).

In order to realise this level of benefit, appropriate ownership and management structures of the energy asset will need to be considered.

7 Financial appraisal

7.1 The £25k cost of the feasibility study would be funded from Reserve.

Viability is highly price sensitive. Interest rate increases would also cause this scheme to be non-viable, as would a shorter lifespan of the assets or significant annual maintenance costs. This is why a detailed appraisal is necessary to conduct a feasibility study.

8 Legal implications

8.1 Clear Sustainable Futures can be appointed to undertake the feasibility work to produce the business case under the CLEAR Futures arrangements. The Council has a template agreement for the provision of Strategic Support Partnering Services which would be used for this purpose. Given the specialist and potentially innovative nature of the potential scheme it is anticipated that external legal support may be required if the scheme is taken forward.

8.2 Section 11 of the Local Government (Miscellaneous Provisions) Act 1976 (LGMPA) provides that a local authority may:

- produce heat or electricity or both;
- establish and operate such generating stations and other installations as the authority thinks fit for the purpose of producing heat or electricity or both;
- buy or otherwise acquire heat;
- use, sell or otherwise dispose of heat produced or acquired or electricity produced by the authority by virtue of this section;
- without prejudice to the generality of the preceding paragraph, enter into and carry out agreements for the supply by the authority, to premises within or outside the authority's area, of such heat as is mentioned in the preceding paragraph and steam produced from and air and water heated by such heat.

8.3 Under the LGMPA local authorities are only entitled to sell electricity produced in association with heat unless Regulations provide otherwise. The Sale of Electricity by Local Authorities (England and Wales) Regulations 2010 provide that local authorities can also sell electricity which is produced from the following renewable sources:

- wind,
- solar,
- aerothermal,
- geothermal,
- hydrothermal and ocean energy,
- hydropower,
- biomass,
- landfill gas,
- sewage treatment plant gas, and
- biogases.

8.4 Nothing in the LGMPA exempts a local authority from the requirements of Part I of the Electricity Act 1989.
[007822-LDC-CJEC]

9 Risk management implications

9.1 After repayment of capital there could result in ether a cost saving to the councils (for council occupied space) or a revenue opportunity (in the case of leased commercial space).
In order to realise this level of benefit, appropriate ownership and management structures will need to be considered.

There is the risk that the solutions proposed by the feasibility study will not be financially viable.

If Members do not approve this feasibility study we will fail to get the information to further future energy projects and will fail to fulfil the objectives of the Clear Futures delivery vehicle.

10 Equality analysis

10.1 A ‘no relevance’ report has been completed

11 Appendices

- None

12 Background papers

The background papers used in compiling this report were as follows:

- None