

<b>Decision maker:</b>	<b>Assistant Director, Environment and Place</b>
<b>Decision date:</b>	<b>16 February 2018</b>
<b>Title of report:</b>	<b>Corporate Energy Efficiency Measures - Invest to Save</b>
<b>Report by:</b>	<b>Principal Energy &amp; Active Travel Officer</b>

## **Classification**

Open

## **Decision type**

Non-key

## **Wards affected**

Countywide

## **Purpose and summary**

To approve spend, procurement and delivery of the following suite of energy efficiency measures on an 'invest to save' basis:

- Standard lighting will be replaced across Ross on Wye Library, Unit 3 depot at Thorn Business Park and Maylords Orchard Car Park sites with energy efficient (LED) lights in order to reduce energy and maintenance costs in addition to reducing carbon emissions.
- Variable speed drives will be installed in the air handling unit at Plough Lane. These would be integrated into the existing Business Energy Management System ensuring the building operates at maximum levels of efficiency, saving energy, money and carbon.
- Solar PV will be installed on the Kingsland Depot, the Hereford Archive & Record Centre and Blueschool House, on an invest to save basis to reduce energy costs and generate income from the Feed in Tariffs (FIT's).

## Recommendation(s)

That:

- a) Air handling units at Plough Lane be upgraded at a cost of not more than £20,000;
- b) LED lighting be installed at Maylord Orchard Car Park, Unit 3, and Ross on Wye Library at a cost of not more than £69,200;
- c) Solar PV systems be installed at Kingsland Depot, Hereford Archive and Records Centre (HARC) and Blueschool House at a cost of not more than £165,000; and
- d) The assistant director environment and place be authorised to take all operational decisions necessary to implement the above recommendations within the approved budget and in accordance with contract procedure rules

## Alternative options

1. **Do nothing** - The council will not benefit from the financial and carbon savings these projects offer. This will adversely affect the council's ability to deliver a required £30k saving target in 2018/19 and the council's ability to deliver against its carbon reduction targets.

## Key considerations

### Plough Lane – Air Handling Units

2. This proposal seeks to upgrade the air handling units at Plough Lane with variable speed drives which will be integrated into the existing building management system. This will greatly improve the unit's efficiency, delivering energy, financial and carbon savings.

### LED Lighting – Maylord Orchard car park

3. This proposal seeks to replicate the successful LED lighting project installed at Garrick House car park earlier in the year by upgrading the lighting to LED and also installing presence detection sensors to optimise the lighting levels.
4. Here the lighting will default down to 10% power when vacant, but the lights will individually detect occupancy and will increase to 100% power until vacant again. This project will reduce the significant energy consumption on site and will result in reduced maintenance pressures as the LED lighting have a much longer life than the existing lighting.

### LED Lighting – Unit 3

5. The lighting at Unit 3 is currently aging and in need of replacement. This proposal is to replicate the successful office LED project at Plough Lane to upgrade the lighting to LED.
6. Although Unit 3 is occupied and used by Balfour Beatty Living Places (BBLP), as the energy costs are a pass through cost within the Public Realm contract, the council will be the net beneficiary of the energy cost savings.

### LED Lighting – Ross Library

7. The lighting at Ross library is currently a mix of traditional lighting with a number of high energy spot lights. This proposal is to link with the planned refurbishment of the site and to upgrade all lighting to LED at the same time.

### Solar PV – Kingsland Depot

8. The proposal is to install a solar PV system on the roof of the depot in order to generate financial savings and generate income from the FIT's.
9. Although Kingsland depot is occupied and used by Balfour Beatty Living Places (BBLP), as the energy costs are a pass through cost within the Public Realm contract, the council will be the net beneficiary of the energy cost savings.
10. The solar PV array project, based on current projections and levels of FIT's, will realise a projected financial benefit to the council in the region of £42k over 20 years.

#### **Solar PV – HARC**

11. The proposal is to install a solar PV system on the roof of the HARC in order to generate financial savings and income from the FIT's.
12. The solar PV array project, based on current projections and levels of FIT's, will realise a projected financial benefit to the council in the region of £87k over 20 years.

#### **Solar PV – Blueschool House**

13. The proposal is to install a solar PV system on the roof of Blueschool House in order to generate financial savings and income from the FIT's.
14. The solar PV array project, based on current projections and levels of FIT's, will realise a projected financial benefit to the council in the region of £64k over 20 years.

#### **Summary**

15. The implementation of the above projects will result in reduced revenue costs, reduce future energy cost pressures and will help to deliver the council's carbon reduction target.
16. Procurement of the projects will be through a full tender process with support of the Commercial Team. Here the Ross Library project will be included as an option within the current refurbishment works to fully incorporate this and the solar PV project has the potential to use the existing Herefordshire solar PV framework.
17. Procurement will commence following approval with the works anticipated to follow the below schedule:
  - a. Solar PV on each of the three sites will go out to tender in early March with contract award in early April and contract completion early May.
  - b. The air handling units at Plough Lane will go out to tender in early March with contract award in early April and contract completion early May.
  - c. The LED lighting installation at Ross on Wye Library will coincide with planned refurbishment works, property services are going out to tender for the refurbishment works now with works planned for early March and contract completion end of March.
  - d. The LED lighting installation at Maylord Orchards will go out to tender early March with contract award early April and contract completion late May.
  - e. The LED lighting installation at Unit 3 Rotherwas will go out to tender mid-April with contract award Mid May and contract completion late July.

18. The procurement process will be as follows:

- a. The LED lighting and Variable Speed Drives will be procured in line with the Council's contract procedure rules with support from Commercial Team.
- b. Solar PV on the Kingsland Depot will be procured through the existing framework for the deployment of solar PV across the council estate.

## **Community impact**

19. The seven projects contribute to achievement of the aims within the council's corporate plan to support improvement in the quality of the natural and built environment and to make best use of the resources available in order to meet the council's priorities. These projects will improve the council's energy efficiency and reduce its carbon footprint, provide cost savings on an invest to save basis to help the council towards its £87m savings target and generate on-going revenue savings.
20. All installations will comply with the construction design management regulations 2015, the energy and active travel team will work alongside the property services team to ensure all installations are compliant and all health and safety regulations observed.

## **Equality duty**

21. Under section 149 of the Equality Act 2010, the 'general duty' on public authorities is set out as follows:
  - A public authority must, in the exercise of its functions, have due regard to the need to –
    - A. eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;
    - 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.
22. The public sector equality duty (specific duty) requires us to consider how we can positively contribute to the advancement of equality and good relations, and demonstrate that we are paying 'due regard' in our decision making in the design of policies and in the delivery of services. As this is a decision on back office functions, we do not believe that it will have an impact on our equality duty.

## Resource implications

23. The estimated capital costs and energy savings are summarised in the below table:

Site	Current annual energy cost £000	Annual energy cost with proposed new technologies £000	Capital Cost £000	Proposed annual energy savings £000	Payback period
Unit 3, Thorn Business Park	6	2	25	4	6.3 years
Ross on Wye Library	3.4	1.75	12.2	1.65	7.4 years
Maylords Orchard Car Park	29	20	32	9	3.5 years
Plough Lane	29	23	20	6	3.3 years
*Kingsland Depot	2.3	0.7	55	5.2**	10.5 years
*HARC	21.5	17.5	55	6.6**	8.4 years
*Blueschool House	10.2	7.4	55	5.9**	9.4 years
<b>TOTAL</b>	<b>101.4</b>	<b>72.4</b>	<b>254.2</b>	<b>38.35</b>	<b>7 years</b>

\* Based on current FiT payments.

\*\*Average saving is based over lifetime of 20 years and includes FiT's and export tariff.

24. The proposal is to finance these projects through the existing 'LED Office & Car Parking', 'Energy Efficiency' and 'Solar PV' capital budgets and where possible to leverage potential grant opportunities through the 'Sustainable Energy in Public Buildings' ERDF funded project.

- a. The LED Office & Car Parking budget currently is £300k with no spend to date
- b. The Energy Efficiency budget is currently £100k with no spend to date
- c. The Solar PV budget is currently £2.1m with £501,381 spent to date

25. As the energy costs at Unit 3 are a pass through cost within the Public Realm contract, these savings will be realised by the Council and will be used to finance the capital investment.

26. Although the proposed lighting installations will also reduce annual maintenance costs compared to the existing lighting, these have not been included within the above

calculations. This is because the centralised Property Maintenance budgets do not include a specifically identifiable budget for lighting maintenance and so therefore this should not be considered a saving against existing budgets. It will however help to reduce the pressures on this budget.

## **Legal implications**

27. There are no specific legal implications arising from this Report. The council has a duty to secure best value in the performance of all of its functions and the proposed energy efficiency measures are intended to realise environment and economic benefits over the lifecycle of their investment. The proposed measures are not anticipated to materially impact on customers' access to, or experience of, their local environment and as such no consultation process is required prior to commissioning or installation. The council's procurement rules will apply to the procurement of the new equipment.

## **Risk management**

28. Health and safety during the installation of the measures will be managed by working alongside the property management team to oversee the works and utilising contract design management (CDM) regulations and procedures.

29. Structural surveys will be carried out on all buildings due to have solar PV installed before any works take place to ensure the building is fit to take the extra load of the solar panels.

30. The energy generation and efficiency measures outlined in this report are replications of successful projects carried out across the corporate estate. LED lights have already been successfully installed in Plough Lane and Garrick Multi Story car park among others, whilst solar PV has been successfully installed at more than 10 sites.

31. A £30k savings target has been set for the corporate energy budget next year (2018/19); these savings will be at risk should these efficiency measures not go ahead.

32. Working on the assumption that the recommendation(s) will be approved, the relevant risks will be managed at a service level and entered into the environment and waste services risk register.

## **Consultees**

33. Balfour Beatty Living Places

## **Appendices**

- None

## **Background papers**

- None identified