ITEM 14-APPENDIX I

WAVERLEY BOROUGH COUNCIL
EXECUTIVE —7 JANUARY 2013

Title:

FINANCIAL IMPLICATIONS OF UNDERTAKING A FURTHER SOLAR PV PANEL PROJECT

[Portfolio Holder: Cllr Keith Webster]
[Wards Affected: All]

Summary and purpose:

To present the financial implications and associated risks of the current options for installation of solar PV panels on Council homes and seek advice from the Executive on whether to pursue a further Solar PV Panel Project in Waverley at this time.

How this report relates to the Council's Corporate Priorities:

The report supports ~~two~~ four of the Council's Corporate Priorities. To deliver Affordable Housing and Environment, Solar PV panels have the potential, along with other measures, to assist tenants with addressing rising fuel costs and reduce the CO2 emissions in the Borough through increased use of renewable energy. It also supports **Value for Money** by providing innovative improvement of services at no cost to the Council; and it supports **Understanding Residents Needs** by defending the interests of residents faced with rising energy costs, by reducing their energy costs and also by bringing business to Waverley.

Financial implications:

In 2011 a project was undertaken by Waverley Borough Council to install over 6,000 solar PV panels to 460 Council homes which were identified as being most suitable for this expenditure. A further 740 Council homes were identified as suitable and the tenants informed that they would be receiving panels but due to the unexpected and short notice reduction in the rates of the Feed in Tariff these were never installed. Any future projects would require some dedicated project management time to deliver the project outcomes and capitalise on the work done in 2011. A comparison of the costs of the options proposed is included at Annexe 1.

Legal Implications:

Tenants would be required to sign an agreement to vary their tenancy prior to the solar PV panel installation, and to agree access for the installation and maintenance of the ~~system.~~system. The 740 tenants who were disappointed in 2011 had already indicated they were prepared to sign agreements and agree access for installation. Only a handful of tenants had refused the offer.

Comment [S1]: Councillor Webster will be able to confirm the position with these tenants

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Background

1. The Corporate Overview and Scrutiny Housing Improvement Sub-Committee asked the Housing Service to explore the scope and options available for an extension of the previous installation programme for solar photovoltaic (PV) panels on Council homes. This follows the project the Council undertook in 2011, which benefited from a significant Government subsidy available at the time, when 6,000 panels were installed on 460 Council homes. This project has been a great success and delivered substantial benefits for tenants and an income for the housing account.
2. Based on the survey of the housing stock undertaken in 2011, there are potentially up to a further 740 properties where solar PV panel installation could be accommodated in the future.
3. To provide a clearer understanding of the financial implications and risks associated with a further installation programme, the Executive has asked for more robust financial modelling to be carried out. This takes into account the costs to the Council, the reduced Government subsidy through the Feed-in Tariff and the expected return generated by each option.

Comment [S2]: The Government subsidy in the form of the feed in tariff or FIT is still available. The level of the subsidy has fallen but that reflects the drop in the price of solar pv panels since 2011.

Current options

4. If the Council wishes to consider a second solar PV panel project in the borough, the current options that are available are:

   (a) Waverley Borough Council self-financing a solar PV panel project
   (b) Community co-operative approach
   (c) A 'rent a roof' scheme where the Council leases roof space on properties to install solar PV panels to the service provider

5. A cost comparison for each option is set out in Annexe 1.

6. **Waverley Solar PV Direct** would be a Council-run scheme, with the Council funding the installation of the panels, managing the project directly and retaining ownership and ongoing maintenance throughout the lifetime of the system.

7. This option requires significant expenditure at the start of the project to cover the purchase of solar PV panels, installation and project management costs and remains in deficit at the end of the 20-year period.

Comment [S3]: This deficit is a result of the inclusion in the Council model of the £1,000 end of life cost per roof and some installation costs that are higher than I would expect.

8. **Community co-operatives** have the potential to provide solar PV panels on Council homes without an initial major financial outlay of the direct installation project. However, staffing costs would be incurred to provide project management. In this approach a co-operative would be set up by local residents supported by Energy4All, the leading co-operative support external agency, to raise the capital from the community through a locally focussed share offer.

Comment [S4]: no – the Co-op would undertake project management. Council staffing costs will be incurred principally to support tenant and Co-op liaison; however these are unlikely to be extra costs but an allocation of existing costs and time.

9. Co-operative members would be required to make a financial contribution to the project and would be looking for a fair return on their investment, contribute to creating more renewable energy and support their local community. They are paid interest and any surpluses would be available to fund other energy efficiency measures on the Waverley housing stock or as otherwise agreed with Waverley.

10. This option requires modest expenditure on staffing costs at the outset by allocating some existing staff resource to the project mainly for tenant liaison. Waverley would start to receive an income in about year eight, and would receive~~only generate~~ a ~~small~~ substantial income~~surplus~~ during the last ten~~five~~ years of the 20-year term.

When the FIT subsidy ends the Co-operative, if Waverley wished, would gift ownership of the panels to the Council or it would continue to own and operate them. The government assumes that solar panels have an anticipated life of at least 35 years so the panels should still be generating electricity for the tenants, saving them money, and earning income on any surplus electricity exported to the grid for this 35+ year period. This export income, continuing after the FIT, should be more than sufficient to maintain the panels for this 35+ year period.

11. **Rent-a-roof schemes** install solar PV panels on suitable Council house roofs at no cost to the Council, except staffing costs. Roofs are leased for a period of 20 years for a rent paid annually throughout the lifetime of the project. With the significant reduction in Government Subsidy (Feed In Tariff) since 2011, these schemes are less financially attractive, offered by fewer providers and require the Council to relinquish control over part of their housing asset

12. This option requires expenditure on staffing costs at the outset and does not provide any surplus during the 20-year term of the project.

Financial comparisons

13. The cost comparisons of each option are set out in Annexe 1.

Risks

14. Before considering the associated risks of each of the project options, it is important to consider the potential risks to the Council of pursuing any scheme including:

i. The impact that the installation of solar PV panels will have on the Councils housing asset over the next 25 years, such as reducing flexibility to refurbish or redevelop without significant additional cost
ii. The most suitable roofs were selected for the 2011 project, leaving the less efficient roofs for any future project, which will affect the return to the Council in the form of "export" tariffs
iii. To reduce the impact of fuel poverty on all Council tenants, there are other energy efficiency measures that the Council is already investing in such as double glazing, new doors, new heating systems and roofs etc where the risks are lower but which will not generate any income for the Council – these measures are guaranteed to cost money! The solar project uniquely produces a surplus and enables more work to be done. But the fact that the Council is doing something on energy efficiency is not a reason not to install solar panels, particularly when the solar panels are free to the Council! In fact the financial savings to the tenants from reduced electricity bills from the solar panels are likely to be greater than those resulting from many other measures so should be a priority measure.
iv. There is also a real but unquantifiable financial risk to Waverley if they do not proceed with the solar project at the present time. At the moment solar pv can be installed free to Waverley, but that position is not forecast to continue for more than the next few years or so. The government is anticipating that a high proportion of suitable houses will have solar panels installed as part of present energy policy. Consequently there is a risk over the next decade that all suitable social housing will be **required** to install solar pv as part of a revised Decent Homes standard, which then will need to be undertaken at Waverley's expense.

Comment [S5]: The FIT has been reduced because the costs of panels and of installation has dropped.

Comment [S6]: There may be fewer, but there are still plenty of providers in the market offering rent a roof schemes. We can put Waverley in contact with a social enterprise which offers assistance with procurement for renewables schemes, amongst other things.

Comment [S7]: The Council has already done this when it entered into one such rent a roof scheme in 2011.

Comment [S8]: Given other councils are entering into these schemes at the present time this seems unlikely.

Comment [S9]: There is some additional cost but it is not significant in the context of reroofing; there is no material, realistic reduction in flexibility when working with a community co-op

Comment [S10]: they were not cherry picked to that extent so far as I am aware because of the need to install quickly.

15. Comparative risks associated with each option are:

Risks	PV Direct	Co-operative	Rent-a-roof
Solar PV panel provider gets into financial difficulties over 20 year period	~~High~~Low	~~High~~Low	High
Feed in Tariff reduces further during pre contract period	High	~~Medium~~Low	High
Government reduces subsidy via Feed In Tariff over the 20 year period	Low	Low	Low
Property has an energy performance band of band D or higher	High	Low	High
Works required to improve energy performance of properties rated below EPC band D	High	Low	High
Detailed and complex lease/contract arrangement	Low	Medium	High
Tenant' s excluded from the scheme if they have a key meter	High	High	High
Additional cost to the Council if PV panels need to be removed to enable repair works to the roof over the 20 years period	High	High	High
Financial responsibility of dealing with the equipment at the end of its operational life falls to the Council	High	~~High~~Medium or Low	High

Benefits

- No cost to the Council
- It would make approximately a £185,000 contribution towards fuel bills for tenants **each year** at present fuel prices and at typical rates of tenant consumption of electricity generated on their home; this benefit starts immediately. It would provide some protection against energy price increases and is a highly focused benefit to help to reduce fuel poverty.
- Much of this saving in fuel cost is likely to be spent in the local community to the benefit of Waverley based business.
- Utilises the survey work undertaken in 2011 by Savills Solar
- A considerable number of tenants who were promised solar panels in 2011 and expected to receive them were disappointed
- Improves the housing stock; reduces risk of rental arrears and unpaid energy bills
- Using the co-operative model would fulfil the government's recently published community energy strategy
- It would enhance the reputation of Waverley Council as a forward thinking Borough
- It would generate income for the Council
- It would make a contribution towards four of the Council's corporate priorities

New build

16. As part of its new build programme, the Council actively considers the use of solar PV panels. alongside other renewable energy options, to achieve Code Level 4 on all new council homes. However our understanding is that it has yet to incorporate any microgeneration into new build social housing

Comment [S11]: These identify risks but do not quantify the sum at risk; at least with the Co-op the amount of financial risk to the Council is low even for high risk items

Comment [S12]: It is not clear what risk or consequence is being identified here. But the panels are paid for at inception without risk to the Council. The Co-op has no or very low borrowings and retains ownership of the panels and FIT (unlike most rent a roof projects)

Comment [S13]: Co-ops can book the current rate so have certainty as to what rate is paid at the time of installation

Comment [S14]: Co-ops are exempt from this requirement

Comment [S15]: Co-ops are exempt from this requirement

Comment [S16]: This is not automatically an issue and we can explore that with you to protect the tenant and maximise returns; the issue arises I believe when power is cut off, not through having a key meter

Comment [S17]: There is an extra cost, but the principal cost is scaffolding which is required for the roof repairs anyway

Comment [S18]: we are talking of equipment thought to have a 35 year + life which can be removed at modest cost and which has an ongoing income more than sufficient to meet operational costs and repairs; if necessary part of the payment to the Council can be reserved for equipment removal and retained by the Council for this purpose. Or the Co-op can retain the risk of removal (and reduce payments to the Council). But there is no need to remove the equipment – see below

Comment [S19]: Councillor Webster will be able to confirm whether this is the case

Conclusion

17 The benefits of a solar PV panel project are a guaranteed immediate substantial ~~potential~~ reduction in fuel bills for tenants included in the programme estimated at nearly £4 million over the first 20 year period at **current** energy prices and which would be expected to continue after the end of the FITs period as the panels will still be generating and contributing towards the Councils corporate commitment to the environment and helping the reduce fuel poverty and other benefits identified.

18. Tenants benefit from year 1, but there are some limited inherent risks for the Council associated with all the options set out in this report. Of the three options considered, only the community co-operative approach would generate~~s~~ substantial~~limited~~ financial return for the Council, ~~and primarily in the last five years of the 20 year term.~~ In the Co-operative model the Council starts to receive returns from year 8. However, the Council would face the risks of the modest costs associated with removal and re-instatement costs during the period if repairs or refurbishment work is carried out. The Council would need to decide whether the Co-op or the Housing Account should meet the costs of removal, out of the income from the project,~~and~~ when the equipment reaches the end of its life (if such removal is appropriate at all).

Note on conclusions

The report's main concern is that there might be a charge to the Housing Account at the end of the project to take panels down. This thinking is back to front. The Council agrees that it should undertake energy efficiency improvements, which save an individual tenant money (although probably not as much as solar panels unless a comprehensive set of efficiency measures is undertaken, and little has been done previously). Such energy efficiency measures are guaranteed to be a charge to the Housing Account. But something which saves the tenant very substantial sums of money immediately and for 20 – 35 years afterwards, and almost certainly has no cost to the Housing Account, but in fact contributes substantially towards it, is regarded as risky!

The figure in this report of a cost of £1,000 per house for removal at end of life (£740,000 in total) bears no resemblance to current quotes. Contractors are quoting about £300 for this work. If the work is done as part of reroofing it is far less. The contactors will dispose of the panels and organise their recycling.

However the report doesn't address the issue as to why the panels should be taken down at all. At the end of the 20 year FIT period they have years of life in them, continue to save the tenant money and continue to generate export income (sufficient to meet the costs of operation and maintenance). They protect the roof. If they stop working and a decision is made not to repair them, then they can be left in situ – they do no harm. They could be removed when the roof is next repaired. Removal costs are then nominal. Panels contain valuable recyclable material such as aluminium which will contribute towards, if not meet, disposal costs.

A provision could be made, paid for out of the income from the panels, for a removal budget. This makes no sense to me, but a sum could be ring fenced and sit within the Housing Account to provide for that. The last two years income from the project to the Housing Account is more than enough to cover this. Alternatively it could just be noted that the project produces sums significantly in excess of any removal costs so should removal costs arise they can legitimately be met from the Housing Account at the time. Then the money generated from the panels can be spent on other energy efficiency improvements to the housing stock, particularly for those not

Comment [S20]: Nothing potential about it! It is real – and already happening in Waverley from the first installations

Comment [S21]: If the Council approached the end of life issue more realistically we think all three options would generate a financial return for the Council but we can only comment in detail on the co-operative model.

Comment [S22]: anticipated to be over £1 million so not that limited

benefitting from panels; and the potential removal of the panels can be considered when the roof is next being repaired, or when new technologies are being installed in years ahead.

There are some additional costs to roof repairs, arising from the need to take down, store and reinstate panels; but this is a quick, easy and cheap job, and avoids the cost of scaffolding (a material part of the installation cost) which is already required to repair the roof anyway. The panels protect roofs so tend to reduce the frequency of repairs. Normally the initial survey of suitable roofs would identify and exclude from the project those roofs which are clearly in need of a repair in the near future (they could be included in the project when the roof repair is done at lower cost, sharing scaffolding).

The Council seems unduly concerned with staff cost – yet much of the work has already been done, it should be easy to reallocate some existing staff time for a short period to deliver the project, and there should be no extra cost. Since the Council acknowledges in the report that it has the capacity to allocate staff to energy efficiency improvements it could allocate those staff on a temporary basis to this project. However if this is what is stopping the project, I suggest the Council asks the Co-op to pay a contribution towards housing department time in order that the Council's houses can be improved! The project can afford it. It is a fraction of the benefit that flows from it.

Installing solar panels is not an improvement tenants can make for themselves. If the Council declines to proceed it is deliberately making tenants, many of whom are vulnerable, face higher electricity bills than they need.

No other project which the Council could do could benefit so many tenants, so quickly and at no cost to the Housing Account.

This project is probably the single most effective thing the Council could do with its own assets to deliver on the Environmental Corporate Priority – and to do so at no cost should surely be a major further factor in support of the project if the Council's Corporate Priorities are to have any meaning at all.

The paper fails to acknowledge that the prime purpose of the project is not to produce a surplus for the housing account, but to benefit tenants, improve the housing stock, benefit the environment and deliver on the Council's corporate priorities. The fact that this can be done at no cost, negligible risk and whilst generating a substantial surplus for the housing account, even on the Council's own figures, surely makes this a "no brainier" – a very desirable thing to do - and the Council should deliver this project as soon as possible whilst the FIT provides the opportunity for it to do so.

Recommendation

That the Executive:-

1. Notes the financial implications and associated risks of pursuing a further solar PV panel ~~project~~and agrees that the project should be proceeded with as rapidly as possible, adopting a "can do" attitude.

2. ~~Agrees that the Council does not undertake a further solar PV panel project at this time, but instead focuses on delivering a core range of energy efficiency measures across the Council housing stock, and actively considers the use of solar panels in new housing developments as part of delivery of Code Level 4.~~

Comment [S23]: These are not alternatives; the conclusion does not follow from the report

Background Papers

There are no background papers (as defined by Section 100D(5) of the Local Government Act 1972) relating to this report.

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ANNEXE 1

Cost Comparison for Solar panel Installation Scheme

based on 3kWh solar PV panels on 740 properties

Per property	Waverley BC	Community Co-operative	Roof Rental
Feed in tariff rate (FIT rate) - current rate	13.41p	14.9p	13.41p
	£	£	£
Cost of Panels	5,000	0	0
Staff and Overheads	223	22 ~~68~~	68
Maintenance and Overheads	950	0~~190~~	0
End of Life Costs	1,000	0 or 300~~1,000~~	1,000
TOTAL COST	7,173	22 to 322~~1,258~~	1,068
Average Generation	2,206	2,206	2,206
FIT income (annual per property)	347	379	347
20 years FIT Income	6,585		
Rental Income (8% annual FIT income)			28
Total rental income		1,518	555
TOTAL INCOME	6,585	1,518	555
Net cost/(income) per property (20 years)	**588**	**-1196 or more~~-260~~**	**513**
Total Cost for all properties	5,308,000	238,280 (maximum)~~930,600~~	790,000
Total Income from all properties	4,872,670	1,123,119	410,330
Total Net Cost/(income) from all properties	**435,330**	**-884,839 (at least)~~-192,519~~**	**379,670**

Note:
The existing Savills contract has been used for average figures
Roof rent 8% of tariff income
Average electricity generation 2206Wh
Based on a 20 year tariff life span, tenants should continue to benefit from free electricity beyond that time.
Inflation and financing costs for the Council have not been included.
The feed in tariff is going to be reduced for new schemes as part of the government's energy policy but the co-operative model benefits from having the tariff rate fixed for up to a year.
A 0.5pence drop in tariff reduces average income by £11 per property per year (approximately £150,000 overall)

Comment [S24]: We generally do not comment on the costings of the Waverley and Roof Rental options; but we do consider that the costs are overstated, and the benefits understated for both options

Comment [S25]: This is a one year project, not three years. This cost is notionally allocating existing staff time to do a new project; it is not real cash

Comment [S26]: This is wrong. The co-op pays for maintenance and overheads

Comment [S27]: This figure of £1,000 per roof is massively overstated. See text of report. True cost is about £300 but there is no reason to remove the panels and they have a productive life of 35+ years. After the 20 year FIT period the income generated from the export of electricity would be sufficient to pay for cost of repair and operation.

Comment [S28]: 2700kWh is average generation figure for a 3kw system as modelled here. This generation is probably for a 2.5kW system which will cost less

Comment [S29]: This is the net figure after overheads and maintenance

Comment [S30]: With the most basic changes to the model (substituting a removal cost of £300 for £1,000 and reflecting the fact that the co-op pays for maintenance, the income per property increases to £1196 per property

Comment [S31]: Tenant benefit has been omitted. Ignoring inflation in energy prices it is about £185,000 per annum at **present** prices - for 35+ years. Over 20 years worth £4million (much of which will be spent in the local community). The tenants are not in a position to achieve this saving without Waverley support - but it costs Waverley nothing to provide it.

Comment [S32]: And the Council (or co-op) will benefit from income from electricity exported from the panels. Panels are forecast to have a lifespan of at least 35 years. The export income is forecast to be more than enough to maintain the panels for the remainder of their life

Comment [S33]: To fail to include some allowance for inflation over 20 years, particularly in energy prices, is absurd. The Bank of England is charged with delivering inflation at 2% (although it has consistently been higher). DECC projects material increases in energy prices above inflation. Inflation is in fact beneficial for the Council in this project.

Cashflow re proposed Solar Panel income and expenditure

	Year	1	2	3	4	5	6-10	11-15	16-20	Total	
WBC	Expenditure	1,323,483	1,323,483	1,323,483	35,150	35,150	175,750	175,750	915,750	5,308,000	
	Income	85,485	170,971	256,456	256,456	256,456	1,282,282	1,282,282	1,282,282	4,872,670	
	Net Position	- 1,237,998	- 1,152,512	- 1,067,027	221,306	221,306	1,106,532	1,106,532	366,532	-435,330	Cost
Co-operative	Expenditure	16,667	~~16,667~~	~~16,667~~			0	0	0 or 222,000 ~~880,000~~	16,667 to 238,667 ~~930,600~~	
	Income	0	0	0	0	0	Not nil we estimate £72,000	Not nil we estimate £362,000	£689,000 ~~1,123,119~~	1,123,119	
	Net Position	-16,667	~~-16,667~~	~~-16,667~~	0	0	72,000~~0~~	362,000~~0~~	£467,000+ ~~242,519~~	884,000+ ~~192,519~~	Income
Roof Rent	Expenditure	16,667	16,667	16,667			0	0	740,000	790,000	
	Income	20,517	20,517	20,517	20,517	20,517	102,583	102,583	102,583	410,330	
	Net Position	3,850	3,850	3,850	20,517	20,517	102,583	102,583	-637,417	-379,670	Cost

WBC We never fully recoup all the costs incurred over the 20 year period, but do benefit from £220,000 income most years.

Co-op ~~We do not recoup the initial cost unit year 17, when we receive £240,000 and surplus income of £190,000. The income in years 18-20 is off set by the termination costs.~~

Roof Rent We benefit from income of £20,000 each year but the termination costs are significantly more than the total income we would receive.

Comment [S34]: I do not follow Waverley's analysis of its own costs. One point is clear. There is no justification for the figure of £740,000 for the end of life cost which has been applied to all three models.

Comment [S35]: If these are staff costs why do they continue for 3 years? This is a one year project. We have revised this to reflect staff costs for one year.

Comment [S36]: The original Waverley figure of 880,600 represented £1,000 for end of life removal plus £190 for maintenance x 740 which is £880,000. £190 is wrongly included as the co-op bears maintenance costs. In addition there is no good reason to remove the panels at year 20. If you did, or wished to include a provision for it, then it should be about £222,000

Comment [S37]: This is not accurate; but if it is such a concern that there will be a minor reallocation of time within the housing department during the start of the project, I suggest you ask the Co-op to pay the Council an entry fee of £16,667. The project can afford it. The impact will be to reduce the later year returns to the Council

Comment [S38]: This is not correct