## London Borough of Merton

Report and Recommendations arising from the Scrutiny Review of Climate Change and the Green Deal

Sustainable Communities Overview and Scrutiny Panel

June 2014

### **Task Group Members**

Cllr Russell Makin (Chair) Cllr James Holmes Cllr Ian Munn Councillor Suzanne Grocott Councillor Ray Tindle

Co-opted Members: Kevin Godding (Sustainable Merton) Tom Walshe (Sustainable Merton)

Scrutiny Support: Rebecca Redman, Scrutiny Officer Richard Greig, Scrutiny Officer (National Management Trainee)

For further information relating to the review, please contact: Scrutiny Team London Borough of Merton Merton Civic centre London Road Morden Surrey SM4 5DX Tel: 020 8545 3864 E-mail: <u>scrutiny@merton.gov.uk</u>

## Acknowledgements

We would like to thank all the officers and external witnesses who have taken the time to provide written and verbal information and discussed their ideas with us. All contributors are listed in Appendix 1 of this report.

## Table of contents

Index	Page(s)
Foreword by the Chair of the Task Group	5-6
	_
Executive Summary	7
List of Recommendations	8-10
Introduction	11 - 12
What the Teels Oregin Did	12
What the Task Group Did	12
Background – the science behind climate	12 - 15
change	
	45 40
What are we doing to tackle climate change?	15 - 19
change:	
Climate Change Strategy for Merton	19 - 21
The Green Deal – is it suitable for Merton?	21 - 24
Exploring the feasibility of an ESCO for	24 - 37
Merton	
Dehevieurel Chenge	37 - 38
Behavioural Change	
Consultation with Merton Priory Homes – Energy Efficiency of Merton's Housing	37 - 39
Stock	
Concluding Remarks	39
What happens next?	40
Appendices	
Appendix 1 – Whom we spoke to	42
Appendix 2 - Equalities impact	43 - 47
assessment	
Appendix 3 – Preliminary Business Case:	48 - 49
Merton ESCO Proposals	
Appendix 4 – Merton ESCO Company	50
Diagram	

### Foreword

# Councillor Russell Makin, Chair of the Climate Change and Green Deal Task Group

#### A timely discussion of a subject which affects us all

For many Merton residents the subject of climate change has been an issue of great concern. We have all seen how climate change has been debated and has grown in importance as an international issue that needs to be addressed.

The UK Government's response to such changes was outlined in the Climate Change Act of 2008. But until now, for many, this has seemed a theoretical discussion rather than an actual threat. However, the impact of climate change has been evidenced in significant weather changes in the UK, the recent floods as an example of how real climate change is and how we must seek to limit and mitigate its impact.

When we began our task group's work in September of 2013 we acknowledged that it was a broad area which impacted on a number of areas and council services. To ensure that our review and recommendations were focused we chose to concentrate on energy improvements.

Our review was also timely because the Council were in the process of refreshing the Climate Change Strategy for Merton 2014-2017 and the task group commented on and contributed to this refresh. Furthermore, Merton was considering how it might respond to the Governments Green Deal initiative, and in particular, if it was right for the borough. Both work streams in this review concentrated on reducing the impact of climate change through increasing energy efficiency in council buildings, local businesses and local housing stock.

During our task group meetings I was struck by the quality of our cross-party discussions and found it a privilege to work with colleagues on this issue. We also benefited a lot from the input of our co-opted members from Sustainable Merton (a local volunteer-run environmental organisation), who contributed to the debate and gave their expertise. Tom Walsh and Kevin Godding gave us their perspective on the subject and have enabled us to consider factors relating to energy improvements and the work of the Council, as well as the opportunities it has in this area and may not yet have explored, which has helped us shape our recommendations. Officer involvement was also of a very high calibre and support to the task group was beneficial in enabling Members to really explore the issues, challenges and opportunities at hand.

We were pleased to hear that the Council is already working on and delivering a number of initiatives to tackle the issue of climate change in relation to energy improvements. The various work streams were considered in detail as part of this review and are discussed in this report. There was a consensus among the task group that the government's Green Deal initiative (focused on making energy efficiency changes to homes and businesses), although laudable in intent, was not

appropriate for the borough due to problems with some of our more vulnerable residents being unable to access the provisions within it. Our deliberations then turned to local responses which we feel are more appropriate and beneficial and are reflected in our recommendations.

We also decided that an objective within the Council's refreshed Climate Change Strategy, the potential benefits to the Council and residents of establishing an ESCO for Merton formed a significant part of our work as a task group. We believe that an ESCO affords a number of opportunities for the Council in relation to its energy efficiency agenda and that the feasibility of such a model should be explored further, building on the work already undertaken by the task group.

I would like to take this opportunity to thank all my colleagues on the task group, Merton staff that contributed to and supported the review and external representatives that have contributed to this review and advised us to enable us to make the recommendations outlined in this report. I do see some promising outcomes form these recommendations and will ensure that the scrutiny function plays a role in ensuring that these outcomes are realised in the future.

## **Executive Summary**

The Sustainable Communities Scrutiny Panel established a task group to consider the issue of climate change and how it might be addressed in the borough, acknowledging that this is not just a local issue but requires a regional, national and international response. The significant impact of climate change also means that any review undertaken would need to ensure that it was focused on one element of the range of issues and activities that fall under the climate change umbrella.

With this in mind the task group chose to focus their review on energy improvements and sought to consider and debate the following:

- What should be included in the Councils Climate Change Strategy in relation to energy improvement?:
- Is the governments Green Deal initiative suitable for Merton?;
- How can the Council fund energy improvement activity in the borough?:
- What innovative measures and opportunities are available to Merton to mitigate the impact of climate change through energy efficiency improvements?

Our recommendations reflect our responses to these questions and what we believe will be significant financial, environmental and social benefits generated through newer innovative local approaches that will enable:

- The Council to mitigate the impact of climate change;
- Ensure that we are an energy efficient borough;
- Delivery of our climate change strategy and associated initiatives are financially sustainable in the short and long term; and
- Residents and the Council to deliver solutions to meet energy demand in the borough at lower costs and with greater efficiency

This review has considered evidence from a range of stakeholders and identified good practice and the financial, environmental, legal and health and safety implications of how the Council may meet climate change commitments. In doing so we have produced a detailed report that has attempted to start some of the work that we would like to ask Cabinet to take forward as we believe that the business case for some of our recommendations is strong and whole heartedly support the recommendations we are putting forward.

Our proposed approach is an incremental, phased programme which will gain momentum over time to ensure the successful outcomes we envisage may be realised. We look forward to how our recommendations will contribute to the strategic direction of the Council in relation to climate change and energy. List of Recommendations -

The Task Group acknowledge that there are interdependencies between a number of the recommendations made which will impact upon the timescales for delivery (as referenced in the table below). We would ask that Cabinet provide a more detailed outline of the considerations to be made in terms of implementation in their action plan and executive response to the Sustainable Communities Scrutiny Panel.

Recommendations	Stakeholder/Responsible Team
<ul> <li>Recommendation 1 - That Cabinet, further to maximising the potential of its own sites, work with other public and private sector landowners, such as Registered Providers, private homeowners, businesses and community organisations installing solar PV (photovoltaic) on their buildings where this is supported by a business case (paragraph 4.17).</li> <li>*Note that this recommendation being implemented</li> </ul>	Cabinet
is dependent upon recommendations 7 and 8 being achieved.	
<b>Recommendation 2</b> - That Cabinet explore how solar PV could be made available to residents to access at cheaper rates/costs and how the Council may promote or support this scheme to enable communities to purchase their own renewable technology. This may be achieved through external capital investment or the ESCO (paragraph 4.17).	Cabinet
<b>Recommendation 3</b> - That the Council adopt Merton's Climate Change Strategy 2014-2017, which has been reviewed by the Task group and revised to take account of its recommendations (paragraph 5.6).	Cabinet
<b>Recommendation 4</b> - That Cabinet consider how to ensure the adoption/installation of energy efficiency measures in appropriate council contracts being established or renewed by procurement, where feasible (paragraph 5.6).	Cabinet/Partners
<b>Recommendation 5 -</b> That representatives from each council Directorate participate in the Climate Change Steering Group, as appropriate, to consider cross cutting	Cabinet

issues and projects relating to tackling climate change to ensure a strategic focus and leadership on climate change priorities (paragraph 5.6)	
<b>Recommendation 6</b> - That Cabinet promote the Green Deal and consider the existing provision, such as ECO funding, to address some of the issues associated with the national Green Deal scheme, as reported by residents, which has resulted in low take up and ensure that it meets local needs (paragraph 6.16).	Cabinet
<b>Recommendation 7</b> – That Cabinet commission a feasibility study to look at establishing an Energy Services Company (ESCO) for Merton, with a view to producing a business case for the ESCO which should include a risk assessment of the proposals. A further detailed investigation into the potential for a Merton ESCO should include:	Cabinet
• Future Merton obtaining specialist legal advice on the Council's scope and legal limitations in generating, distributing and selling energy and advise on the development of an ESCO;	
<ul> <li>Feasibility investigations into the potential for district heating at Morden Town Centre and Colliers Wood / South Wimbledon</li> </ul>	
<ul> <li>Further scoping of energy efficiency retrofit potential in Merton</li> </ul>	
<ul> <li>Identification of where existing regeneration proposals/programmes may take forward energy efficiency improvements, alone or in partnership without the need for an ESCO to be in place.</li> <li>(paragraph 8.40)</li> </ul>	
<b>Recommendation 8</b> – That Cabinet receives a report on progress on rolling out the expansion of the Merton solar PV portfolio, and on the scope for making further investment, subject to the results of a scoping exercise and a viable business case. This business case should include an appraisal of whether this should be undertaken via an ESCO or not (paragraph 8.40).	Cabinet
Recommendation 9 - That the Council develop a	Cabinet
marketing and engagement strategy to ensure the	

widest promotion and awareness raising of energy efficiency measures and improvements that staff, residents and local businesses can access (paragraph 9.6)	
<b>Recommendation 10</b> – That Cabinet consult with Circle Housing/Merton Priory Homes on any of the recommendations from this review that they agree to, in order to establish where there may be opportunities for joint working/delivery on measure to improve the energy efficiency of resident's homes.	Cabinet/Circle Housing

# Final Report of the Climate Change and Green Deal Task Group

## 1. Introduction

## Purpose:

- 1.1 The Council's Sustainable Communities Overview and Scrutiny Panel, at its meeting on 25 June 2013, agreed to establish a Task Group review of Climate Change and the Green Deal and appointed a small number of Members to the Task Group.
- 1.2 At the Sustainable Communities Overview and Scrutiny Panel meeting on 16 October 2013, Terms of Reference for the Task Group review were agreed. The aims of the review were established as follows:
  - To support the Council in its refresh of the Climate Change Strategy 2013 -2016;
  - To address the impact of climate change in Merton and determine how the Council will support residents in relation to energy improvements; and
  - To support the Council to agree a way forward for the Governments Green Deal initiative in Merton
- 1.3 The terms of reference for the review were as follows:
  - To determine what the government's policy is on Climate Change and how Local Authorities are required to respond;
  - To determine the impact climate change could have on the borough and the Council's responsibilities to respond to this change;
  - To determine what action Merton has taken to date, and proposals for the future, to tackle climate change in Merton (focusing on energy improvements: Merton RE:FIT Project, energy efficiency activities with schools and renewable energy);
  - To determine what impact not implementing certain climate change measures will have on service delivery and the Council's resources;
  - To determine if the Governments Green Deal policy is suitable for Merton and how they should respond;
  - To identify what funding streams the Council has to support climate change activity, as outlined within Merton's draft Climate Change Strategy, and which work streams are prioritised by the Council;
  - To explore potential funding streams to implement preventative measures to mitigate the impact of climate change;
  - To determine how partner organisations can be more effectively engaged in supporting the delivery of the draft Climate Change Strategy for Merton;

To determine how the Council can work more effectively across departments to ensure that climate change objectives and measures are built into business planning and strategy development

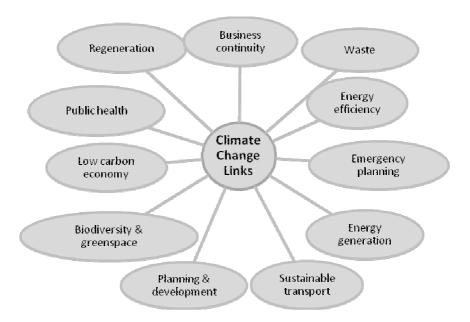
## 2. What the Task Group Did

- 2.1 The Task Group held a number of meetings during the course of the review at which a wide range of evidence was considered and the public invited to attend to contribute their views. This is outlined below with corresponding recommendations that resulted from these discussions.
- 2.2 Members requested a range of evidence and comparative information throughout the course of the review. Members also invited a variety of people to attend to assist in the forming of evidence-based recommendations to the Executive, and where appropriate, to partner organisations.
- 2.3 Evidence considered consisted of the following:
  - Detailed officer reports supplemented by verbal evidence;
  - Best practice from other Local Authorities;
  - Government legislation and guidance (national, regional and local policy);
  - Visits to meet with other authorities/organisations;
  - Evidence from partner organisations and stakeholders;
  - Research reports/briefing papers; and
  - Consultation activities

## 3. Background

Climate Change- why we must take action

3.1 Members commenced their review by considering the scientific findings on climate change. Members learned that the Intergovernmental Panel on Climate Change (IPCC), a scientific body under the auspices of the United Nations (UN), reviewed and assessed the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. The key links and spheres of influence were identified as follows:



- 3.2 Members agreed that there was a need for councils to address climate change as it impacted a number of areas of policy and service delivery that the Council was responsible for, and furthermore, required a cross departmental strategic approach. In particular, they noted the UK CIP projections for London by 2050 on the potential impact of Climate Change in the region. The potential changes resulting from climate change that would need to be prepared for/addressed were identified as follows:
  - Rising temperatures;
  - More seasonal rainfall;
  - Tidal surges; and
  - Sea level rise

#### National and Regional Policy and Legislation on Climate Change

3.3 Members considered the national and local policy on climate change to establish the requirements of Local Authorities in responding to this legislation. Officers outlined the policy and legislative framework governing preventative/responsive work in relation to climate change as follows:

## Climate Change Act (2008)

3.4 The Climate Change Act 2008 established a target for the UK to reduce its emissions by at least 80% from 1990 levels by 2050. This target represents an appropriate UK contribution to global emission reductions consistent with limiting global temperature rise to as little as possible above 2°C. Within this Act the following secondary legislation has been passed:

#### Carbon budgets

- 3.5 To ensure that regular progress is made towards this long-term target, the Climate Change Act also established a system of five-yearly carbon budgets, running from 2008-2027. The level of carbon budgets has been informed through assessing, by sector, what can be achieved to reduce emissions at the least cost.
- 3.6 The first four carbon budgets, covering the period from 2008 to 2027, (2008-2012; 2013-2017; 2018-2022; 2023-2027) have been set in law. The UK is currently in the second carbon budget period. Meeting the fourth carbon budget will require that emissions be reduced by 50% on 1990 levels in 2025.

## **Adaptation**

- 3.7 The Climate Change Act also legislates for climate change adaption and sets out the requirements for the following policies:
  - The Climate Change Risk Assessment: sets out the main priorities for adaptation in the UK under 5 key themes Agriculture and Forestry; Business, industries and Services; Health and Wellbeing; Natural Environment and Buildings and Infrastructure and describes the policy context, and action already in place to tackle some of the risks in each area.
  - The National Adaptation Programme: analyses the potential effects of climate change and the risks and opportunities for the UK and sets out what government, businesses, and society are doing to become more climate ready.
  - The Adaptation Reporting Power: gives government the power to ask certain organisations responsible for essential services and infrastructure (e.g. energy or transport companies) to produce reports on the current and future predicted impacts of climate change on their organisation and their proposals for adapting to climate change.

## Renewable energy

3.8 Furthermore, within the Climate Change Act, the UK is legally committed to provide 15% of its total energy demand from renewable sources by 2020.

## The Mayor's Climate Change Mitigation and Energy Strategy

- 3.9 To limit further climate change, the Mayor has set a target to reduce London's CO2 emissions by 60 per cent of 1990 levels by 2025 and 80% by 2050. This strategy also sets the following four objectives:
  - to reduce London's CO2 emissions to mitigate climate change;
  - to maximise economic opportunities from the transition to a low carbon Capital;
  - to ensure a secure and reliable energy supply for London; and
  - to meet, and where possible exceed, national climate change and energy objectives

Merton Council's responsibilities for tackling climate change

- 3.10 Members were informed that the Council is responsible for adhering to, and reporting against, the following mandatory legislation:
  - Annual greenhouse gas emissions reporting: of emissions from Merton's own estate and operations to the Department of Energy and Climate Change (Appendix 1 details Merton's greenhouse gas emissions);
  - Carbon Reduction Commitment Energy Efficiency Scheme (CRC): a mandatory scheme aimed at improving energy efficiency and cutting emissions in large public and private sector organisations. Participants are required to report their annual electricity and gas consumption from buildings and purchase allowances against emissions associated with their energy use. Qualification for the scheme is based on an annual electricity consumption of over 6,000 megawatt-hours (MWh);
  - Home Energy Conservation Act (1995): amendments to the Act require all English authorities to prepare a report setting out the energy conservation measures that the authority considers practicable, cost effective and likely to result in significant improvement in the energy efficiency of residential accommodation in the area; and
  - Flood and Water Management Act (2010): requires local authorities to take on the responsibility for leading the coordination of flood risk management in their area under the guise of lead local flood authority

### 4. What are we doing to tackle Climate Change?

- 4.1 Members considered the Council's current activity to address climate change. The Council has focused upon energy improvements in the Council's own buildings and estates. Beyond the installation of energy efficient measures in its own estates, the Council has also facilitated behavioural change, particularly with the wider community on energy improvements, and through engagement with partners to change the way that people think about their energy usage.
- 4.2 Members learned that energy improvements were being made/planned by the Council in three broad areas which all aimed to reduce the impact of greenhouse gas emissions, generate funding for the Council and support behavioural change among staff and residents.
- 4.3 The three key areas were identified as the following, and the task group discussed the activity in each area:
  - Mitigation activity;
  - Affordable Warmth; and
  - Adaptations

#### Mitigation activity

4.4 The Council are currently engaged in the Greater London Authority's (GLA) **REFIT programme** for council buildings which involves an upgrade to

heating and lighting systems in the largest energy consuming buildings in the Council's portfolio.

- 4.5 Members learned that currently a total of 36 buildings are scheduled to be included in the REFIT project across three phases. This represents 13% of the Council's operational building assets (excluding non-building operational assets). Those included in the programme have been selected as they are the buildings within the Council's operational portfolio that are the poorest performing and/or largest emitters of CO2.
- 4.6 In addition, the Council is currently working with the Greater London Authority (GLA) and Merton Chamber of Commerce on a pilot project to deliver energy efficiency retrofit works for SME's using the REFIT energy performance contracting model. The current proposal is to target leasing council-owned buildings in the non-operational assets estate.
- 4.7 Members learned that the contractor overseeing the REFIT programme is responsible for delivering on commitments in relation to energy performance over an 8 year period. This is known as 'energy performance contracting', in which savings guaranteed that are not delivered are paid back by the contractor to the Council. This programme guarantees a saving for Merton of 19% across the 10 buildings included in Phase 1. This is equivalent to financial savings of £42,672 and emissions reductions of 255 tonnes of CO2 per annum.
- 4.8 The REFIT programme will utilise a range of energy conservation measures to secure efficiency savings across the estate. The types of measures installed will vary according to the specific needs and requirements of the individual building, as outlined below:

MEASURE	BENEFITS
Voltage optimisation	Reduction in energy consumption of appliances through reduced voltages
Lighting upgrades (LEDs)	Reduction in electricity consumption from lighting
Thermostatic radiator valves	Improve local controls and reduce overall thermal energy demand
Smart energy metering	Improved data and information to support monitoring and behavioural change activities
Building energy	Reduction in gas/electricity consumption by
management upgrade	implementing energy saving controls strategy
Plant room insulation	Reduction in thermal energy waste and
upgrades	demand
Appliance upgrades	Install efficient appliances to reduce electricity consumption (e.g. heat pump tumble drier)
Boiler plant ungrades	Reduced gas consumption by improved
Boiler plant upgrades	efficiency of performance
Upgrade heating controls	Reduced gas demand through implementation of energy saving controls

	strategy
Upgrade hot water controls	Reduction in electricity demand through improved thermostat controls

- 4.9 The Task Group learned that annual monitoring and verification of savings from each site will be undertaken throughout the duration of the project (8 years) through:
  - *Electricity consumption monitoring*: direct measurement of voltages and current drawn by main meter and sub meters before/after installation.
  - *Gas consumption monitoring*: analysis of automated meter reading (AMR) data to verify achievement of annual savings
  - *Lighting monitoring*: measurement of electricity consumption as detailed above.
- 4.10 Members learned that the Council had a programme for taking forward **Renewable Energy** sources in the form of **Solar PV** (photovoltaic). The task group heard that the efficiency in performance of solar panels is increasing and they are considered a robust renewable technology. The performance of Merton's installed panels has exceeded that forecast in the original business case. This programme of investment will support the Council in reducing the use of traditional grid based provision, supplying zero carbon energy and generating an income through the Government's Feed-in Tariff, which will result in a reduction in energy bills. A business case for the next phase of the programme has been made.
- 4.11 Members were informed that the Feed-in Tariff supports individuals and organisations, including communities, to generate low/zero-carbon electricity using small-scale renewable energy systems. The scheme covers technologies including solar PV panels, wind turbines, water turbines, anaerobic digestion (biogas energy) and micro combined heat and power (micro-CHP). Feed-in Tariffs provide a payment for the electricity that is generated over a 20-25 year period. The up-front costs of purchasing and installing the panels need to be funded. Merton Council anticipates a 7% return on investment from the solar PV panels it has installed.
- 4.12 The Panel also learned that the Council was undertaking a **Schools Insulation Project** which involves loft insulation being installed in 13 Merton primary schools and commenced in 2012 with an investment of £80,000. Members were pleased to hear that Merton is also installing solar panels at schools and across the corporate estate. The Council currently has 305kWp of solar PV installed across 12 sites to date as part of three phases of installation.
- 4.13 A further 470kWp of solar panels will be installed across nine more sites by the end of March 2014. This programme has been prioritised as it provides a zero carbon source of energy for sites and a significant reduction in CO2

emissions. Furthermore, there will be a reduced reliance on grid electricity. An example was provided by officers of William Morris School which, since the installation of a 50kWp system, has reduced its electricity bills by  $\pounds$ 3500.00 over 2012/13.

- 4.14 Members noted that the energy generated on site could be utilised with any excess sold back to the grid. The Task Group explored how this might provide an additional income stream for the Council. In doing so, they explored the possibility of expanding the existing programme of installing solar PV at school sites and providing a period of free energy and then supplying schools at a cheaper rate than other providers, with any excess sold back to the grid. This generates income for the Council and would not only ensure schools paid lower energy bills but also incentivise them to install such measures.
- 4.15 All solar PV panels installed from Phases 1 & 2 (excluding Phase 0 in the Low Carbon Zone) have tri-party agreements in place which state that the Council can charge for the energy supplied to the site they are installed on. The Council have yet to utilise this arrangement (as of yet) but have the capability to do so once the agreed period of free energy has expired.
- 4.16 Members discussed the importance of a structured engagement and communications programme with schools to ensure that the schools could be well informed about the benefits of Solar PV and increase take up of this measure by schools.
- 4.17 The task group agreed that what is needed is behavioural change in schools to encourage awareness and also to alleviate the concerns of pupils and parents about the aesthetics of Solar PV on the school, which can often be an issue when seeking to install these measures. Officers informed the task group that the Schools Energy Officer is actively visiting schools to engage them in the proposals for installing Solar PV and wider energy efficiency measures on their sites. Of the schools approached to date, only one had rejected the proposal to install Solar PV on their buildings.

Recommendation 1 - That Cabinet, further to maximising the potential of its own sites, work with other public and private sector landowners, such as Registered Providers, private homeowners, businesses and community organisations install solar PV on their buildings where this is supported by a business case.

Recommendation 2 - That Cabinet explore how solar PV could be made available to residents to access at cheaper rates/costs and how the Council may promote or support this scheme to enable communities to purchase their own renewable technology. This may be achieved through external capital investment or the ESCO.

## Affordable Warmth

4.18 The Task Group heard that the affordable warmth element of the Council's strategy sought to alleviate fuel poverty in domestic housing.

# The Big London Energy Switch

- 4.19 As part of this work, Members discussed the Council's work on collective energy switching. Members learned that £31,000 of funding was secured from the Department of Energy and Climate Change (DECC) in January 2013 as part of a Pan-London bid to roll out 'The Big London Energy Switch'. This programme sought to increase public awareness of the potential for reducing energy bills through collective switching and promote behavioural change
- 4.20 As part of the programme energy auctions were held on a quarterly basis, which allowed residents to register an interest in switching. Vulnerable households (fuel poor, low income or benefits, those using prepayment meters) were actively engaged as well as those that hadn't switched before. Merton undertook this work with 22 other London Boroughs, working alongside London Councils and with support on engagement from Sustainable Merton.
- 4.21 The result of the programme was that in September 2013, 626 Merton residents registered (0.79%) for the Big London Energy Switch with 71% of those that registered identifying savings on their energy bill. The average saving for participants was £122 and as much as £243 was identified for one customer. Members agreed that this programme should continue and that the Council should continue to promote collective energy switching.

# 5. Climate Change Strategy for Merton 2014 - 2017

- 5.1 This review of climate change and the Green Deal is timely as the Council's Climate Change Strategy is being refreshed and agreed for the 2014-2017 period. Members commented upon the draft priorities and objectives within the strategy in relation to energy improvements, internal and external, in the following three areas:
  - The Council's own buildings and estate;
  - Engaging the wider community on behavioural change and energy improvements; and
  - Facilitating activities with partners
- 5.2 In doing so, the task group considered the financial resources dedicated to climate change activity. Members established that, over all of the six key themes within the strategy, spending in this area constituted the following:

TEAM	TYPE	BUDGET	RESOURCE	NOTES
Facilities Management	Capital	Energy	£100,000	Bid to increase to £150k p.a. from 2015/16
	Revenue	utility invest to	£290,000	On-going funding for energy conservation activities and salary for 3 x FTE (Approx. £100k as of 14/10/2013)
Future Merton	Capital	Climate change initiatives	£140,000	Funding up to 2013/14 for climate change activities
	Revenue			Approx. salary costs for x2 FTE. No other revenue funding
TOTAL		£598,000		

- 5.3 Members noted that a third of this resource was directed towards staff salary (partnership work, promotions, project management) and two thirds of the resources were directed towards investment in buildings.
- 5.4 As part of their review, the task group discussed the financial implications of non delivery of the proposed activities within the refresh of the Climate Change Strategy 2014-17, in the three key areas relating to energy improvements concerning the task group (mitigation, adaptation and affordable warmth). The impact was identified as:
  - Increasing energy prices/use internal and external;
  - Falling down on the Carbon Reduction Commitment and impact on our carbon allowances (tax to be paid on CO<sub>2</sub> production is £12 per tonne);
  - Public health costs (e.g. fuel poverty, excess winter deaths, hospital admissions);
  - Direct and indirect costs associated with extreme events (e.g. road melting);
  - Potential changes to the costs and availability of insurance; and
  - Potential changes to the value of assets
- 5.5 Members were pleased to hear that the Council has undertaken consultation and held events with residents and partner organisations on a number of initiatives, including the Green Deal, Big London Energy Switch, and on behavioural change and addressing fuel poverty, which had informed their work on the refresh of the strategy.
- 5.6 Given that the Council is aiming for a 1.5% year on year reduction in carbon emissions and to generate savings as part of Merton's Climate Change Strategy, Members considered what opportunities there were for the Council to

achieve this. In doing so, the task group explored the following lines of enquiry in the subsequent months of their review to generate recommendations that would enable energy improvements to be made in the short and longer term, and to be taken forward as part of the refresh of the Climate Change Strategy:

- The Green Deal and 'any other successor' for Merton that would better appeal to, and meet, resident need; and
- The business case for a Energy Services Company (ESCO) or Quasi Energy Services Company (QuESCO) in Merton

Recommendation 3 - That the Council adopt Merton's Climate Change Strategy 2014-2017, which has been reviewed by the Task group and revised to take account of its recommendations.

Recommendation 4 - That Cabinet agree to build consideration of the adoption/installation of energy efficiency measures in appropriate council contracts being established or renewed by procurement, where feasible.

Recommendation 5 - That representatives from each council Directorate participate in the Climate Change Steering Group, as appropriate, to consider cross cutting issues and projects relating to tackling climate change to ensure a strategic focus and leadership on climate change priorities.

#### 6 The Green Deal – is it suitable for Merton?

6.1 Members considered the government's Green Deal initiative, how the Council should respond, and whether it should be dedicating resources to its promotion going forward.

What is the Green Deal?

- 6.2 Members were informed that the Green Deal is a new measure designed by the government to encourage people to make their homes and businesses more energy efficient. The Green Deal includes measures such as loft insulation, cavity wall insulation, draft exclusion, draft proofing, new doors, windows, and new boilers. Residents or businesses who want to use the Green Deal commission an energy assessment of their premises to determine if they are eligible for the loan and establishing where they would benefit financially from these measures.
- 6.3 The scheme offers pay-as-you-save loans to both domestic homes and businesses, which are used to pay for the energy-saving improvements installed. The loan operates under a "golden rule" which states that repayment of the loan has to be estimated as less than the amount the customer will save on their energy bills over the duration of the loan period. The loan is linked to the property where the energy efficiency measures have been carried out and repayments are added to the property's energy bills.

The incentive with these loans includes no up front costs for measures to be installed in residents' homes.

- 6.4 However, Members were informed that savings are not guaranteed through this scheme and that take-up by residents has been affected by a range of issues, including the interest rates attached to the loan. In some trials only 30% of households met the golden rule and were entitled to the loans. The golden rule, Members heard, is also preventing the installation of other energy efficiency measures.
- 6.5 The length of the process for securing finance for Green Deal to the point of installation was also cited as another reason for poor take up of the scheme. The four stages involved in residents seeking to install energy-efficiency measures in their homes through the Green Deal are as follows:
  - **Green Deal assessment** Green Deal Assessor/Advisor visits the property to work out which energy efficiency improvements would be most beneficial;
  - **Green Deal finance** customer finds a Green Deal Provider, who will arrange and fund the improvements. The customer is asked to sign a contract;
  - **Installation** a Green Deal Installer (with an approved quality mark) will come to carry out the work; and
  - **Repayment** interest is paid on the repayments (around 7% APR over 25 years). Loans can be paid back over 5, 10, or 25-year periods
- 6.6 Officers explained that, for the above reasons, the anticipated interest in the Green Deal in England and Wales had not materialised. In March 2013 the Government expected the take-up rate for the Green Deal to be 10,000 bill payers by the end of that year. However, the target was not met with 1,173 had signed up by the end of November 2013.

#### Green Deal Pioneer Places – take up of the Green Deal

- 6.7 Members learned that the funding successfully secured as part of the Green Deal Pioneer Places scheme allowed local engagement on the Green Deal to try and encourage take up, with Merton securing £46,000 for this task. The borough bid for and successfully secured the funding for the Green Deal assessment phase and a questionnaire on the Green Deal, working with Sustainable Merton.
- 6.8 Members heard that Merton Council engaged with 600 households attending residents' association meetings, offering free assessments, distributing publication materials and running information events on energy efficiency. Furthermore, 2,000 households were engaged by Sustainable Merton, and 62 households received a free Green Deal assessment. As a result of this process, one household in Merton signed up to have Green Deal measures installed.

- 6.9 Merton residents expressed their concerns about the Green Deal during the consultation which ranged from the relatively low actual savings, the length of the payback period, and reservations about interest rates. Furthermore, they expressed concerns about repayments being handled by the owners of the property and products breaking before they have been paid for. Overall, Sustainable Merton found in their consultation with residents that there is interest in tackling climate change, but there was scepticism about the Green Deal being the best route to do so.
- 6.10 Members considered the issue of financing the Green Deal as one of the main reasons residents were not taking up this initiative. Officers advised that people who could afford to pay for the changes up front would purchase their own energy efficiency measures. The scheme therefore was aimed at people who may find it hard to secure finance for energy efficiency improvements to their home.

#### Alternatives to the Green Deal

- 6.11 Members considered instead the possibility of adopting a local Green Deal which may respond to residents concerns expressed during the Green Deal Pioneer Places consultation phase. The task group was informed that the GLA has suggested three alternative Green Deal models for London boroughs which were outlined as:
  - **The Promoter Model** Merton could carry out a marketing campaign to help Green Deal providers identify properties for Green Deal assessment;
  - **The Producer Model** Merton would assess homes in the borough (potentially through the creation of a development company). Addresses would be passed on to Green Deal Providers; and
  - **The Provider Model** Merton would become the Green Deal Provider, providing finance and working with a single delivery partner.
- 6.12 For residents, alternatives to the Green Deal have been taken up such as the Energy Company Obligation (ECO) scheme. This is a charge which is added to all energy bills in England and Wales which subsidises the cost of home insulation for people experiencing fuel poverty in low-income groups and those whose homes are not eligible for the pay-as-you-save loans due to not meeting the "golden rule". The ECO funding mechanism is aimed at those whose properties are considered to be 'hard to treat' and therefore prohibitively expensive (unlike the Green Deal which is for people who are able to repay loans).
- 6.13 Members found that although annual repayments are designed to be less than actual savings achieved through the Green Deal, they may still exceed the amount saved. Task group members also considered the fact that there have been 100,000 Green Deal assessments nationally, but just over 1,000 bill payers have signed Green Deal Plans and there have been only 481

Green Deal measures completed. However, 303,795 ECO measures were taken up by the end of October 2013.

- 6.14 Members noted that ECO has been more successful because measures are delivered free of charge, with energy companies achieving around 15% of their target.
- 6.15 The task group were informed that the ECO has three obligations, which are primarily aimed at those who are unable to pay for energy efficiencies, these are:
  - The Carbon Emissions Reduction Obligation (solid wall and hard-totreat cavity wall insulation), which can be used in conjunction with the Green Deal;
  - The Carbon Savings Community Obligation (insulation measures and connection to district heating systems in low income and rural areas); and
  - The Home Heating Cost Reduction Obligation (affordable warmth measures such as reducing the cost of space heating, together with replacement of boilers).
- 6.16 Members therefore chose to explore alternatives to the Green Deal in this review and were informed that, under the Localism Act, council's have powers to establish and manage Energy Services Companies (ESCOs) that offer the possibility of providing energy to residents at a cheaper rate than they are currently paying and of generating an income stream that the Council could utilise in funding other energy efficiency projects, such as a local Green Deal.
- 6.17 Members also considered the advice of the Director of Environment and Regeneration and agreed that there could be a renewed programme to promote the Green Deal and ensure that the issues identified could be addressed to increase take up. This was felt to be a more financially viable option for the council as it was unable to allocate funding to roll out a local Green Deal. Going forward, Members were advised, there would need to be an analysis of the existing provision, such as the Green Deal and ECO funding, and how these options might be exhausted before any other local council delivered options, such as local Green Deal, would be considered as it was not felt that it was a viable option at this time.

**Recommendation 6** - That Cabinet promote the Green Deal and consider the existing provision, such as ECO funding, to address some of the issues associated with the national Green Deal scheme, as reported by residents, which has resulted in low take up and ensure that it meets local needs.

## 7. Exploring the feasibility of an ESCO for Merton

What is an ESCO?

- 7.1 Members learned that an ESCO is an Energy Savings Company that is set up as a trading company which is able to provide a wide variety of energy services such as energy purchasing, generation and supply.
- 7.2 ESCOs can bring a variety of benefits to the local community, including alleviating fuel poverty and income generation as well as supporting councils' to achieve their carbon emissions reduction targets.

#### Categories of ESCOs

- 7.3 Members were informed that ESCOs tend to fall into three categories:
  - Wholly owned by the private sector;
  - Public sector ESCOs; and
  - Private sector organisations operating with energy performance contracts

#### What needs to be considered when setting up an ESCO?

- 7.4 Members heard that Merton already has a foundation in place to establish a QuESCO which would have the following features/benefits:
  - a revolving internal loan fund which allows the Council to make energy efficiency improvements to council facilities;
  - facility to access Salix loans; and
  - energy generation assets of its own, such as a gas-fired CHP system and solar photovoltaic systems, including schools-based solar PV
- 7.5 Members were informed that the foundation of a QuESCO offers the opportunity for the development of an external ESCO in the future and the potential to deliver energy to the local community and on a commercial basis.
- 7.6 Members explored how the costs and risk associated with set up and operation of the ESCO could be mitigated/addressed. Members heard that funding could be acquired through significant investment from the Council's capital programme, in the first instance, or through joint delivery with an external partner. It might also be possible to set up a stand alone vehicle for an ESCO either through a public/private partnership or some form of social enterprise. Members agreed that this latter arrangement would emphasise the important social benefits the ESCO would afford residents in Merton and being central to the business case of this model.
- 7.7 Members also agreed that the costs of establishing an ESCO in terms of distribution, infrastructure and legal and financial support would need to be factored in to any business case for an ESCO in Merton. This investment could potentially be a high risk to the authority as establishing a successful ESCO is a long term project with a number of significant challenges. Funding sources would therefore have to be explored.

- 7.8 The task group learned that there was an opportunity, through the revolving loan fund attached to the ESCO, to establish new energy networks in Merton for the production or supply of energy, as well as provide loans for energy efficiency improvements to homes in the borough using the Green Deal-style "pay as you save" model. It could also aid the improvement of the commercial sector in the borough via the use of the energy performance contracting concept, harnessing what Merton has learned from its REFIT programme.
- 7.9 Officers presented the quasi-ESCO (QuESCO) model versus the full ESCO model to Members which is outlined in Appendix 4 of this report.

#### Benchmarking - Examples of ESCOs run by Local Authorities

7.10 Members heard that established ESCOs operate in Southampton (run by the city council since 1986) and Woking (since 1999). Peterborough city council has recently introduced an ESCO.

#### Woking

- 7.11 The Woking ESCO is 90% owned by Woking Borough Council via a holding company called Thamewey Ltd, with a 10% stake held by a private firm called Xergi. In terms of control, the ESCO is retained by the local authority and thus the authority is liable to more risk. Profits remain within the public sector and are then recycled back into green/climate change projects. This model required an initial investment of £250K in 1999.
- 7.12 Woking, Members discovered, is renowned for using an internal revolving climate change fund, without the need for a holding company or partner organisation to deliver the project. The revolving loan fund allows money received from external sources to be focused explicitly on energy projects. Its revolving loan fund was started with a capital figure of £250,000, which was invested in improvements and creation of local CHP networks

#### Southampton

7.13 Southampton (holding company called Southampton Geothermal Heating Company Ltd), on the other hand, is run on behalf of the city council by a private company (Utilicom) which keeps a majority of the profits. This does minimise the financial risk to the local council which receives a profit (usually around 10K to 15K per annum). However, the majority of any income is retained by Utilicom. This model was funded by an EU grant and Utilicom. It has successfully reduced household bills by 25%.

#### Best Practice – Blue Sky Peterborough

7.14 Members met with representatives from Peterborough City Council, and their legal and financial advisors, to consider the ESCO they have established, known as 'Blue Sky Peterborough' to consider good practice in this area.

#### Why did Peterborough City Council set up an ESCO?

- 7.15 Peterborough explained that they chose to establish an ESCO to trade surplus energy, supplying the Council's needs in the first instance. The ESCO was also set up to:
  - Generate Renewable Energy;
  - Reduce Energy Consumption;
  - Enable regeneration;
  - Reduce carbon; and
  - Financial benefits savings/income (long term revenue income streams from the sale of surplus energy
- 7.16 Blue Sky Peterborough was established by Peterborough City Council in 2011 in order to meet the following objectives:
  - Self supply;
  - Generate a profit from the sale of its excess energy;
  - Be scalable/sellable to other councils;
  - Keep costs of supply/transmission low;
  - Result in a cheap, "Peterborough tariff" for local residents; and
  - Allow Peterborough to be self-sufficient for energy (acknowledging that this is a more aspirational, longer term goal that may not be entirely feasible)
- 7.17 Officers from Blue Sky Peterborough posed the question to the task group about the objectives/priorities that an ESCO would meet and why the task group felt this might be the best approach to take. Members heard that the term ESCO can mean many things to many people and delivering a number of energy improvements and creating energy streams could be delivered by the Council independently of an ESCO. In particular, Members noted that these measures could be delivered without having to address certain legislative, regulatory and financial challenges that establishing an ESCO presents.
- 7.18 Members noted that the rationale for setting up an ESCO for Peterborough City Council related to localising energy production to make it more efficient, promoting the Localism agenda through decentralisation of energy, addressing the budget deficit through the production, supply and selling of energy, and to develop, install and finance projects to improve energy efficiency. However, the company had not traded since its incorporation.

#### Legal Considerations when establishing an ESCO

7.19 Members heard from Peterborough City Council of the need to consider the alternatives to setting up an ESCO as it can only operate in accordance with

any business case mandates that the Council wishes it to pursue anyway. The task group were informed that there are a number of alternatives including:

- Not pursuing provision of an energy supply if it does not promise a worthwhile income generation stream;
- Undertaking projects in-house; and
- Establishing an ESCO in partnership with another party as a joint venture with a shareholding of less than 20%
- 7.20 Members learned that a local authority has limited statutory powers to trade for profit. It must therefore set itself up as a separate company. A number of provisions must be adhered to in this. Officers explained that licensing an ESCO relies upon the following:
  - The focus of ESCO as it is a wholly owned subsidiary that the Council operates and owns;
  - How the ESCO intends to trade their energy supply, for example, internally or for commercial purposes
  - Whether the focus of the ESCO is on Generation; Distribution; or Supply (retail) will impact the form of the ESCO and what is required for its operation
- 7.21 The task group learned that the regulation that is required to be followed when setting up an ESCO falls under the Local Government Act (2003) (LA Trading Companies to trade for commercial purposes) and the Localism Act (2011) using the 'general power of competence'. An ESCO requires that a board of Directors and shareholders be set up with responsibility for making financial and commercial decisions, which carries the risk of competing views and the need to ensure profits for shareholders through its operation.
- 7.22 Members were informed that an ESCO requires a relatively large customer base to meet administrative costs in the first instance. Members heard that Peterborough had approached the licensing of their ESCO by establishing a joint venture with license holders to avoid un-necessary regulation. This involves set up costs, management of administrative costs and regulatory issues being the sole responsibility of the local authority. Peterborough City Council recommended that the Council avoid additional licensing regimes, where possible, and to note that not all income generation needs to be within the boundaries of the authority.
- 7.23 Members considered that in Peterborough, the ESCO was established as a trading company of Peterborough City Council ("PCC") with a board of Directors appointed by PCC established from members and officers. The Company is limited by shares, with the entire issued share capital of 100 shares of £1 each owned by Peterborough City Council. The directors have commercial and fiduciary duties and recognise the need to establish clear lines to avoid conflict.

What can an ESCO achieve?

- 7.24 The task group heard that Peterborough City Council agreed to set up their ESCO to deliver the following energy initiatives:
  - Solar power
  - District heating
  - Income streams through infrastructure and regeneration plans
- 7.25 The ESCO supports Peterborough City Council to meet efficiency savings targets and savings from the ESCO is estimated year on year, (built into the Council's MTFS), as outlined in the table below:

	2014/15	2015/16	2016/17	2017/18	2018/19
Energy	£K	£K	£K	£K	£K
Wind & Ground	1				
Mounted	441	217	954	4,426	4,983
General saving Target	462	494	514	514	514
Total	903	711	1468	4940	5497

- 7.26 Blue Sky Peterborough has also delivered the following energy improvements as part of their ESCO:
  - Solar power and schools: Peterborough's approach is to charge schools for the power produced but cap their exposure to energy price rises at RPI. In their experience, schools are happy with this. The key to this is managing stakeholder relationships with the heads of schools and governors. For example, Peterborough City Council runs a green boot camp for teachers to raise awareness. To date, solar panels have been installed on 16 of their schools;
  - Working with British Gas in a strategic partnership to deliver ECO and Green Deal efficiency improvements to household, particularly those in fuel poverty;
  - Collective switching 10% of households have registered to date to a new tariff as part of this scheme;
  - SME switching 29 businesses have switched supplier to reduce their energy costs and increase their competitiveness;
  - Setting up an **Energy performance framework agreement** to implement energy efficiency improvements to council properties with the possibility

of widening the scope to other local authorities, social housing and other organisations; and

• Evaluation of solar panel installation on new sites such as colleges, sports centres, recycling centres etc.

How to engage Members and residents in the establishment of an ESCO

7.27 Members enquired about the best way to secure buy in for an ESCO. Representatives explained that with regard to securing buy in from residents for an ESCO, engagement and consultation needs to be undertaken on the individual energy improvements by product/initiative. Member support should be gathered through approval and delivery of the Council's Climate Change Strategy and budget.

## 8. An ESCO for Merton - Options

- 8.1 Having considered the evidence presented above and the discussions with Merton officers, and with external organisations, such as Peterborough City Council, the Task Group asked that a proposal be produced outlining potential options and routes for establishing a local ESCO. This would provide a grounding for Cabinet to take forward the groups recommendations regarding an ESCO for Merton in the future (please refer to Appendix 3 and 4).
- 8.2 The task group debated the Council's ability to generate electricity and to become a provider of energy or utilities to other council buildings, for example schools, and the local community. Members were particularly interested in the opportunity to offer support to residents in this approach, beyond our estates, which would have real social benefits.
- 8.3 Members also considered that the establishment of an ESCO which would place the Council in a position where it could commercially, individually or with a partner, make a profit, operating through a limited company. There is the possibility that, in consultation with relevant organisations such as limited companies, or limited liability partnerships, the ESCO can pursue a number of energy related projects.
- 8.4 The ESCO model then provides the authority with the opportunity to trade commercially as all shares are/can be held by the Council and commercial opportunities can be capitalised upon as they arise. The Council can also determine if it is better for energy projects to be undertaken by the Council or the ESCO.
- 8.5 The task group considered the possibility of setting up a Quasi ESCO (QuESCO), as outlined in the Council's refreshed Climate Change Strategy, as a stepping stone to a full ESCO model at a later date. This would be an internal ESCO which would enable funds to be generated and ring fenced for council initiatives.

- 8.6 Members learned that the key distinction between the quasi ESCO and the full ESCO is that the quasi ESCO is internal and that the Council is able to supply energy to its own sites without needing a license. The legal and licensing framework that is required to be met when establishing an ESCO was discussed with the legal representatives that supported Peterborough City Council in establishing their ESCO.
- 8.7 Members agreed that the full external ESCO was an ambitious longer term objective which would require a number of financial, regulatory and legal challenges and barriers to be met/addressed. The possibility of establishing an ESCO for Merton, and the associated benefits outlined below, Members felt should be taken forward to consider its feasibility. This was felt to be a worthwhile piece of work that could be done to establish the opportunities it presents for Merton:
  - Financial benefits for the Council (income stream);
  - Improved energy efficiency in, and reduced energy costs to, council buildings/estates, including schools;
  - Providing opportunities for funding other energy improvement initiatives from a central funding ring fenced pot; and
  - Social benefits for residents including protection from increasing energy costs and to alleviate fuel poverty
- 8.8 Furthermore, Members felt that the QuESCO in the shorter term would provide the Council with experience and a knowledge base in setting up the full ESCO in due course, acknowledging that the process for setting up the ESCO and time taken to realise the anticipated benefits.

#### Rationale for an ESCO in Merton

- 8.9 Members requested that a business case be drafted with the information available within the timescales for the review that would inform their deliberations on the feasibility of an ESCO for Merton.
- 8.10 The task group heard that Merton Council has developed a wealth of experience in delivering sustainability-based projects that have also demonstrated the ability to deliver positive financial outcomes; notably in the delivery of low/zero carbon energy technologies (primarily solar photovoltaic).
- 8.11 This experience has enabled the Council to be in a position where there is scope to expand the delivery of localised energy projects on a wider scale with a view to generating a profit (whether commercially, individually or with a partner) and delivering wider environmental, economic and social enhancements.
- 8.12 However, with regard to the possibility of an ESCO, not all of these activities would necessitate the immediate development of an ESCO but, in order to deliver a profit-making enterprise, the Council would be required to operate through a limited company. The primary purpose for establishing a Merton ESCO would therefore be to allow the Council to take advantage of powers to

trade commercially with the aim of generating a profit. Any profits arising from commercial trading could then be utilised to deliver further energy efficiency, emissions reductions and environmental projects depending upon which outcome(s) are deemed to be the greatest priority.

### How could an ESCO in Merton be developed?

8.13 Members were informed that the development of a local energy services could be achieved through the following three stages, subject to financial and technical viability. The stages are not mutually exclusive and could be implemented independently or in parallel.

### Stage 1: Local energy generation and supply via solar PV

- 8.14 The Council already owns a sizeable portfolio of solar photovoltaic panels with an installed capacity of 305kWp across 13 buildings. An additional 460kWp of solar panels are scheduled for install across a further eight sites by 31 March 2014. The Council has tri-party agreements in place for each system that enable it to derive the full income from the Feed-in Tariff and maintain an option to introduce energy charging for the electricity supplied to each site.
- 8.15 The current PV installations provide an internal rate of return of 5-7%. Whilst the financial returns on PV are still favourable, officers' recommended that installing solar panels on as many Council and non-Council owned buildings as possible, would replicate the tri-party power purchase model currently in use.
- 8.16 Members heard that there are three potential routes for the expansion of solar PV which are as follows:

### 1) Utilise all viable Council operational roof-space under existing triparty Agreements

8.17 The amount of viable roof space on the Council's operation stock is limited, so any future installed capacity would be in the order of 1000kWp. Scoping studies are being carried out by the Council's solar PV contractor Mark Group Ltd to evaluate potential sites for a fourth phase of solar PV installations.

# 2) Utilise most profitable non-operational sites in accordance with a power purchase agreement

8.18 Non-operational (commercial) sites should be included in a future scoping study of potential locations for the expansion of solar PV. These sites generally provide larger roof space and therefore better opportunities to install large PV systems and maximise the energy generation potential. The amount of viable roof space on the non-operational stock is yet to be determined. First order estimates suggest that future capacity could be in excess of 1000kWp.

# 3) Install solar panels on private-owned sites on a roof lease type arrangement in accordance with a power purchase agreement

8.19 The task group were informed that exploration of opportunities to locate Merton-owned PV on private-owned sites in the borough should go ahead. Detailed scoping studies would be required in order to determine the potential future capacity. In addition, legal advice would be required to clarify the Council's legal limitations regarding energy generation and supply.

## Stage 2: Development of district heat network (generation and/or supply)

- 8.20 Officer explained that a clear ambition for a Merton ESCO should be to generate and/or distribute heat and power through a local district heat network (either independently or in partnership with a third party). The Council is already exploring the viability for district heating in Merton and has submitted two bids to the Department of Energy and Climate Change's Heat Network Distribution Unit (HNDU) for assistance in delivering detailed feasibility work, with additional bids planned for future rounds of HNDU funding. The HNDU provide match funding (67% grant alongside 33% match funding) and assistance with the procurement of specialist consultants.
- 8.21 The task group learned that bids have currently been submitted for two locations as follows:

## *Morden Town Centre* (*Project cost:* £30k – application approved)

8.22 The Morden Station regeneration will provide the opportunity to service around 1900 new residential units (over two phases), a 2,100m2 supermarket, 1,350m2 of small retail units and a new 80 room hotel (2,600m2) and potentially connect to existing dwellings and shops in Morden Town Centre. Furthermore, the Morden Town Centre regeneration provides the opportunity to connect Morden Civic Centre's existing 200kWp Gas CHP system to a decentralised energy network.

**Colliers Wood and South Wimbledon** (Project cost: £80k – application result pending

8.23 Opportunities for the development of a decentralised energy network fit strategically with Merton's regeneration and housing delivery objectives and plans for the intensification of sites around Colliers Wood Town Centre. This includes the refurbishment of the Brown and Root Tower and additional sites identified in the Council's draft Sites and Policies Plan & draft Policies Map.

#### Stage 3: Delivery and resourcing of local energy efficiency retrofit

8.24 *Domestic sector:* The Scrutiny Task Group indicated a desire to explore a local funding mechanism that could provide support for domestic energy efficiency retrofit activities to offer a local alternative to the current Green Deal scheme. No detailed analysis has yet taken place for the viability of a Merton

local domestic 'Green Deal' scheme and advice would be sought on the feasibility of a local scheme.

- 8.25 However, when members met with Merton Priory Homes and Circle Housing they highlighted a successful local Green Deal model in the North East. Gentoo became an accredited Green Deal Provider after signing an agreement with the Government in which 22 local organisations worked on developing key Green Deal systems and processes for consumers. These organisations were required to go through a robust accreditation process in order to become accredited Green Deal Providers.
- 8.26 Gentoo was one of the first social landlords to join the Green Deal Finance Company with a view to building upon its existing energy efficiency retrofit portfolio by aspiring to become a Green Deal Provider. Gentoo owns approximately 29,000 social homes and has already delivered a number of retrofit schemes, including a Green Deal pilot the 'Energy Saving Bundle', on its own stock. 79% of 1200 homes have taken up this local Green Deal and there have been no upfront costs to residents.
- 8.27 *Non-domestic sector:* In addition to Merton's own contract with the GLA's RE: Fit framework, the Council is also running a pilot project with the GLA and Merton Chamber of Commerce to offer RE: Fit to local small medium enterprises over the period 2014/15. The findings of the pilot will help to assess the viability of local led commercial scheme.

Solar PV

- 8.28 The current installation costs of solar PV through the Council's appointed contractors is £1,000 £1,500 per kW installed. The current PV return on investment is between 5-7% from the generation tariff. Once the Council exceeds 25 registered solar systems, the level of Feed-in Tariff will be reduced for all subsequent systems installed. Despite this, the financial returns on investment are predicted to exceed 5%.
- 8.29 A programme of installation of Solar PV is underway on council buildings. This is both reducing the carbon footprint and generating financial savings towards the Council's budget deficit. There would be complex financial issues in seeking to deliver the existing PV programme via an ESCO rather than continuing installations in house. This would require further investigation before a clear approach can be determined.

#### District Heat Network

8.30 Officers explained that a detailed business case would be subject to the completion of technical feasibility work. The split between doing this in house on council owned assets and facilitating wider development would require further analysis. The existing CHP power plant at the Civic Centre could potentially serve other council facilities in the vicinity. Members heard that it was likely to benefit the Council financially to manage this in house.

## Energy efficiency retrofit

8.31 Members learned that the REFIT for SMEs project will provide further detailed analysis of the potential scope for investment in non-domestic energy efficiency retrofit. It should be noted that it has been difficult to attract interest in many of the "Green Deal" schemes.

## How would an ESCO for Merton be funded?

- 8.32 The task group were informed of the potential funding sources for the ESCO, these included the following sources:
  - Offsite contributions (2014-2016): payments from new development arising that fail to meet onsite CO2 reduction requirements;
  - Allowable Solutions (2016 onwards): developer contributions from shortfall in meeting zero carbon homes CO2 reduction targets onsite; and
  - London Energy Efficiency Fund (LEEF): £100m fund to be lent to public or private sector borrowers on projects that promote energy efficiency.
- 8.33 The availability of funding for the sort of investments mentioned is going to be the limiting factor, plus the ability to repay the finance at the rate of interest at which it is provided and deprecate the assets though the accounts of the company. This will be challenging for some of the proposals.

## Legal and Statutory considerations when establishing an ESCO

## Local authority companies

- 8.34 The task group considered the legal and statutory requirements of establishing an ESCO, which they also explored in terms of the first hand experience of Peterborough Council when they established their own ESCO and the legal support and advice they required.
- 8.35 Members heard that Local authorities are established and governed by statute and thus can only act where they have a relevant statutory power. Those powers must be exercised reasonably and in accordance with the purpose of the legislation. A local authority has a limited number of statutory powers which permits it to trade for profit beyond which it may still do so, providing there is no statutory duty to provide the services and subject to a number of constraints. The most significant constraint is that a local authority can only trade commercially through establishing a separate company. In setting up and operating such a company, the local authority must adhere to a number of provisions, including a prerequisite of approving a business plan, transparency of accounts, restrictions on payments to local authority staff and members when acting through the company, and having regard to guidance issued by the Secretary of State.

#### Sale of electricity

8.36 Officers explained that there is a restriction contained in s.11(3) of the Local Government (Miscellaneous Provisions) Act 1976 which provided for local authorities to sell energy but only that produced from a heat source. This prevented local authorities being full participants in the government's decentralised energy policy, so the government made Regulations in exercise of the powers conferred by the 1976 Act which allows local authorities to sell energy they produce from renewable energy sources (e.g. energy from wind, solar, biomass and biogas) back to the national electricity grid. This came into force on 18thAugust 2010 as The Sale of Electricity by Local Authorities (England and Wales) Regulations 2010 (SI 2010/1910). The power given by these Regulations is sufficient to cover a very wide range of renewable options for local authorities.

#### Environmental considerations when establishing an ESCO

8.37 Members heard that the environmental considerations and impact of the range of initiatives discussed that may be delivered by, or independently of, an ESCO would be aligned with Merton's draft Climate Change Strategy (2014-2017) and support the delivery of national targets, including the UK Climate Change Act 2008 and the EU 2020 climate and energy targets.

### How to take the ESCO model forward – some considerations

- 8.38 Members considered the proposal and the advice of officers and the Assistant Director of Finance and agreed that there are a number of solutions which could be rolled out sooner and also would be better suited to an ESCO model. Partnership arrangements also enable shared risk, funding, and a greater range of energy technologies to be rolled out. Furthermore, a number of the initiatives proposed may be best taken forward under the Councils regeneration programme, alone or in partnership.
- 8.39 In considering what the overarching strategic aim of the ESCO was, Members of the task group were in agreement that the sole purpose of an ESCO should not just be about generating income. It was also important that the ESCO addressed fuel poverty which was a real threat. The task group insisted that the business case for an ESCO reflect both financial and social benefits and its focus should be agreed (supply/generation) and reflected in council policy, climate change, regeneration and other associated council policies.
- 8.40 There was also a need for consideration of ways in which developing an ESCO is a response to climate change that will identify Merton as one of the leading authorities in this area. This in turn may lead to Merton being approached or in a better position to access any additional funding for energy improvements that may present itself, or to capitalise on partner interest in working with local authorities in this area.

Recommendation 7 – That Cabinet commission a feasibility study to look at establishing an Energy Services Company (ESCO) for Merton, with a view to producing a business case for the ESCO which should include a risk assessment of the proposals. A further detailed investigation into the potential for a Merton ESCO should include:

- Future Merton obtaining specialist legal advice on the Council's scope and legal limitations in generating, distributing and selling energy and advise on the development of an ESCO;
- Feasibility investigations into the potential for district heating at Morden Town Centre and Colliers Wood / South Wimbledon
- Further scoping of energy efficiency retrofit potential in Merton
- Identification of where exiting regeneration proposals/programmes may take forward energy efficiency improvements, alone or in partnership without the need for an ESCO to be in place.

Recommendation 8 – That Cabinet receives a report on progress on rolling out the expansion of the Merton solar PV portfolio, and on the scope for making further investment, subject to the results of a scoping exercise and a viable business case. This business case should include an appraisal of whether this should be undertaken via an ESCO or not.

#### 9. Behavioural Change

- 9.1 The task group considered the behavioural change and engagement that would need to take place to ensure the greatest efficiencies could be achieved from the range of products and initiatives the Council was delivering and promoting to residents.
- 9.2 A conference on Climate Change and Community Engagement was attended by one of the group's co-opted members, with a view to gathering any information on good practice, in relation to influencing behavioural change and raising awareness of how climate change effects can be prevented/tackled by council staff, local businesses and residents.
- 9.3 With regard to the evidence presented at the conference, the task group agreed that steps should be taken by the Council to **raise awareness**; **engage people**; and to empower residents to **take action** through a number of channels.
- 9.4 Members heard that continued productive working relationships with organisations such as Sustainable Merton could ensure messages could be communicated to wide and diverse audience. The issue with raising awareness and understanding about climate change, it was felt, was that the issue is currently too big for people to fully grasp and constantly shifting agendas don't help residents to gain a clear picture of what is happening to the climate and what can be done to mitigate negative impact.
- 9.5 Members heard that people need a positive story about how they can make a

difference for any behavioural change to become a reality and felt that Merton as undertaking good work in this area which should be publicised. The information given to them needs to be interesting and engaging, and they need to feel confident enough to make changes in their daily lives.

9.6 Furthermore, the task group heard that the possibility of offering incentives and potential savings for residents should be given some consideration when seeking to influence behavioural change.

Recommendation 9 - That the Council develop a marketing and engagement strategy to ensure the widest promotion and awareness raising of energy efficiency measures and improvements that staff, residents and local businesses can access.

# 10. Consultation with Merton Priory Homes – Energy efficiency of Merton's housing stock

- 10.1 Members invited Merton Priory Homes (MPH) and Circle Housing to contribute their thoughts on the task group's findings to date and their emerging recommendations. Furthermore, Members wished to hear about the energy and green strategy for MPH.
- 10.2 The task group heard that Circle's Energy Saving and Warm Homes Strategy aims to:
  - Provide properties that are energy efficient;
  - Support customers to live in comfort and affordably heat their homes;
  - Enable customers to save energy and save money where possible; and
  - Enhance life chances through improved health, opportunities and finances
- 10.3 Members heard that Circle Housing/MPH have 68% of their properties SAP 65 and above and there are opportunities to further insulate stock and improve energy efficiency. There were 998 homes identified as needing solid wall insulation and repairs and maintenance contractors have been instructed to ensure heating, insulation and glazing meets decent homes standards.
- 10.4 The task group learned that Circle Housing/MPH have endeavoured to support their customers to save money on fuel bills through 'my home energy switch'. This is an individual switching service which supports customers through he process and has potential savings of £100-200 per year on energy bills. MPH customers have saved nearly £3000 in this programme;
- 10.5 There are also resident energy champions in place with 60 champions trained by an external organisation to provide advice on energy efficiency. 1200 residents have been advised by Champions to date. Energy champions can provide top tips which can save people up to £250. The focus is on the most

vulnerable residents to provide them with the best advice on how to manage their energy.

- 10.6 As Members were aware, there is a regeneration programme planned, which is in the early stages of development, by MPH. A design team will be appointed soon to undertake the master planning design phase which will be completed at the end of 2014. This programme will aims to:
  - Improve the building fabric and replace inefficient and expensive to heat homes;
  - Ensure houses are built to at least code level 4;
  - Reduce fuel poverty and carbon footprint;
  - Include sustainability throughout the process of design and build;
  - Explore opportunities to produce heat and power locally; and
  - Reduce waste through the construction process
- 10.7 Circle Housing/Merton Priory Homes stated that they would be willing to engage in preliminary consultation on the recommendations made by the task group on both the technical aspects and possible energy efficiency technologies, and also on policy, and where they might see opportunities for joint working and delivery of similar initiatives. Although this was subject to much more detailed discussion and consultation and no agreements were made at this stage.
- 10.8 A response was provided to the recommendations made by the task group by Circle Housing/MPH. It stated that Circle welcomed the request from the task group to contribute to the review and to comment on the group's recommendations. Circle added that they were exploring a range of options as part of the regeneration work in Merton to provide energy efficient homes for their customers.
- 10.9 The report included a number of considerations which were identified as comparable to Circle's own policies; for example, in its current design Green Deal is not a suitable funding mechanism for the general needs of their customers to improve the energy efficiency of their homes. Circle asked that the council update them if plans for a local Green Deal were agreed to be implemented in Merton by Cabinet and how this might work for Circle customers.
- 10.10 Circle added that the report placed a lot of emphasis on solar PV systems and a reliance on an income they will generate. One of the key aspects that should be considered to protect this income stream is the maintenance of the solar PV systems and the costs that may be incurred.
- 10.11 To complement the solar PV systems and their income from FITs, Circle suggested that the strategy could also include renewable heat technologies and funding secured through the RHI. Members were informed that funding was soon to be in place for domestic properties in Circle's stock, but commercially this scheme was already open and consideration should be given for both the district heating networks and the ESCO.

- 10.12 There is a lot of focus on technology, but not much discussion about improving the fabric of the buildings, particularly how hard-to-treat properties will be tackled in the following years to protect both Local Authority and residential properties. Alongside the improvement of retrofit projects, consideration should also be given to the environmental performance of new build properties.
- 10.13 There should also be a greater focus on behaviour change and how residents and businesses in Merton can reduce their energy usage and become more environmentally sustainable. There will also need to be a substantial marketing campaign to explain to Merton residents why this is a priory for the Council and the need to make changes to the way they use energy.

Recommendation 10 – That Cabinet consult with Circle Housing/Merton Priory Homes on any of the recommendations from this review that they agree to, in order to establish where there may be opportunities for joint working/delivery on measure to improve the energy efficiency of resident's homes.

#### 11. Concluding Remarks

- 11.1 Our recommendations impact on the Council and its partners. The recommendations cover:
  - The possibility of an ESCO for Merton;
  - Solar PV roll out to council estates, local businesses and residents;
  - Greater strategic oversight across the Council on climate change and joint working on initiatives to mitigate its impact;
  - Procurement;
  - A local Green Deal for Merton;
  - Policy development of the Councils Climate Change Strategy 2014-2017; and
  - Community engagement and behavioural change

#### 12. What Happens Next?

- 12.1 This report will be presented to the Sustainable Communities Overview and Scrutiny Panel meeting on 26<sup>th</sup> March 2014 for the Panel's approval.
- 12.2 The Panel will then send the report to the Council's Cabinet meeting on 30 June 2014 for discussion and to seek agreement to the recommendations presented.
- 12.3 The Cabinet will be asked to provide a formal Executive Response and Action Plan to the Panel within two months of the submission of the report to its meeting in September 2014. The Cabinet will be asked to respond to each of the task group's recommendations, setting out whether the recommendation is accepted and how and when it will be implemented. If the Cabinet is

unable to support and implement some of the recommendations, then it is expected that clearly stated reasons would be provided for each.

- 12.4 The lead Cabinet Member (or officer to whom this work is delegated) should ensure that other organisations, to which recommendations have been directed, are contacted and that their response to those recommendations is included in the Executive Response and Action Plan.
- 12.5 The Panel will seek a further report six months after the Cabinet response has been received; giving an update on progress with implementation of the recommendations (anticipated March 2015).

### Appendix 1

Whom we spoke to

#### **External Organisations**

John Harrison – Executive Director, Resources (Peterborough City Council) Helen Coates – Circle Housing Group Leanne Donald Whitney, Merton Priory Homes

#### Officers

Tara Butler – Programme Manager – Strategic Policy and Research Damian Hemmings – Climate Change Officer Jon Buick – Climate Change Projects Officer Paul Dale – Interim Assistant Director of Resources Chris Lee – Director of Environment and Regeneration

#### **Cabinet Members**

Councillor Andrew Judge

## Appendix 2 Equality Impact Assessment (EqIA) template Initial Screening



This form should be completed in line with the Equality Impact Assessment guidance available on the <u>intranet</u>

The blue text below is included to help those completing the template and should be overwritten.

EqIA completed by: (Give name and job title)	Rebecca Redman, Scrutiny Officer
EqIA to be signed off by: (Give name and job title)	Julia Regan, Head of Democracy Services
Department/ Division	Corporate Services, Democracy Services
Team	The Scrutiny Team
EqIA completed on:	
Date of Challenge Review (if you have one):	N/A
Date review of this EqIA is due (no later than 3 years from date of completion):	TBC

- 1. What are you assessing? (Tick as appropriate)
- Policy: A policy is an adopted approach by the Council to a specific issue or position, usually in the long term. It provides a set of ideas or principles that together form a framework for decision making and implementation.<sup>1</sup> A policy may be written or unwritten, formal or informal. For example, the Corporate Equality Scheme.
- **Strategy:** A strategy sets out the activities and actions that have been identified as most likely and cost-effective to achieve the aims and objectives of a council policy e.g. the Consultation Strategy.
- Procedure: A procedure sets out the way in which practices and actions are to be undertaken at an individual level in order to achieve the policy in local situations, for example using a flow chart approach. Procedures also outline who will take responsibility on a day to day basis for decisions in the implementation of the policy.<sup>2</sup> For example, this procedure for carrying out an EqIA.
- **Function:** A function is an action or activity that the Council is required to carry out for example emergency planning arrangements.
- Service: A service is a facility or provision made by the Council for its residents or staff for example the Library service or Translation service.
- 2. Title of policy, strategy, procedure, function or service

A Scrutiny Review of Climate Change and the Green Deal undertaken by scrutiny councillors on the Sustainable Communities Overview and Scrutiny Panel.

3. For functions or services only: Does a third party or contractor provide the function or service? If so, who?

Yes. The Council has arrangements with a number of contractors that deliver energy efficiency initiatives at present.

4. Who is the policy, strategy, procedure, function or service intended to benefit?

All Merton residents (to alleviate fuel poverty), local businesses, landowners, community organisations and the Council (including its estates but also the recommendations, if agreed and realised, would offer the potential for income generation for the Council).

5. Who else might be affected?

Partner organisations.

6. What is known about the demographic make up of the people you have included in your answers to questions 4 and 5?

The refresh of the Council's Climate Change Strategy (2014-17) will have utilised existing

<sup>&</sup>lt;sup>1</sup>See the Council's Policy Handbook <u>http://intranet/policy\_handbook\_final\_agreed\_nov\_07-2.doc</u>

<sup>&</sup>lt;sup>2</sup> As above

demographic data held by the Council to prioritise a number of energy efficiency improvements and initiatives which will benefit a range of stakeholders.

The task group have recommended that feasibility studies be undertaken regarding the roll out of Solar PV on council estates, to local businesses and to residents, furthermore, establishing an ESCO would have an impact on those listed in questions 4 and 5. The task group would ask that Cabinet review demographic data and establish risk and impact as part of these feasibility studies.

7. Have you already consulted on this policy, strategy, procedure, function or service? If so, how?

The task group considered the range and number of national, regional and local strategies and plans that are required to be met and delivered against in relation to mitigating the negative impact of climate change.

During this review, the task group contributed to the Council's refresh of the Climate Change Strategy for 2014-17. The Council have engaged other council departments and partner organisations in consultation during the development of this document and also identified the relevant stakeholders that will need to be consulted for the delivery of initiatives and priorities proposed.

The Task Group engaged stakeholders in the delivery of the Councils Climate Change Strategy, and also on the roll out of the Governments Green Deal initiative, to gain an understanding of the work underway and of the improvements that could be made, in particular, how the Council might better support those agencies and where opportunities for delivering new and innovative solutions to tackling climate change could be explored.

The Task Group have also made a number of recommendations regarding solar PV and an ESCO for Merton that will impact on council policy, strategy and service delivery. The task group has requested that a more detailed exploration of the risk and impact of such technologies and models be undertaken by Cabinet and this will include consultation with key stakeholders.

8. How will you measure the success of your policy, strategy, procedure, function or service?

The Task Group have made a number of recommendations above which, subject to Cabinet approval, will be outlined in an action plan that will be performance monitored at appropriate intervals by the Sustainable Communities Scrutiny Panel. The Council's Environment and Regeneration Department will also undertake their own performance monitoring of development and delivery of the above strategies and their associated services, through corporate performance monitoring.

9. How often will the policy, strategy, procedure, function or service be reviewed?

The agreed recommendations will be monitored on a six monthly basis by the Sustainable Communities Scrutiny Panel and by the departments on a monthly/quarterly basis, as identified on the corporate performance dashboard.

10. When will the policy, strategy, procedure, function or service next be reviewed?

The Sustainable Communities Scrutiny Panel will consider the action plan and Executive Response to the recommendations that have been made two months after Cabinet consideration of the Final Report (anticipated June 2014).

11. Please complete the following table and give reasons for where:

- (a) The policy function or service could have a positive impact on any of the equality
- (b) groups. The policy function or service could have a potential negative impact on any of
- (c) the equality groups.

Think about where there is evidence that different groups have different needs, experiences, concerns or priorities in relation to this policy, strategy, procedure, function or service.

Equality group	Positive impact		Potential negative impact		Reason
	Yes	No	Yes	No	
Gender (inc. Transgender)				~	
Race/ Ethnicity/ Nationality				~	
Disability				~	
Age				~	
Sexual orientation				~	
Religion/ belief				~	
Socio-economic status	~				

12. Did you have sufficient data to help you answer the above questions?

$\checkmark$	Yes
V	res

□ <sup>No</sup>

If there is a potential negative impact on one or more groups, or there was insufficient data to help you answer the above questions, you should complete a full EqIA

13. Is a full Impact Assessment required?

✓ Yes <sub>No</sub>

EqIA signed off by:	Julia Regan, Head of Democracy Services.
Signature:	
Date:	

#### Proposal Target market Service provision Technology Indicative Maintenance Financial costs<sup>3</sup> costs p.a.<sup>4</sup> returns / capacity Solar PV LBM buildings estate -LBM retains Feed in Tariff. School sites supplied at 1000 kWp £1.5m £14k per annum £75k (@5%) operational zero cost for a two year period with charging Expansion implemented thereafter). This will be in house by the council LBM buildings estate non-LBM retains Feed in Tariff. Electricity supplied to >1000 kWp >£1.5m >£14k per >£75k (@5%) operational occupants at ~3% below market rate. Potential linkannum in with REFIT for SME energy efficiency retrofit. This will be in house by the council LBM retains Feed in Tariff. Electricity supplied to TBC TBC TBC TBC Social Housing or community occupants at ~3% below market rate. Potential link assets with local 'Green Deal' energy efficiency retrofit. Private sector – domestic or TBC TBC TBC TBC commercial £3.0m £28k £140k Sub-total District heat Morden Town Centre: domestic. Heat and electricity generated and supplied to LBM Gas CHP: £1.3m £96k TBC network commercial and community sites at zero charge. Private sector charged at X% Large - 2MWe buildings below market rate. Option for variable tariffs: Colliers Wood / South (i) fuel poor households (ii) Potential link-in with energy efficiency retrofit Wimbledon: domestic, CHP gas turbine: offers commercial and community buildings

#### Appendix 3 – Preliminary Business Case: Merton ESCO Proposals

<sup>&</sup>lt;sup>3</sup> CHP installation costs: 2MWe - £657 per kWe; 50Me - £805 per kWe; 90MWe - £759 per kWe

<sup>&</sup>lt;sup>4</sup> Operation and maintenance costs: Solar PV: approx. £14 per kW per annum CHP: 2MWe - £48 per kWe; 50Me - £805 per kWe; 90MWe - £759 per kWe (DECC)

			Small - 50MWe	£40.25m	£1.6m	
			Med - 90MWe	£68.3m	£2.8m	
	Heat network infrastructure	Energy distribution infrastructure with income via 'use of network' charges	Pipes, branches, connections	5-8k per dwelling	TBC	ТВС
			Sub-total	ТВС	£96k–£2.8m	ТВС
Energy efficiency	Commercial premises – SMEs	Energy performance contracting – REFIT for SMEs	Assorted energy efficiency measures	TBC	TBC	TBC
retrofit	Domestic properties	Local 'Green Deal' model		£27.0m	N/A	£46.4m
Sub-total			£27.0m	ТВС	£46.4m	

(N.B Future Merton estimates subject to technical validation)

<sup>1</sup> CHP installation costs: 2MWe - £657 per kWe; 50Me - £805 per kWe; 90MWe - £759 per kWe <sup>1</sup> Operation and maintenance costs: Solar PV: approx. £14 per kW per annum CHP: 2MWe - £48 per kWe; 50Me - £805 per kWe; 90MWe - £759 per kWe (DECC)

Appendix 1

#### Appendix 4 – Merton ESCO Company Diagram

(N.B. Illustrative approach, subject to technical and financial analysis).

