The Wandle Valley Low Carbon Zone
Community Action, CO₂ Reduction, Encouraging Behaviour Change and Other Opportunities

Merton Council
Executive Summary

The Wandle Valley Low Carbon Zone was set up to achieve deep cuts in CO2 emissions from 1117 properties in Merton, London, using community-focused engagement. We reduced CO2 in the area by 12 to 16%. This document contains three report sections, covering: our practical work in the area, the results of our activity, and the conclusions we have drawn for future schemes. In particular, we found that:

Messages and communication - On the whole, people accept that lifestyle and energy use in some part contributes to climate change. However, there are many reasons why it is inconvenient to make the required changes to reduce these impacts. Our project found that residents don’t install energy saving measures based on investment payback; hence, messages around fuel-bill savings as an incentive can be ineffectual. Conversely, tailored messages based on instant benefits of improved air quality can improve action on domestic energy saving.

Costs for engagement - The often hidden costs to engage residents such that they are prepared to make changes to their energy consumption can be as much as £205 per property, which could potentially impact upon the future success of Green Deal delivery.

Data - There are notable gaps in established CO2 saving figures for the measures one might easily put into a home. This makes it difficult for CO2 saving schemes to formulate clear strategies. There remains a great opportunity to improve future delivery through the coordination of a full and reliable set of CO2 saving data.

Multiple benefits - An opportunity exists for reducing CO2 cost effectively by installing measures and behavioural change interventions within schools and community buildings. Reductions within such buildings allow for the bill savings to be reinvested into improved education or social mobility whilst responding to some of the challenges set by the Carbon Reduction Commitment.

Community mobilisation - Our newly formed community group, the Friends of Phipps Bridge, helped increase community awareness across a range of sustainability issues. Having seen the potential for such groups to access typically hard-to-reach corners of the community, we encourage an increased collaboration with them on future CO2 reduction programmes.

We have seen that local initiatives can make significant steps towards energy reduction targets at a cost-effective manner. Simultaneously, activity at this level can contribute to health, employment and community cohesion, though its close work with the community, the Wandle Valley Low Carbon Zone encapsulated many of these benefits, demonstrating which areas could be prioritised in future programmes.

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Part 2: The results

Part 3: Concluding discussion and Recommendations
PART 1

HOW IT HAPPENED

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Starting in 2009, the Wandle Valley Low Carbon Zone (WVLCZ) has been a great example of what can be achieved from a three year pilot project focused on CO2 savings at community level. It has been a success because of the positive steps made towards saving CO2 on the ground, the skills and know-how imparted, the lessons we have learnt and the effort and energy that has been contributed by so many. Its main accomplishment however has been the slow, steady but noticeable increase in awareness of sustainability issues seen at community level. It has been a very human project, and exactly what is needed if change is to be lasting. The WVLCZ sought to answer three questions:

1. Is it possible to achieve a 20% reduction in area-wide CO2 emissions?
2. What activities need to happen at a community level to help deliver this most effectively i.e. can we get the community to maintain and reinforce the actions we initiate?
3. By providing comprehensive support does the community capitalise on this by creating something meaningful and lasting?

The area and The Community

Depending on which source you consult, the WVLCZ area (Phipps Bridge in Mitcham) is described in a variety of ways. When compared nationally the neighbourhood is classed as amongst the most underprivileged in England, made up of a somewhat transient, diverse population. Historically it is a many layered area, playing host over the centuries to industry, travelling communities, tower block expansions and other dramatic redevelopments. There has always been something to write about this corner of Merton, being the focus for much local authority investment whilst struggling with issues of antisocial behaviour. Ultimately however, it is the residents who make the area what it is.

The Philosophy of our Approach

We were trying to get a very typical, diverse outer-London community to take action on CO2 reduction (which for most people is an uninspiring, confusing topic). We kept our offer as simple as possible, aiming to align ourselves with the community's core values and interests. To effectively reach and engage many of those community with varying and often changing entity and values, it became important to use broad and comprehensive approaches to encourage people to engage, and ultimately, take action on CO2 reduction.

The following guiding principles throughout all elements of the project:

1. Anything we do has to be as meaningful as possible to the people of the area, and ideally developed with them.
2. Our mistakes will be at least as important as our successes – what we have learnt from them should be shared openly with the community and other stakeholders.
3. We need to be transparent and open about the data we use and the results we generate in order to have greatest influence on the success of future schemes.
4. At the heart of the WVLCZ were real people responding to challenges in real ways, and we needed flexibility in our approach to cater for this.

*Core WVLCZ: 1,117 properties including 1,103 homes, 3 schools, 6 businesses and 5 community buildings
*Extended WVLCZ: An additional, overflow area of 2,000 properties allowing us to make the most of existing community networks and provide opportunities for additional CO2 saving activity in the immediate neighbourhood

The WVLCZ

A community-based CO2 saving project in a diverse area of 2,000 properties in south-west London makes a holistic approach to create stable change, providing the best opportunities for sustainable development.
Where we started: resentment to change can be human nature

It was Newton who said that an object travelling in space will do so in a straight line forever if nothing causes it to change direction. People can be a little like this too. We are creatures of habit, often deriving our comfort and sense of security from routine and familiarity. Although we can adapt well to change if needed, mostly we don't unless forced or persuaded to, and we can naturally feel uneasy at the attempts of others who try to coax us to follow a new path. Accepting these simple truths went some way towards preparing ourselves for what lay ahead in this project.

Barriers to area change

The recent past in Phipps Bridge had shown higher than average rates of unemployment and crime, whilst indicating lower than average rates of education and social mobility. As might be expected, Phipps Bridge has at times been difficult to engage with on subjects that aren't perceived as directly connecting with the area's needs. Other factors influencing our ability to connect included:

- The transfer of homes from council ownership and management to a new Registered Provider in March 2010, which included half of the WVLCZ homes, created resident confusion around entitlement to our offer, and required the rebuilding of communication routes with and through the new provider.
- There were no active resident or tenant associations.
- Gang and territory related crime, plus other antisocial behaviour disturbances meant residents often had other priorities to deal with, impacting on active community cohesion.
- Many residents lived in the area temporarily, did not speak English, or were difficult to contact due to other cultural and social issues.

Networks and communication defined our community

For us, the concept of community covered any network or group that the people in the area thought of themselves as belonging to, and importantly, through which we could communicate. It worked well as although the common denominator amongst most people was the physical locality, within this were specific community groups covering schools, faith, outreach and social interest etc. which often represented and inspired a greater sense of affiliation. Once identified, the coordinators of those communication routes contributed to the project by honing and disseminating our messages and offers.

How we were first perceived

Despite the local opportunities, it was perhaps not so surprising that we lacked early interest in our project benefits and services. The main reasons for this were:

- Scepticism of our 'brand' - there was an initial lack of trust in us and the offer we promoted.
- Little meaning in our message with the community - CO₂ reduction and climate change frequently didn't resonate with the basic values of those in the area.
- A feeling from the community that personal behaviour change has little effect on local, national or global climate change - the community lacked a sense of empowerment through their actions.

How we responded to their concerns

We maximised our presence within the area as opportunities opened up and our understanding grew. Using a proactive, but sensitive, approach to the local issues we adjusted our communications to be more community-relevant for our CO₂ based initiatives. On the latter point this meant:

- Increased presence and visibility by using every trusted communication opportunity that existed in the community: school fairs, faith group meetings, GP surgery sessions etc., whilst supporting other groups to build two-way relationships. This improved project outreach.
- Transformation of a network of motivated residents into a bona fide community group to inform and publicise our messages and provide a locally-owned legacy. This improved our alignment with local residents.
- Adapting our messages to show how a range of involvement activities resulted in meaningful outcomes; changes to home comfort, household fuel bills, area improvement, opportunities for skills and qualifications etc. This improved individual engagement.

Note to self: Should an area really be considered hard to engage, or are we communicating in the wrong ways on issues which are not regarded as a current local priority?
We set out with an ambitious plan that implied intense amounts of outreach activity. A significant contribution to our 20% CO₂ saving target was to come from individual homes and we aimed to help at least 860 of the homes in our area (78% of all properties) to live a more sustainable lifestyle. This was to be delivered predominantly through a ‘Green Doctor’ home visit scheme to achieve domestic energy savings through simple measures and advice. We found that despite working in an area of relative poverty with an offer centred mainly on saving money, the promise of a fuel bill saving by itself was not enough to drive interest and action. Furthermore, although in the early part of the project we held a number of events and leaflet drops to improve people’s awareness, initial take-up was extremely slow. In line with our efforts to increase trust and make our messages more meaningful, over the course of the project we improved our outreach and presence via: 1. A large increase in door-knocking and leafleting, using local residents where possible to act as street ambassadors 2. Improving awareness of local leadership by forming and facilitating a new community group 2. Increasing our profile and improving our targeting of residents via attendance at a range of local events generating referrals to our Green Doctors Generating sustained resident interest dominated our workload. In addition to our core team we employed two local residents to encourage the neighbourhood to make the most of the Green Doctor service – they were consistently successful. The levels of staff time needed just to successfully generate a Green Doctor visit were considerable: • Staff management – 20 minutes per referral • Outreach (door-knocking and local events) – 25 minutes per referral • Preparation of all booking paperwork – 25 minutes per referral • Outreach (door-knocking and local events) – 45 minutes per referral • Explaining the service to residents – 3 minutes per referral • Supporting programme management – 25 minutes per referral

Average total time to generate referrals – approx. 2 hours

Large challenges: perceptions of a door-knocker rented properties - tenants could be unwilling to book appointments without landlord consent, and were especially reluctant to access cavity or loft insulation offers. It is not just the landlord-investment/tenant-benefit dilemma that makes energy efficiency in the rented sector difficult, it can be the entire landlord-tenant relationship. Some people just don’t want it – you might be able to overcome a lack of knowledge around energy efficiency, money or climate change, but how do you battle indifference?

Awareness - residents needed on average of 3 separate prompts before they opted in.

Generating referrers to our Green Doctors

For residents it was increasing and improving our door-knocking which had most impact on generating referrals to our Green Doctor service which represented our main CO₂ saving offer. However, community members also became aware of what we were doing via: • Door-knocking • Leafleting • Local events • Neighbour referrals • School stalls

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On to the ground in to the area

Building up trust and adjusting the tone of the message is one thing, but how much outreach effort is really involved with increasing awareness and driving action?
Friends of Phipps Bridge (FOPB) are a community association created in early 2011 by a small group of residents and local leaders keen to engage more with the community. It was set up by the WVLCZ to:

a) Keep the work we did focused on the needs of the community
b) Provide new routes through which to engage the community
c) Create a meaningful legacy for the work

The FOPB focused on broad social aspirations on which environmental activity and benefits were easily hung. They have been well received in the area and since starting they’ve run many successful activities including eco-focused training and site visits, action against fly-tipping and litter picking.

Groups such as this are good for the area because, with support from the wider community, they can respond quickly to issues that would otherwise be significantly harder to address. They are great for quick wins, which can reduce as members take the time to set out a clear group direction. It takes strong leadership over these months to get a critical mass involved and keep the group going as some members inevitably drop out. A number of actions can help:

1. Success should not be based solely on numbers at meetings.
2. Groups such as the FOPB can be fragile after they start, and initial enthusiasm and significant rise in FOPB profile.
3. The WVLCZ had been running for a year, and other local leaders recognised the need for the groups – it helped to be able to take the good about on existing connections.

4. Leadership dropout can be stemmed somewhat by simply calling members for meetings to encourage attendance.

**Interview with Lee**

**Role:** Energy assessor and Chair of the Friends of Phipps Bridge

**Name:** Lee

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IT WAS SUMMER, AND IT WAS HOT

With over 340,000 people coming together, the new festival was an instant hit. The heat was the perfect backdrop for fun and games, with a great atmosphere and a variety of activities to keep everyone entertained.

**Low Carbon Zone**

In 2011, the Low Carbon Zone project was launched in Phipps Bridge, a small area in West Sussex. The project aimed to reduce the carbon footprint of the community by encouraging energy efficiency and sustainable living.

**Focus:**

- Energy saving measures
- Community engagement
- Environmental awareness

**Achievements:**

- Reduction in energy consumption
- Increased awareness of environmental issues
- Stronger sense of community

**Lessons Learned:**

- Collaboration is key
- Communication is vital
- Sustainability is a collective responsibility

Follow-up local leadership groups:

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Since getting involved I’m now Chair of the Friends of Phipps Bridge. I’m involved because it’s important that everyone in the community helps itself, making our area better for all that live and work here. We’ll continue to work with the council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the project council and local housing associations. We’re glad we had the relentless support of Tom, Nidhi and Ross from the
A comprehensive routes to reaching corners of the community

For a project focused on engaging a diverse community, it was important to understand and utilise the full range of networks within the area.

Growing food

Discovering how often stimulates enthusiasm, some instigators, growing it gives insights into accessible ways of connecting consumption with production. More importantly, growing it gives perhaps the most accessible way of connecting consumption with production. Hence, by engaging people through the allotments, it means they often have smaller steps to take on issues of energy efficiency.

We relied on a successful community garden in the area, set up by the charity Sustainable Merton in 2009, prior to our WVLCZ. Clearing the land and bringing it back to food growing capacity with local help demonstrated what can be achieved with inspired, dedicated volunteers. This led to school involvement which in turn meant that, when discussing WVLCZ issues with homeowners, the children already knew our outreach team which improved the sense of trust and confidence in what we were delivering.

Faith groups, churches and draughty doors

Old churches present an interesting debate when it comes to saving CO2. They can be large, cold and draughty with issues of heritage that can exclude certain technologies. But their usage patterns mean heating is not used throughout the week and, importantly, congregations don’t expect thermal comfort and tend to dress accordingly. For these latter reasons, we chose not to work with them on direct carbon saving, instead focusing on mutual community engagement.

We worked with various faith groups on fundraising, awareness and skills events and, by association, became more accepted in the area. Following this, one of our most successful events was a training session around the practical techniques of draught-busting where feedback was especially positive.

We connected up the new skills we imparted with further action in the WVLCZ by providing materials for attendees to fit in homes. Working with the local Ahmadiyya Muslim Association on this project was particularly rewarding as we found they frequently went the extra mile to strengthen community links. Altogether the day was encouraging as we saw all groups come together to improve a local building, share some stories and build new relationships.

The schools – Benedict, Haslemere and Melrose

There are fundamental reasons why schools should be included in all energy efficiency community outreach schemes:

1. They’re the biggest community hubs that you will find and messages coming from them are more trusted.
2. There are often good opportunities to involve them as they are keen to include more energy saving measures and by helping them with energy savings, they can spend more on education.
3. There are lots of opportunities for simple behaviour change via their pupils in the building (e.g. simple switches for energy saving). This is good for the whole school.
4. Ongoing relationships with schools (e.g. whole school days) can mean we can teach learn and building on our work.

It is easy to underestimate these local partnerships, particularly when it comes to CO2 but they can be valuable partners in relation to schools. They provide direct routes to a large numbers of homes in the area. When we helped them with their bills, they in turn brought more activity into our activity by bringing other local groups to events who in turn brought more activity into our activity. Altogether the day was encouraging as we saw all groups come together to improve a local building, share some stories and build new relationships.

Medical centres

It was initially difficult to engage with the medical centres in the area. Despite everything we offered, some potential interest to affordable warmth, physical activity via our allotments, more enthusiasm from local centre managers but we were surprised not to experience more enthusiasm from local centre managers but felt this was mostly due to the busy schedules of the Practice Managers. Through persistence we did build good involvement with the centres and they promoted our work to the patients through TV displays, posters and leaflets as well as providing us with access to patient participatory groups. Despite this improvement, our data suggests none of our residents who received our Green Doctor service first became aware of the project via the medical centres, although the endorsement did serve to reinforce our profile.

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What were we aiming for?
To achieve a 20% CO₂ reduction in 1117 properties within the boundary of the zone, within three years from September 2009 to September 2012. A lot of numbers in that, but the details are important.

To plan activity towards achieving the target we needed an understanding of:

- The starting point (baseline) - the numbers, types and tenures of properties in question across domestic, schools, community and commercial buildings.
- How much action impacts on carbon savings, taking into account wider benefits and cost.
- How the building stock, available funding and resident attitudes affects the viability of certain approaches and technologies. For us this included:
  - Solid walled properties – only 36% of homes had cavity walls, most of which were filled
  - High proportion of flats and flat roofed properties – only 23% of homes (c.250 properties) had lofts of which we estimated just 32 were un-insulated
  - Fewer subsidised energy saving products available due to changes in CERT (Carbon Emission Reduction Target) guidance
  - Low proportion of owner-occupied properties (owner occupiers are typically more empowered through their home improvement choices)

Green Doctors: our Community - Wide Domestic Offer
Our Green Doctor project, representing the core offer to WVLCZ residents, was run by the environmental charity Groundwork London. Each Green Doctor achieved three full visits daily (in addition to scheme administration) which resulted on average in each visited property achieving:

- 270kg of annual CO₂ savings through installation of simple measures (plus savings from referrals to other schemes if practicable)
- Further CO₂ savings from behaviour change advice
- 15,000 litres of annual water savings
- £100 annual fuel bill saving

Why residents liked the service
Once the visit had been completed, residents responded overwhelmingly 100% saying they would recommend the service. In particular they highlighted that it:

- Increased their belief in the associated financial savings and sense of control over household bills
- Reduced the need to invest their own time into finding solutions to running an efficient home
- Made them feel they were doing the right thing for themselves and the environment
- Helped encourage all occupiers to commit to behaviour change e.g. it wasn’t just mum nagging to switch off the lights.

Installing the Carbon Savings in the Community
Once people are listening, the second half of the battle is finding where and how to best install the measures to achieve the CO₂ savings.

Green Doctors: a Complete Offer
In perhaps the most comprehensive service of its kind in London, at no cost to the resident, our trained Green Doctors:

- Provided a full introduction and home energy assessment plus checks for benefit entitlement, social tariffs, and other services (c.1 hour)
- Installed (and demonstrated up to 10 simple measures relevant to property and residents' needs (appro. 1 hour)
- Calculated CO₂ and water savings and produced tailored behavioural advice with residents agreement documented in a comprehensive report (15 mins)

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Dear Mr A Hutchinson
I am just contacting you to once again express my many thanks for the wonderful hard work you completed in draught proofing and improving my home. Since then I have had the housing association come to fit in a new boiler, finally!

Yours sincerely
Ms Michele Ebanks

\[Highest reported saving on a resident’s bills was £15 pcm on energy and water bills\]

\[92% of visited residents remember their personal advice such as how to programme their heating.\]

\[The advice and shower timer means everyone in the house now takes less time to get ready in the morning.\]

Yusupha (Resident)
WORkIng WiTh The regiSTered houSing proViders (Social landlordS)

Over half the homes in the area (58%) were owned by Registered Housing Providers and it was important to build strong relationships with these organisations to understand and capitalise on their remit to improve their properties. Four providers operated within the WVLCZ. Over and above our standard offer, these activity streams were developed:

1. General property improvements through the Decent Homes programme (insulation, boilers, glazing etc.)
2. Individual housing provider commitments to increase the energy efficiency standards of their properties (in this case 6 properties were brought up to a Standard Assessment Procedure rating of 65 where they previously were less than 50)
3. Development of a 380-home Community Energy Saving Programme (CESP) project with solid wall insulation, roof insulation and boilers

The Community Energy Saving Programme... almost

One housing provider developed a comprehensive energy efficiency refurbishment for 380 homes using Community Energy Saving Programme (CESP) funding. The work was significant, including planning permission, scaffolding and a completed pilot project, but was halted in the final stages as delays led to reduced confidence in delivery and funding. The key reasons for this were:

- Initial estimated CO2 savings were optimistic. As scheme data was improved (and potential CO2 savings reduced), there was a perception that funding contribution was being depleted despite increasing resource investment from all partners.
- Recycling funding streams on energy savings created an unstable funding platform.
- A tool for calculating CO2 savings (and funding confidence) from non-standard insulation was delayed by the regulator.

The housing provider didn’t typically work with a currency of CO2 savings and, hence, funding contributions from the energy supplier were uncertain. The approach was further complicated by energy suppliers levying a charge for non-standard CO2 savings.

Our activity at the community centre became an exemplar project at the heart of the organisation, and the range of work can be seen in the main illustration. The majority of work covered standard energy efficiency measures but we also installed a novel solar photovoltaic direct current (DC) system which powered LED lighting, computers and monitors.

The project worked well for the community centre team as it worked with DC power sources. Energy savings of up to 40% for lighting and other functions were recorded.

The Community Centre Refurbishment

One reason we decided to work with South Mitcham Community Centre to help them reduce their energy use was that it was easy to justify our expenditure on energy saving measures as by helping them save money they can then provide better services to the community. It works in a beautifully self-reinforcing fashion and the model could easily be adopted within other community buildings.

Work With the local businesSeS

There were only six commercial properties within the WVLCZ. These encompassed small corner-shop type food stores, although also included was a swimming centre with a small pool. We expected these businesses to be more likely to invest in energy saving measures with a view to making ongoing savings. However, we found they were not willing to invest their cash reserves in anything with a payback longer than around 8 months. We offered an incentive (£500) towards the installation of simple lighting upgrades, partnered with some light behavioural change advice. All but one of the businesses accepted the offer.
As we’ve already mentioned, we loved working with our three schools too and every CO2 saving strategy should consider activity with them. They present real opportunities for testing and implementing behaviour change alongside installation of cost-effective measures – at a time when budgets are being cut, the potential to reinvest the ongoing energy bill savings towards education needs little debate.

Our approach to installation was based on what was meaningful to the school, could be delivered on site, and tied in with a holistic package of tools to encourage behaviour change. Following full energy audits, measures were chosen on the following practical basis:

1. Recommendation in the audit;
2. Cross referenced with our own analysis of energy saving potential;
3. Cross referenced with what products were readily available in the market;
4. In consultation with what the staff across the school felt they would like to get involved with

This final point was important as we looked to nurture and sustain enthusiasm from staff as a route to encouraging future activity. In particular we worked with one school around recognising the true, often hidden value of different installations. By presenting a series of options based on energy savings and payback we arranged dual funding support for the extensive lighting work that they chose. This led to an improved understanding of energy saving amongst senior management, reduced CO2 and better working relationships with the school in general.

Typical installed measures included:

- Cavity wall insulation
- Thermostatic radiator valves
- Boiler weather optimisers
- Fluorescent tube lighting conversions
- Lighting motion sensors and dimmers
- Boiler valve insulation
- Powerdown sockets
- Solar photo-voltaic panels

Our package of behaviour interventions aimed to encourage sustainable actions at every opportunity within the school: Pupil assemblies, advice posters and stickers, regular gardening workshops; Training and advice sessions for staff and site managers; Attendance at governor meetings to encourage project involvement and funding contributions towards measures; Automatic meter reading equipment and related data processing software; Solar PV generation display monitors; Comprehensive energy management, education and engagement software, and website content support.

We estimated that a full combination of the above would lead to a CO2 saving of up to 10% after all other installed measures were in place. Individually, information sources for some of the above had claimed savings in excess of our combined total and hence we felt the 10% saving was justified.

Educational and Energy Management Software for Schools

The WVLCZ offered the opportunity to work not only with today’s energy users but tomorrow’s too. With a view to combining all of our main school activity within one site, we designed and used novel management software covering CO2, energy, waste, water and travel, specifically:

1. Online CO2 management tools to inform site managers and governors on relevant reduction strategies (making it easier to identify CO2 and money saving opportunities);
2. Online ability to share information on energy usage with peer-to-peer competitors between schools;
3. Online social-network resource space for teachers to share and develop lesson content for environmental and sustainability focused teaching;
4. An interactive educational platform for pupils and classes (aged 5-7 years) with capacity for peer-to-peer competition between pupils, classes and schools.

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The WVLCZ provided access to skills development, training and jobs across the breadth of the project. In light of the current debates around lengthening job queues, unpaid work experience and the need to develop energy assessor skills for the forthcoming Green Deal, we found simple ways to ensure that this provision was as valuable as possible.

Providing Quality Youth Employment

By matching WVLCZ resources with work programmes such as the Future Jobs Fund (FJF), we were able to offer 11 young unemployed people six months of employment on the programme. All were employed on the minimum wage and offered a wide range of training to support them in their role and maximise their chances of progressing into long term employment or into further training. We ensured that all the participants were placed in a supportive work place and in roles that clearly contributed to the overall goals of WVLCZ. We are proud that 100% of our participants moved into further employment or education on leaving our programme. We attribute our success here to:

1. Selecting young people who, despite their lack of work experience, could demonstrate drive and character.
2. Giving them full access to the breadth of the project, allowing them to try new things, learn from mistakes and gain the fullest experience
3. Providing access to training and qualification opportunities including: minimum standards for Green Doctor provision, IT skills, project management, diversity and equality, and City & Guilds training in Energy Awareness.
4. Letting them know when they did a good job, that they each had something positive to offer and were a valued and equal member of the team.

Providing Quality Skills for the Community

We also focused on working with members of the community to achieve the following three goals:

1. Help them live more sustainably through energy management training for school site managers, draught-proofing training, bicycle proficiency training, food waste awareness and education sessions at a local ‘Living Green’ centre.
2. Provide skills for a WVLCZ legacy through guidance on running the FOPB, awareness sessions on the potential for Green Deal and fuel poverty awareness.
3. Provide jobs for local residents through outreach session workers (for Green Doctor referrals) and skills leading to community members accessing green sector jobs.

Thoughts on the Skills Provision

It was initially difficult to get buy-in of some of our free training. Sessions to reduce school energy consumption were well received although the site managers involved felt they had limited direct responsibility, suggesting it would be beneficial to invite senior management. For residents, energy behaviour training or home efficiency improvement, such as internal wall insulation, is a concept not on their radar although the opening of the nearby National Trust Living Green demonstration centre improved uptake. Unsurprisingly, we found that residents aware of the WVLCZ were much more inclined to take advantage of training.

Skills and Jobs for Better Communities

The WVLCZ allowed students to develop their skills in a working environment and show me where my strengths and weaknesses lie. It gave me the chance to understand what future roles I’m best suited to and most interested in and it has given me the confidence to start my career in community engagement. Nidhi

I got a first-hand understanding of managing parts of the project. The experience inspired me to start an Environmental Masters and gave me the confidence to campaign to become campus Environment Officer. I was successful and started my term by coordinating our student ‘Green Week’. John

<table>
<thead>
<tr>
<th>Post employment</th>
<th>No. of roles</th>
<th>Example roles/course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time work: community, environment or sustainability</td>
<td>5</td>
<td>Green Doctor or similar; Charity support officer; Environmental consultancy</td>
</tr>
<tr>
<td>Full-time work: other</td>
<td>3</td>
<td>Retail assistant; Adventure park assistant; Office administrator</td>
</tr>
<tr>
<td>Returned to further education</td>
<td>2</td>
<td>PGCE (Environment)</td>
</tr>
</tbody>
</table>

What happened to the young people employed on the WVLCZ

Providing Quality Skills for the Community

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Case Study: ‘Love Food Hate Waste’

Norma was a local resident who learnt about food waste. Although initially apprehensive, believing she wouldn’t gain anything, Norma believed the session to be beneficial because it made her more aware of her food waste habits.

“The lady who ran the course was great at explaining things. I use the recommended tips, particularly the one for yoghurt, and I now think twice before wasting anything.”

Nb. Figures show activity 6-12 months after end of contract.
The Results

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Green Doctors: CO₂ performance ....................... 25
Savings attributed to Registered Providers ...... 26
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Project funding and costs breakdown ............ 30
INTRODUCTION TO THE DATA WE’VE USED AND GENERATED

Our WVLCZ focused on providing area-based interventions delivered with the aim of creating lasting behaviour change and long term cuts in carbon dioxide. But behind this sat a range of supporting data that helped focus our activity, and arising from it came a succession of results showing the levels of success. To make the work as useful as possible for future schemes, we have aimed to present our findings in as open and transparent a way as possible. We discuss the strengths, weaknesses and impacts of these findings in a later section of the report. There was not scope to conduct in-depth long-term monitoring and we accept that savings are mostly based on (conservative) estimates. We have endeavoured to use the most informed sources of data available for these estimates, aligning where possible to similar schemes across London. All presented figures are based on annual savings unless otherwise stated.

CALCULATION OF THE BASELINE

To calculate a percentage saving for an area it was necessary to first understand the area starting point in 2009. We identified the main components of our carbon emission baseline using the methods and sources as shown in Figure 1. For the WVLCZ this split down as shown in Figure 2.

<table>
<thead>
<tr>
<th>SITE DESCRIPTION</th>
<th>2009 EMISSIONS (TCO₂/yr)</th>
<th>METHOD / SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1103 domestic properties</td>
<td>4899.5</td>
<td>Parity Projects BREDEM derived model based on property archetypes, building fabric assumptions and typical heating patterns following a street-by-street survey</td>
</tr>
<tr>
<td>Melrose School</td>
<td>48.4</td>
<td>Fuel bill data</td>
</tr>
<tr>
<td>Benedict Primary School</td>
<td>88.1</td>
<td>Fuel bill data</td>
</tr>
<tr>
<td>Halsmere Primary School</td>
<td>126.2</td>
<td>Fuel bill data</td>
</tr>
<tr>
<td>Southwark Community Centre</td>
<td>36.9</td>
<td>Fuel bill data</td>
</tr>
<tr>
<td>Merton Housing Office</td>
<td>5.0</td>
<td>Fuel bill data</td>
</tr>
<tr>
<td>Parish Church</td>
<td>12.0</td>
<td>Fuel bill data</td>
</tr>
<tr>
<td>Review Centre</td>
<td>35.0</td>
<td>CBSE benchmarks (based on floor area &amp; property use)</td>
</tr>
<tr>
<td>La Sporta Community Centre</td>
<td>7.7</td>
<td>CBSE benchmarks (based on floor area &amp; property use)</td>
</tr>
<tr>
<td>Merton Adult Education Centre</td>
<td>4.4</td>
<td>CBSE benchmarks (based on floor area &amp; property use)</td>
</tr>
<tr>
<td>6 Businesses/SME’s</td>
<td>154.9</td>
<td>CBSE benchmarks (based on floor area &amp; property use)</td>
</tr>
<tr>
<td>Total core area baseline</td>
<td>5263.6</td>
<td></td>
</tr>
</tbody>
</table>

Notes on abbreviations:
TCO₂ - tonnes of carbon dioxide
BREDEM – Building Research Establishment Domestic Energy Model
CBSE – Chartered Institute of Building Services Engineers

accessing wvlcz residents

41 large events and advice surgeries
7 road-side stalls
21 friends of Phipps Bridge meetings and events
30 other events e.g. coffee mornings, school assemblies, parents evenings etc.
Quarterly newsletters and broad poster/banner presence
Door-knocking monthly
Door-knocking weekly
Door-knocking twice weekly & instant booking and visits
Door-knocking weekly & instant booking and visits
44%
22%
3%

green doctor - visits

We aimed for a 75% Green Doctor penetration rate (860 homes) within the core WVLCZ; a high aspiration, especially considering our starting point. By April 2013 we had successfully visited 830 homes (Figure 3); just 30 short of our target. However, this achievement included visits both within the core WVLCZ and also just outside this area (our extended WVLCZ). When referrals within our core area couldn’t be generated (due to temporary area saturation), or when nearby residents had specifically heard of, and requested, a visit, we used our spare capacity to visit these homes. Typically these occurred within 200m and never more than 500m, of our core WVLCZ boundary. Therefore, despite all but achieving our 860 home target, as some of these were outside of our official WVLCZ boundary, our final penetration rate for completed visits within our original WVLCZ area was around 1 in 3 homes (393 homes or 36%).

Data: data-generated model based on property archetypes, building fabric assumptions and typical heating patterns following a street-by-street survey

notes on abbreviations:
TCO₂ - tonnes of carbon dioxide
BREDEM – Building Research Establishment Domestic Energy Model
CBSE – Chartered Institute of Building Services Engineers
**GREEN DOCTOR CO2 PERFORMANCE**

The Green Doctors achieved their CO2 savings by installing simple measures into the homes, providing behaviour change advice and referring on to external boiler and insulation programmes. Through this activity they also achieved savings on fuel bills and, where metered, water bills. Figure 5 shows their achievements within the properties they visited.

**Figure 5**

*Additional savings from referrals performed by other agencies could have occurred without our knowledge.

Baseline covers just the 830 properties receiving visits, not the entire area.

**Figure 6**

For the simple measures this equated into 198 tonnes of CO2 savings annually achieved from the installation of 8327 homes they visited.

**Figure 7**

**Savings from Businesses**

We achieved savings in 5 out of the 6 business properties within the zone with simple energy efficiency lighting upgrades (Figure 10). These installations were predominantly funded by the businesses but we also supported this with small grants of up to £500.

**Figure 8**

**Additional savings may remain un-submitted from some RPs.

Self improvements commitment refers to one RPs pledge to improve poorly performing units to SAP65.

**Figure 9**

**Additional savings may remain un-submitted from some RPs**

**Savings from Smart Meters**

Additionally, we have worked with UK Power Networks on their Low Carbon London smart meter trials. This will see a significant number of smart meters installed in homes in the WC1C by summer 2012. Because of the nature of the trial, the level of behaviour change that will take place in homes we have estimated a conservative 2% saving for the receiving homes on energy bills after all other savings, equating to around eight tonnes annually.

**Figure 10**

---

**Perception of Green Doctor Installed Measures**

- **Door Draught-proofing**
  - High demand due to properties all having draughty doors. Became one of the main reasons for signing up to service.
  - Increased home comfort.

- **Highly popular.**
- **Draughtproofing.**
  - Residents showed surprise it was being provided for free.

- **Fast change**

- **Aerating ‘miracle’ taps**
  - A very popular item. Residents showed surprise it was being provided for free.

- **Hot Water Tank Jackets**
  - Average savings 8.78 tonnes across all properties.

- **Sava-flush**
  - Individually tailored to suit each toilet – varying water savings of 0.3 to 1.2.

- **4 min. Shower Timers**
  - Popular with households with children/teenagers. "Everyone in the house gets ready much quicker now!"

- **Rad Panels**
  - Often quoted to save £5 pcm. One resident reported a £6 pcm saving from water bill.

- **PC Powerdown plugs**
  - Popular item. Seen as time saving, especially for older people as helped turn off switches.

---

**Perception of Green Doctor Baseline (tCO2/yR)**

**Total** 830 356 9.7

*Baseline covers just the 830 properties receiving visits, not the entire area.*

**Figure 7**

**Table 1**

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Properties Receiving Saving</th>
<th>Saving Achieved (tCO2/yR)</th>
<th>Saving Achieved (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door Draught-proofing</td>
<td>830</td>
<td>198</td>
<td>5.4</td>
</tr>
<tr>
<td>Behaviour changes</td>
<td>830</td>
<td>149</td>
<td>4.0</td>
</tr>
<tr>
<td>Radiator panels</td>
<td>830</td>
<td>85</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>830</strong></td>
<td><strong>364</strong></td>
<td><strong>9.7</strong></td>
</tr>
</tbody>
</table>

**Figure 8**

**Table 2**

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<th>Category</th>
<th>No. of Properties Receiving Saving</th>
<th>Saving Achieved (tCO2/yR)</th>
<th>Saving Achieved (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decent Homes improvements</td>
<td>109</td>
<td>169</td>
<td>12.8</td>
</tr>
<tr>
<td>Roofing upgrades/maintenance programme</td>
<td>250</td>
<td>154</td>
<td>9.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>366</strong></td>
<td><strong>330</strong></td>
<td><strong>10.3</strong></td>
</tr>
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</table>

**Figure 9**

**Table 3**

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**Savings from Businesses**

We achieved savings in 5 out of the 6 business properties within the zone with simple energy efficiency lighting upgrades (Figure 10). These installations were predominantly funded by the businesses but we also supported this with small grants of up to £500.

**Figure 10**

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**Savings from Smart Meters**

Additionally, we have worked with UK Power Networks on their Low Carbon London smart meter trials. This will see a significant number (c.100,250) of smart meters installed in homes in the WC1C by summer 2012. Because of the nature of the trial, the level of behaviour change that will take place in homes we have estimated a conservative 2% saving for the receiving homes on energy bills after all other savings, equating to around eight tonnes annually.

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SAVINGS FROM SCHOOLS

Three schools (two primaries and one providing for pupils with social, emotional and behavioural needs) were in the WVLCZ. We installed energy efficiency and renewable energy measures alongside packages of behaviour change initiatives. One of the schools (Benedict Primary) underwent a major energy refurbishment including extensive heating upgrades (Figure 11). An important part of all of the work that we did was instilling lasting behaviour change, though without additional study it is difficult to truly assess the impact of this work. We opted instead for conservative saving values in comparison to currently existing sources. Melrose school, whose staff and pupils were dealing with a non-standard set of challenges, did not receive our full complement of behavioural change interventions. Figure 12 overviews the two behaviour change package scenarios that we used.

SAVINGS FROM COMMUNITY BUILDINGS

At the start of the WVLCZ there were six buildings specifically serving the needs of the community. Three of these buildings closed within the duration of the WVLCZ due to expected building-use changes. For this project have been captured as an area CO2 reduction. Community buildings were used as a hub through which to communicate with our audience. Although work at the Parish Church was not cost effective and delivery issues hindered activity at the medical centre, we did install significant savings within the South Mitcham Community Centre. This worked well as a community focus for our project.

### Table 1

<table>
<thead>
<tr>
<th>Building</th>
<th>Baseline (tCO2/yr)</th>
<th>SCENARIO 1: 4% SAVING FROM PACKAGE OF INTERVENTIONS</th>
<th>SCENARIO 2: 10% SAVING FROM PACKAGE OF INTERVENTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Mitcham Community Centre</td>
<td>36.9</td>
<td>2.4</td>
<td>0.9</td>
</tr>
<tr>
<td>ADULT EDUCATION CENTRE</td>
<td>4.4</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>HOUSING OFFICE</td>
<td>5.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>LA SPORTA COMMUNITY CENTRE</td>
<td>7.7</td>
<td>2.6</td>
<td>0.7</td>
</tr>
<tr>
<td>MEDICAL CENTRE</td>
<td>13.0</td>
<td>3.4</td>
<td>2.0</td>
</tr>
<tr>
<td>PARISH CHURCH</td>
<td>12.0</td>
<td>2.9</td>
<td>1.7</td>
</tr>
</tbody>
</table>

### Baseline (tCO2/yr)

| Intervention                              | '
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity wall insulation</td>
</tr>
<tr>
<td>Boiler valve / pipe insulation</td>
</tr>
<tr>
<td>Power flush radiators</td>
</tr>
<tr>
<td>Power flush: boiler header</td>
</tr>
<tr>
<td>Hot water calorifier</td>
</tr>
<tr>
<td>Reduce cylinder hot water to 60°C</td>
</tr>
<tr>
<td>Flow temperature optimiser</td>
</tr>
<tr>
<td>Thermostatic radiator valves</td>
</tr>
<tr>
<td>Lighting upgrade (T12-T5)</td>
</tr>
<tr>
<td>Window replacement</td>
</tr>
<tr>
<td>Water saving refurbishments</td>
</tr>
<tr>
<td>Solar PV panel</td>
</tr>
</tbody>
</table>

### SCENARIO 1: 4% SAVING FROM PACKAGE OF INTERVENTIONS

- Energy saving with recommendations
- Food growing sessions and assemblies
- Little or little seventh with pupils
- Assemblies
- PV generation display
- Energy management and engagement software with corresponding staff support
- Lessons on water saving
- Automatic Meter
- Replacing equipment
- Climate-change competitions
- Continuous relationships with staff
- Student attending TDB
- Energy and water awareness sessions and assemblies
- Package of behaviour change

### SCENARIO 2: 10% SAVING FROM PACKAGE OF INTERVENTIONS

- Energy saving with recommendations
- Food growing sessions and assemblies
- Little or little seventh with pupils
- Assemblies
- PV generation display
- Energy management and engagement software with corresponding staff support
- Lessons on water saving
- Automatic Meter
- Replacing equipment
- Climate-change competitions
- Continuous relationships with staff
- Student attending TDB
- Energy and water awareness sessions and assemblies
- Package of behaviour change

* South Mitcham Community Centre received a package of behaviour measures equivalent to 4%.
* No installation activity in Medical Centre.

---

*South Mitcham Community Centre received a package of behaviour measures equivalent to 4%.

---

### Table 2

<table>
<thead>
<tr>
<th>Building</th>
<th>Baseline (tCO2/yr)</th>
<th>SCENARIO 1: 4% SAVING FROM PACKAGE OF INTERVENTIONS</th>
<th>SCENARIO 2: 10% SAVING FROM PACKAGE OF INTERVENTIONS</th>
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</thead>
<tbody>
<tr>
<td>Haslemere Primary</td>
<td>126.5</td>
<td>12.6</td>
<td>7.8</td>
</tr>
<tr>
<td>Benedict Primary</td>
<td>88.1</td>
<td>8.9</td>
<td>4.9</td>
</tr>
<tr>
<td>Melrose</td>
<td>46.4</td>
<td>4.6</td>
<td>2.5</td>
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</tbody>
</table>

### Baseline (tCO2/yr)

| Intervention                              | '
<table>
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---

* % saving due to behaviour change applied after absolute savings from hard measures.
From the 1103 domestic properties, 4 business properties, 3 schools and two community centres we had a 2009 CO2 emission baseline of 5,264 tonnes. The previous pages breakdown our saving activity within each of the individual property types and below we look at what we were able to achieve over the whole area (Figure 14). Because we softened our WVLCZ boundary line at an early stage of the project (to better take account of our community’s response to us and to maximise Green Doctor capacity) around half of our Green Doctor visits were just outside of our strict baseline ‘boundary’. As we sought a specific saving of 20% within an area we consider below our achievements under three scenarios:

1. Activity only in the core zone compared to core zone emissions
2. All activity compared to core zone emissions
3. All activity compared to core zone emissions plus the emissions of the properties revisited outside the zone.

Of the three scenarios it is number 3 that we believe is most representative of the true activity.

Based on this, the savings when compared to our target can be seen in Figure 15.

In this final data section we show how the costs split down in terms of activity and impact (Figure 16) alongside the various funding contributions to the project (Figure 17).

### Project Funding and Costs Breakdown

#### VALUE (£K’s)

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ONLy CORE ZONE ACTIVITY COMPARED TO ONLy CORE ZONE EMISSIONS (TCO2/yr)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All activity compared to core zone emissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registration provider activity in core LCZ</td>
<td>168.6</td>
<td>168.6</td>
</tr>
<tr>
<td>All activity compared to core plus additional property emissions (TCO2/yr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered provider activity in extended LCZ</td>
<td>330.2</td>
<td>330.2</td>
</tr>
<tr>
<td>Registered provider activity in Green Doctor visited homes in extended LCZ</td>
<td>31.2</td>
<td>31.2</td>
</tr>
<tr>
<td>Smart meter trial</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Schools</td>
<td>90.6</td>
<td>90.6</td>
</tr>
<tr>
<td>Community buildings</td>
<td>33.0</td>
<td>33.0</td>
</tr>
<tr>
<td>SME/Small businesses</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>635.7</td>
<td>854.3</td>
</tr>
</tbody>
</table>

**BASELINE**

- 522.6
- 521.6
- 730.7

**RELATIVE SAVINGS (%)**

- 12.1
- 14.2
- 11.9

### Notes on both cost figures:

* CO2 saving activity covered by the Registered Providers under Decent Homes or otherwise is not included.
* Engagement costs include in-kind volunteer contributions.
* Engagement impact does not include work with schools and other non-resident strands of the community.
* Costs covered by LB Merton as part of the Benedict Primary school refurbishment are not included.
* Costs covered by LB Merton for Solar PV panels in schools do not include benefits from the feed-in-tariff.
* C-Change funding was provided to promote local ‘Climate Change Champions’, known in the context of the WVLCZ as the Friends of Phipps Bridge.
* CO2 saving figures are presented for year one only (i.e. not over the lifetime of the measure) to align with our relative reduction target from 2009 (single year) baseline.
PART 3

CONCLUSIONS AND RECOMMENDATIONS

Closing discussion...............................................33
Key conclusions for government and policy makers..................37
Final thoughts..................................................................39
CONCLUDING DISCUSSION

The WVLCZ was a 36 month project with 25 months of area-facing, on-the-ground activity. The final 5 months of the project (through to September 2012) allowed us to capture complete (and in some cases forecasted) CO₂ savings from longer-term projects facilitated by our work. In this section we discuss our key findings and place these in the context of the impacts on future scheme delivery.

OVERVIEW OF PROJECT OUTCOMES

By September 2012 we will have achieved savings in the region of 834TCO₂/yr, equivalent to a 12-16% saving against our target of 20%. In addition to this we have also achieved:

1. A genuine and positive public response to the causes we championed, leading to a new, self-standing local community group (the Friends of Phipps Bridge) that will continue to operate for the benefit of the area.
2. Greater clarity and awareness on issues of energy saving behaviours, CO₂ reduction, climate change and sustainability in at least 1 in 3 homes in the area.
3. A greater understanding of the hidden costs and levels of resource it can take to raise awareness, achieve CO₂ reductions and behaviour changes, leading to an on-the-ground insight into where CO₂ cuts can be achieved most cost-effectively within a community.
4. A highly successful youth employment scheme with a corresponding elimination in participants later re-claiming job seeker benefits.
5. A greater insight into the holistic value of comprehensive home energy visits, and the resources required to achieve this.
6. A fuller understanding of the types and extent of partnerships needed to maximise the impact of area-based schemes.
7. Development and roll-out of novel packages of behaviour change interventions, especially for schools where reductions can have a disempowering, negative effect. Our experience showed that people are broadly aware of climate change and yet the convenience of inaction, and the opaqueness that exists around how they can best contribute, leads to a pre-engagement response of apathy - a very natural human trait. We started in an area that was arguably in greater need of energy saving initiatives than others. Yet, whilst those who received a Green Doctor visit went on to highly value the bill savings they would make, before the visit there were high levels of distrust around such money saving messages (evidenced by the slow take-up within the context of area deprivation, services offered for free, high levels of promotion etc.). Other literature has highlighted the likely opportunity for engagement by showing energy bill savings (who would say no to £50 in their pocket?).
8. A series of disseminated project lessons (including this report) for others undertaking similar activities to learn from.

POSITIVE PUBLIC RESPONSES

By responding to the needs of the area we improved local trust in our ability to deliver. Additionally, by supporting other organisations and goals we were slowly accepted within area whilst, in parallel, we identified a broad set of community representatives whose knowledge and standing in the neighbourhood were used to channel our own messages.

By April 2012 the response to our project was higher than when we started. Attendance at events was greater (e.g. a 700% increase between launch and closing events), gaining access to flats via intercoms was no longer treated with suspicion, and discussions on doorsteps took place more easily etc. Prime amongst all examples was the creation of the Friends of Phipps Bridge who remain increasingly active in the area.

Like existing research we found that it is not the facts around climate change that galvanise action for change. Indeed, these kinds of messages can have a disempowering, negative effect. Our experience showed that people are broadly aware of climate change. Nevertheless, by promoting our work through local activity, making the links between cause and effect more relevant and tying ourselves into the direct concerns of those in the area (greater home thermal comfort, reduced waste, improved area, community togetherness etc.) we saw a significant change from apathy to interest. This was subsequently followed by greater community involvement.
InCREASE d AwAREnESS AT COMMUNITY LEVEL

Up to 18 months after a Green Doctor visit we found that 95% of those surveyed (152 homes) considered themselves either fairly or very aware of environmental protection and 85% had received advice on the matter. The advice they had received and 85% had no other sources of information. All of our 152 visit recipients (100%) reported sticking to their behaviour change pledges. These figures suggest residents now have a greater awareness of the relationship between their actions, energy bills and environmental impact. Consequently such homes are more likely to enter into discussions around future schemes such as Green Deal in an informed manner.

Increased awareness went further than energy efficiency with 62% reporting they’d heard of the Friends of Phipps Bridge and a further majority wanting to find out more.

Within the core WVLCZ area, we were unable to start any discussion with around a third of the homes. We knocked on each of the 1103 domestic properties up to 8 times and taking into account that we varied these schedules across times/day we had already assumed that these residents don’t open their doors to unexpected calls. There will be numerous reasons why this is so, but these extremes hard-to-reach parts of the community should now form a focus for other social or cultural services such as those linked with benefit entitlement. Some interesting work remains around how best to progress communication with this sector of society. Of the 66% that we did have a dialogue with, most acted positively by booking and receiving a Green Doctor visit. Many of these additional advice surgeries or events, worked on our doorstep, joined workshops such as draught proofing or supported our Friends of Phipps Bridge; however, 22% of the area chose not to act on our initial engagement. Some of these visits were aborted due to safety concerns for our Green Doctors, although in general they represented homes which cancelled appointments on three occasions. This engaged but uncommitted portion represents the best focal group for follow-up activity and, in particular, generating an improved understanding of what would nudging them into a more committed state.

COStS AND EFFEcTiVEnESS

The project was evaluated at around £77k for which we achieved annual savings of 834 TCO2, equating to £985/TCCO2 in the first year. For this latter figure we revise it, but note that the ‘cost per tonne of CO2 saved’ figure is normally presented as a single year and if it’s done in this case to align with our relative reduction target from a 2009 (single year) baseline. This figure would reduce if we took into account measure lifetime.

The savings from our main domestic offer, the Green Doctors, were the most cost effective (£696/TCCO2 or £299/house). This compares favourably with cost reductions and have shown that they can dramatically reduce some elements of the above (e.g. appointment scheduling). Two hours of staff time (covering staff management, project management, administration and outreach activity) to engage and generate the Green Doctor visit will vary, but given that we learnt a great deal positively by booking and receiving a Green Doctor visit. Many of these additional advice surgeries or events, worked on our doorstep, joined workshops such as draught proofing or supported our Friends of Phipps Bridge; however, 22% of the area chose not to act on our initial engagement. Some of these visits were aborted due to safety concerns for our Green Doctors, although in general they represented homes which cancelled appointments on three occasions. This engaged but uncommitted portion represents the best focal group for follow-up activity and, in particular, generating an improved understanding of what would nudging them into a more committed state.

YEaR EMPLOYMENT

The debate around appropriate provision of skills and jobs to the young is a current one. We used the following propositions:

1. That they should be treated as adults and given the opportunity to be given this responsibility.
2. That they should be allowed to make mistakes – because this is the only way to learn lessons.
3. That they should be rewarded for what they do. Alongside a small wage and praise of achievement, the critical point we make here is that the reward is the access they’re given to points 1 and 2 above.

Throughout the approach we achieved additional scheme development, notably greater levels of outreach and consequently more impactful outcomes. Of particular note is that all 11 of the Future Job Fund recruits that came through the WVLCZ had found and sustained work or further education up to 12 months after end of their contracts. This is in contrast to national figures for the Future Jobs Fund which saw around 40% of participants re-claiming job seeker benefits within seven months of their placement. Seven of our 11 moved into an area of environmental interest.

I.e. channeling more resource into education and community mobility represent an important but often under-valued element to such work. Simultaneously, savings made in these buildings can also help respond to the challenges set by the Carbon Reduction Commitment.

One of the most interesting results is the cost it takes to access and engage homeowners. Like other energy saving projects we struggled with a perception of fraud in our message and brand at the start of the project. Building this trust and delivering messages such that they resonated with the resident i.e. they said ‘yes’ to taking an active step towards energy saving, cost around £255 per property. This figure has an important impact on the future of the government’s Green Deal where engagement costs have been largely ignored or played down.

With regard to the staffing resource needed to deliver all aspects of our Green Doctor scheme, these far exceeded what was originally forecast. We found that for each individual home that made tangible steps towards CO2 reduction, it took approximately:

- 2 hours of staff time (covering staff management, project management, administration and outreach activity) to engage and generate the Green Doctor visit.
- 1.5 hours of staff time to complete the Green Doctor visit.
- 3.3 hours of staff time (covering staff management, appointment scheduling, reporting, monitoring, query checking etc.) to provide the support for programme management.

Some future schemes should consider these resource requirements. However, it is worth noting that related IT technology has now become available through cost reductions and have shown that they can dramatically reduce some elements of the above (e.g. appointment scheduling).
KEY CONCLUSIONS FOR GOVERNMENT AND POLICY MAKERS
Following the WVLCZ we now believe the Department of Energy and Climate Change (DECC), with its responsibility for affordable warmth, energy efficiency and renewable energy, is sitting on the biggest revolution for positive social change of our era. We have seen the cross-sector reality of a comprehensive approach to energy efficiency and DECC, their partner departments, local governments and the organisations that influence them can gain greatly from investigating these more thoroughly. Below we highlight the barriers and knowledge-gaps to achieving this social and environmental impact, along with opportunities that stakeholders can take to focus on future priorities for the future.

RESPONSE TO POLICY EXPECTATIONS
There remain a stark disconnect between large expectations of domestic cuts in CO2 and a basic acknowledgement how residents are responding to this. Current approaches to home energy efficiency assumes that bill payers make choices somewhat like the businesses i.e. rationally, based on investment payback. However, the majority are not inclined to make decisions this way and bill savings, as an initial incentive, are often not enough to encourage action. In the mind of the resident, the perceived value of the fuel-saving (which is immediate, simple and based on their own evaluation of hassle) does not outweigh the perceived value of the effort of installation (which is immediate, simple and based on their own evaluation of hassle).

The WVLCZ improved the balance of this equation by making our offer more accessible. Using simple terms and tailored messages we highlighted benefits such as additional home comfort (an instant gain), less waste (a known behaviour), ease of use (an aspiration) or water saving (a tangible action), whilst reducing concerns around effort and hassle. These techniques helped to tip the positive benefits of action in favour of the negative costs associated with inconvenience and time-loss.

UNACCOUNTED COSTS AND IMPACT ON THE GREEN DEAL’S GOLDEN RULE
As most people don’t feel a pressing sense of urgency on climate change issues, the cost to engage a home (i.e. meeting them, promoting an offer and getting them to say ‘yes’ to further advice) was around £205 per home. The government’s forthcoming Green Deal, based on the figures that exist. Surprisingly, there are still gaps in established CO2 saving figures for the full range of measures that one might easily put into a home. What does exist isn’t easily accessible, understandable and contains inconsistencies between sources. This makes it difficult for any scheme with CO2 saving of its heart to formulate a clear strategy. This is particularly the case for draft pricing (carbon tax) which remains the most requested measure from our residents as they find it delivers the biggest change to thermal comfort. To deliver programmes with confidence in the range of CO2 saving impacts it would be useful for central government to facilitate further access to open and useable data, and commission research to cover the gaps where data doesn’t exist.

There remains little understanding of the true impact of behaviour change advice. We’ve used approximate figures based on a range of sources but acknowledge that this is not adequate to properly inform nationwide schemes. The Green Deal in particular will be sensitive to behaviour change and we would propose that government:

• facilitate research to capture lessons from behavourial change projects, partnered with providing reliable data on the associated CO2 impacts

• Consider options that will allow bill payers moving into a Green Deal treated home to have access to energy behaviour workshops
• Work with Green Deal providers on a ‘Green Deal Rescue’ package of energy behaviour tips in instances of Golden Rule failure

COMMUNITY REFURBISHMENT, COMMUNITY MOBILIZATION
Much of the action behind community-based refurbishment schemes such as the Community Energy Saving Programme (CESP) (aside from peer encouragement to improve take-up) was to take advantage of economies of scale. However, from our experience it could be suggested that the additional management needed for such complex schemes may offset this saving. For the reasons documented earlier and, in common with other CESP schemes, we were unable to see our CESP scheme through to completion despite great effort from the many contributors, that we did not allocate 20% target would have been exceeded.

We have seen great progress via faith, community, school and environmental groups in reaching out to energy users. Acting as community leaders they have shown us in practice to increase awareness and engage residents across a range of sustainability issues. Although a number of Local Energy Assessment Fund (LEAF) projects have made an encouraging start here recently, we would like to see central and local governments facilitate community groups even further, allowing them to play a greater role in filling the engagement needs of future scheme delivery.

FACILITATION OF SERVICE SHARING

The case for treating health, employment, education and other social needs through energy efficiency is growing, and several external studies have demonstrated the associated cost savings. We would like to see a greater move towards capturing these wider benefits, with routes opened up for the financial savings achieved to plug gaps in energy efficiency funding. In support of this we have:

• Linked up with health centres to reduce resident likelihood of suffering from cold-related illnesses by offering free patient access to affordable warmth, in addition to opening up routes to physical activity via our allotments and social inclusion through the Friends of Phipps Bridge

• Trained the young unemployed and seen them all move into jobs or further education

• Connected with other social service providers and given cost effective routes to targeting vulnerable homes

The need for improved and widely understood data on savings
Much of the data that supported our programme was based on informal estimates and we propose that it is time to have a fuller debate around the range of CO2 saving figures for the full range of measures that one might easily put into a home. What does exist isn’t easily accessible, understandable and contains inconsistencies between sources. This makes it difficult for any scheme with CO2 saving of its heart to formulate a clear strategy. This is particularly the case for draft pricing (carbon tax) which remains the most requested measure from our residents as they find it delivers the biggest change to thermal comfort. To deliver programmes with the most CO2 saving impact it would be useful for central government to facilitate further access to open and useable data, and commission research to cover the gaps where data doesn’t exist.

ACOUNTED COSTS AND IMPACT ON THE GREEN DEAL’S GOLDEN RULE


•  Work with Green Deal providers on a ‘Green Deal Rescue’ package of energy behaviour tips in instances of Golden Rule failure

•  Consider options that will allow bill payers moving into a Green Deal treated home to have access to energy behaviour workshops

•  Work with Green Deal providers on a ‘Green Deal Rescue’ package of energy behaviour tips in instances of Golden Rule failure

• Connected with other social service providers and given cost effective routes to targeting vulnerable homes
The Wandle Valley Low Carbon Zone set out to reduce CO₂ emissions. In the end, because of the commitment and contribution of almost countless people, we achieved far more. We saw, noticed and nurtured true community responses to issues of sustainability present at local level, priming the area for the bigger changes we need for the future. We brought 18 years through a youth scheme and witnessed how they embrace the responsibilities they were given. We were rewarded by favourable feedback to the full and complete visits given by the Green Doctors. We identified critical gaps in the data which, when filled, will markedly improve the impact and delivery of future schemes.

This project saw change at this level in a very typical, diverse area of London where there was no history of an existing green movement. The project team would like to thank the following for their support:

- James Mcginlay, South Mitcham Community Centre, the Ahmaddiya Muslim Association, Mitcham Parish Church, the Tamil Women’s Group, Cricket Green Medical Centre, Merton Seniors Forum, the Wandle Society, the Jeremiah Project, Deen City Farm, Tariro’s, Transition Town Wimbledon, Transition Town Brixton, Hyde Farm CAN.
- Ross Hudson and the nine other Low Carbon Zones, Jasia Fareed, Mr and Mrs Cachia, Louise Partridge, Carlene Charge, Carmen Taylor, Hannah Lockley, Cllr David Simpson, the volunteers of Sustainable Merton, Cllr Russell Mclean, Cllr Judy Saunders, Cllr Ian Munn, Cllr Andrew Judge, Cllr Stephen Alambritis, Cllr Izzi Simpson, the volunteers of Sustainable Merton, The Panda of Phipps Bridge, the Future Jobs Fund participants, Ed Codelli, Joost Van, Neeshu Chadwick, Ross Hudson and the nine other Low Carbon Zones, Jasia Fareed, Mr and Mrs Cachia, Louise Partridge, Cartene Charge, Carmen Taylor, Hannah Lockley, Cllr David Simpson, the volunteers of Sustainable Merton, The Panda of Phipps Bridge, the Future Jobs Fund participants, Ed Codelli, Joost Van, Neeshu Chadwick, Ross Hudson and the nine other Low Carbon Zones.

To reiterate this final point – despite the engagement dilemmas that we faced regarding climate change, by gaining the trust and support of the community, we believe positive movement on CO₂ reduction can most probably be created anywhere.

The Wandle Valley Low Carbon Zone worked with a community at the start of such a journey. We showed that by acting together locally, inspiring communities to make small sacrifices for exchange for bigger gains; we were able to make these significant first steps towards a more sustainable future. And, by placing greater emphasis on true area values, we were able to contribute to additional social benefits related to fuel poverty, health, education, employment and community cohesion.

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Community activity is not, nor will it ever be, a cure-all for CO₂ emission reduction. However, we have shown that it can represent one of the most crucial elements of a sustainable future. Communities can, and will, play that part if they are given only the resource, support and encouragement to do so. Indeed, across the country there are already inspiring examples of what can be achieved through such collaborations, often delivered extremely cost-effectively.

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