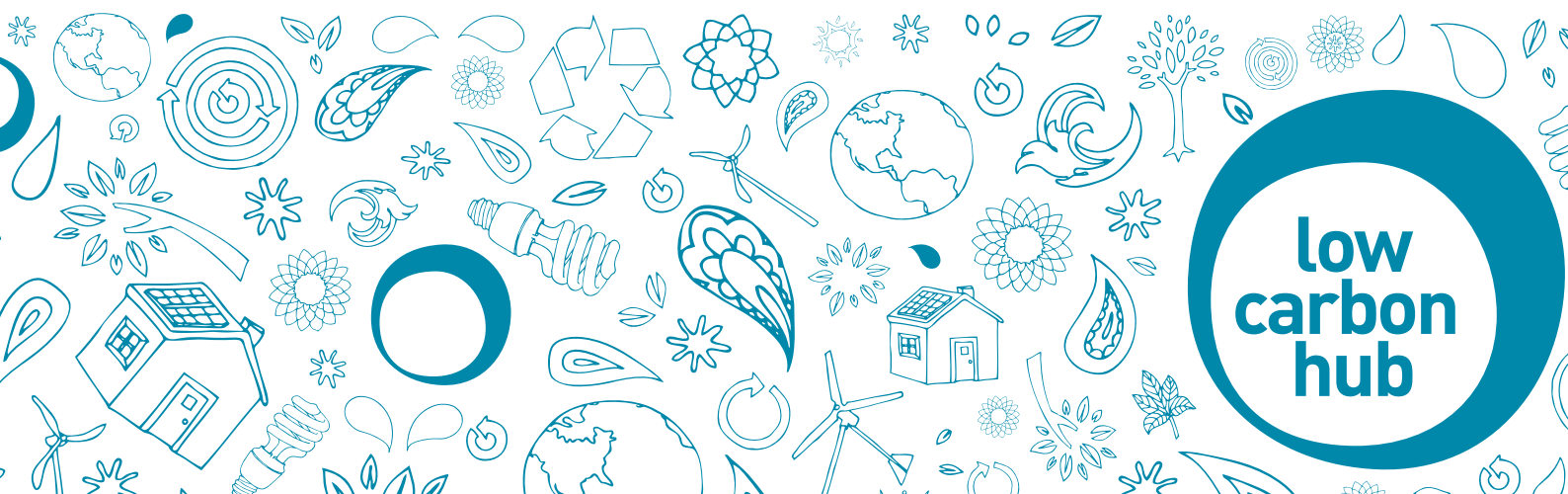


low carbon hub

warming barton

evaluation report





Department
of Energy &
Climate Change



Co-funded by the Intelligent Energy Europe
Programme of the European Union

www.oxford.gov.uk



The Warming Barton pilot was funded by the Department of Energy and Climate Change Green Deal Pioneer Places Fund. This pilot is also part of the Powering Down strand of OxFutures programme which is co-funded by Oxford City Council and the Intelligent Energy Europe programme of the European Union.

Contents

Executive summary	6
1. Introduction	9
1.1 Project summary and objectives	9
1.2 Barton	9
1.3 Green Deal	11
1.4 Energy Company Obligation (ECO)	12
2. Project set up	13
3. Results and outcomes	15
3.1 Outcomes of recruitment phase	15
3.2 Outcomes of energy assessments	17
3.3 Value of Green Deal Advice Reports (GDARs)	21
3.4 Outcomes of accessing ECO-funding and retrofitting households	23
4. Conclusions	24
4.1 Recruitment of households	24
4.2 Assessment of households	24
4.3 Value of Green Deal Advice Reports (GDARs)	24
4.4 Accessing ECO-funding and retrofitting households	25
4. Next steps	28
Organisations involved	29
Green Deal organisations	30
Definitions	30
References	32

October 2013

The sole responsibility of the content of this report lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI or the European Commission are responsible for any use that may be made of the information contained therein.



Executive Summary

Oxford has 12 areas that are among the 20% most deprived in England, one of which is Barton (OX3) to the east of the city (Oxford City Council, March 2013). It ranks as one of the lowest 15% of Super-Output Areas in terms of deprivation (reference: Oxford City Council). Although statistics are not available specifically for Barton, given the low income of the area, it is expected that many homes would be considered fuel poor. Of the 1424 households, a large number are hard-to-treat system build properties that have been highlighted as poor in terms of energy efficiency and therefore are the focus of this pilot.

The Government introduced the Energy Company Obligation (or ECO) alongside the Green Deal in January 2013. This is the Government's new domestic energy efficiency programme: ECO has replaced the previous CERT and CESP programmes and Warm Front, all of which came to a close at the end of 2012. ECO has been designed to replace these carbon saving and fuel poverty programmes, and focus on those in fuel poverty. ECO creates a legal obligation on energy companies to improve the energy efficiency of households, especially those in low income areas, and has annual targets.

The main aim of this pilot scheme, called “**Warming Barton**”, was to look at how best to improve the energy efficiency of hard-to-treat local homes in an IMD (Indexes of Multiple Deprivation) area with the launch of two Government initiatives: the Green Deal and ECO. The pilot ran from October 2012 to June 2013, prior to, and after, the launch of these schemes in January 2013.

Objectives

The objectives of the Warming Barton were to look at:

- 1) **recruitment** of households to the Warming Barton scheme;
- 2) undertaking **energy assessments** of households recruited;
- 3) **assessing the value of Green Deal Advice Reports (GDARs)**
 - i) for householders assessed under the scheme
 - ii) to identify and access funding for the installation of energy-saving measures under the Energy Company Obligation or ECO;
- 4) **accessing ECO funding and retrofitting** a cohort of Barton homes with energy-saving measures under ECO.

The focus of the project was on owner-occupied, (ie transferred to private ownership under the right-to-buy scheme) poorly-insulated system-build properties that did not take up the offer of low cost external wall insulation when other similar council-owned BISF (British Iron & Steel Federation ie. steel-framed with external cladding) properties were retrofitted ie. with low Standard Assessment Procedure (SAP, or energy) ratings (approx. 130 properties).

The Warming Barton project was run by the Low Carbon Hub in partnership with Oxford City Council and local community organisations, Low Carbon Barton and the Barton Community Association.

The Low Carbon Hub recruited households to the Warming Barton scheme to receive a full Green Deal assessment and Green Deal Advice Report (GDAR). Properties were assessed for suitability for a range of energy-saving measures under the Green Deal and other Government incentives. A key aspect of this project was to identify properties in Barton in need of external wall insulation in order to inform discussions with energy utility companies on how they might fulfil their new Energy Company Obligation (ECO) to invest in home energy improvements.

1. Recruitment of households to the Warming Barton scheme

188 households were recruited to the Warming Barton scheme. A key motivating factor for signing up to the scheme was that the energy assessments were free – it was a “no brainer” – and resulted in a valuable certificate, the EPC. We found that the Green Deal Advice Report had no current value with householders and was not influential in householders signing up to the scheme therefore it is expected that take up would have been much lower if householders had to pay for assessments. Households were recruited through a variety of methods with the best results from planned door-knocking campaigns. To ensure this is successful for future schemes it would be worth training local volunteers. Partnership with Oxford City Council, a known and trusted organisation, was vital for the recruitment phase of the project, especially during the door-knocking campaign when volunteers were talking face-to-face with householders. A key constraint to recruiting households was not knowing the project outcome vis-à-vis ECO funding and what energy-saving measures could be installed under this scheme. The marketing campaign could have greater impact and success if there was a clear route to access ECO funding with a secure partner to install fully, or partly-funded, energy-saving measures in households.

The Warming Barton pilot has demonstrated a successful recruitment model, which can be further improved with learning from this pilot. If a successful model of working with a partner on ECO-funding was established and agreed, there is potential for the Low Carbon Hub and Oxford City Council to roll out this programme to recruit further households in Barton and other areas in the City.

2. Energy assessments of households recruited to the scheme

In total, 119 households undertook energy assessments under the Warming Barton scheme and received EPCs. Of these only 61 received full GDARs due to problems with Green Deal procedures in the first phase of the project.

Carrying out energy assessments for households and producing GDARs was complicated and time-intensive as the pilot ran prior, and just after, the launch of the Green Deal in January 2013. Many of the processes and systems were not in place and caused delays and lack of trust in the Green Deal. We found that it was vital to use local, independent and trusted assessors that understood the project and its aims. This ensured that communication to householders was consistent and clear throughout and that the Green Deal, financing options, and ECO-funding were clearly explained to householders.

For future schemes, trust in the assessor and the assessment process will create trust for the next stages in retrofitting households.

3. Value of Green Deal Advice Reports (GDARs)

i) value of Green Deal Advice Reports for householders

From our findings, the value of GDAR for householders is still in question. Without trust in the Green Deal and its financing mechanism, Green Deal assessments had no, or little, value to householders. We found that people needed detailed input from an experienced assessor that understood the measures being recommended in the GDAR; financing options; and how the Green Deal and ECO-funding work.

The value of GDARs for householders will depend on the success of the Green Deal.

ii) value of Green Deal Advice Reports (GDARs) for accessing ECO-funding

This project planned to use GDAR to identify households eligible for ECO and access funding through a third party or energy company. However, we found that the reports were lacking the relevant information to identify households and satisfy the data required by the energy companies. This completely devalues the Green Deal Advice Report for such projects.

GDARs need to clearly identify properties and energy-saving measures that can be funded under ECO and satisfy the criteria required by funders. ECO needs to operate as part of, not separate from, the Green Deal framework and integrating the outcomes of GDAR is a key part of that.

4. Retrofitting energy-saving measures for Barton households under ECO

At the time of writing, the Low Carbon Hub has had discussions with energy companies and other partners for ECO-funding for a cohort of 25 owner-occupied BISF houses in Barton. Discussions with providers suggest that it is difficult to access ECO-funding for a small number of eligible households and that it is not possible to fully-fund external wall insulation for 25 BISF households in Barton, even though Barton is among one of the 15% most deprived areas in England.

Negotiations on ECO funding have been based on a price per tonne of carbon savings. The consequence of this market-driven approach is that while savings made will certainly be cost-effective not all types of construction will be fully-funded. Solid wall houses, like the BISF properties in Barton, are expensive to treat and from negotiations to date cannot be fully-funded under ECO, even in a low IMD area. Our experience is that ECO providers are looking for the lowest hanging fruit ie. a large number of properties/ interventions that give the greatest carbon savings for the least amount of effort/money. There is a risk in this market-driven approach that the quick-easy wins will be implemented by ECO providers but pockets of householders in real need, like the BISF homes in Barton, will miss out. This will result in the ambition of the policy being limited – it will not reach those households most in need. The legacy of ECO will be to leave behind cohorts of households in fuel poverty and poor quality, hard-to-treat properties for which improvements are expensive.

There are three key ways the Low Carbon Hub can potentially smooth the process for accessing ECO funding for future schemes:

- 1) Create a precedent for getting planning permission for installing external wall insulation that changes the exterior finish of properties. This will need to be established with the City Council and District Councils.*
- 2) Partner with an ECO provider to look into alternative ways – other than GDARs – of identifying and surveying properties in the City and County that are suitable for ECO funding that comply with data required to accurately work out the carbon savings and comply with OFGEM's requirements.*
- 3) Partner with an ECO provider and OCC to identify households in the City to create a larger blended portfolio of property types that would allow energy-saving measures to be fully funded by ECO for homes in fuel poverty. The blended portfolio would mean that properties with greater carbon savings would subsidise those with lower savings, allowing a larger number to be fully or partly funded under ECO. However, we still need to assess whether there is a financial model that works for householders, community groups, the Low Carbon Hub, and ECO providers.*

The Warming Barton pilot has identified potential ways forward to recruit, assesses, identify and retrofit households under ECO. The next step is to run a further pilot to test the revised model with the aim of delivering to communities within Oxford and Oxfordshire as part of the “Powering Down” strand of the OxFutures programme with a target of retrofitting 300 households by November 2015.

1. Introduction

1.1 Project summary and objectives

The key aim of the pilot, was to look at how best to improve the energy efficiency of local homes in an IMD area with the launch of two Government initiatives: the Green Deal and ECO. It ran prior to, and after, the launch of these schemes in January 2013.

The pilot looked at how energy assessments, and the resulting GDAR, could help householders in Barton, an IMD area on the east side of Oxford, save energy and money by identifying hard-to-treat households that were eligible for the installation of energy-saving measures under ECO. The pilot project was called: “**Warming Barton**”.

Objectives

The objectives of the Warming Barton pilot were to look at:

1. **recruitment** of households to the Warming Barton scheme:-
To look at key methods of community engagement to recruit households in energy saving and retrofitting in Barton, including critical success factors and barriers and issues
2. undertaking **energy assessments** of households recruited:
To take a look at the new Green Deal assessment process for householders signed up to the scheme and the potential impact for householders in an IMD area, including critical success factors and barriers and issues.
3. **value of Green Deal Advice Reports (GDARs)**
 - i) for householders assessed under the scheme
To look at the value of GDAR for the householder.
 - ii) to identify and access the installation of energy-saving measures under ECO
To look at the value of using GDAR to identify eligible households and access appropriate ECO funding with an energy company or ECO-provider.
4. **accessing ECO-funding and retrofitting** a cohort of Barton homes with energy-saving measures under ECO
To look best way to access ECO-funding for a cohort of Barton homes to retrofit energy saving measures, in particular external wall insulation for BISF properties.

The focus of the project was on 130 owner-occupiers in system-build properties sold under the right-to-buy scheme (introduced in the 1980s) but not improved at point of sale (ie. with low Standard Assessment Procedure – SAP, or energy – ratings). These right-to-buy properties did not take up the offer of low cost external wall insulation when other similar council-owned BISF (British Iron & Steel Federation ie. steel-framed with external cladding) properties were retrofitted with external wall insulation.

The Warming Barton project was run by the Low Carbon Hub in partnership with Oxford City Council and local community organisations, Low Carbon Barton and the Barton Community Association. The Low Carbon Hub recruited households to the Warming Barton scheme with the aim of properties receiving a full Green Deal assessment and GDAR (GDARs). Properties were assessed for suitability for a range of energy-saving measures under the Green Deal and other Government incentives, with particular emphasis on accessing external wall insulation for eligible households under ECO.

The first phase of the pilot ran from October to December 2012, pre the launch of the Green Deal, and the second phase from January to June 2013, post the launch of the Green Deal. This second phase of the project was extended to the private-rented sector, social housing and council houses and, again, with a focus to identify hard-to-treat system-build and

timber-framed properties eligible for free insulation under ECO. The Warming Barton Project was run by the Low Carbon Hub in conjunction with the Warming Oxfordshire scheme, a pilot project to undertake energy assessments in households across Oxfordshire, also funded by the Department of Energy and Climate Change Pioneer Green Places scheme (see separate report on “Warming Oxfordshire”, produced by the Low Carbon Hub).

Target: To recruit 200 households to the Warming Barton scheme to have energy assessments and identify hard-to-treat properties eligible for energy-saving measures under ECO, in particular external wall insulation for BISF properties.

1.2 Barton

Oxford has 12 areas that are among the 20% most deprived in England, one of which is Barton (OX3) to the east of the city (Oxford City Council, March 2013). It ranks as one of the lowest 15% of Super-Output Areas in terms of deprivation. Although statistics are not available solely for the Barton area, given the low income, it is expected that many homes would be considered fuel poor. Thirty-one per cent of the population is said to be income-deprived (Indices of Deprivation, Oxford City Council, 2010) which affects nearly half (41–51%) of children under 15 living in the area, and a quarter of the older population. More than 40% of children in Barton are living in out-of-work households.

Measure	Barton & Sandhills	Oxford City
Life expectancy	77.5 years	80.9 years
Owner occupation	34%	55%
With no qualification	42%	28.7%
Unemployed	6.5%	6%
Caring for relatives	10%	6%

After World War II, the city began to clear poor housing from the centre and develop new estates on “green field” sites on the outskirts to re-house people cleared from these areas. The Barton estate was an early example of resettlement. The first houses to be built were the British Iron and Steel Federation (BISF) system builds, designed by Fredrick Gibberd (who was also the architect of Liverpool Metropolitan Cathedral). These properties are steel framed with external cladding, and poor insulation.

Barton has a population of 5,500 (2010). Of the 1424 households, a large number are hard-to-treat system build or timber-framed properties that have been highlighted as poor in terms of energy efficiency and therefore the focus of this pilot. As Barton has a high IMD, it should open the door for ECO (Energy Company Obligation, see box) funding across all tenures.

A new development – Barton West – has had planning approved to build a further 900 homes in the area which will emphasise the poor quality of much of the existing housing stock, and could potentially create a divide between the two communities.

1.3 Green Deal

Launched in January 2013, the Green Deal is a new way to pay for energy-saving improvements in the home, like insulation, double-glazing or a new boiler. It allows householders to pay for some, or all, of the improvements over time through energy bills. Repayments will be no more than what a typical household should save in energy costs.

The two key elements of the Green Deal are:

- a) The Golden Rule: this states that the projected savings on energy bills must be greater than the cost of installing energy efficiency measures to be eligible for Green Deal funding.
- b) The repayments: these are attached to the property, not the individual. If the person who signed up for the scheme moves house, responsibility for payment will pass to the next person named on the electricity bill.

The aim of the Government's Green Deal is to reduce carbon emissions cost-effectively by transforming the energy efficiency of UK homes. Energy-efficiency measures covered by the Green Deal include insulation, heating, lighting, glazing and micro-generation.

The first step in accessing the Green Deal is to get a Green Deal Advice Report to pinpoint energy-saving measures for households and access energy-saving measures for eligible households under ECO.

Each property is assessed by a qualified and certified assessor. The Green Deal assessment process will be a robust and impartial examination of what works need to be carried out by the property in order to improve its energy efficiency. The assessment – in the form of a Green Deal Advice Report – covers both the fabric of the building (the EPC) and its use (the Occupancy Assessment). The assessment leads on to the development of a Green Deal Plan. This is the contract between the customer and the Green Deal Provider. Once a contract has been entered, the work can be undertaken on the property. This pilot looks at the first stage of the process – the assessment process and the resulting Green Deal Advice Report.

1.4 Energy Company Obligation (or ECO)

The Government introduced ECO alongside the Green Deal in January 2013. It is the Government's new domestic energy efficiency programme that has replaced the existing CERT and CESP programmes, which came to a close at the end of 2012. ECO creates a legal obligation on energy suppliers to improve the energy efficiency of households through the establishment of three distinct targets:

- the **Carbon Emissions Reduction Obligation (or CERO):**

20.9 million lifetime tonnes of carbon dioxide: Focusing on hard-to-treat homes and, in particular, measures that cannot be fully funded through the Green Deal. Solid wall insulation and hard-to-treat cavity wall insulation are the primary measures that the Government intends to be promoted under this target. Other insulation measures and connections to district heating systems are also eligible if they are promoted as part of a package that includes solid wall insulation or hard-to-treat cavity wall insulation.

- the **Home Heating Cost Reduction Obligation (HHCRO):**

£4.2bn of lifetime cost savings: Requiring energy suppliers to provide measures that improve the ability of low income and vulnerable households (the 'Affordable Warmth Group') to affordably heat their homes. A "heating qualifying action" is the installation of a measure that will result in a heating saving, including the replacement or repair of a qualifying boiler.

- the **Carbon Savings Community Obligation (or CSCO):**

6.8 million lifetime tonnes of carbon dioxide: Focusing on the provision of insulation measures and connections to district heating systems to domestic energy users that live within an area of low income (defined using the bottom 15% of Lower Super Output Areas from the Indices of Multiple Deprivation). This target has a sub-obligation, which states that at least 15% of each supplier's CSCO must be achieved by promoting measures to low income and vulnerable households living in rural areas.

(Reference OFGEM: *Energy Company Obligation for Suppliers*, March 2013)

ECO will work alongside the Green Deal to provide additional support for packages of energy efficiency measures, including solid wall insulation or hard to treat cavity wall insulation – measures which are socially cost effective, but unlikely to be fully financeable by Green Deal finance. ECO will also provide insulation and heating measures to low-income and vulnerable households. The reason that the Government has introduced ECO is that if felt that former schemes could be improved upon and that ECO could sit alongside the Green Deal, "neatly offering a seamless link between the two. Without ECO, Green Deal would be less effective. The reason for this is twofold: more significant works, particularly solid wall insulation are too expensive to meet the Golden Rule; and secondly, lower income households often insufficiently heat their homes anyway meaning that the golden rule would again fail to be complied with." (Reference: *The Green Deal*, published by APSE). Measures covered under the Green Deal and ECO are shown in Appendix O.

ECO is not a grant pot for the supply chain. It is a target placed on energy companies to deliver carbon savings or fuel bill savings. ECO is aiming to deliver carbon savings and heating cost reductions to an indicative 75:25 split – with expected investment from energy suppliers to deliver on their targets at £1.3bn per annum. Energy companies can choose how they deliver it, and who they work with to deliver – it is market driven:

"The ECO Brokerage is an auction-based mechanism designed to enable suppliers to buy contracts for the delivery of ECO measures by participating Green Deal Providers."

(OFGEM: *Energy Company Obligation for Suppliers*, March 2013). The obligation period is from 1st January 2013 to 31st March 2015. The obligations set under each phase of ECO "are cumulative and do not need to be met individually."

2. Project set up

The Warming Barton project broke down into three key stages, all of which were run by the Low Carbon Hub:

- **recruitment of households** to the scheme
- undertaking **energy assessments of households** recruited and identifying properties eligible for EWI and ECO-funding
- **retrofitting** these homes with energy-saving measures

i) Recruitment of households

The Low Carbon Hub worked with Low Carbon Barton and the Barton Community Association to mobilise demand among Barton residents to provide free energy assessments of local homes with the potential to make energy-saving improvements. This included community engagement, developing marketing materials, creating an online survey for households ('customer questionnaire'), and building a team of energy assessors to carry out assessments. Households were recruited to the scheme via leafleting the community; a door-knocking campaign; and a local event:

1) leafleting households

All 1424 houses in Barton were leafleted. The leaflet was distributed by a member of Low Carbon Barton and paid for on an hourly rate (£7/hour). It took 22 hours.

2) local event

The Low Carbon Hub had a stall at the annual Barton event, the Barton Bash. The stall was manned by the Low Carbon Hub team, a local councillor, and volunteers. The Warming Barton leaflets were used for recruitment.

3) press coverage

A press release was sent to local press and there were articles in the *Oxford Mail* and *Hands On News*, a community newspaper.

4) door-to-door recruitment

LOW CARBON HUB were unable to get local community groups involved in the door-knocking process as both groups were under resourced. The door-knocking was carried out by a team of Low Carbon Hub volunteers and a local councillor. The councillor's involvement in the project was significant at this stage. His knowledge of running previous campaigns and local knowledge of the area was vital for planning and targeting the door-knocking programme.

ii) Energy assessments of households

The Low Carbon Hub appointed three DEAs (Domestic Energy Assessor) to be trained as Green Deal Advisors to undertake the energy assessments of households recruited in phase 1 of the pilot. In phase 2, Low Carbon Hub employed a local accredited GDA assessor from Green Home Energy to undertake the assessment of households. The assessor is a member of GDAA (Green Deal Advice Association, an accredited GDAO or Green Deal Advice Organisation and used ECMK-EPC reporter).

The first phase of the project was completed by December 2012; the second phase of assessments was completed by June 2013.

iii) Retrofitting households

At the start of the project Low Carbon Hub selected the Energy Saving Co-operative (ESCoop) as the delivery partner to run the fulfilment phase of the Barton pilot project. They were responsible for design, procurement, installation and accessing ECO funding for Barton households.

Households assessed under the Warming Barton scheme were to be passed on to the Energy Saving Co-operative for retrofitting energy-saving measures. As Barton is an IMD area, the ESCoop was responsible for accessing Government initiatives and grants to get as many of the recommended energy-saving improvements funded (eg. under ECO, RHPP2, Green Deal cash back scheme, OCC Fuel Poverty Fund etc) for local householders assessed under this scheme. The focus was to access ECO funding for external wall insulation (EWI) from an energy company for hard-to-treat properties.

The ESCoop was aiming to set up a supply chain of providers to install improvements in households prioritising local Oxfordshire tradespeople, where possible, to benefiting the local economy. The original objectives of the project included the provision of fair and ethical finance for those who needed it, including Green Deal finance where appropriate. This would include the ESCoop becoming a 'Green Deal Provider' and 'Green Deal Installer' in time to enable the delivery of the Barton Pilot Project.

After several months work, there was no tangible evidence of progress from ESCoop on delivering the retrofitting stage of the project. They weren't accredited Provider and didn't have financing options available for householders. In May 2013, the Low Carbon Hub, in consultation with Oxford City Council, decided to terminate the relationship with ESCoop and seek alternatives for the successful delivery of the project. The Low Carbon Hub are in negotiation with ECO-providers, including Insulation NE, to get an offer on the table to retrofit a cohort of Barton properties with energy-saving measures under ECO.

3. Results and outcomes

3.1 Outcomes of the recruitment phase

Push to action

Phase	Households recruited	Push to action			
		Door knocking	Event	Leafleting	Door knocking + leaflet
Phase 1	109	55%	38%	11%	n/a
Phase 2	79	51%	n/a	18%	31%
TOTAL	188				

Critical success factors for the recruitment phase

- **Free assessments for householders:** Free assessments for households was a key factor for households signing up to the scheme – a “no brainer”.
- **Assessments resulted in a valuable certificate (EPC):** EPCs have a value to householders as they are a recognised certification.
- **Association with Oxford City Council:** The City Council is a known and trusted local organisation.
- **Support from local councillor:** Support from a local councillor was key as he had knowledge of running similar campaigns in the neighbourhood.
- **Tie-in with local events:** Recruiting through a local event was a key push to action.
- **Co-ordinated door knocking campaign:** This was the most effective way of recruiting households and explaining the scheme.

Barriers and issues to the recruitment phase

- **No assured ECO offer:** A key constraint to recruiting households was not knowing the project outcome. If at the outset of the recruitment phase, we’d had an assured agreement on ECO-funding from an energy supplier on energy-saving measures that could be installed, it would have created a stronger marketing campaign and therefore improved recruitment of households. As it was, not having this agreement on the table has made messaging to local organisations, householders and the media complex and at the best of times vague.
- **Privacy issues:** Developing the privacy statements for this project has been complicated as we were unsure of the steps involved for retrofitting homes at the start of the project and the involvement of the energy companies and parties involved. We were keen to protect the privacy of households whilst trying to access funding and support through Government initiatives and grants.
- **Selecting a project name:** We chose a name/title for the project eg. Warming Barton that didn’t associate the scheme directly with the Green Deal as there was some scepticism about the Green Deal from community groups at the start.
- **Project branding:** We had to think carefully about the branding of the resources and the organisations involved. It was important to have the local community organisation branding as this gave the project gravitas and trust.
- **Slow start up of Green Deal:** Phase 1 of the project was hampered by the late launch of the Green Deal which brought uncertainty around the ability to be able to lodge GDARs. This meant communication to householders was vague as to what they would actually receive as a result of the energy assessment.
- **Lack of local resource:** The two Barton community groups worked with had very little resource to input into the Warming Barton project. The Low Carbon Hub could have improved communications between the stakeholders on the project to spread the reach and recruit more volunteers.

- **Details of tenure and building type:** In phase 1 of the recruitment, we requested very basic information from the householder. However, we should have collated information eg. house tenure (as the project was focussed on owner-occupiers) and building type (as this is important information for assessing households for eligibility for ECO).
- **Amount of information to collate at sign up:** In Phase 2 of the project, we had to work closely with GDAOs to carefully work out what information to collate from householders at the sign up stage of the project. We wanted to be sure that householders were not asked the same questions twice and put off the scheme

Recommendations for the recruitment phase

- **Assured agreement on ECO-funding at start:** To have assurance from an ECO-provider on funding for installing energy-saving measures under ECO in local households at the outset of the project would have been beneficial to the marketing campaign.
- **Stronger recruitment drive with community:** There needs to be a much stronger presentation and recruitment drive with community groups at the start of the project to get people involved and motivated about the project. And, there needs to be close contact with the group to ensure they have the backup they need from the Low Carbon Hub for an effective recruitment campaign. The set up meeting with community groups is a vital stage of the project and should be carefully planned and managed. A simple handout on the project for committee members would have helped to ensure clear communications throughout the project with regular meetings to update on progress. The engagement of community groups for the Warming Oxfordshire project (*see separate report*) was more successful with improved communication and support from the Low Carbon Hub.
- **Increase awareness of scheme:** To increase awareness of the campaign, we should leaflet households several times, not just once. And we should focus more attention on a media campaign to up the profile of the scheme at the start.
- **Training volunteers for door-knocking:** A planned door-knocking recruitment phase is vital to ensure success, including careful briefing of volunteers including prompt sheet, co-ordinated door knocking sheet of properties to target and register of contact with households. It would be worth training volunteers, including running practice interviews for face-to-face encounters. This would be very important when handing this aspect of the project over to a Community Group, rather than using Low Carbon Hub volunteers. Door knocking is a significant skill that requires in-depth knowledge of the project and agreed procedures.
- **Local event:** A local event was an effective way of signing up households to the scheme.

3.2 Outcomes of energy assessments

Numbers of households assessed under the scheme

Phase	Households recruited	EPC	Low Carbon Hub recommendation sheet	GDAR	EWI rec by EPC/OA
Phase 1	109	58	58*	0	4
Phase 2	79	61	0	61	18
TOTALS	188	119	58	61	

Costs

Cost of recruiting households to the end of the assessment phase, including project management, marketing materials, marketing, assessments:

£332 per household assessed.

Critical success factors of the assessment phase

- **Local, independent GDA:** Using an independent, local assessor gave cohesion to the project and ensured that communication with householders was clear.
- **Good, reliable reporting software and technical support:** ECMK software worked well and there was good technical support for assessments carried out in phase 2 of the project.

Barriers and issues to success of the assessment phase

- **Poor GDA training and support:** The GDA training at Stroma was poorly constructed, especially for the portfolio part of the process: the training was “obscure, the trainers dilatory”; “the questions are ambiguous and request answer content that cannot be anticipated”. This was a barrier to the Low Carbon Hub-appointed DEAs completing their training within the timeframe of the phase 1 of the Barton project and caused one DEA to drop out.
- **Quality of advice and assessment varies:** Many GDAs are training in short amounts of time with no previous background knowledge in the field. Inadequately trained assessors could find themselves advising on installing new measures they don’t fully understand. There is possibly room for an energy advisor “plus” who has a relevant background or training in the area to give trusted, independent advice.
- **Impartiality of GDAs:** The independence of GDAs will be compromised unless there is a successful way of paying assessors other than linking to providers where they get a commission.
- **Market price for assessments:** As the Green Deal and production of GDARs are new, it was difficult to work out the market price for assessments from advisors/GDAOs.
- **No database of local, independent GDAs:** Through the current GD-ORB system, only GDAOs are listed making it hard to access individual, trusted and independent advisors. We particularly wanted to brief the individual assessor on the project as it is complicated and the messaging to householders important to build trust and confidence in the scheme. Luckily, we found an independent assessor through our own contacts.
- **Inaccurate information collected by volunteers:** Information collated by volunteers when recruiting households via door-knocking needs to be accurate eg. 10 out of 80 email addresses were wrong for phase 2 households recruited.
- **High drop out rate:** Although the assessments were free, there were a large number of drop outs from the scheme when it came to booking appointments as a) they weren’t prepared to commit the time to stay at home for the assessment and b) there was some cynicism about getting ‘something for nothing’. There is more likely to be a commitment from the householder when something is paid for. In phase 1, 15% of those recruited via

leaflets dropped out; 30% from the event; and 60% from door-knocking. There were also several private rented properties signed up to the scheme and contacting landlords was problematic.

- **Long-winded assessment process:** Our GDA commented that the assessment “process is quite long-winded and too much administration! Having a tablet to record information would streamline things but this is dependent on the software/ accreditation body. I prefer to record data then have an opportunity to reflect when entering it into the reports. Also, allows one to interact better with the customer and allows for any issues to be rectified post visit, therefore contributing to quality of assessments over quantity”.
- **Benefit of GDARs to householders not clear:** Our GDA commented that “Overall customers quite confused as to the reasons and benefits of having the GDAR done. The majority were only interested in getting something for free! A good number dismissed what it could do for them and many were concerned about it leading to a loan. However, there seemed to be a strong consensus to agree to have a retrofit done!” Customers felt it was a “good intentioned scheme”. The feedback we received from this pilot is that GDARs won’t have value unless the Green Deal is perceived as a successful initiative.
- **Short deadline for lodging OAs:** There is an issue with the two-week deadline for lodging OA reports (part of the Energy Act). DECC need to clarify whether phone call updates to OAs are sufficient rather than re-doing OAs and another visit which is a longer process for advisor and disruptive for householder.
- **Technical problems in lodging GDARs:** Throughout the project there were technical problems with lodging GDARs.

Recommendations for the assessment phase

- **Improved GDAR software packages:** need to be modified to accommodate a wider range of properties and recommendations eg. system build and timber-framed houses in Barton.
- **Improved communications with householders:** Communications to householders and the local community needs to be much clearer and much more regular for the duration of the project. It helps to have one local and independent advisor but as the aims of the project (ie. ECO-funding for installing energy-saving measures in local homes) have been unclear it has been hard to give clear message to householders about the next steps.
- **Use different training organisation:** Use a different training organisation for any on-going training for Green Deal Advisors. Our advisor from Green Home Energy, recommended ECMK as a good training organisation.
- **Improved sign-up database:** The householder sign-up database could be further tailored to dovetail with information GDA needs to collect and headings abbreviated.
- **Clear introductory letter to households:** The introductory letter to households should be simple and clearly explain the scheme and avoid asking extra information from the householder if at all possible. It is preferable to send the letter after the appointment is made for an energy assessment so that the time, name of the assessor and documentation etc required for the day can be confirmed in writing. A few householders found the documentation overwhelming and dropped out of the scheme at this stage. It would also help if letters were part of the email not a separate attachment that you have to open.
- **Team of local, trusted community GDAs:** For future projects, we would like to be able to access and hire trusted, local assessors directly rather than having to go through a central listing of GDAOs. There is possibly room for an energy advisor “plus” who has a relevant background or training in the area to give trusted, independent advice to householders ie. knowledge beyond a newly-trained GDA.

Outcomes of Green Deal Advice Reports (GDARs)

The Low Carbon Hub evaluated the outcomes of the EPCs and Occupancy Assessments carried out for the Warming Barton scheme.

Overview of data from Energy Performance Certificates

For the 119 households that received EPCs under the scheme:

A) potential cost for installing recommended energy-saving measures from EPC data for 119 households surveyed

Minimum cost	£1,629,385
Maximum cost	£2,546,057
Total annual savings	£45,121

B) average cost per household for installing recommended energy-saving measures from EPC data

Minimum cost	£13,692
Maximum cost	£21,395
Annual saving per household	£379

C) potential tonnes of CO₂ saved for installing all recommended energy-saving measures from EPC data

Overall total	206.1 tonnes
Average CO ₂ saved per household	1.73 tonnes

D) potential environmental impact rating from EPC data

Potential average increase per household	17.64
--	-------

E) potential energy efficiency rating from EPC data

Potential average increase per household	16.87
--	-------

F) cost per tonne of CO₂ saved through installing all recommend measures

Minimum cost per tonne of CO ₂ saved	£7905.80
Maximum cost per tonne of CO ₂ saved	£12,353.50
Average cost per tonne of CO ₂ saved	£10,129.70

Green Deal-funded energy-saving measures from EPC data

Measures fully funded	14.2%
Minimum cost of funding these measures	£27,060
Maximum cost of funding these measures	£82,200
Total saving for fully funded measures	£3638
Measures part-funded	69.8%
Minimum cost of part-funded measures	£1,600,015
Maximum cost of part-funded measures	£2,442,745
Total saving of part-funded measures	£38,433
Measures not funded	16%

See appendices for evaluation of individual energy-saving measures recommended by EPCs

Overview of data from Occupancy Assessments

For the 61 households that received OAs under the scheme:

A) potential cost for installing recommended energy-saving measures from OA data for 61 households surveyed

Minimum cost	£485,950
Maximum cost	£905,080
Total annual savings	£11,173

Bi) average cost per household for installing recommended energy-saving measures from OA data

Minimum cost	£7,966.4
Maximum cost	£14,837.4
Annual saving per household	£183.2

Warming Barton: Evaluation Report

Bii) average cost per person for installing recommended energy-saving measures from OA data

Minimum cost	£2,927.4
Maximum cost	£5,452.3
Annual saving per person	£67.30

C) potential tonnes of CO₂ saved for installing all recommended energy-saving measures from OA data

CO₂ saved data is not shown on OA reports.

D) potential environmental impact rating from OA data

Environmental impact data is not shown on OA reports.

E) energy efficiency rating from OA data

Energy efficiency rating is not shown on OA reports.

F) cost per tonne of CO₂ saved

Data cannot be calculated from information on OA reports.

Green Deal-funded energy-saving measures from OA data

See appendices for evaluation of individual energy-saving measures recommended by OAs

Comparison of EPC and OA data

Measures recommended	Number of recommendations from households with EPC (all 119 households assessed)	Number of recommendations from OA (all 61 households assessed)
External wall insulation	4	18
Cavity wall insulation	5	2
Loft insulation top-up	33	24
Loft insulation virgin	1	2
Insulate concrete floor	104	13
Draught proofing	4	3
Low energy lighting	93	0
Hot water cylinder insulation	28	14
Fit cylinder thermostat	4	2
Fit room thermostat	8	0
Fit TVRs	13	0
Fit new heating controls	6	8
Replacement warm air unit	2	2
Fit new boiler	42	20
Install solar thermal	93	12
Install solar PV	111	24
Micro wind generation	8	0
Fit triple glazing	5	3
High performance external doors	2	43
Heat recovery mixer shower	1	20
Flu gas heat recovery	10	0
Fan assisted storage heater	2	1
Upgrade boiler and radiators	0	1
Air source heat pump and radiators	0	3

3.3 Value of Green Deal Advice Reports (GDARs)

i) Barriers and issues with GDARs for householders

Feedback from this pilot showed that householders were currently unsure as to the value of GDARs:

- **Value for money:** Currently an EPC can be carried out for approx. £60 and give the householder a good set of measures that can improve the energy efficiency of the building, including those that would be covered by Green Deal finance. The cost of an independent GDAR is currently costing in the region of £135 upwards ie. a further £75 more than an EPC and yet the information provided doesn't seem to be worth the extra cost. This means householders will only take up a full GDAR if they are definitely going to access Green Deal finance.
- **Cost of GDARs:** energy-saving reports for the Warming Barton scheme were free so take-up was high but householders are unlikely to pay the market rate for such a report unless they could see a clear benefit in doing so. At the moment, householders are unsure about the Green Deal as a funding mechanism for installing energy-saving measures and therefore the benefits of having a report. Green Deal providers are offering GDAR at low cost but householders are then tied to a particular provider.
- **GDARs are recommending inappropriate measures:** GDARs are inappropriately recommending microchip CHP for Barton households.
- **Information on GDAR are too generic to be of use for householders:** We have had feedback re the data that it is too standardised and generic to be trusted. The information gathered by the assessor is individual to the household but the report makes standard assumptions, which means the costings and savings given to householders are a useful start but not accurate. The data supplied relies on the house history eg. the age of the windows or when a conversion was completed. Inaccuracies with this basic information from the householder can produce inaccurate results. The energy savings predicted are calculated from baseline energy usage on the EPC using simplistic steady state calculations ie. so the energy savings households might make are only estimates. This calls into question the validity of the Golden Rule where savings must always exceed the cost.
- **GDARs identify low cost measures for Green Deal Funding:** Hot water cylinder insulation is usually recommended as a fully-funded Green Deal measure but householders are unlikely to access funding for a such a low cost measure via a Green Deal Provider unless they are considering other measures. Some reports have one low-cost measure appearing as the only fully-funded measure.
- **Costs unclear for part-funded energy-saving measures:** It is not clear from the reports what percentage of funding, or actual amounts, the householder would receive towards part-funded measures or those with an orange tick.
- **Advice on low cost/no cost measures in GDAR unfocussed:** the low-cost/no-cost advice in the GDAR is often unfocussed and not comprehensive enough. The software precludes a number of simple, low cost solutions that could offer genuine energy savings.
- **Advice given in GDARs often confusing and conflicts with EPC:** There are a set of recommendations for householders in a) the EPC and b) the GDAR. The recommended energy-saving measures are often different and therefore confusing, and there is no explanation as to why this is. For example, one household was recommended a boiler in the EPC and a boiler with flu extractor in the GDAR with no explanation as to why. Another household was recommended external draught-proofing for doors in the GDAR but not in the EPC. A further household was recommended a new boiler on the EPC but not on the GDAR. It would be clearer for the household if the reports were combined or cross-referenced in some way. The householders needs one set of recommendations on appropriate energy-saving measures for their home. The typical repayments can also vary

from EPC to Occupancy Assessment. This is due to the “in-use” factor used for OAs but this is often not explained to householders and is not clear on the report.

- **Financial information in GDAR poor:** It is not clear that the household has a choice as to how they finance recommended energy-saving improvements and there is no mention of the interest payments on Green Deal finance or the potential payback rates on energy bills. A clear explanation of this currently rests with the Green Deal assessor.
- **Follow up information in GDAR inadequate:** One independent, local assessor on our project is sending follow up letters to householders with GDARs. This includes an explanation sheet on the Green Deal and the possible next steps for the householder.

ii) Barriers to identifying households eligible for ECO-funding using GDARs

Out of the 61 properties that received full OAs, 18 were recommended external wall insulation. And, out of the 119 households that received EPCs, only 4 were recommended external wall insulation. And, out of the cohort of 25 houses that are now being ECO funded for EWI and other energy-saving measures in partnership with Insulation NE eight of those had EWI recommended by the GDAR. Our findings show that GDARs produced for the Warming Barton scheme do not adequately pinpoint appropriate energy-saving measures for these households or successfully identify households for ECO-funding.

- **GDARs don't recognise different building types:** The GDAR software doesn't recognise different types of system build or timber-framed houses (even though cavity is less than 50mm so impossible to fill) and it doesn't come up with an automatic recommendation for external wall insulation. System build for reporting purposes includes all systems, some of which are highly energy efficient and some of which are not, such as those in Barton. The EPC assigns a U-value of 2 to system builds, which in the case of Barton homes is generous. This issue was discussed with ECMK but they currently don't have another suggestion. To access ECO-funding for these properties, a separate report from an independent chartered surveyor recommending external wall insulation might be required. This devalues the Green Deal Advice Report for such projects.
- **GDARs need to work with all building types:** the reports are too generic to identify different types of building (eg. the system build properties in Barton) and therefore doesn't come up with appropriate energy-saving recommendations.
- **GDARs need to link to ECO-funding:** GDARs need to clearly identify properties and energy-saving measures that can access ECO-funding. From this pilot, we found that ECO is currently not covered by standard Green Deal software – in that there is nowhere in the data entry for the Green Deal occupancy assessment where this could be captured. Currently a further survey of the household has to be carried out to satisfy funders.

As completed GDARs were inadequate to access ECO-funding, we have provided energy companies/potential ECO-providers approached with EPCs; XML files used to compile EPCs; and a copy of an Oxford City Council survey on their own, similar, BISF housing stock. It seems that this is still not sufficient “evidence” for accessing ECO and it seems a further survey is needed for the energy companies to meet the audit trail required by OFGEM.

3.4 Outcomes on and accessing ECO funding and retrofitting households

The Low Carbon Hub has now taken on the role of delivery of retrofitting energy-saving measures in Barton households, focusing on funding for external wall insulation for hard-to-treat homes under ECO. We have identified 30 owner-occupied BISF households in Barton that are potentially eligible for ECO-funding under the Carbon Savings Communities Obligation. However, we have found some key issues and barriers in accessing ECO-funding for this cohort of properties in Barton:

- **Planning issues**

The Energy Saving Co-operative assumed that national guidelines on permitted development applied to EWI of Barton properties but we have since discovered this is not the case. The Low Carbon Hub are now applying for planning permission for 27 BISF households in Barton to install external wall insulation and finish with a pebble-dash rendered exterior.

- **Negotiating ECO-funding for retrofitting energy-saving measures in Barton homes**

At the time of writing, the Low Carbon Hub are in discussion with British Gas and a partnership with E.ON and North East Insulation (NEI) re ECO-funding for Barton households. Discussions with both providers suggest that it might not be possible to fully-fund EWI for 30 BISF households identified for ECO-funding.

Findings from this pilot suggest there are two routes available to access ECO funding:

- a) to work in partnership with a certified Green Deal Provider that is approved by an energy company and
- b) to work with an energy company/ECO-provider direct

ECO funding is related to CO₂ savings achieved and carries a price per tonne of CO₂. The current trading price of CO₂ means that not all types of construction can be fully funded by ECO. Constructions such as hard-to-treat cavity wall (for three or more storeys) can be fully-funded as they are relatively cheap for the amount of CO₂ savings achieved. Solid wall houses are relatively more expensive to treat and currently it seems they cannot be fully funded under ECO. From our discussions, it seems there is an estimated funding gap of up to 50% of total cost. The figures quoted for the installed cost of EWI would come in at around £120/tCO₂ and funding is available to the order of £85/tCO₂

A showcase

The Low Carbon Hub recommends that the first cohort of 25 ECO-funded households become the “demonstration houses” or phase 1 of the delivery to showcase the scheme locally. The aim is for installations to be completed by the end of the year (2013) so properties can benefit from the installed energy-saving measures in winter. The “demonstration houses” would be used to publicise the programme and extend to further households in Barton and other areas of the City.

4. Conclusions

4.1 Recruitment of households

The Low Carbon Hub in partnership with Oxford City Council and local organisations are successful in recruiting households for energy assessments in communities. A key motivating factor for signing up to the Warming Barton scheme was that the energy assessments were free – it was a “no brainer” – and resulted in a valuable certificate, the EPC. We found that the Green Deal Advice Report has questionable value with householders as it stands and was not influential in householders signing up to the scheme and therefore it is expected that take up would be much lower if householders had to pay for assessments ie. the scheme would be a much harder “sell” if householders had to pay for assessments.

Households were recruited through a variety of methods but the most successful route is via planned door-knocking campaigns. To ensure this is successful for future schemes it would be worth training local volunteers, including running practice interviews for face-to-face encounters. Door knocking is a significant skill that requires in-depth knowledge of the project and agreed procedures.

Partnership with Oxford City Council, a known and trusted organisation, is vital for the recruitment phase of the project, especially during the door-knocking campaign when volunteers were talking face-to-face with householders.

A key constraint to recruiting households was not knowing the project outcome vis-à-vis ECO funding. A marketing campaign could have greater impact and success if there is a clear route to accessing ECO funding and a secure partner to install fully or partly-funded energy-saving measures in households. If a successful model of working with partners on ECO-funding was established and agreed, there is potential for the Low Carbon Hub and Oxford City Council to roll out this programme to recruit further households in Barton and other IMD areas across the City.

4.2 Assessment of households

The assessment process was complicated and time-intensive as the pilot ran prior and just after the launch of the Green Deal in January 2013. Many of the processes and systems were not in place and caused delays and lack of trust in the Green Deal. Under this pilot, we found that it is vital to use local, independent and trusted assessors that understand the project and its aims. This ensures communication to householders is consistent and clear throughout and that the Green Deal, financing options and ECO-funding are clearly explained to householders. Trust in the assessment process will create trust for the next stages in retrofitting households.

4.3 Value of Green Deal Advice Reports

From our findings, the value of Green Deal assessments and advice reports (GDARs) is still in question. Without security in the process and trust in the Green Deal and its financing mechanism, Green Deal assessments have little, or no, value to householders. Householders want a process that results in a relevant and affordable plan for saving energy. GDARs are only a requirement for those that plan to go forward with the Green Deal; for others they need to add significant value to the EPC to be seen as worth the additional cost. The EPC has value as it is necessary for selling a property.

From this pilot project, we found that the quality of the information and the way the reports and information are presented undermine householders confidence in the information.

There are discrepancies between the EPC and the OAs in recommendations of energy-saving measures for households; potential savings; and measures funded under the Green Deal. The reports don't adequately explain key points to householders: the Green Deal financing mechanism; funding for measures with orange ticks; payback times; potential funding for energy-saving measures under ECO. This makes it difficult for householders to understand the Green Deal Advice Report and how to go forward. These factors require detailed input from an experienced and independent assessor that understands the measures being recommended; the financing options; and how the Green Deal and ECO-funding work. The advice on low-cost/no-cost energy saving measures in the report is often unfocussed and not comprehensive enough. The software precludes a number of simple, low cost solutions that could offer genuine energy savings eg. low energy lighting.

Assessments for the Warming Barton scheme were free so take up was high but householders are unlikely to pay the market rate for such a report unless they can see a clear benefit in doing so. At the moment householders are unsure about the Green Deal as a funding mechanism for installing energy-saving measures and therefore the benefits of having a report are not clear. Currently an EPC can be carried out for about £60 and give the householder a good set of measures that can improve the energy-efficiency of their property, including those that would be covered by Green Deal finance. If householders are not sure whether they are going to use Green Deal finance, will they pay the extra amount for a Green Deal Advice Report? The value of GDARs for householders will depend on the success of the Green Deal.

This project planned to use GDAR to identify households eligible for ECO and access funding through a third party or energy company. However, the reports were lacking the relevant information to identify households and satisfy the data required by the energy companies/ECO providers. At £135+ each, GDARs for individual households are an expensive and unsuccessful way of pinpointing energy-saving measures and properties eligible for ECO. GDARs need to clearly identify properties and energy-saving measures that can be funded under ECO and satisfy the criteria required by funders. ECO needs to operate as part of, not separate from, the Green Deal framework and integrating the outcomes of the GDAR is a key part of that.

4.4 Accessing ECO-funding and retrofitting households

The Low Carbon Hub is currently in negotiation to access ECO-funding for a cohort of 25 owner-occupied BISF houses in Barton.

From this pilot, our current understanding is that ECO funding is related to carbon savings achieved and carries a price per tonne of CO₂ ie. it is market driven. The current trading price means that not all types of construction can be fully funded by ECO. Constructions, such as hard-to-treat cavity walls can be fully-funded as they are relatively cheap for the amount of CO₂ savings achieved. Solid wall houses, like the BISF properties in Barton, are relatively more expensive to treat and currently it seems that they cannot be fully funded, even in a low income IMD area. There could, potentially, be a funding gap of up to 50% of the total cost.

Accessing ECO funding for households is a complicated process. ECO funding should help with energy saving measures for those who need it most. It seems that ECO providers are looking for the lowest hanging fruit, ie. a large number of properties/interventions that give the greatest carbon savings for the least amount of effort/money. There is a risk in this market driven approach that the quick easy wins will be implemented by ECO providers but

pockets of households in real need, like the BISF homes in Barton, will miss out. This will result in the ambition of the policy being limited – it won't reach householders in real need.

In addition, the OFGEM criteria for ECO are stringent and the energy companies/providers are still working out how to fulfil the criteria needed. Our negotiations show that ECO approaches are not all the same and each ECO provider seems to interpret OFGEM's requirements in their own way.

From our findings so far, there are three key ways we can smooth the process for accessing ECO funding for future schemes:

1) **precedent for planning for external wall insulation**

We need to establish a precedent for getting planning permission for installing external wall insulation that changes the exterior finish of properties. This will need to be established with the City Council and the four District Councils.

2) **work with an ECO-provider to pinpoint properties eligible for ECO funding**

We need to look into alternative ways, other than GDAR, of identifying and surveying properties in the City and County that are suitable for ECO funding and that comply with requirements of the energy companies and the OFGEM. We need to assess the costs for an alternative assessment of households other than GDARs to access ECO funding for eligible properties

An OFGEM report on *Energy Company Obligation for Suppliers* was published in March 2013, towards the end of this pilot project. This 154pp document sets out the rules around accessing ECO. It seems that it is a complicated and stringent process for energy companies to comply with OFGEM criteria under ECO. However, it clarifies some points on how carbon savings are worked out using SAP or RdSAP and how energy savings measures can be recommended in surveys that should be taken into consideration for future schemes.

The difficulties in accessing ECO-funding for this project and information obtained from the OFGEM report on *Energy Company Obligation for Suppliers* suggest that for future schemes we should consider an alternative, more cost-effective way of surveying properties to identify housing stock of similar constructions (such as BISF houses) in the City that would be eligible for installing energy-saving measures with ECO-funding. This would satisfy OFGEM requirements under the Energy Company Obligation Scheme and ensure we are providing the correct data to our partners to access ECO.

3) **work with an ECO-funder to create a blended portfolio of property types in Oxfordshire to access ECO funding**

From negotiations so far, it is likely that the installation of external wall insulation for the 25 BISF houses identified in Barton can be fully-funded under ECO by seeking a workable blend of installations from other parts of the county. This offer would be on the basis that the project would be rolled out to other areas of the City.

To replicate this model of working for future schemes, we need to work with an a ECO-provider/partner to identify households to create a blended portfolio of property types in Oxford that would allow energy-saving measures to be fully funded by ECO for homes in fuel poverty. The blended portfolio would mean that properties with greater carbon savings would subsidise those with lower savings, allowing all to be fully funded.

It seems from this pilot that GDARs are ineffective in identifying households eligible for ECO-funding. For future projects, we need an assessment or surveying process that can quickly, cheaply and easily identify households eligible for ECO and what energy-saving measures can be funded to create a blended portfolio of housing types across the City.

Once we have a blended portfolio of properties that were eligible to install energy-saving measures under ECO, we could roll-out a targeted marketing campaign to these households. To successfully recruit households to a wider scheme and retrofit energy-saving measures, we need an ECO-funding agreement on the table that we can promote at the start. In order to pass households on to Green Deal Providers or access ECO-funding, the Low Carbon Hub needs a consumer credit licence.

We can now see how there is potentially a way forward to retrofit energy-saving measures under ECO but we need to assess whether there is a financial model that works for householders, community groups, the Low Carbon Hub, and the energy companies.

Since running this pilot, we have discovered through GDAA, one of the GDAOs we used on this project, that GDARs can now be updated. A GDAR that omits a measure due to a deficiency in the early software version can be amended using a software tool as part of the Green Deal Improvement package (GDIP). As we are now working in partnership with Insulation NE and OCC (*see next steps*) to access ECO funding, we have not updated the GDARs produced as part of this pilot to see if this changes the outcomes of the reports.

We also understand that some Green Deal software providers are now delivering ECO software but that its use would not be expected as part of a standard Green Deal assessment.

5. Next steps

After negotiations with several energy companies and ECO-providers, the Low Carbon Hub has decided to work with Oxford City Council to access ECO funding and extend the Warming Barton pilot with Insulation NE (NEI), a company specialising in energy efficiency measures and ECO funding. NEI is a Green Deal Approved Installer and was recommended to the Low Carbon Hub by Middlesbrough Environmental City (MEC), who has been running an energy efficiency project since 2009. The reference given by MEC is excellent.

A pilot was designed for providing External Wall Insulation (EWI) for BISF-type houses – the worst performing in thermal insulation – with 25 houses being recruited from the Warming Barton pilot described in this report. A planning application for these properties was submitted in August 2013. Those properties will be eligible to ECO funding. However there is an estimated shortfall of between £50,000 and £75,000 to cover all costs.

In order to overcome the funding shortfall an extended version of the pilot has been devised, called “Warming Oxford”, where properties in the whole of the OX3 and OX4 areas of the City will be targeted and offered a range of energy efficiency measures that could be partly- or fully-funded through ECO. The idea is to widen the range of measures in such a way that the whole mix of easy- and hard-to-treat measures are funded, in effect creating an internal subsidy from one property to another, at no extra cost to the owner or occupier.

The measures include loft insulation, boiler replacement, hard-to-treat cavity wall insulation and solid wall insulation. The amount of funding available per household and/or measure depends on the projected savings of CO₂ and the level of income of the household in question.

NEI estimates that loft insulation and boiler replacements can be fully funded under ECO. For wall insulation there is the need for analysis on a case-by-case basis and the property owners could have the option to fund part of the works.

The amount of ECO funding made available to the Warming Oxford project corresponds to 10,000 tonnes of CO₂, or approximately £1,000,000 in funding.

The plan is to start the project by canvassing properties in those areas with a leaflet created (see Appendices) by the Low Carbon Hub and carrying the logos of Low Carbon Hub, Insulation NE and Oxford City Council. This leaflet explains the project and refers interested households to a free phone number where they can get further information and/or register for a detailed survey. The printing of the leaflets, the canvassing and the running of the phone lines will be the responsibility of Insulation NE.

Once a survey of the property is carried out and the specific measures and personal circumstances identified, a funding plan will be presented to the household. The measures could be either fully- or partly-funded with options given to the owner or occupier.

Those households that agree to have the measures installed will enter into a contractual agreement with NEI, who will carry out the works, access the ECO funding and all necessary administration related to it, and offer the warranties and guarantees. The Low Carbon Hub will not have any contractual obligations with the households in question.

A partnership agreement will be entered between Insulation NE and Low Carbon Hub where a referral fee of 5% of the total ECO funds available for that property will be paid to the Low Carbon Hub. We therefore estimate that £50,000 will be made available to the Low Carbon Hub, which in turn will help bridge the funding gap for the 25 properties in Barton pilot.

Organisations involved in Warming Barton pilot

Low Carbon Hub

Contact: Dr Barbara Hammond, CEO

The Low Carbon Hub is a community interest company launched in 2012 to work with communities across Oxfordshire to develop renewable energy and energy reduction projects.

<http://www.lowcarbonhub.org>

Oxford City Council

Contact: Dr Paul Robinson, Team Leader Energy and Climate Change

Oxford City Council (OCC) provides a wide range of services for their 150,000 residents, 83,000 people who work in Oxford, and 7.5 million who visit the city every year.

Dr Paul Robinson, Team Leader Energy and Climate Change

<http://www.oxford.gov.uk>

Barton Community Organisation

Contact: Sue Holden

The Barton Community Association was founded over 60 years ago and is the main body representing the residents of Barton.

Low Carbon Barton

Contact: Rachael Peace

Low Carbon Barton aims to combine awareness-raising of the impact of climate change and practical action to reduce carbon with projects that engage the community in green issues affecting our area.

Green Home Energy

Contact: Richard Green

A local independent domestic energy assessment and advice service since 2008, based in Wantage. Excellent track record of providing prompt and professional EPCs and GDARs to private and social clients along with agents. They have excellent relationships with a number of organisations as regards alternative energy provision.

<http://www.greenhomeenergy.org.uk>

Energy Saving Co-operative

Contact: Ewan Jones, CEO

The Energy Saving Co-operative enables homeowners and communities to maximise their energy savings at minimum cost – or zero cost where possible – whilst generating the greatest possible local economic benefit. It connects homeowners, communities and local businesses that have energy-saving opportunities and sources of finance and deliver a one-stop energy saving service, helping people to save energy and money.

<http://www.energysaving.coop>

GDAA

Contact: Linn Rafferty, MD

The GDAA (Green Deal Advisor Association) is a not-for-profit Company. They represent trainee and qualified GDAs and provide information about the role of the GDA within Green Deal to interested parties. They are a certified member of ECMK and BRE, and Green Deal approved.

<http://www.gdaa.org.uk/about.html>

ECMK

Contact: Sarah Griffiths

Based in Milton Keynes, ECMK offers training courses for energy assessors plus software and accreditation schemes.

<http://www.ecmk.co.uk/default.asp>

Green Deal organisations

The Administrator of the Green Deal

The overall role is run by OFGEM on behalf of DECC. It will also oversee the administration of ECO.

The Oversight and Registration Body

This undertakes a number of key functions, including overseeing the register of assessors and managing the Green Deal Code of Practice.

The UK Accreditation Service

UKAS carries out the assessments of the certification bodies that approve the assessors and installers.

Green Deal Assessor

The Green Deal assessor inspects the house or property and determines what measures will apply by producing a Green Deal Advice Report. This comes in two parts: the EPC (Energy Performance Certificate) and the OA (or Occupancy Assessment).

Green Deal Advice Organisation (GDAO)

Green Deal assessors register with a chosen GDAO that monitors the quality of the work of carried out by the assessor.

Definitions

A **Green Deal Advice Report (or GDAR)**: A GDAR is produced by an accredited Green Deal Advisor as a result of doing an energy survey of an individual property. This is in two parts: an Energy Performance Certificate or EPC which gives the building an energy rating from A to F; and an Occupancy Assessment which looks at how the building is used eg. what temperature is the heating at; how many people live in the house. These two parts combine to make up the Green Deal Advice Report, which gives information low-cost no-cost measures as well as whole house measures like insulation. Measures with a green tick can be funded under the Green Deal and those with an orange tick part funded by the Green Deal with additional finance from the householder.

The Green Deal Assessment will generate a “bespoke” assessment for the customer, recommending only the measures that will improve the energy performance of their building. The report produced will highlight the “package” of measures the customer could obtain with Green Deal finance. Ultimately the customer will choose the measures they want from the recommendations. For certain measures ECO subsidy may also be available.

Energy Performance Certificate (EPC): Energy Performance Certificates (EPCs) give information on how to make your home more energy efficient and reduce your energy costs. All homes bought, sold or rented require an EPC and they will contain key financial information about the Green Deal.

Occupancy Assessment: the second part of the Green Deal assessment in the domestic

sector. The occupancy assessment considers the energy use of the household and the impact this is likely to have on the standard energy savings predicted by the EPC. It also contains a tailored package of measures based on householders preferences and behavioral information to help households reduce their energy use at no cost.

Green Deal Advisor: Only a Green Deal Advisor is authorised to carry out and produce a Green Deal Advice Report, recommendations and provide related advice on the Green Deal to the consumer. A Green Deal Advisor must hold a qualification that meets the standard required by the relevant National Occupational Standards and syllabus and be a registered member of a certification body.

Green Deal Advice Organisation: A Green Deal Advice Organisation or GDAO is an Organisation that delivers Green Deal advice, through qualified Green Deal Advisors and that has complied with the requirements and ongoing performance reviews of an accredited certification scheme.

Golden Rule: The Golden Rule refers to the estimated savings on a customer's energy bill due to the energy efficiency improvements made to the property. In most cases repayment levels will be based on heating bills for the property or the typical energy bills of a similar property. The Green Deal is designed to try to save the customer at least as much money as they will have to repay. However, the actual level of savings will depend on how much energy is used (e.g. to heat your home) and the future cost of energy.

Green Deal Installer: Only an authorised Green Deal Installer can install energy efficiency improvements under the Green Deal finance mechanism and use the Green Deal Mark.

Green Deal Plan: This is the contract that sits between the Green Deal Provider, the improver and the Bill payer (if different at the property). It sets out the financial terms of the agreement (e.g. amount and duration of installments).

Green Deal Provider: A Green Deal provider provides the finance, arrange for the Green Deal measures to be installed and the point of contact for customer service enquiries after the Green Deal is complete.

References

Oxford City Council:

http://www.oxford.gov.uk/PageRender/decC/Statistics_about_Oxford_occw.htm

The Green Deal

Published by Apse (Association for Public Service Excellence), July 2013

Energy Company Obligation for Suppliers

Published by OFGEM, March 2013

For more information please contact:

Low Carbon Hub
23 Park End Street
OXFORD OX1 1HU
01865 246099
info@lowcarbonhub.org

