

Moving towards Green Deal: 'Go Early' success in Greater Manchester



Pictures supplied by Wigan & Leigh Housing

From October 2012 to May 2013 the Association of Greater Manchester Authorities (AGMA) was one of eight core cities to pilot Green Deal approaches as part of the Government's £12million 'early mover' programme. This programme, commencing before the national launch of Green Deal, set out to trial aspects of the Green Deal policy framework in a live environment. Ultimately, the programme helped DECC and AGMA with its ongoing development of the Green Deal market.

We delivered a £7.7million programme of retrofit works to 608 homes across all ten Greater Manchester authorities. The programme benefited from £2.7million of Department of Energy and Climate Change (DECC) funding for Greater Manchester, which in turn leveraged a further £5million match funding, including £2.5million of ECO funding. The programme has also been used to kick-start and develop the local supply chain.

This summary report sets out the learning and achievements, including details of how we developed the programme and achieved the level of financial spend, numbers of installations and support for the low-carbon supply chain that have resulted from this work.

Locally, this retrofit programme impacts directly on AGMA's commitment to reduce greenhouse gas emissions by at least 80% by 2050 and by 48% (on 1990 levels) by 2020, as detailed in the GM Climate Change Strategy:

<http://manchesterismyplanet.com/gmccsip>

These ambitious targets, alongside the GM City Deal commitment to establish the Low Carbon Hub, are an indication of AGMA's appetite to be at the forefront of climate change action. It has also been a natural extension of the work of GM authorities and the GM Energy Advice Service in delivering energy-efficiency and fuel poverty programmes since 2008.

Strong partnerships, robust programme management and clear governance arrangements have ensured the successful delivery of this GM programme despite the many challenges faced, including the longest, coldest and wettest winter in decades.



Sir Richard Leese
Chair of Low Carbon Hub

AGMA
www.agma.gov.uk/low_carbon_hub/index.html

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The objectives of the programme were:

- To deliver cost-effective energy-efficiency measures
- To share best practice with other local authorities and partners
- To increase public awareness of energy-efficiency measures.

In doing so we set out to:

- Demonstrate approaches across tenures
- Work partnership at scale
- Leverage other sources of funding
- Pilot the Green Deal process or some element of the Green Deal
- Develop strong local Green Deal delivery networks
- Successfully engage local community groups and encourage street-by-street approaches to Green Deal.

Our chosen approach included five workstreams to test Green Deal processes across different tenures and delivery models:

1. Social housing schemes focusing on solid wall insulation, and building on existing CESP neighbourhood-based work.
2. Local Authority Energy-Efficiency Loan schemes offering interest-free loans to 'right to buy' and private sector households.
3. Empty Property Energy-Efficiency programme bringing short-term void properties back into use and with greater energy-efficiency.
4. Community Green Deal Provider Go Early Scheme to test retrofitting homes to 2050 80% carbon reduction targets and thereby develop a 'pattern book' of retrofit showhomes across Greater Manchester.
5. Commercial Green Deal Retrofit of offices in Salford with Green Deal eligible lighting measures.



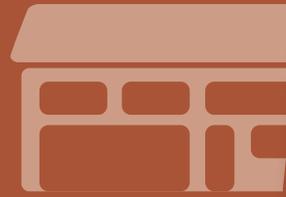
At Greenbuild Expo: members of the GM team with partners from Oldham College, enjoy breakfast briefings with The Rt Hon Greg Barker MP, Minister of State for Climate Change (centre); Charlie Parker, Chief Executive of Oldham Council (left); and Ashley Crumbley, Chief Executive of Wigan and Leigh Housing (second left)

"Local people know their area best, which is why we have funded Core Cities to help get the Green Deal up and running and test key elements of the programme.

"I've been extremely impressed by the joined-up delivery of this pilot in Greater Manchester, which has involved several different partners and produced impressive results within a tight timescale. I'm confident that Greater Manchester can now go on and deliver the Green Deal on a larger scale."

Greg Barker, Energy and Climate Change Minister

4



local companies supported
to become PAS20/30 accredited

7

Green Deal
assessors
trained
to gain
experience

20

local companies
engaged in the
supply chain

£7.7
million

total
investment
in housing stock

4

apprentices
working on site



Delivery at scale:

The programme demonstrated the ability of partners to deliver at scale, ramping up quickly. Over 50% of the programme outputs were delivered in March and nearly 90% of the original spend targets were met in the challenging timescale (figs 1 and 2).

Successful loan sign-up:

Overall, 83 homeowners took up loans to retrofit their homes; 14 Carbon Co-op members signed loan agreements with loan provider StreetUK to test the whole house retrofit approach, resulting in carbon emission savings of between 60% and 80% in these properties. Wigan and Leigh Housing also achieved an impressive 75% take-up of loans with 'right to buy' householders in their neighbourhoods. These projects have tested and highlighted the techniques and drivers most successful in engaging homeowners in advance of our Green Deal programme.

Benefit of area approach proven:

The benefit of street-by-street/area-based working was clearly demonstrated. Take-up and interest in loans increased dramatically through word of mouth once the benefits of improvements to social rented properties were seen.

As the photograph shows (fig 3), Ms Collier, a tenant of Northwards

Housing Association, is delighted with her newly refurbished home. Measures fitted included external solid wall insulation, which has made her house toasty and warm and looks good too! Judging by the cheesy grin of her daughter, little Skye Boylan, she is even happier!

"I have definitely noticed a difference in comfort and warmth already. My home stays warmer for much longer and I don't need to use the heating as much. I am really happy with the way the works have been done and just waiting for the final snagging works to be completed. I have noticed a saving in my bills and my property looks much nicer as well. The works were carried out really well and workmen were polite and friendly and kept their appointments."

Ms Collier, Northwards Housing Association tenant

New technologies:

Within the programme, St Vincent's Housing Association were given the opportunity to test the potential of 'voltage optimisation' as a future Green Deal measure. In Tameside, new internal insulation system from Matilda's Planet was also successfully tested by New Charter Housing Association proving that it is both easier and quicker to install

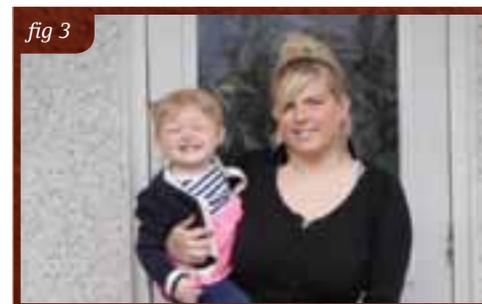
than traditional dry lining solutions. This saved time and reduced the disruption for the householders (fig 4).

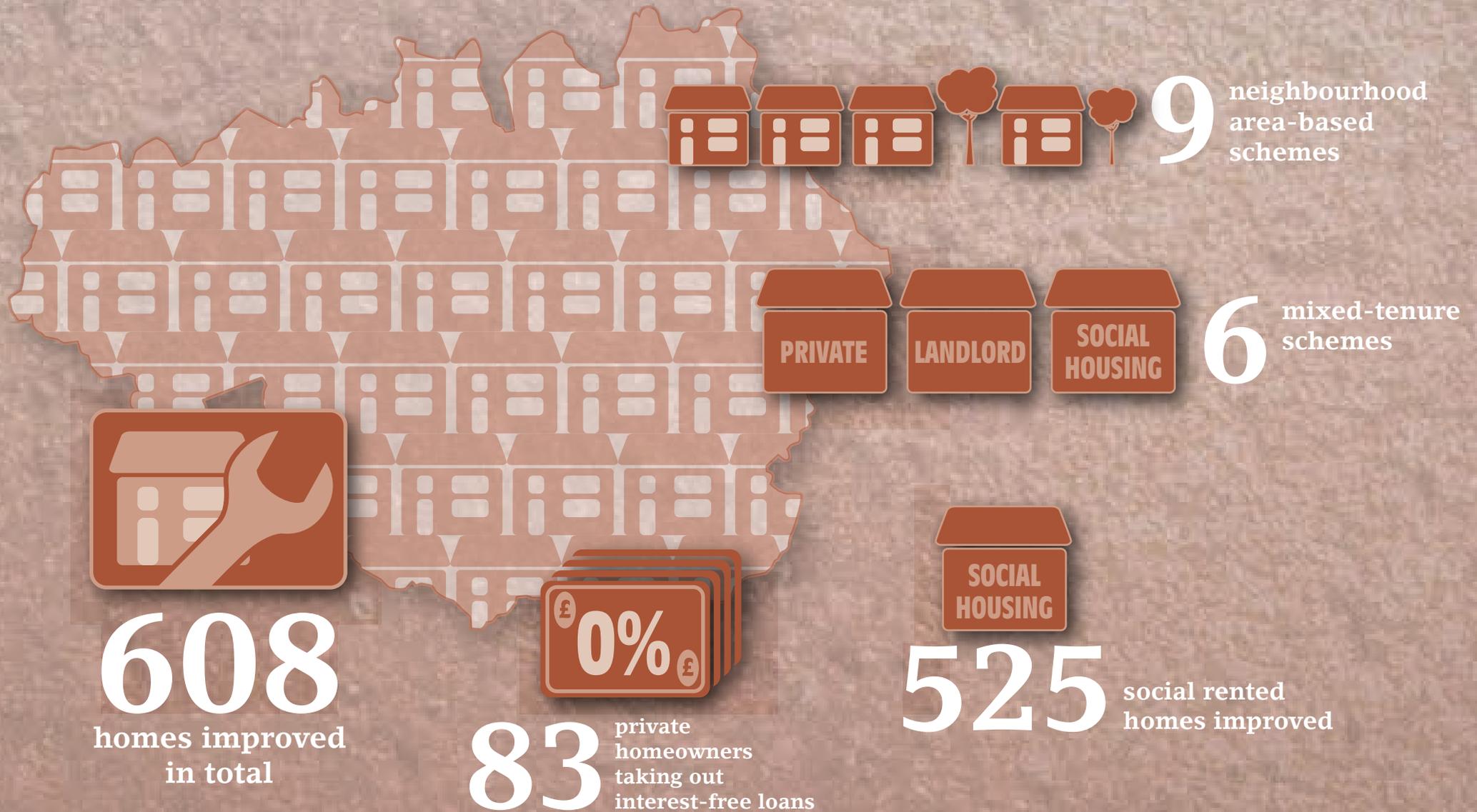
"It looks unobtrusive when complete and (if you can get access) is a really quick and effective solution which does not leave a broken tooth effect on a row of terraces. This allows partial take-up without an obvious negative effect on the visual appearance of a row."

Danny Vose,
Head of Investment,
New Charter
Housing Association



"Since it's been done, we've really noticed the difference; it's brilliant."
FCHO resident





Learning 1: Area-based approaches to work

Street by street:

This approach was successfully used to tackle areas of Victorian terraces and non-traditional 'hard to treat' properties. The solid wall insulation proved to be fast and straightforward to install on this basis, resulting in immediate comfort and fuel-saving improvements. It also allowed the most effective use of scaffolding, reducing the inconvenience to householders.

However, where this was not achieved, the visual impact of pepperpotting of solid wall insulation was less obvious than feared.

"The expectation that the private properties, having not had the EWI installed, would stand out and become an eyesore has proved unfounded. By examining the properties it is clear which ones have had the installation, but on passing they blend in very well with the others, especially from a short distance. Once the new render has been exposed to the elements for a time, it will become even less conspicuous."

Andy Morris, Energy Manager,
Bolton at Home

Seeing is believing:

This was definitely the most effective engagement for owners and for tenants, who had previously refused, where neighbours or other homeowners discussed the works and benefits (fig 1).

Associated building fabric issues:

These have ranged in scale from multiple property redecoration repairs, where new boiler time clocks have been smaller than those removed, to issues where the previous roof insulation was installed directly under the roof tiles; this meant that rather than being able to extend the roof slightly to encompass the external insulation, the whole roof had to be replaced. Partners were happy to share their learning to build up a 'bank' of technical expertise and solutions across Greater Manchester (fig 2).

Technical challenges, common to many retrofit schemes, were experienced:

1. Cold bridging:

Resulting from the widened window reveals created where external insulation is installed. In several projects this was solved by applying thin phenolic foam insulation to the reveals. Where windows were also replaced this was not an issue.

2. Ventilation:

Several partners highlighted the potential for reduced roof ventilation and increased moisture in the properties now that they have been improved. This will need to be monitored closely during the lifetime of the measures installed, which for solid wall insulation is up to 40 years.

Planning requirements:

For brick slips, finishing has increased the cost for one project and caused delays while waiting for planning permission (figs 3 and 4).





1

new product
tested for
Green Deal
future eligibility



502+

Green Deal
assessments
completed

300



windows
and doors
installed



3

technical solutions
tried for the first
time in the area



146

boilers installed



482

solid wall
insulations
installed

Learning 2: Accessing ECO-presented challenges

Eligibility:

The documentation and evidence required to prove eligibility for ECO funding changed/was clarified significantly over the course of the programme. Our experience shows that the utility companies are interpreting this data requirement differently, which has impacted on partners' ability to 'bank' the ECO match. We are working with our ECO partners to understand this further and to feedback to DECC on any inconsistencies. Unfortunately, the redefined 50% requirement for SWI brought in during the programme has resulted in at least one homeowner not going ahead due to the reduction in ECO funding available for that property.

Calculation variance:

A range of calculation methods have been researched in depth by the Carbon Co-op indicating there are variances of +/-80% in carbon savings between SAP and Rd-SAP. This is a source of considerable concern both in Go Early and for future retrofit projects where viability of the project may be dependent on the level of ECO funding it can leverage.

2050 calculation:

To allow calculations that will show the 80% carbon emission reductions for 2050, the Carbon Co-op has developed a new assessment methodology providing detailed carbon calculations and accurate carbon savings figures. As the national ECO calculations become finalised, this methodology will be linked so that funding can be calculated.

Valid EPCs:

ECO funding requires SAP calculations using updated software, meaning that older EPCs do not qualify, although they are still valid. This has also had unanticipated major cost and time implications, especially for Social Housing partners.

Learning 3: Loan schemes take time

Uptake:

This has been lower than originally anticipated. However, enquiries did pick up towards the end of the programme once owners saw and heard about the benefits of completed installations. This indicates the benefit of demonstration homes and that sufficient time is required to allow people to consider whether to engage in the project and how they want to finance the works.

Time lag:

A significant delay has been identified in the uptake of loans in the private sector of up to four months. This would indicate that it is worth going back and asking customers after this thinking time to see if they wish to proceed.

Different drivers:

These were identified between the Social Housing-managed 'right to buy' area-based schemes and the community Carbon Co-op scheme. Comfort and visual appearance were common to both groups; however the community scheme also listed carbon savings and their homes' fitness for the future as significant drivers. The main drivers for social housing were stock improvement for the housing provider, and improved appearance, increased comfort, and cost savings for the tenants.

The Golden Rule:

The concept was understood by most householders. They equated the measures with saving energy but not necessarily saving money, as they felt this would be cancelled out by their ever-increasing energy tariffs.

“Most householders understood the concept of saving energy as a result of having the measures installed. However, they did not equate this to necessarily saving money, as they felt this would be cancelled out by ever-increasing fuel tariffs.”

“Most householders were attracted by the visual improvements to their property and their estate as a whole, which they felt would increase their property values much more significantly and make homes on their estate much more desirable for potential purchasers.”

Mr Anees Mank,
Service Manager – Housing Services

Show homes:

Probably the most successful way of engaging householders was to use show homes and pilot properties. All the social housing area-based schemes reported increased interest and uptake from both tenants who had initially refused and from right-to-buy owners following the completion of some properties (even where a Go Early loan product was not being marketed).

Make it fun:

The Carbon Co-op successfully used an ECO bus tour to show homes across Greater Manchester where prospective loan applicants could visit and see what others like themselves had already done to improve their properties. This proved to be highly inspirational and definitely encouraged the participants to go one step further (fig 1).

Carbon Co-op community:

The Carbon Co-op business aim is to exponentially increase the number of whole house retrofits delivered by engaging the retrofit pioneers from Go Early to open their new eco show homes to the public, so inspiring and recruiting their next wave of whole house recruits.

“We recently met DECC minister Greg Barker and Head of Green Deal Consumer Demand, David Thomas. Both were eager to learn from Carbon Co-op’s approach. You can see a video David made about his visit to board member Charlie’s Super Home (fig 2 – you can view the video by clicking [here](#)).”

Carbon Co-op
<http://carbon.coop>





£810,000

value of loan repayment to be reinvested over the next 20 years to help tackle in GM fuel poverty



£2.7 million

DECC funding invested



£337,000

estimated total annual household savings

£5.05 million

match funding including ECO



1316t/CO₂

estimated carbon savings per annum

Key learning

Learning 4: Green Deal assessment process still under development

Teething problems:

These were encountered with the Green Deal Assessment process and caused significant delays to most of our projects. As the programme ends, the majority of these, such as software, accreditation and lodgement issues, have been addressed. However, there is still inflexibility with how the software calculates household carbon savings that will continue to impact on the levels ECO available for certain measures. This issue continues to be raised with DECC.

Upskilling:

The majority of our partners have invested in Green Deal Assessment training for their own staff, including Manchester City Council, St Vincent's Housing Association, Wigan and Leigh Housing, Wigan Council and Northwards Housing. Several partners engaged external assessors with varying levels of success due to the issues noted above.

GM capacity:

The capacity and expertise to provide Green Deal assessments have been kick-started within Greater Manchester with some partners now being able to offer assessment to other organisations.



Left to right: Matt Roberts (Director of Asset Management and Development, Wigan & Leigh Housing), the Rt Hon Gregory Barker MP (Minister of State for Climate Change) and Jonathan Mayoh (Project Manager, BAAS Construction Limited)

Learning 5: benefits from collaborative working

Engaging local supply chain:

By working with local partners and encouraging early accreditation, the programme has tested and developed the experience of Greater Manchester's low-carbon retrofit companies. Where gaps have been identified in capacity and skills the partners have supported their contractors with accreditation and by testing new solutions and materials.

Accreditation:

Several local supply chain organisations have been supported to become PAS2030-accredited. Others have been trained in new installation techniques or have developed increased capacity to support the programme. This has had a direct impact on the level of skills and capacity now available for the Green Deal and other low-carbon work across Greater Manchester.

Technical expertise:

The programme has clearly demonstrated the need for technical, project management and customer engagement expertise in delivering in this emerging market. This expertise was ensured by working with partners with a proven track record and experience on projects that had already been identified but did not have funding in place.

The Carbon Co-op identified the strong technical expertise provided by Urbed as very important not only for retrofit design and delivery but for positively engaging householders and building their trust, especially where householders are taking out a loan.

The Go Early Supply Chain Workshop:

This event, held in February, very successfully engaged with more than forty local organisations, indicating that there is already an active and engaged low-carbon retrofit supply chain across Greater Manchester. However, concerns were raised regarding the serious lack of knowledge about Green Deal, ECO calculations, training and quality of assessors and installations, the route in for SMEs, and the importance of behavioural change in achieving maximum benefit from the works. The full findings were shared with DECC and will inform the sector skills development work underway in Greater Manchester.



All **10**
local authority areas covered



Bolton

- Area-based schemes ✓
- Community schemes ✓
- Empty property scheme ✓

Bury

- Area-based schemes ✓
- Community schemes ✓
- Empty property scheme ✓

Rochdale

- Community schemes ✓

Wigan

- Area-based schemes ✓
- Mixed-tenure schemes ✓
- Empty property scheme ✓

Oldham

- Area-based schemes ✓

Salford

- Community schemes ✓
- Commercial scheme ✓

Tameside

- Area-based schemes ✓

✓
19
projects delivered

Trafford

- Community schemes ✓

Stockport

- Community schemes ✓

Manchester

- Area-based schemes ✓
- Mixed-tenure schemes ✓
- Community schemes ✓
- Empty property scheme ✓

As a result of this programme a number of recommendations have been put forward:

1

Retrofitting a network of demonstration homes

2

Exploring a range of routes to ECO funding

3

Allowing time for take-up of loans

4

Upskilling the existing supply chain

5

Continually testing innovative new products

6

Avoiding the winter with external wall insulation!

Next steps

Monitoring project with Salford University:

Over the next two years a detailed technical and behavioural monitoring programme of 40 representative properties within the Greater Manchester Go Early retrofitted programme will be carried out. This will cover internal and external environmental conditions, and fabric performance.

Salford University

www.salford.ac.uk/energy/research/applied-buildings-and-energy-research-group

Get Me Toasty ECO programme (2013/14)

Our three ECO programme delivery partners, Carillion, Dyson and Forrest, have started working across nine of the Greater Manchester authorities on a one-year framework agreement. During this year we aim to help a minimum of 8,500 households, mainly those in fuel poverty and living in areas of deprivation, to make their homes more energy-efficient and reduce

their fuel bills. The Get Me Toasty ECO programme has already benefited from the learning and partnerships developed through Go Early.

Get Me Toasty

www.getmetoasty.com

Greater Manchester Green Deal (2014–17)

Following on from the Go Early and the Get Me Toasty insulation/ECO schemes, this major programme will be launched in early 2014 across all ten authorities. Greater Manchester Green Deal marketing will commence in the late autumn of 2013. In this ambitious programme we want to improve a minimum of 15,000 properties through Green Deal loans over three years, as well as establishing a robust and growing Low Carbon supply chain and economy across Greater Manchester.

Social housing partners:

Currently, the city region's 260,000 social housing dwellings have an average EPC rating of 'D', and by the 2030s this stock needs to reach a top-end 'B' rating. The benefits from such a programme would be considerable – stimulating the economy, countering rising fuel poverty, and contributing to both the low-carbon and climate-change agenda. The next 18 months will be 'business as usual' with social housing continuing with investments in the fabric of their buildings and renewables. However, a new project is now underway. This involves a number of Greater Manchester's social housing landlords developing a new approach to Asset Management Plans that have the most cost-effective approach to achieving a 'step change' improvement in the energy rating of their portfolios.

Fuel Poverty Fund

The Go Early loan repayments, amounting to £810,000 over 20 years, will be utilised for energy-efficiency works for those in fuel poverty.



Thanks to Green Skills alliance for funding.

"The production of this report has been funded by the Green Skills Alliance. The Green Skills Alliance is a partnership between Sector Skills Councils Asset Skills, ConstructionSkills and SummitSkills. The Alliance was launched by Climate Change Minister Greg Barker in January 2012 to ensure the UK has the right skills to implement the Green Deal, the Government's flagship policy to improve the energy-efficiency of buildings.

"The Green Skills Alliance is drawing upon the different SSC footprints to support businesses and industry to upskill and deliver work and advice as part of the UK drive for a green economy. Greater Manchester is a Green Deal Skills Exemplar, working with the Green Skills Alliance as part of its Low Carbon Challenge programme. Greater Manchester's Low Carbon Pioneer City programme has informed the skills development work being undertaken by the Green Skills Alliance."

Steve Housden - CITB

Bolton at Home

CarbonCo-op

Eastlands Homes



Salford City Council



University of Salford MANCHESTER

