

# The **GreenWave**

Community Film Project Evaluation

REELmcr



*"The people of Manchester are the city's greatest asset: resourceful, proud of their city and ready to tackle the toughest of challenges. These people, the communities of Manchester, will deliver our most significant cuts in carbon emissions. Through the way we live our lives and run our homes we will all work together to make Manchester a low-carbon city."*

**Manchester. A Certain Future\***

\*Published by Manchester City Council on behalf of the city of Manchester, December 2009

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## Executive Summary

*"It's made me more aware about global warming. I've learnt how to recycle and taught the kids how to recycle, and not just throw cans and plastic away. It can all be recycled for a better future."*

### **Project Participant**

The 'GreenWave' is a climate change film drama project, made by the local people of Blackley and Charlestown, two adjacent communities in Manchester, working in conjunction with REELmcr, a Manchester based social enterprise that supports communities around the North West by providing a positive and fun learning environment, where a 'you can do it if you try' attitude is passed on to all that they are involved with.

This community project was designed to encourage participation, community interaction and creative thinking. The film has a strong environmental message and throughout the planning and shooting process, all participants were

encouraged to think about the impact of their lifestyle on the environment and the projects' own impact was to be minimised wherever possible.

Drama and learning workshops have provided participants with a fun environment in which to learn about climate change. Where young and old alike have shared the learning experience and gained new knowledge about climate change and energy consumption.

The emphasis of this project has not only focused on saving the planet, but perhaps more importantly for those involved, about how they can 'save money'.

The group have been introduced to various issues that relate to climate change, and the 'Reduce, Reuse, Recycle' principals, responsible energy usage, etc. This has prompted participants to explore various climate related subjects as part of a group, but also to take an introspective look at their own individual energy consumption habits and addressing those areas that reflect 'bad habits', with the aim of saving money.

This new knowledge mentioned earlier, also relates to the ways that different age groups perceive each other, with the more mature group participants having been surprised by how different the 'Kids in the Hoodies' are once they had got to know them, whilst it was apparent that young and old began to take an amount of responsibility for each other, having seen beyond the stereotypes that are portrayed in the media.

The group is also feeling empowered, sufficiently enough to now want to progress onto exploring the possibility of formalising the group and sourcing funding to research and develop their own ideas stemming from the issues that most affect the young people within their communities, as was demonstrated during the final group celebration session, when the group stated their wish to continue working together, both young and old, to address the problems related to subjects that the group have strong feelings about, such as drug abuse, teenage pregnancy, education and career opportunities.

It was also stated that the adults in the group felt the need to do something for the young people in their communities, as their future opportunities are potentially jeopardised by 'falling in with the wrong crowd', and recognising that juvenile mistakes can have a long lasting effect on the future lives of their young people and the negative knock-on effect to their future families and the wider community.

The outcome of this project is not only the film that has been produced, but also what could be described as a by-product of the project, is a cohesive, multigenerational group that has a renewed enthusiasm and community centred spirit, that if nurtured, could provide a large number of the group with opportunities for personal development that will benefit not only those individuals, but also future generations and the communities that they live in.

## Evaluation Aims

*"You don't think about climate change now because when it happens we are all going to be dead anyway, but now you realise it relates to your next generations, our children."*

**Project Participant**

This evaluation has been conducted so as to demonstrate the effectiveness of using drama and filmmaking to engage with a group of community residents, to produce a film based on the theme of climate change, by enabling the group to explore the issues surrounding the subject, and further determine the impact of empowering the group to voluntarily adjust their own domestic energy consumption by consciously adopting a more energy efficient mind-set.

This evaluation explores:

- Phase 1 – Outreach and engagement
- Phase 2 – Workshops
- Phase 3 – Film Production
- Phase 4 – Film Premier
- Phase 5 – Final group celebration session

## Methodology

The methodology has taken the form of:

- A formative evaluation by analysing the weekly reports produced by REELmcr
- A summative evaluation completed by analysing all data and outcomes at the end of the project

The evaluation is supported by

- Quantitative and qualitative evidence. (See appendix)
- Questionnaires were completed by participants, and face to face interviews with all main film characters

## Data collection method

Data was collected during face to face interviews, video recorded interviews and questionnaires.

A questionnaire was designed to collect basic demographic data of all participants as well as indicators of knowledge, attitudes and behaviours related to sustainable lifestyles. This questionnaire constitutes the baseline information that has been reassessed at the end of the project to complete this evaluation. *See Appendix for all questionnaire results.*

## Project Background

*"this revolution will happen everywhere, down every street and in every neighbourhood."*

**Manchester. A Certain Future**

REELmcr (REEL) is a North West based social enterprise that uses participatory drama and filmmaking as a tool to engage with and provide a voice to deprived and often alienated communities and individuals.

Since being established in 2003, REELmcr has developed its own methodology for community and group engagement, with a sharp focus on Regeneration and Social cohesion. This has helped the company to build a large portfolio of successful community film projects reaching across the North West. More recently REELmcr has looked to further develop this method of engagement by implementing a project management methodology (PRINCE2) within the organisation, so as to enable the effective planning and recording of all areas of an engagement project, allowing information to be collected, analysed and reported on, with the aim of on-going process and outcome improvement, for the benefit of community participants and Commissioners.

More recently, REEL has dealt with the themes of Sustainability and the Environment; though these are new subject matter within REELmcr projects, the Management of the company had been

developing the idea internally for some time, and waiting for the right engagement opportunity to arise.

Early in 2009, REELmcr, approached Manchester City Council (MCC), to discuss a community film project that the company hoped to run in the City; during meetings with MCC, it became clear that there was an opportunity to feature the theme of 'Sustainability and the Environment' in a MCC community project.

In the second half of 2009, REELmcr were successful in a bid to the Manchester Carbon Innovation Fund, with the aim of developing a film about climate change with local residents in Manchester. MCC identified two priority wards within the city for REELmcr to work in, both of which would benefit from involvement in the project, as they were recognised as hard to reach and had fewer active environmental campaigns than other areas of the city.

Engagement was also made with the various funders to promote the project according to their different priorities. REELmcr met with them and presented film clips from other projects and discussed their needs along with the aims and objectives of the project. MCC assisted REELmcr to secure the remaining funding that was required from various sources, as the project would achieve a number of objectives from intergenerational community cohesion to carbon reduction.

## Funding

Funding was secured from a number of sources:

- MCC Manchester Carbon Innovation Fund
- MCC North Manchester Regeneration Team (Cultural and Community Cohesion)
- CLASP - (Climate Change Local Area Support Programme)
- Enterprise Manchester
- Cultural Strategy

Additional in-kind support was provided by numerous organisations and individuals:

- United Utilities
- Manchester City Council Housing Energy Management Unit
- Manchester Eco House
- Manchester Creative and Media Academy (Boys)
- The Co-operative Academy of Manchester and Our Lady's R C High School

## Project Aims

The aim of the project:

1. To engage with community groups in two MCC wards, Higher Blackley and Charlestown,
2. To enable these groups to jointly produce a film, of between 30 to 40 minutes in length,
3. The film will raise awareness of the impact that current levels of energy consumption are having on the environment, across wards within the boundaries covered by Manchester City Council.
4. Provoke a level of action within each community that will help to mitigate climate change and reduce CO<sub>2</sub> emissions in a quantifiable way,
5. Enable the residents of each ward to choose to live as part of a 'Low Carbon Community'.
6. Develop a sustainable group of individuals that can be involved in future projects
7. Produce measurable outcomes in terms of pledges from all participants, family and attendees of the films' premiere

**The project contributes to a number of National Indicators including:**

## **National Indicators**

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**NI 1:** Percentage of people who believe people from different backgrounds get on well together in their local area

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**NI 2:** Percentage of people who feel that they belong to their neighbourhood

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**NI 3:** Civic participation in the local area

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**NI 4:** Percentage of people who feel they can influence decisions in their locality

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**NI 5:** Satisfaction with local area

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**NI 6:** Participation in regular volunteering

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**NI 7:** Environment for a thriving third sector

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**NI 11:** Engagement in the arts

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**NI 138:** Satisfaction of people 65 and over with both home and neighbourhood

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**NI 140:** Fair treatment by local services

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**NI 185:** % CO2 reduction from local authority operations

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**NI 186:** Per capita CO2 emission in the local area

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**NI 187:** Tackling fuel poverty

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**NI 188:** Adapting to climate change

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## Project Overview



**Project Milestones** were outlined by REELmcr at the beginning of the project and were flexible to MCC's needs as required.

REELmcr had regular telephone and face-to-face contact with MCC, and submitted a full session report following each workshop and rehearsal within 7 days. This included detailed feedback from every staff member on progress of the project and of individual participant's progress.

## Outreach

The first stage in the outreach involved MCC and REELmcr running a 'trailer day', flyers were placed in community shop windows, promoting the project and inviting local residents to take part in a film based drama project, with the times that the trailer would be at various locations around Higher Blackley and Charlestown. The trailer fitted with screens that allowed previous REELmcr productions to be shown to the groups that were waiting at the advertised locations. This was successful in raising community interest in the project, with 124 names and telephone numbers being taken over the course of the day. REELmcr were also invited onto a local community radio station to discuss and promote the project, an article about the project appeared in a local newspaper, this included an invite to local residents to take part.

This was followed up by REELmcr contacting those that had shown an interest in being involved, who were then invited to attend an evening seminar held by REELmcr at a local school. This session sought to give potential participants more information about the project in order for them to learn more about the techniques used by REELmcr. There was a very good turnout of women and children, who were very enthusiastic about getting involved. However very few men attended; this was remedied by re-contacting those males that had indicated that they would be at the seminar, the majority of these males recommitted to attending; however a small number were unable to recommit, due to unforeseen circumstances.

*"I've learnt a lot more about the small things you can do to lower carbon emissions."*

### **Project Participant**

Being conscious of the subject matter of the project, REELmcr were keen to look for the 'low carbon' option when planning each stage of the project, from the hiring of a minibus to transport participants, REELmcr staff and equipment to and from workshops (where possible), through to arranging a 'vintage bus' to promote the use of public transport for the film's red-carpet premiere at Manchester Town Hall.

### **Engagement and workshops**

From November 2009 until mid-March 2010, weekly workshops and rehearsals were held in two local schools in the Higher Blackley and Charlestown wards. REELmcr worked closely with participants in the sessions, using a 'climate change expert' to assist the project participants to explore the issues surrounding climate change, and how through simple lifestyle changes, the actions of individual participants could make a difference and help mitigate the effects of climate change, with the added benefit of reducing their own energy consumption and therefore reducing their energy related bills. Some of the older participants were able to share their childhood

experiences, demonstrating that it was normal to recycle goods and clothing, buy local food, and be aware of the use of 'paid for' energy.

As the workshops progressed, the sessions sought to continually educate, engage and enthuse participants. REELmcr continued to involve participants in the film development process, using a professional script writer to work closely with the group, by pulling together the collective ideas that had been uncovered during discussion sessions in the weekly workshops, creating a script for a 35-45 minute film.

A representative from the Energy Savings Trust assisted by leading a discussion in a workshop, by providing an interesting and informative presentation to the group, followed by a question and answer session.

*"We will reuse and recycle as much as possible. We will grow more of our own food. We will repair things rather than throwing them away. We will enjoy increased self-sufficiency. Waste will be our common enemy."*

**Manchester. A Certain Future**

A visit from a local resident, who works as 'Recycling Manager' for a local authority, gave a talk to the group, he has an interest in setting up recycling points locally for items that are not currently recycled kerbside by MCC – e.g. energy

saving light bulbs, batteries. The talk was finished off with a quiz, participants formed mixed groups, the result of which was an indication that the children knew more about climate change than adults. However surprisingly it was also shown that adults can confuse children in terms of what they are taught in school being contradicted by the parents' own beliefs, i.e. children being taught that recycling is necessary, but parents saying that it is not, leaving the child confused as two important influences in their lives giving opposing knowledge.

Additionally a group was taken to the MCC run 'Eco House'; this was an invaluable way of demonstrating the different methods of insulation, energy efficiency and alternative energy production in our homes. Comprising of two previously uninhabitable terraced properties, the Eco House is a good way to show people, both from the local area and further afield, what can be achieved in an average home, this was a real opportunity for participants to see the reality of 'green living'; great inspiration taken from the simple and easy to implement energy saving advice that was given.

The group continued to explore climate related issues in the remaining workshops. At the same time, the characters of the film script, titled 'The GreenWave', were allocated to the project participants, the group commenced with rehearsals and as none of the group had ever acted before, other than in school plays, professional drama workers and actors assisted participants to rehearse their parts and learn drama techniques that would enable participants to take on their role and give the part their best effort.

## Production

The production process commenced on 20<sup>th</sup> March 2010, and saw the group adopt their characters with true commitment and the intention to 'do their best'.

The film is a drama set in 2080 and consists of flashbacks to 2010 and contrasting lifestyles of saving/wasting energy, recycling, buying local food etc. It refers to the impact of having to live with the effects of climate change in 2080, if individuals and communities do nothing about it in the present day. It includes messages about making simple lifestyle changes, but keeps the educational messages very much at a community level.

This was a completely new approach to the subject of climate change in Manchester, which sought not only to bring about increased community cohesion in two hard to reach communities but also to produce a 45 minute drama that would be a legacy for the future.

The scenes were filmed at various locations in both wards and other locations in Manchester that met the requirements of the scene, the 'Eco House' being one. Local food suppliers and other local residents were drafted in to ensure the CO<sub>2</sub> reduction elements of the project were consistent. Local residents were used in a prominent crowd scene in the film.

*"Now I walk a lot instead of getting on the bus or jumping in the car."*

**Project Participant**

Post production was completed by qualified REELmcr staff.

## Premier

REELmcr view the premier showing of any of their film projects as a vital piece of a successful 'engagement & film' project, as it provides participants with the opportunity to show their work to their peers and local community, whilst producing a sense of pride and self-respect, with ownership of the film and the subject matter that it contains being automatic. It also has the added benefit of providing the audience with the chance to see cast members in a way that they might not have previously seen them in.

The red carpet premier for the film was held at Manchester Town Hall on 21<sup>st</sup> May, with almost 500 residents attending the event, including the cast and production crew. Keeping in mind the nature of the film, the environmental impact of the premiere was minimised by giving attendees bus passes for a local bus company serving the Higher Blackley and Charlestown wards. In other REELmcr film projects, limousines would be hired to transport cast members to their film premier, however on this occasion, the cast members travelled to the event in a vintage open-top Manchester bus which was dressed and branded up with the theme of the GreenWave to help further raise awareness of the project and promote sustainable transport. The bus was met by a large crowd of guests and representatives from local radio and newspapers. All cast members wore

donated second hand clothing which was recycled into glamorous red carpet outfits.

Once the film had been shown, the 'Climate Oscars' award ceremony began with each member

*"The project has made me aware of what releases a lot of energy and what wastes energy and what it costs and what we can do to get it lower."*

**Project Participant**

of the group being called to the stage, and introduced to the audience with a specially written comment from the REELmcr Drama Worker that they had work with, to receive a unique award for their involvement in the project, which was presented by the Lord Mayor of Manchester. REELmcr normally present participants with shop bought 'Mini Oscars' for the award ceremony, however due to the recycling theme of the project, it was decided to invite a local school to make the different individual awards from reclaimed paper, cardboard, wood, plastic, metal, etc. Following the film being shown, there was a positive response from the audience and MCC officials that attended, with the cast being interviewed by local newspapers and radio stations.

## **Final Group Celebration**

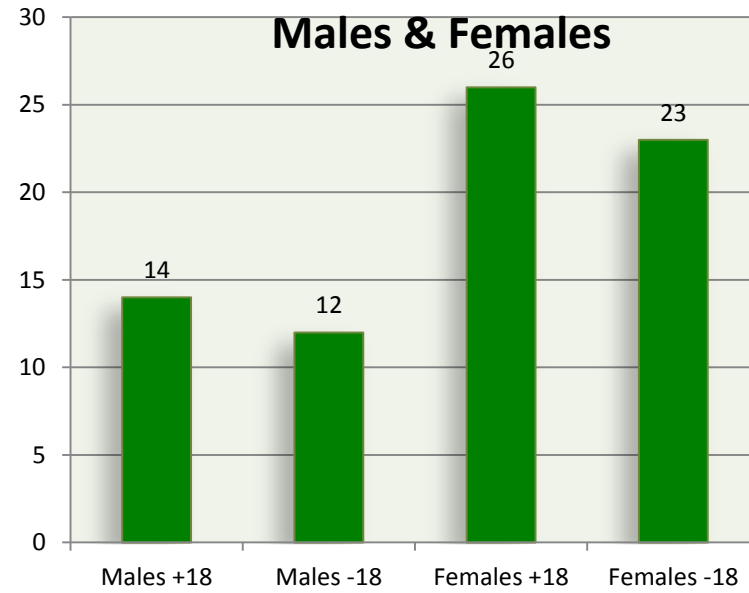
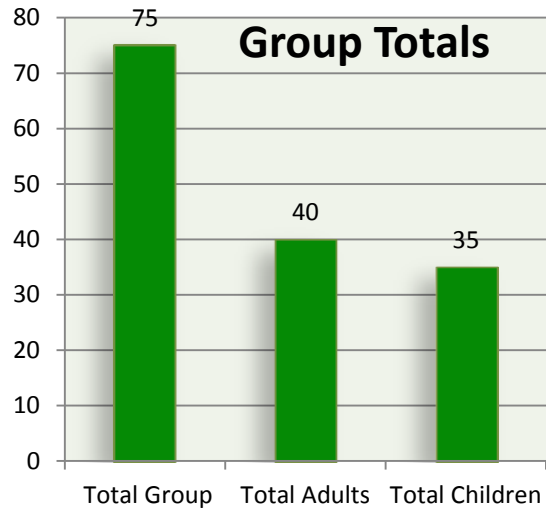
REELmcr invited all participants, funders and local Councillors to attend a 'Final group celebration session' and screening of their film project the 'GreenWave'. This is part of the reflection process and the aim was to show the final edit of the GreenWave during a less formal occasion, and to enable the group to discuss their person journeys and experiences with each other, representatives of the funding organisations and local Councillors.

Following the commitment and hard work of the group throughout the course of the project, this final session was a less formal event, and well attended considering the afternoon time slot, with a party like atmosphere.

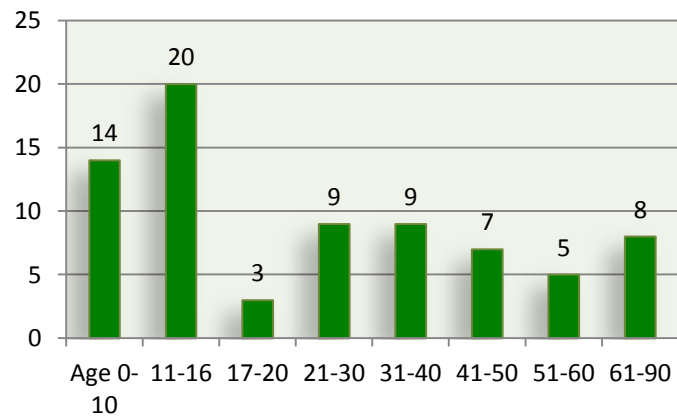
All participants had been invited to speak about their experience; however a couple of participants had been nominated to speak on-behalf of the whole group. The overall feeling was that the project had been an 'eye opener', in terms of climate related matters, and that meeting and working with other members of the local community, both young and old alike, had been a great experience, one that all would like to experience again.

A local Councillor gave her commitment to helping the group source funding to enable a sustainable group of residents to develop more local projects, with a focus on community inclusion. REELmcr have also offered to assist the group with setting up and will act as advisors for any independent group that is formed out of the original participants.

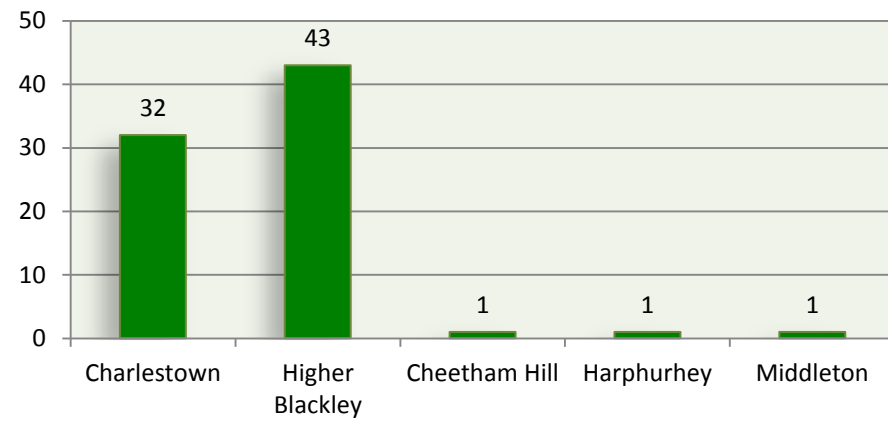
**Participants:**



### Age range

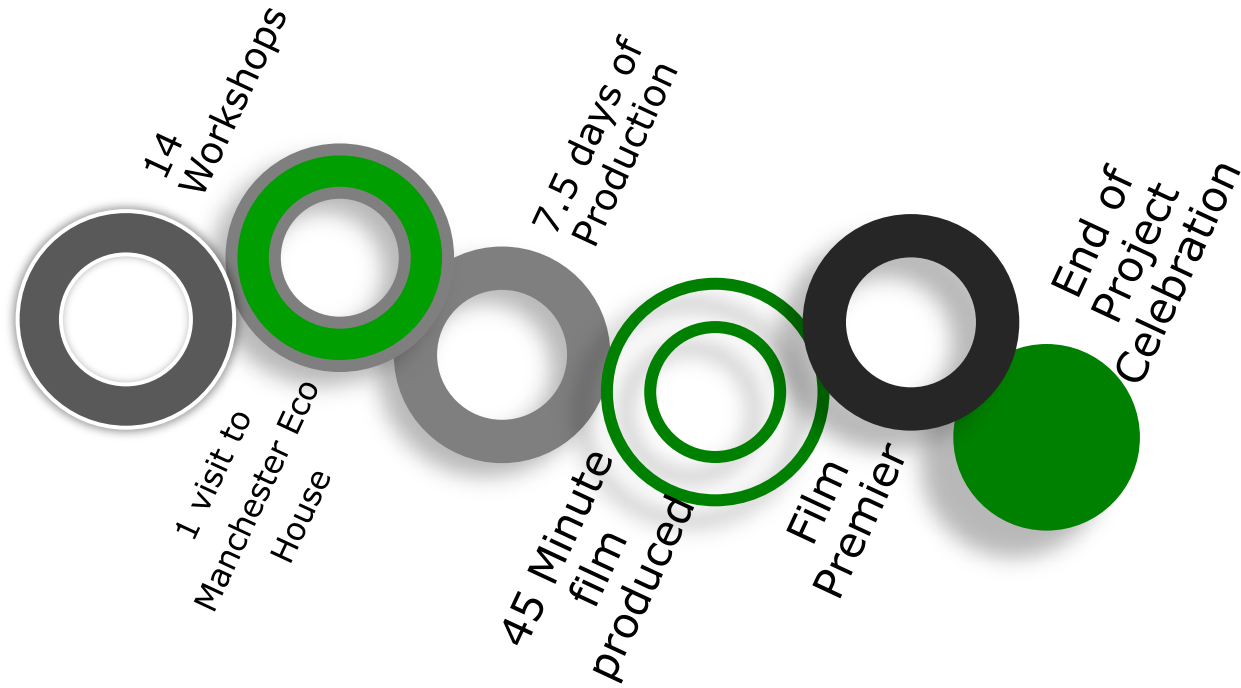


### Area



## Project Outputs

The project was a great success, well planned and delivered on time within the realistic timescales set and on budget.



### Expected outputs (achieved)

Improve the 'carbon literacy' of all participants

A change in individual participants' attitude and behaviour in relation to energy consumption

A reduction in the amount of domestic energy being consumed by participants

Assist participants to avoid fuel poverty

A 30-40 minute film based on the theme of climate change

A premier of the film produced

### Additional outputs (achieved)

Social cohesion

Intergenerational cohesion

Male adult involvement

Increased confidence in participants

### Evidence

Appendix, Questionnaires 1, 2 & 3

Appendix, Questionnaire 3, Q7

Unable to measure

Appendix, Questionnaire 1, Q10

Produced and available on DVD

Film Premier took place on 21<sup>st</sup> May 2010 at Manchester Town Hall and was attended by nearly 500 guests

### Evidence

Appendix, Questionnaire 3

Appendix, Questionnaire 3, Q5

14 Adult males took part

Appendix, Questionnaire 3, Q6

## Project findings

*"I can get anywhere I want to without having to jump in a car, and it's done wonders for me because I've lost half a stone as well!"*

### Project Participant

1. 75 local residents involved in making the 'GreenWave' film, including 49 adults and 26 young people.
2. 14 Adult males took part in the project. It is unusual for so many Men to take part in a voluntary activity.
3. 20 adults aged from 41 to 87 took part.
4. The project produced numerous case studies of personal journeys, such as one participant deciding to give up her car, this was brought about by the participants new found understanding of the impact that driving her car had on CO<sub>2</sub> levels.
5. The carbon footprint of the project has been calculated is **681.9kg**, the total footprint would have been marginally larger due to CO<sub>2</sub> emissions which were unable to be calculated due to information relating to some of the venues that held the workshops being unavailable, but even allowing for hundreds of kilograms of CO<sub>2</sub> from the indirect sources, this is still less than the offset produced by the car which was given up in the first year.
6. The film and 'Making of the GreenWave' has been produced and is available to stream at <http://www.reelmcr.co.uk/REELprojects/greenwave/>.
7. A DVD of the 'GreenWave' film drama and 'Making of the GreenWave' will be circulated around the CLASP network, relevant partners and 'Green Teams' representing the AGMA (Association of Greater Manchester Authorities).
8. This project has 'opened the doors' for other organisations to follow on with similar themes, e.g. climate change volunteering etc. Participants have been shown how to take their own action on carbon reduction.
9. There is potential for the project to be replicated and further developed as there is a complete process map in place that will allow future projects to run along the same lines.
10. REELmcr will be seeking future funding opportunities for similar work in Manchester, based upon this model.

11. The project received excellent press coverage throughout:
  - a. [http://menmedia.co.uk/manchestereveningnews/news/s/1240335\\_stars\\_turn\\_out\\_for\\_climate\\_change\\_film?rss=yes](http://menmedia.co.uk/manchestereveningnews/news/s/1240335_stars_turn_out_for_climate_change_film?rss=yes)
  - b. [http://menmedia.co.uk/manchestereveningnews/news/s/1241345\\_forget\\_red\\_carpet\\_filmstars\\_get\\_the\\_red\\_bus\\_treatment](http://menmedia.co.uk/manchestereveningnews/news/s/1241345_forget_red_carpet_filmstars_get_the_red_bus_treatment)
  - c. <http://manchesterclimatefortnightly.blogspot.com/2010/05/green-wave.html>
  - d. <http://insidethem60.journallocal.co.uk/2010/05/north-manchester-residents-stars-of-climate-change-film/>
  - e. <http://www.how-do.co.uk/north-west-media-news/north-west-broadcasting/locals-and-tv-stars-create-the-green-wave,-premiering-in-manchester-tomorrow-201005208147/>
  - f. <http://en4m.org.uk/?q=node/1871>
  - g. <http://manchesterclimatefortnightly.blogspot.com/2010/05/green-wave.html>  
[http://menmedia.co.uk/news/s/1240335\\_stars\\_turn\\_out\\_for\\_climate\\_change\\_film](http://menmedia.co.uk/news/s/1240335_stars_turn_out_for_climate_change_film)
12. A GreenWave Facebook site was been set up –  
<http://www.facebook.com/#!/group.php?gid=255174275809&ref=ts>
13. A YouTube film is available on the web -  
<http://www.youtube.com/watch?v=LU7ZubRZ4Ms>
14. The film is available to stream on the REELmcr website –  
<http://www.reelmcr.co.uk/REELprojects/greenwave/>

## Lessons Learnt

1. The project established a successful model of engaging communities in a project and using it as a tool to educate them about climate change and how they as individuals can make a difference, rather than trying to preach about the subject.
2. Keeping local members informed and on-board is highly beneficial.
3. Forward planning to identify potential Council restrictions is important. The election embargo affected when the film premiere could be held, which impacted on filming schedules and publicity opportunities.
4. Remaining flexible and looking out for additional opportunities. As the film was being shot it was decided a 'making of' the film would be an excellent addition to highlight the legacy of the project and to demonstrate the personal journeys of participants.
5. It was important to MCC and to the participants involved to shoot the film locally around the city, rather than going elsewhere in the country. This allowed the residents to showcase their local area and obviously helped minimise carbon emissions from travel.
6. As well as the participants learning how to reduce their carbon footprint, there were also many lessons learnt for REELmcr on how they could reduce their own emissions, which will be used on their future projects.
7. There was a need to be creative to minimise carbon emissions from the project whilst remaining within budget.
8. During the initial engagement period a number of the group were signed up to take part in the DEHEMS (Digital Environment Home Energy Management System) 'Living Labs' project <http://www.dehems.eu/> with the Manchester Digital Development Agency. However, due to unforeseen problems with availability of equipment and the progress of the project, the equipment was not installed and the DEHEMS project became more South Manchester focussed. The New Economy for Manchester Smarter Project will now be used to deliver this element of the project and to further enable key members of the group who will be trained to install the equipment and help to support others in their local area who will be engaged and signed up to this project.
9. Meter readings must be provided by community participants on a weekly basis.
10. Using the collected data will demonstrate a plus (+), minus (-) or static effect on energy related household bills as a direct result of the learning taken from the project.

## Conclusions

*"The project makes me aware of what releases a lot of energy and what wastes energy and what it costs and what we can do to get it lower."*

**Project Participant**

The project has been successful in engaging and enthusing a mixed group of community residents that stretches across four generations, as many older residents were involved in the project and this has had a significant impact in terms of prompting inter-generational respect in the communities of Higher Blackley and Charlestown.

This cohesive group has enjoyed taking part in the project, with each of the workshops being well attended, and given that some of these were run at the coldest time of the year, this has clearly demonstrated the level of commitment that participants had for the long-term success of the project.

The group's enthusiasm is transferable, as they are keen to engage with other agencies offering interesting project opportunities, a core focus of this interest stems from a wish for locally run, constructive past-time activities that can involve a broad age range from within the community.

Climate change is now regarded as of 'high importance' within the group and this is an area that can be further developed, with the providers of housing, waste management, energy providers, etc, all of which are in a position to capitalise and build on the group's current level of knowledge and experience.

Individual group members have also adopted a fresh attitude and responsibility in relation to their own energy usage, this is demonstrated through attitudes to temperature levels within the home being maintained between 18C -21C, turning off electric appliances when not in use, turning lights out when not in use, using energy saving light bulbs, etc. The group has also demonstrated a wish for further information in relation to energy saving or generating technologies and schemes.

The only shortfall that has been identified throughout the project, is the inability to measure the on-going energy usage of those participants that had volunteered to take part in the DEHAMS (Digital Environment Home Energy Management System) project. This would have shown the effect that the workshops had on the energy consumption of participants for a period of twelve months. This was out of the control of either MCC or REELmcr, and was due to Manchester Digital Development Agency, which is the agency running this EU funded project within the region, and supply problems, as they had not received the necessary technology in time to install prior to the project commencing or coming to an end.

Though it is recognised that the project has achieved a neutral CO<sub>2</sub> footprint, through the sale of a vehicle owned by a participant, this has made a significant impact on the overall figure, however this is not an outcome that can be either planned or built-in to similar future projects. To benefit any future projects of a similar nature, it is recommended that a process be put in place that can include the use of technology and the standard energy bills from participants. This will provide a method from which to take a base-line measurement, allowing all further measurements to be compared, so as to show the quantifiable effect of the learning at various stages throughout the project lifecycle.

We have had the opportunity to follow this project from its' start and have witnessed a change in those participants that have remained as a part of the core group. They have an enthusiasm that really needs to be developed by other agencies in the local area, as there is the opportunity to engage with a group from a demographic that historically, is difficult to reach.

*I feel the project focuses more on what people can do, not what people won't do."*

**Project Participant**

## **Carbon Footprint**

### **Abstract**

This audit has been designed to look at the Carbon Footprint of the GreenWave film project, suggest recommendations for future projects and draw conclusions about the practicality of carrying out such studies with the data which is currently easily accessible.

The project is comprised of three main parts:

1. The workshop stage, where 14 sessions were run over several months at 3 different venues in the local community.
2. The shooting stage, 7.5 days of filming at various locations around Manchester.
3. The production stage, where the raw footage was edited to produce the finished film.

### **Sources of CO<sub>2</sub>**

For the purposes of this audit, the sources of carbon dioxide are categorised into two main headings. The direct sources refer to CO<sub>2</sub> emissions which came about as a direct result of the project taking place. The indirect sources are somewhat harder to quantify and involve emissions which would have occurred independently of the project but which the project is involved in by way of association. An example of an indirect emission is the CO<sub>2</sub> produced by transporting food to the shop from which it was bought for use in the project. Due to the considerable time and complexity in tracing back emissions over several generations of transportation and manufacture of the products with which they are associated with, only the existence of these emissions has been noted rather than actually calculating values for them.

Direct:

- Transport
- Electricity usage (powered equipment etc.)

Indirect:

- Consumables (tapes and other materials which were not manufactured/transported specifically for the project)
- Site energy usage (buildings already heated, lit between hours which project used)
- Food not prepared specifically for project

## Transport emissions

Arguably the single largest direct contributor to the carbon footprint of the project, the transport used to get people and equipment around was where it was decided to start when calculating the emissions for the project. For the first 3 weeks of the project, all travel was made using cars, as funders had determined that a minibus would not be required and had not budgeted the project accordingly. When it became apparent to REELmcr staff that a minibus would be vastly more efficient, the case was again made for the use of one and from the 4th week a minibus was available for both staff and participant use.

As registers were available for all the workshop sessions and shooting days, the calculation involved looking at which method of transport people had used to travel and the distance they had travelled. For some participants, who were being dropped off and collected by car, the actual mileage was twice as large as those who drove themselves. The calculation of CO<sub>2</sub> emissions based on mileage was done using DEFRA's 2008 GHG Conversion Factors. The results of these calculations are shown below.

### Workshops

<b>Sum (kg CO2)</b>	<b>424.1146978</b>	<b>Minibus Avg (kg CO2 pp)</b>	<b>Cars Avg (kg CO2 pp)</b>	<b>Bus Avg (kg CO2 pp)</b>
		<b>1.374212</b>	<b>1.889336</b>	<b>0.61279301</b>

### Shooting

<b>Sum (kg CO2)</b>	<b>234.3848</b>	<b>Minibus Avg (kg CO2 pp)</b>	<b>Cars Avg (kg CO2 pp)</b>
		<b>0.659659</b>	<b>4.781063</b>

### Project Sum and Averages

<b>Transport Sum for project (kg CO2)</b>	<b>Project Minibus Avg (kg CO2 pp)</b>	<b>Project Cars Avg (kg CO2 pp)</b>	<b>Project Bus Avg (kg CO2 pp)</b>
<b>658.4995</b>	<b>1.016936</b>	<b>3.335199</b>	<b>0.612793</b>

### Breakdown of Transport emissions

	<b>Minibus Total (kg CO2)</b>	<b>Cars Total (kg CO2)</b>	<b>Bus Total (kg CO2)</b>
	<b>133.7963</b>	<b>515.5734</b>	<b>9.1297878</b>
<b>% of total emissions</b>	<b>20.31836</b>	<b>78.29518</b>	<b>1.386453267</b>

Although it was an expected result, the amount to which the cars produced more CO<sub>2</sub> than the other transportation methods is still astonishing. Had the minibus not been used, it is likely that emissions would have more than doubled.

The bus is clearly the most efficient way of travelling, producing only ~0.61 kg of CO<sub>2</sub> per person. It is a shame that only a handful of participants actually used the bus, a possible way to increase bus usage would be to publicise the routes which went through the local area and the workshop locations. In co-ordination with the operators it may have been possible to arrange a pass for the duration of the project which meant that participants could travel for a decreased fare. Not only would this save the participants money on fuel, it would also make the bus even more efficient as more people used it.

Another way to reduce the emissions from vehicles would have been an increased number of people sharing cars. Although car sharing amongst REELmcr staff was quite good, it was much poorer for the participants of the workshops. Often people would be travelling from the same postcode in separate cars to arrive at the same destination. A car-share rotor could have been drawn up at one of the initial workshops; this would have improved the per-person emissions of the cars.

### Electricity usage

During the shooting and editing processes, the main source of emissions was the electricity consumed by the equipment used. Although the buildings used were heated and lit, these were public buildings and were not opened specifically for REELmcr's use, therefore I have not included these emissions in the calculations. However, efforts were made to lower these emissions wherever possible; I will cover this in more detail later in this report. The main equipment used for the filming was a Sony HVR-Z1U camcorder. Film was shot on DV camcorder cassettes, which were sourced locally from SK tapes in Wythenshawe. Two computers were used to edit the raw footage and create the finished film. These were an apple MacBook Pro and a Power Mac G5. CO<sub>2</sub> emissions were calculated using a UK average figure for electricity taken from the national grid. The

charger for the camera batteries was assumed to be 90% efficient based on research into chargers of a similar nature, as a more accurate value for the energy lost during charging could not be obtained.

	<b>Camcorder</b>	<b>MacBook Pro</b>	<b>Power Mac G5</b>
kg CO2	0.19978728	3.081135	20.10846
% of total	0.854179378	13.17322092	85.9725997

<b>Filming &amp; Editing total kg CO2</b>	<b>23.3893823</b>
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The CO<sub>2</sub> produced by using the equipment is a small but significant contribution to the overall carbon footprint of the project. During the editing process, the energy usage was reduced by having three fifths of the editing take place on the less powerful MacBook Pro. The footage was compressed for this editing then decompressed for the final full-quality editing on the Power Mac G5.

### **Offsetting the footprint**

Throughout the project, an effort was made to reduce the carbon footprint. While it was not always possible to work out how much of an offset a particular practise had made in terms of kg of CO<sub>2</sub>, I will try to list all the ways in which these efforts were made. On location, all accessible light fittings had their bulbs replaced by energy efficient bulbs of the equivalent types whilst shooting took place. For a standard 100W light bulb, the energy efficient counterpart consumes 23-30W meaning that 70-77% less electricity is required to power the bulb.

A 40-inch 5-in-1 reflector was also used to light areas of shot using available light without the need to bring in any additional lighting. This meant that in some cases actors could be lit using the sunlight without any electrical lighting in use at all.

All the food used was sourced from a local retailer in Longsight, any packaging was recycled. Although initially plastic cups were used for the workshops, with the intent of re-use, it soon became apparent that the cups would not stand up to the rigours of use and washing for long, so several ceramic mugs were bought for the use of REELmcr, to be re-used indefinitely throughout the GreenWave and other filming projects.

Perhaps the most significant offset came about as a result of one of the participant's decision to give up the use of her car and sell it after taking part in the project. The car in question was a Fiat Punto, travelling approximately 5000 miles each year. This means that every year after the project, the individual will be reducing their carbon footprint by around 1094kg, or just over a metric tonne. This is a significant reduction and one of the very positive outcomes of the project.

### **Conclusion**

From the outset the project was designed to get all participants thinking about their own impact on the environment and how they could minimise it. As part of this, a visit to the Manchester's Eco House was organised for the film cast and crew. A pre-1930s terrace, the Eco House has been retro-fitted with a wide variety of insulation and renewable energy systems.

As for the carbon footprint, the amount of CO<sub>2</sub> calculated in this report was **681.9kg**, the total footprint is larger due to CO<sub>2</sub> emissions which were not calculated but even allowing for hundreds of kilograms of CO<sub>2</sub> from the indirect sources, this is still less than the offset produced by the car which was given up *in the first year*. If a project like this can change people's minds in this way, it has been successful.

As a note, the job of auditing was made quite difficult by not knowing how much energy certain buildings were using, even though in this instance it was an indirect source of CO<sub>2</sub> it would still be useful if these figures were compiled in a central database when energy assessments of buildings are carried out.

*"I felt the GreenWave film was a fantastic opportunity that brought together a whole community in the production of a key message, about the need to change our wasteful habits in order to conserve energy and help save the planet.*

*The film cast and crew came to the Manchester Eco House to film a small section. What was hugely apparent during their visit was the enormous enthusiasm of all those involved, the excitement, the patience, the professionalism, the commitment and mostly the thorough enjoyment.*

*Seeing the film was amazing, it was so professional and I am sure will be watched by many, which in turn will raise awareness of a very important green issue and what we can all do to save energy."*

**Diana Clayton, Energy Efficiency Officer for Manchester City Council**

## REFERENCES

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Appendix:

The **GreenWave**

Film Project Questionnaire Results

## Contents

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Questionnaire 1 .....	Asks questions about participants attitudes to the Climate Change and energy efficiency	iii - vi
Questionnaire 2 .....	Asks questions about participants attitudes to renewable energy and technologies	vii - xii
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## Introduction

The following three questionnaires were completed by a core group of 36 adult (over 18 years of age) project participants, 15 men and 21 women, during face to face interviews, video interviews and individually with and without assistance. Questionnaire 1 was the main set of questions that has been used at the start of the project and is used as the base data, the mid-point stage and the end of the project. The Questionnaires 2 & 3 were completed at the end of the project.

Participants were informed that their answers would be used in the evaluation of the project but would remain anonymous.

*\*All questions are numbered, with all answers alphabetically listed for ease of reference.*

## Questionnaire 1

The following key is used to indicate the stage that the answers were given during the project: % = project start % = mid project % = end of project

### 1. As far as you know, do you personally think the climate is changing, or not? This is sometimes referred to as 'Global Warming'.

(Please tick one only)

	Stage in project	Start	Mid	End
a.	Yes	86.5	91.6	100
b.	No	4.5	8.4	0
c.	Don't Know	9	0	0

IF YOU HAVE ANSWERED NO, PLEASE GO TO QUESTION 3

### 2. Thinking about the causes of climate change, which of the following best describes your opinion?

	(Please tick one only) Stage in project	Start	Mid	End
a.	Mainly caused by natural processes	5.5	7	0
b.	Partly caused by natural processes and partly caused by human activity	37.8	46.5	60
c.	Mainly caused by human activity	37.8	46.5	40
d.	Don't Know	18.7	0	0

### 3. How concerned, if at all, are you about climate change?

(Please tick one only)

	Stage in project	Start	Mid	End
a.	Very concerned	25	29	58.3
b.	Fairly concerned	40	71	41.6
c.	Not very concerned	15		
d.	Not at all concerned			
e.	Don't know	20		
f.	No opinion			

**4. To what extent do you agree or disagree with each of the following statements about climate change?**

Please tick one box for each of questions (a) to (h)

	% = project start % = mid project % = end of project	Strongly agree			Tend to agree			Neither agree nor disagree			Tend to disagree			Strongly disagree			No opinion/ Don't know	
a.	a) There are risks to people in Britain from climate change	26	31	44.4	63	50	33.8	11	19	16.2								
b.	b) There are benefits to people in Britain from climate change		7		12.5	33	11.1	25	13	25	19	40	38.9	37.5	7	25	6	
c.	c) I have mixed feelings about climate change	29	19	19.4	41	38		24	31	27.7		6	16.6	6	6	36.1		
d.	d) I have strong opinions about climate change	6	19	33.3	53	19	30.5	29	56	27.7	6		5.6	6	6	2.8		
e.	e) My emotions relating to climate change are quite strong.	7	15	11.1	27	39	61.1	40	15	16.7	13	31	8.3			2.8	13	
f.	f) I trust the British Government to adequately tackle climate change	20	14	11.1	10	7	13.9	15		19.4	25	43	11.1	20	36	44.4	10	
g.	g) The seriousness of climate change is exaggerated in the media	18	19	8.3	23	25	50	18	13	27.7	29	25	8.3		13	5.6	12	5
h.	h) Most scientists agree that humans are causing climate change	35	13.5	41.7	41	40	19.4	6	13.5	19.4	18	33	11.1			8.3		

**5. To what extent do you agree or disagree with each of the following statements about climate change?**

Please tick one box for each of questions (a) to (g)

	% = project start % = mid project % = end of project	Strongly agree			Tend to agree			Neither agree nor disagree			Tend to disagree			Strongly disagree			No opinion/ Don't know	
a.	a) I can help to reduce climate change by changing my behaviour,	40	50	61.1	10	40	38.9	10	10		40						8	
b.	b) There are a variety of external factors that make it difficult for me to undertake behaviours that help to reduce climate change.	15	8	38.9	31	50	19.4	23	25	22.2	23	8			8	19.4		
c.	c) The way that society is structured means it is hard to undertake behaviours that help to reduce climate change.	7	31	38.9	33	37	38.9	40	12.5	8.3	40	12.5			6	13.9		
d.	d) I personally feel that I can make a difference with regard to climate change	8	29	41.7	38.5	36	38.9	15	29	19.4	15	29						
e.	e) I feel a sense of urgency in changing my behaviour to be more sustainable	8	29	38.9	76	50	27.8	8	7	22.2	8	7				11.1		
f.	f) I feel a sense of obligation to do whatever I can to prevent climate change	9	21	41.7	73	58	30.5	9	21	27.8	9							
g.	g) I think that climate change is likely to be a serious problem for Britain	31	43	50	44	36	30.5	12.5	14	19.4	12.5	7						

**6. When do you think Britain will start feeling the effects of climate change?**

*(Please tick one only)*

	Stage in project	Start	Mid	End
a.	We are already feeling the effects	33	54	80.5
b.	In the next 10 years	33	31	11.1
c.	In the next 25 years	13	8	8.3
d.	In the next 50 years	7	8	
e.	In the next 100 years			
f.	Beyond the next 100 years	13		
g.	Never			
h.	Don't know			

**7. Do you think that climate change will mostly affect areas in the world that are local to you or distant to you?**

*(Please tick one only)*

	Stage in project	Start	Mid	End
a.	Almost wholly local	11	7	30.5
b.	Mostly local		7	52.8
c.	Equally local and distant	72	67	8.3
d.	Mostly distant	11	20	8.3
e.	Almost wholly distant			
f.	Don't know	6		

**8. Please tick one box only for question (a) and (b)**

		Very negative			Fairly negative			Neither negative nor positive			Fairly positive			Very positive			No opinion/ don't know		
		% = project start % = mid project % = end of project																	
a.	a) How do you think that your friends and family feel about climate change?	19	7		37	43	19.4	19	29	30.5	19	14	30.5		7	19.4	6		
b.	b) How do you think most other people in British society feel about climate change?	13	8		33	62	27.8	27	31	44.4	20		27.8				7		

**9. Overall, how do you feel about how climate change is being handled?**

	Stage in project	Start	Mid	End
<i>a.</i>	Very positive	11	33.3	50
<i>b.</i>	Fairly positive	22	19.4	16.2
<i>c.</i>	Neither positive nor negative	33	25	19.4
<i>d.</i>	Fairly negative	28	13.9	2.8
<i>e.</i>	Very negative	6	8.4	11.1
<i>f.</i>	Don't know			

**10. Do you try to save energy in your home by the following?**

*(Please tick as many as apply)*

	Stage in project	Start	Mid	End
<i>a.</i>	Turning off electric appliances when not in use	30	70	100
<i>b.</i>	Turn lights out when not in use	6	90	100
<i>c.</i>	Use full loads with dishwasher/washing machine	50	70	70
<i>d.</i>	Showers instead of baths when possible	50	70	100
<i>e.</i>	Use energy saving light bulbs	30	90	100
<i>f.</i>	Keep temperatures at home between 18C – 21C	50	80	100
<i>g.</i>	Buy energy efficient appliances	20	30	70
<i>h.</i>	Dry clothes naturally rather than use a tumble drier	60	100	100
<i>i.</i>	Other, please specify			

## Questionnaire 2 – End of Project

### 1. Would you consider supporting or investing in a community-owned renewable energy project in your area

<i>a.</i>	<i>b.</i>	<i>c.</i>
Yes – <b>50%</b>	No –	Don't know – <b>30%</b>

### 2. Do you think energy efficient home appliances, like fridges and washing machines are a good way to reduce CO2 emissions?

<i>a.</i>	<i>b.</i>	<i>c.</i>
Yes – <b>80%</b>	No – <b>10%</b>	Don't know – <b>10%</b>

### 3. Do you feel that you need more information about renewable energy options?

<i>a.</i>	<i>b.</i>	<i>c.</i>
Yes – <b>70%</b>	No – <b>30%</b>	Don't know –

### 4. Do you agree with the following statements

	<i>a.</i>	<i>b.</i>	<i>c.</i>
	Agree	Disagree	Unsure
Energy saving measures only make sense if payback is less than 10 years	<b>60%</b>	<b>30%</b>	<b>10%</b>
Climate change should be a priority in every town	<b>100%</b>		
Climate change is best tackled at community level	<b>80%</b>	<b>10%</b>	<b>10%</b>

**5. What is your opinion on the following forms of renewable energy sources and energy systems?**

		Support	Oppose	No opinion
<i>a.</i>	Wind energy	<b>100%</b>		
<i>b.</i>	Solar Thermal (hot water)	<b>100%</b>		
<i>c.</i>	Solar PV (electricity)	<b>100%</b>		
<i>d.</i>	Hydro	<b>90%</b>		<b>10%</b>
<i>e.</i>	Tidal power	<b>90%</b>		<b>10%</b>
<i>f.</i>	Nuclear power (fission as currently generating)	<b>60%</b>	<b>30%</b>	<b>10%</b>
<i>g.</i>	Nuclear power (fusion, still in development)	<b>50%</b>	<b>30%</b>	<b>20%</b>
<i>h.</i>	Biomass plant (energy from wood)	<b>90%</b>	<b>10%</b>	
<i>i.</i>	Waste incineration (waste to energy)	<b>100%</b>		
<i>j.</i>	Geothermal power	<b>100%</b>		
<i>k.</i>	Combined Heat and Power System	<b>100%</b>		
<i>l.</i>	District Heating System	<b>90%</b>		
<i>m.</i>	Other (please specify)			

**6. Do you have or would you install the following technologies into your home?**

Tick all that apply.

	<b>Energy Efficiency Technology</b>	Already have	Like to install	Not Interested	Don't Know
<i>a.</i>	Double-glazing (low u-value glazing)	<b>90%</b>	<b>10%</b>		
<i>b.</i>	Loft insulation	<b>100%</b>			
<i>c.</i>	Cavity wall insulation	<b>80%</b>	<b>20%</b>		
<i>d.</i>	Solid wall insulation	<b>70%</b>	<b>30%</b>		
<i>e.</i>	Energy saver light bulbs	<b>100%</b>			
<i>f.</i>	'A' Rated appliances	<b>70%</b>	<b>30%</b>		
<i>g.</i>	Thermostatic controls	<b>70%</b>	<b>30%</b>		
	<b>Alternative Energy Sources</b>	Already have	Like to install	Not Interested	Don't Know
<i>h.</i>	Solar electric PV panels		<b>80%</b>		<b>20%</b>
<i>i.</i>	Solar water heating		<b>80%</b>	<b>10%</b>	<b>10%</b>
<i>j.</i>	Small wind turbine		<b>10%</b>	<b>60%</b>	<b>30%</b>
<i>k.</i>	Small scale hydro			<b>20%</b>	<b>80%</b>
<i>l.</i>	Ground source heat pumps		<b>10%</b>	<b>20%</b>	<b>70%</b>
<i>m.</i>	Wood fired boiler system		<b>5%</b>	<b>35%</b>	<b>60%</b>
<i>n.</i>	Wood pellet stoves		<b>40%</b>	<b>20%</b>	<b>40%</b>
<i>o.</i>	Other energy saving / source (please specify)				

**7. Is there anything stopping you installing the above options on your property?**

Please tick all that apply

		Agree	Disagree	Don't know
<i>a.</i>	I am a tenant	<b>100%</b>		
<i>b.</i>	Planning regulations	<b>50%</b>		<b>50%</b>
<i>c.</i>	They are unattractive	<b>10%</b>	<b>60%</b>	<b>30%</b>
<i>d.</i>	I think that installations would be too expensive	<b>75%</b>	<b>5%</b>	<b>20%</b>
<i>e.</i>	They would not produce enough energy for my home	<b>10%</b>	<b>50%</b>	<b>40%</b>
<i>f.</i>	My current supply of energy is adequate	<b>10%</b>	<b>80%</b>	<b>10%</b>
<i>g.</i>	I don't understand how they work	<b>85%</b>	<b>5%</b>	<b>10%</b>
<i>h.</i>	Other, please specify			

**8. Are you aware of any grants available to help you install Renewable Energy or Energy Efficient Technologies?**

<i>a.</i>	<i>b.</i>	<i>c.</i>
Yes - <b>50%</b>	No - <b>50%</b>	Don't know -

**9. When buying or renting a home would you be more likely to choose one with renewable energy installations?**

<i>a.</i>	<i>b.</i>	<i>c.</i>
Yes - <b>75%</b>	No - <b>25%</b>	Don't know -

**10. What type of fuel do you use for heating your home?**

Please tick as many as apply

<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>	<i>e.</i>	<i>f.</i>	<i>g.</i>
Gas – <b>50%</b>	Oil	Electricity – <b>50%</b>	Coal	Wood / biomass	Other (please specify)	Don't know

**11. Please circle the type of property you live in.**

<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>	<i>e.</i>
Detached	Semi-detached	Terrace	Flat	Don't know
<b>30%</b>	<b>30%</b>	<b>25%</b>	<b>5%</b>	

**12. What is your property built from?**

<i>a.</i>	<i>b.</i>	<i>c.</i>	<i>d.</i>	<i>e.</i>	<i>f.</i>	<i>g.</i>
Brick (cavity wall)	Brick (solid wall)	Solid stone	Concrete	Timber frame (exposed)	Other (please specify)	Don't know
<b>50%</b>	<b>30%</b>					<b>20%</b>

**13. How many times a week do you make short journeys (3 miles or less) by car?**

<i>a.</i>	<i>b.</i>	<i>c.</i>
0-4 times	4-7 times	8 or more times
<b>50%</b>	<b>40%</b>	<b>10%</b>

**14. How many times a week do you make short journeys (3 miles or less) on foot?**

<i>a.</i>	<i>b.</i>	<i>c.</i>
0-4 times	4-7 times	8 or more times
<b>50%</b>	<b>40%</b>	<b>10%</b>

**15. How many times a week do you make short journeys (3 miles or less) by bicycle?**

<i>a.</i>	<i>b.</i>	<i>c.</i>
0-4 times?	4-7 times	8 or more times
<b>80%</b>	<b>10%</b>	<b>10%</b>

**16. Do you have a bicycle you could use instead of your car?**

<i>a.</i>	<i>b.</i>
Yes – <b>30%</b>	No – <b>70%</b>

**17. Do you know how to ride a bicycle?**

<i>a.</i>	<i>b.</i>
Yes – <b>90%</b>	No – <b>10%</b>

**18. Thinking about cycling: If you have a bike, what stops you from cycling more often for short journeys?**

	<i>a.</i>	<i>b.</i>	<i>c.</i>
	Strongly Disagree	Strongly Agree	Don't know
I don't like being exposed to bad weather	<b>80%</b>	<b>20%</b>	
I don't feel safe	<b>70%</b>	<b>30%</b>	
I can't carry everything I need	<b>60%</b>	<b>40%</b>	
I can't get about quickly enough	<b>90%</b>	<b>10%</b>	

**19. Thinking about walking: What stops you from walking more often for short journeys?**

	<i>a.</i>	<i>b.</i>	<i>c.</i>
	Strongly Disagree	Strongly Agree	Don't know
I don't like being exposed to bad weather	<b>80%</b>	<b>20%</b>	
I don't feel safe	<b>40%</b>	<b>60%</b>	
I can't carry everything I need	<b>20%</b>	<b>80%</b>	
I can't get about quickly enough	<b>60%</b>	<b>40%</b>	

### Questionnaire 3: (End of Project) Please answer using where 0 = 'not at all' and 10 = 'definitely'

1. Have you enjoyed the project?

0	1	2	3	4	5	6	7	8	9	10
								5.6%	11.1%	83.3%
	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.

2. Has it made you feel more a part of your community?

0	1	2	3	4	5	6	7	8	9	10
	2.3%		8.3%	8.3%	13.9%	11.1%	5.6%	16.7%	33.3%	
	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.

3. Has it made you feel any differently about your community

0	1	2	3	4	5	6	7	8	9	10
						13.9%	27.8%	30.5%	27.8%	
	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.

4. Do you think it has been successful in bringing people together from different backgrounds?

0	1	2	3	4	5	6	7	8	9	10
									13.9	86.1%
	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.

5. Has it made you think differently about younger/older people?

0	1	2	3	4	5	6	7	8	9	10
			5.6%			22.2%	8.3%	25%	38.9%	
	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.

6. Has being part of the drama group improved your confidence?

0	1	2	3	4	5	6	7	8	9	10
				19.4%		16.7%	13.9%	16.7%	33.3%	
	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.

7. Has the project made any difference to the way you think about CO2 emissions and Global Warming?

0	1	2	3	4	5	6	7	8	9	10
	2.8%								19.4%	77.8%
	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.

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