Be gas safe in Moseley project final evaluation report

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1.0 Introduction

1.1. The Gas Safe in Moseley project was delivered by Moseley Community Development Trust between April 2012 and April 2013. The principal project partners were Rachel Gillies, community film-maker, and Sandra Taylor, independent creative facilitator. The project was funded by a grant from the Gas Safety Trust.

2.0 Executive summary

2.1. Gas Safe in Moseley succeeded in training community workers and raising awareness among parents and children at four schools in Moseley, Birmingham. The project also achieved educational outcomes for the children taking part. Moseley and its surrounding areas are at some risk of gas safety due to the following factors:
   - An ageing population
   - A concentration of privately rented housing
   - A population of ageing gas appliances, exacerbated by low incomes in some areas

2.2. The main activity of the project was the production of a gas safety video by children at Park Hill School, working with local creative professionals. DVDs of the film were distributed to families at four schools, and via Youtube. A quiz was conducted among parents at the school to test their awareness of gas safety and their reactions to the film.

2.3. We found that there is a high spontaneous awareness of gas safety among the majority of parents and carers. However there is a persistent minority of people who have lower awareness and who may be less able to identify risks such as lack of ventilation or incomplete combustion. This group seems to be geographically concentrated in the less affluent areas in and around Moseley.

2.4. The film did raise awareness among those parents who had seen it, and brought the issue of gas safety more to the front of their minds than previously.

2.5. There is a continuing need to raise awareness of gas safety at a community level. The film is a good way of engaging people and the quiz is a good way of interacting. In future projects we need to continue to identify the minority of people who have lower awareness, and use intelligence to identify areas where there is a risk of poor-quality private sector housing. This could be in Moseley or other at-risk areas of Birmingham. In Moseley we need to engage younger people in privately rented accommodation.

2.6. The key message of this campaign, namely “Get them checked, keep them safe” should be continued in future work, and supplemented with messages such as “gas appliances need air”.
3.0 The purpose of the project

3.1. The purpose of the project was to raise awareness and educate local residents about the dangers of carbon monoxide and introduce gas safety practices in their homes.

3.2. The aim of the project was to reach the most vulnerable in our community and educate them about gas safety through:
   3.3. training of Green Doctors and other community workers in gas safety
   3.4. Supporting children to teach their parents, siblings and extended families where appropriate about gas safety.
   3.5. The focus of the project was on raising awareness of the danger posed by carbon monoxide (CO) poisoning in people's homes as a result of faulty gas appliances and flues. The key message is that people should get their gas appliances checked annually by a Gas-Safe registered engineer. Accompanying this message are other messages such as what gas appliances need to work safely, how to identify an appliance that might be faulty, understanding the medical impacts of carbon monoxide poisoning, and what to do in the event of a gas emergency.

4. The context for our work

4.1. What is the gas safety baseline in Moseley?

4.2 There is no dataset that gives us a straightforward baseline for gas safety in Moseley. What we must do is identify the risk factors involved in gas safety and build a picture of how these apply to Moseley. Here are some of the main risk factors involved in gas safety:

- A person aged 70 or over is five times more likely to be fatally injured in a CO incident than a younger person
- The risk of a CO incident happening in a property with a private landlord is 50% higher than in an owner-occupied property or a social landlord property, although this risk has tended to reduce in recent years
- Central heating appliances have been involved in more than two-thirds of reportable CO incidents between 1996 and 2010, CO incidents can happen in both condensing and non-condensing boilers
- Almost 50% of incidents reported involve older central heating boilers (aged 21 years or over)
- Appliances connected to individual open flue systems have typically been involved in 70-
80% of all CO incidents investigated.

- The risk of a CO incident is highest in areas of highest population density, e.g. Greater London and the West Midlands. ¹

4.3 These factors mean that the Gas Safety Trust recommend that the focus of gas safety work should be on:

- older gas users
- the responsibilities of the private landlord
- the age of central heating boilers remaining in use
- an ongoing surveillance of unregistered gas operatives.

4.4 Using these risk factors, we can partially identify a gas safety baseline for Moseley:

4.4.1. Moseley and Kings Heath ward had 9.7% of people aged 70 and over according to the 2001 Census. This compares to 10.6% for Birmingham and 11.5% for England as a whole. This means that Moseley's elderly population is comparable to although slightly below the national average, but still significant. The early results of the 2011 Census show an increase in the number of people aged 90 and over in Birmingham by 18.5%², which we can assume also applies to Moseley and Kings Heath ward. This is part of a national trend.³

4.4.2. The 2001 Census does not contain a breakdown by tenure for Moseley and Kings Heath so we do not have information on the numbers of people living in private rented homes. The 2001 Census does say that in Birmingham as a whole, 7.84% of the population live in privately rented homes and nationally, 8.8 per cent. Anecdotally, Moseley is renowned as an area with a large private rented sector, and in the north of Moseley there is a concentration of low-income private rented households.

4.4.3 Birmingham City Council’s Private Sector Housing Strategy 2008+ shows that Moseley and Kings Heath has a relatively high concentration of private rented property, following the main private sector hotspots in the City Centre, in the north-west of the city, and in Bournbrook. Most of these properties are 1 and 2 bed flats - i.e. houses in multiple occupation.

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¹ Gas Safety Trust, Carbon Monoxide Trends Report - 1996 to 2010
The private rented sector in Moseley and Kings Heath does not include a high percentage of student households compared to areas such as Bournbrook. This suggests that the private rented sector is occupied by young professionals and smaller low-income households which may include single adults and older people.
Moseley and Kings Heath is not identified as an HMO risk area, unlike Hagley Road, Bournbrook, Stirchley, Selly Oak and others, although the map shows that there is a concentration of HMOs in Moseley and Kings Heath and parts of neighbouring Sparkbrook.
There are, however, a number of asylum seeker households in Moseley and Kings Heath:
There is evidence of concern about vulnerable households in non-decent properties in parts of Moseley and Kings Heath and adjacent neighbourhoods such as Sparkbrook:
Overall, the Moseley and Kings Heath ward is low in absolute numbers of vulnerable households in non-decent properties - whereas neighbouring Sparkbrook, where some families attending Moseley schools live, is high.
4.5 A dataset from the Energy Saving Trust for Kings Heath Transition Initiative in 2011 shows that most homes in Moseley and Kings Heath ward use mains gas as their central heating fuel, and that approximately half of homes surveyed have gas condensing boilers, which means that their boilers are likely to have been installed since April 2005 when the building regulations changed to make gas condensing boilers mandatory in most circumstances. In neighbouring Springfield ward, which also has gas central heating as the primary source of heating, has only one-third of homes with a condensing boiler in the dataset. Approximately half of homes questioned in Sparkbrook have gas condensing boilers.

4.6 This dataset suggests that the boiler population of Moseley and Kings Heath has a similar or better age profile than neighbouring wards. The caveat to this dataset is that it is based on those who have completed Home Energy Checks for the Energy Saving Trust. As such it has a bias towards households that have installed or are more likely to install energy-saving measures including new gas condensing boilers and are therefore not representative of the population. This suggests that the actual population of new condensing boilers in Moseley and Kings Heath is significantly less than half, although the relative population is still consistent with or higher than neighbouring wards. Anecdotally the population of older boilers is expected to be higher in the poorer north of the Ward; and in the low-income private rented and owner-occupied sector, with social housing providers such as Moseley and District having a more modern boiler population due to the Decent Homes Standard.
4.7 We do not have any kind of baseline on whether or not unregistered gas operatives are active in Moseley and Kings Heath.

5.0 What has the project achieved?

5.1 Workshops

5.1.1 We have delivered nine workshops with pupils at Park Hill School. The outputs of the workshop have been the design of a gas safety film and associated logo. The methodology used to evaluate the workshops was a drawing of a house divided into rooms. The children were invited to sort their ideas using the rooms of the house, as follows:

- Garden = ideas
- Library = learning
- Lounge = enjoyment
- Games room = fun
- Toilet = things to be discarded
- Attic = any questions
- Bedroom = things that are sleep-inducing.

Transcripts of the post-workshop evaluations are reproduced below in Appendix 1. The key outcomes that were met through the workshops are as follows:

<table>
<thead>
<tr>
<th>Learning through play</th>
<th>Drama/performance skills including acting and role play</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-operative learning skills such as learning about each other</td>
<td>Arts and craft skills</td>
</tr>
<tr>
<td>Design skills e.g. logo, poster, film</td>
<td>Science skills e.g. states of matter</td>
</tr>
<tr>
<td>Film-making including operating equipment and working as a team</td>
<td>Scriptwriting</td>
</tr>
<tr>
<td>Story-telling and learning through stories</td>
<td>Peer-to-peer appraisal</td>
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<tr>
<td>Patience</td>
<td>Compromise</td>
</tr>
<tr>
<td>Carbon monoxide as the Silent Killer</td>
<td>Symptoms of CO poisoning</td>
</tr>
<tr>
<td>Rogue gas engineers</td>
<td>Young people thinking individually about gas safety in the home &amp; following it up with parents</td>
</tr>
</tbody>
</table>

Comments made by some of the children in short peer-to-peer video interviews include:

5 We know that many homes in Moseley do not have a garden, a games room or a study.
Never cover up any vents in your house.

There are many symptoms of CO poisoning and it can kill you.

Found acting challenging because got script last minute and hard to remember words, we should have been given script earlier.

Enjoyed doing the sound, using the microphone.

Making the film requires skill and you’ve got to be very concentrated.

I could tell lots of people about gas safety and maybe they will be saved.

We all had to put ideas into the animation.

It was really good in the camera crew because you got to tell people what to do, you got to work independently and as a team.

Acting was quite challenging.

Directing was really fun, I got to shout actions.

Putting up the tripod was hard but it was explained simply.

Writing the script was one of the best things because you got to write all your ideas down.
5.2 Monoxide Mole gas safety logo

5.2.1 One of the outputs of the workshops was the production of a gas safety logo. Below is the logo that was adopted by the project:

![Monoxide Mole gas safety logo](image)

5.3 Gas safety film

5.3.1 The major output of the project so far is the film, which is now online at our website - http://www.moseleycdt.com/node/2620 - and also on Youtube -

http://www.youtube.com/watch?v=Yk4CqXyVjnA&feature=player_embedded

5.3.2 The film adopts the format of a news broadcast about a hospital patient who is suffering from carbon monoxide poisoning as a result of work by an unregistered gas engineer.

5.3.3 The film has received 278 views to date on Youtube and has received coverage on Twitter. The Gas Safety Trust featured the project in a press release 6 The National Home Improvement Council featured the story on its website, 7 while BVSC (Birmingham Voluntary Services Council) featured it in its newsletter. 8

5.3.4 GasCare, a gas safety company in New Zealand, has given extensive coverage to the film on its Facebook and Twitter accounts. 9

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8 http://www.bvsc.org/sites/default/files/files/bvsc_update_221_WEB%5B1%5D.pdf
9 http://www.facebook.com/gascare.co.nz/posts/594540310573644
5.4 Training

5.4.1 Five community workers have been trained in gas safety awareness through the project and this has given them the understanding they need to raise awareness among the local community. Two of the community workers had some prior knowledge of gas safety through their City and Guilds in Energy Efficiency qualification but the other three had received no prior training in gas safety awareness.

5.4.2 Two of the community workers involved in the delivery of this project were the Moseley Street Wardens. They are well-known local community safety workers who help keep the neighbourhood, clean, green and safe. They also support the delivery of measures to reduce fuel poverty and will visit vulnerable residents at home to advise about how to stay warm and stay well. In this project, throughout the year the Wardens were able to:

- distribute gas safety information to parents at the school gate
- conduct interviews with parents
- deliver monoxide mole flyers to local hundreds of local homes in areas of multiple deprivation
- visit libraries, Farmers’ Market, Housing Associations, community games and distribute monoxide mole flyers / postcards
- give gas safety advice to residents in their homes who had requested help about saving energy.

5.4.3 All this work helped to extend the reach of the project to ensure families beyond those connected to the primary schools were able to benefit.

5.5 Awareness raising among school communities

5.5.1 Awareness raising before the video was distributed

5.5.2 In the summer of 2012 we invited parents at four schools (Park Hill Primary, S.S John and Monica Catholic Primary, St Bernard’s Catholic Primary, Moor Green Primary) to take part in a Gas Safety Quiz. The quiz would measure people’s awareness of gas safety issues. Some of the questions were designed to be easy and instil confidence, while others were designed to be a genuine test of people’s knowledge around subjects such as colour of a healthy gas flame, which atmospheric gas is necessary for appliances to burn safely, and which gas is known as the Silent Killer. So the quiz was designed to both measure existing awareness and raise awareness.

- Twenty-nine parents took part. Their responses showed a generally high spontaneous level of gas safety awareness among the majority of parents. Twenty-five out of twenty-nine answered
correctly that a gas appliance should burn with a blue flame:

- Twenty-three out of twenty-nine answered correctly that gas appliances needed oxygen to burn safely:

- Twenty-eight out of twenty-nine correctly identified carbon monoxide as the Silent Killer.

- Twenty-three out of twenty-nine correctly identified that gas appliances should be checked every twelve months, with the remaining six people saying every six months.

- All twenty-nine correctly answered that a Gas Safe registered engineer should service gas appliances.

- Twenty-six out of twenty-nine had had their gas appliances serviced in the previous twelve months.
Twenty-seven out of twenty-nine correctly identified that the National Grid gas emergency service should be called in the event of a gas emergency.

5.5.3 While most of the parents answered most of the questions correctly, there is a persistent minority of people who have lower awareness, and who answered one of the more testing questions wrongly - i.e. the colour of a gas flame or the name of the atmospheric gas needed for a gas appliance to work safely. Eight out of twenty-nine people, i.e. more than a quarter, got one or more of these questions wrong. Out of these eight, three of them - ten per cent of the overall sample - got both questions wrong. These people were also less likely to know that 12 months is the correct frequency for gas servicing (three out of eight got this wrong compared to six out of twenty-nine overall), suggesting that their knowledge and awareness of gas safety was quite low and they were guessing the answers. This group is concentrated in the north of the catchment area. They were less likely to have people aged 60 or over living in the home.

5.6 How representative is the sample?

5.6.1 Using postcode as an indicator, we can see that most (17 out of 23) are in the north of the catchment area, which is considered to be disadvantaged compared to the south.  

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10 Six postcodes were eliminated from this map; five because they were incomplete, and one because it was out of area (B92)
This map shows the locations of those who answered questions incorrectly (on the colour of a healthy gas flame; on the necessity of oxygen for an appliance to work safely):

5.6.2 It can be seen that seven out of the eight live in the north of the catchment area. The three people who answered both of these questions incorrectly all live in the north of the catchment area.
5.7 Awareness after the film was distributed

5.7.1 In March 2013 we interviewed parents and carers collecting their children from two schools to evaluate the impact the film had had upon them. The two schools were S.S John and Monica RC Primary, where we had previously given out approximately 200 DVDs in September 2012, and Park Hill Primary, where we had distributed approximately 400 DVDs in September 2012 and where the film had been shot.

5.7.2 We completed eleven interviews with parents/carers at S.S John and Monica and ten interviews with parents at Park Hill. Parents/carers at Park Hill were more likely to have seen the film, with five out of ten (50%) reporting that they had seen the film, with one person answering "not sure" and the remaining four (40%) saying that they had not seen the film. Only two out of eleven parents/carers questioned at S.S John and Monica (11%) said they had seen the film, with one person saying "not sure" and the majority - eight out of eleven (72%) reporting that they had not seen it.¹¹

5.7.3 We had anticipated that the response rate would be better for Park Hill because we had carried out more intensive work there. While interviewing the parents/carers we became aware of the following two issues:

5.7.4 Many of the parents/carers we interviewed told us that they did not always pick up their child. We know that the duty of picking up children from school is often shared between parents, grandparents, and neighbours, and therefore the person who picked up the child on the day the DVD was distributed may not be the same person who collected the child on the day of the interviews.

• In some instances, the children told us that they had seen the film whereas the parent/carer told us that they had not seen it. This raises the possibility that the child has taken ownership of the DVD and has watched it alone or with siblings, without the parent/carer present.

5.7.5 These two factors combined mean that the actual viewing rate for the film may be higher than the seven out of twenty-one across the two schools who said they had seen it, but that we have not met those parents who took copies of the DVD for a second time to ask them about it.

¹¹ In September 2012 when we returned to Park Hill, out of the ten parents we met, none said they had seen the film.
6.0 Our findings: Impact of the film upon those parents/carers who had seen it

6.1. There was a good level of recall of the characters in the film. When we asked parents/carers if they could name the cartoon character in the film, four out of the seven questioned were able to give an answer. Three of them responded correctly by saying "Monoxide Mole" or "Mole". One further parent/carer responded by saying "Penny" who was the patient in the film. Three of the seven did not remember the name of the cartoon character at all.

6.2. We asked the seven parents/carers who had seen the film to rate their levels of gas safety awareness before and after seeing the film, on a scale of one to five. The graph below shows the results before and after for each of the seven parents/carers:

6.3. Two parents/carers (numbers 2 and 3) showed a high level of awareness before the project and were unchanged afterwards. Five out of the seven (numbers 1, 4, 5, 6, and 7) showed low or moderate levels of gas safety awareness before the project and significantly higher levels after the project. Awareness overall has increased by a factor of 1.43.

6.4. All seven of this group of parents/carers answered the question "what do you think is the most important thing you should do to keep your gas appliances safe?" correctly (100%), with some variant of getting them checked/serviced, with five out of the seven (71%) referring to the frequency of the check ("regularly" or "annually/every twelve months"), and two of them (29%) responding with the fully correct "every twelve months".
6.5. How does this compare to the fourteen parent/carers who had not seen the film? Out of this group, twelve people (86%) responded correctly, with some variant of getting gas appliances checked/serviced. Seven of this group (50%) referred to the frequency of the check ("regularly" or "annually/every twelve months"), and five of them (36%) responding with the fully correct "every twelve months" or "annually". Among the two people (14%) who answered this question incorrectly, one answered "keep kids away" and the other answered "turn them off" suggesting that they perceived safety in terms of the risk of children suffering burns from fires or cookers rather than carbon monoxide emissions from boilers, fires or cookers. This may also be a result of the way we framed this question.

6.6. So, on the main message of the film, that gas appliances should be checked annually, there is a generally higher awareness among people who had seen the film than among those who had not. On the second level gas safety messages (correct colour of a gas flame; necessity for oxygen for a gas appliance to work safely) there is less difference between the two groups.

- Out of the seven parents/carers who had seen the film, six of them (86%) correctly answered that a gas flame should be blue; with one person (14%) answering incorrectly that it should be orange.

- Out of the fourteen parents/carers who had not seen the film, thirteen of them (93%) correctly answered that a gas flame should be blue; with one person (7%) answering incorrectly that it should be orange.

- Out of the seven parents/carers who had seen the film, six of them (86%) correctly answered that gas appliances need oxygen to work safely, with one person (14%) answering incorrectly that they needed carbon dioxide.

- Among the fourteen parents/carers who had not seen the film, twelve of them (86%) answered correctly that gas appliances need oxygen to work safely, with two people (14%) answered incorrectly - one of them saying they needed carbon dioxide, one of them saying nitrogen.

6.7. When we asked the seven people who had seen the film what the main message was, they were able to give positive responses, as follows:
This shows that viewers had understood that the film was about gas safety in a general sense. Only one of them understood that the specific message of the film was about getting gas appliances checked. Although as we have seen, the people who had seen the film had a high level of awareness about the need to get appliances checked, we cannot be certain that this is a direct result of the film, because they do not seem to have drawn this conclusion from the film.

All seven of the people who had seen the film had had their gas appliances checked in the twelve months before they saw the film. Four of them (57%) had had their appliances checked again since they saw it, while two of them (28%) had not, and one of them (15%) was planning to do so.

Ten of the people who had not seen the film gave us information about whether or not they were having gas safety checks. Nine of them had indicated that they had gas safety checks. One person had not had a gas safety check or service in the last twelve months. This is the only response we have received throughout the project indicating failures to have a safety check or service.

Respondents in the post-film interviews - including those who had not seen the film - showed a higher level of gas safety awareness than those we interviewed before the film was distributed. There was less evidence of the persistent minority of approximately one-quarter identified in the pre-film interviews whose gas safety awareness is sufficiently low for them to get either or both of the "blue flame" or "oxygen required" questions incorrect. This may be because the post-film interview sample is smaller.

At the time of writing the West Midlands Fire Service has expressed interest in using the Monoxide Mole film in their future campaigns and at their schools safety visitor centre – Safeside (Safeside is a state-of-the-art, scenario-based, experiential learning centre that provides an innovative, interactive and enjoyable learning experience, inspiring visitors to think and act safely).
7.0 How representative are the two groups (viewers and non-viewers)?

7.1 Four out of the seven people who had seen the film owned their own home (57%), while three of them rented (43%). Seven of the people who had not seen the film owned their own home (54%), while six of them rented (46%).

7.2 Below is a map showing the home locations of those who had seen the film:

[Map of home locations of viewers]

Here is a map showing the home locations of those who had not seen the film:

[Map of home locations of non-viewers]
7.3 The catchment area of the two schools is roughly divided on a north-south basis with the B4217 corridor running from Edgbaston in the north-nest of the map area through Wake Green Road and College Road. The south is generally considered more affluent than the north.

7.4 The distribution of those who have seen the film shows that half of them (two out of four or 50%) are in the more affluent south of the catchment area. The other two are in less affluent areas - one Billesley, which is a relatively deprived enclave in the more affluent south, and one in Balsall Heath, a deprived area in the north.

7.5 The distribution of those who have not seen the film shows that the majority (eight out of ten or 80%) are in the north of the area. Of the two that are in the south, one of them is in Billesley which is a disadvantaged area. Therefore, ninety per cent of those who have not seen the film are from the more deprived areas of the catchment area.

7.6 This suggests that the film is less likely to be seen in the less affluent parts of the schools' catchment areas.

The private rented sector

7.7 When we interviewed people after the distribution of the DVD, four households out of twenty-one identified themselves as being in the private rented sector. Not all interviewees answered this question so we do not know if this is representative. Out of these four people, one said that they had not had their gas appliances checked in the last twelve months. One person did not have a gas supply, and we know anecdotally that many private rented properties in Moseley are heated by electricity despite the availability of mains gas.

8.0 Conclusions

8.1 Among those people who have seen the film, it has succeeded in raising their general awareness of gas safety. Monitoring who has seen the film has been difficult. There is a generally high level of awareness of gas safety among the public including the key messages of getting appliances checked, that appliances need oxygen to work safely and that a healthy gas flame is blue, with approximately three-quarters of people understanding this.

8.2 The making of the film has also led to educational outcomes for the young people involving in producing it.

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12 We have excluded from this map three people who are from further afield: their postcodes are B29 7QJ; B28 8SN; and B9 5UP. All three of these are two miles or more from the location of the two schools. Out of these, B28 would be considered affluent; B9 would be considered disadvantaged; and B29 would be considered somewhere between the two.
8.3 The format of the film as a news documentary interspersed with the cartoon character Monoxide Mole, is effective at conveying the message and there is the potential to build on this format in future projects.

8.4 There is a persistent minority of people with a lower awareness of gas safety - approximately one-quarter. They have a general awareness of the need to get appliances checked, but they have lower awareness on issues such as the need for oxygen and the colour of a gas flame. This suggests that this minority of people have a lower understanding of ventilation issues and might not be able to spot the symptoms of a faulty appliance. Low-income households in the north of the catchment area seem to be most at risk.

8.5 One difficulty we encountered in the project was the existence of a number of parents who did not speak English, possibly recent arrivals, and where the children did not yet speak English well enough to interpret, but the DVD helped.

8.6 The Gas Safety Trust has been an appropriate funder for this project as there is a high degree of alignment between what Moseley CDT wanted to achieve from the project, the specific needs of Moseley and the published aims of the Trust. The Trust's published materials on gas safety have been of real use to the project in framing the messages of the project for a local audience.

8.7 We said we would measure the following:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Successful production of the short film</td>
<td>completed successfully.</td>
</tr>
<tr>
<td>2. Number of DVDs distributed or downloads of the film</td>
<td>1,000 DVDs distributed</td>
</tr>
<tr>
<td></td>
<td>300 Youtube views</td>
</tr>
<tr>
<td>3. Number of residents receiving advice or support from the project</td>
<td>we estimate 2,300 residents received information</td>
</tr>
<tr>
<td>4. Residents understanding about carbon monoxide and the risks involved</td>
<td>See section 6 which indicates that the film has raised awareness of carbon monoxide and the risks involved among those who have seen it</td>
</tr>
<tr>
<td>5. Number of vulnerable homes taking action to become safer</td>
<td>Is it not possible to list accurately the homes that have become safer but our survey’s shows that the majority of residents demonstrate a greater understanding of the issue.</td>
</tr>
<tr>
<td>6. Changes in behaviour and motivations that led to action taking place</td>
<td>See chapter 6, this indicates that most people from our sample are taking action.</td>
</tr>
</tbody>
</table>
8.8 In future projects, we should continue to work at a community level. Distributing a film is a good way of engaging people, and a gas safety quiz enables interaction and identification of issues. There is a need to focus in more on those people most at risk. In this project we have succeeded in engaging people who are on low-incomes and in postcode areas where we know there is a risk of poor-quality private sector housing. What we do not know is the degree to which we have succeeded in reaching at-risk groups such as older people, and people living in HMOs.

8.9 Considering that our interaction with each household was brief - five minutes at most answering a quiz in the school gate, and a matter of seconds to hand someone a DVD - we have succeeded in engaging people and getting a snapshot of their gas safety awareness and whether this has changed as a result of the film.

8.10 In future projects we need to deepen these interventions if possible in order to more fully engage people who may be at risk. This might take the form of an advocacy approach, such as working with advice centres so that people who come in for advice on general welfare matters are can be engaged on gas safety issues, asked to take part in the quiz, offered a copy of the film, enabling us to better understand who is at most risk and why, and to better target the intervention. This would mean working in partnership with local advice agencies as an alternative or additional route to engaging people as well as through schools.

8.11 This would also give us additional possibilities for monitoring the viewing of the film and its impact where the advice agency has repeated contact with the household. It would be possible to send people a reminder by text message to watch the film, including a Youtube link for those with smartphones (people on low incomes often have smartphones - but they pay higher tariffs for the privilege). They could also be invited to give feedback on the film by text message.

8.12 In the Moseley area there are two specific groups that need to be targeted on future projects. The first group is older people. We know that they are at risk and that their number is increasing. Nine out of the fifty households engaged in this project (before and after the distribution of the DVD) had anyone aged over 60 in the home. This confirms that there are a significant number of older people in the area. What we haven't succeeded in doing through this project is engaging older people living alone or in all-pensioner households. In future projects, an inter-generational approach working with schools might be a way of engaging this group.

8.13 The second group who may need to be targeted in Moseley are younger single people living in the private rented sector. They will include both people on low incomes and young professionals, but both may be at risk as they are in HMOs. They, especially the young
professionals, are perhaps less likely to be engaged through a school or community organisation but are more likely to be found in the cafes and pubs of Moseley, and that may be the best way to engage them. "Sponsored" events could be part of this, for example in a coffee bar or pub with a voucher for a free non-alcoholic drink or snack as an incentive for sitting down and taking part in a quiz, which would enable a more relaxed and longer conversation.

8.14 Overall, there is greater need in the north of the Moseley area, bordering neighbourhoods such as Balsall Heath and Sparkbrook, and in pockets of the south of the area such as Billesley and the Pineapple Estate.

8.15 The gas safety quiz is a good way of engaging people quickly where there isn't time for a longer intervention. It could also be a gateway for longer interventions e.g. in an advice centre, or a coffee bar as suggested above, and to identify those who need further help, for example distribution of carbon monoxide alarms (which now retail for around £10 and could be obtained in bulk for less) to those who fail the gas flame colour and need for oxygen to work safely questions, and enrolment on the Priority Services Register.

8.16 The quiz could be modified to identify further risk factors - for example asking do you live in a house or a flat, in order to identify those living in HMOs. This would enable us to better monitor whether we are engaging people who are at risk from these factors.

8.17 The question asking which atmospheric gas do appliances need to work safely (options are oxygen, nitrogen, carbon dioxide) seems to have caused most difficulty for people. Since most people do not understand the science of combustion then the use of the term 'oxygen' may not be helpful. Previous gas safety campaigns have used the slogan 'gas appliances need air', which everyone can understand, to focus on ventilation, rather than 'gas appliances need oxygen'. In future projects we need to move from 'oxygen' to 'air' because although less scientific, it is easier for people to understand even if they don't know the chemical properties of the main atmospheric gases. So this quiz question will need to change.
9.0 Recommendations

9.1 In future projects the focus still needs to be on the general message of getting gas appliances checked to keep them safe. We also need to find ways of getting across secondary messages such as gas appliances needing air, and the colour of a healthy gas flame. These messages are conveyed in the Monoxide Mole film and future project materials need to put these across. A smartphone app could be developed to convey gas safety messages to people over a longer period. This could be accessed by wide sections of the population, including people on low incomes who do use smartphones albeit on a pre-pay basis.

9.2 The approach that has been developed in Moseley could be used by other neighbourhoods in Birmingham and elsewhere where there are identified risks such as quantities of low-income vulnerable private sector households, including HMOs; asylum seekers/refugees/recent migrants; older people; students, and leaseholders (e.g. people who have exercised right-to-buy in tower blocks or other high-rise but who may be unaware of their gas safety responsibilities). Data from the Birmingham Private Sector Housing Strategy suggests the following groups of neighbourhoods might be suitable for a future project:

- Ladywood/North Edgbaston/Hagley Road;
- Gravelly Hill/Perry Common/Kingstanding;
- Bournbrook.

9.3 All of these areas have local organisations providing general welfare support to local people who could be suitable vehicles for the delivery of similar projects.

9.4 Moseley Community Development Trust has taken the initiative in setting up the Birmingham Affordable Warmth Partnership. Gas safety and fuel poverty are separate but related issues and the connections made through the Partnership may be of use in disseminating and replicating the successes and learning points of this project.
Appendix 1 – transcripts of workshop evaluations

Session 1

I liked/enjoyed/fun...
Everything
Mini Play!
The Quiz (x4)
The acting (x2)
I enjoyed the whole session
I enjoyed introducing myself with marbles (x 4)
I enjoyed go getting the marbles and sharing an amount about ourselves
I loved drawing/making the house (x 3)

I learned...
I liked it when you shared a role play
I learned a lot
About Carbon Monoxide (x2)
That Co is called the silent killer (x2)
I learned the safety procedures involving gas incidents which happen a lot to me
I learnt a lot about the safety of gas

Ideas...
In DVD put in the role play that had a problem
More role play – children involved too
I loved the home idea
Draw a gas scenario
Role play with something bad happening
Pretend to be solids, gases and liquids

I didn’t like....
Nothing

Questions/uncertainty...
None

Observations

The children seemed very knowledgeable about the science of gas and states of matter. Although there appears to be at least two children who have a particular interest/knowledge. The children
had lots of questions about gas and its safety and gave lots of personal accounts. There were concerns about at least two children two had expressed particular concerns about gas safety in their own homes with regard to appliances, yellow flames and whether there were regular checks taking place.

Session 2

I liked/enjoyed/fun...
I liked drawing and sharing our ideas
It was fun thinking of ways to remember CO safety
Spider web (game) (x4)
Fun because we got to draw
Liked creating the logos
I really liked creating posters
Logos
Drawing (x2)
Poppy’s stories
Making a way to remember
Making logos
Marbles
Everything
I loved the house idea
Drama
I loved everything especially the CO logo making

I learned...
CO is dangerous
Everyone is in danger of CO
CO affects babies more
Gas is serious

Ideas...
Next time do role play

I didn’t like....
Nothing

Questions/uncertainty...
None
Observations

I asked the children who had talked with their family about what they had learned. The majority had talked to parents. Four children reported that their parents had acknowledged that they get their appliances checked. One of these was a young person who had spoken about her concerns in the last session as to whether checks were happening. She was reassured by her parent. Another young person who referred to ‘problems’ with gas appliances said that the family did have gas checks but that they were not certain that the person doing these was registered.

Although the children seemed to grasp the key safety points in the first session there was some confusion about it in the second and so we revisited key points. This was particularly to do with the distinction between the gas leaking and the CO from faulty appliance and also to do with the behaviour of gases (science).

We will keep revisiting this in the following sessions to ensure that the key points have been understood.

Session 3

I liked/enjoyed/ had fun...
Listening to P (peer acting)
Setting out the tripod
Setting up the camera
Working as a team
Everything III
Camera Operating
Filming II
Filming in our crews
I loved the filming
‘Silly Stuff’
I found the directing fun
Doing the doodle and the head phones
Listening to Peoples stories

I learned...
How to use the camera III
“ ‘ ” “ tripod

Ideas...
Film actors and plays

I didn’t like....
Nothing
Questions/uncertainty...
None

Observations
The aim of this session was to teach children skills and knowledge about camera operating and setting up filming equipment.
The children responded well to the task and supported each other in handling the equipment.

Evaluation
Observations from sessions 4 to 9

Session 4
The children worked really hard to write three separate scripts. They performed their pieces too each other and then made constructive comments to their peers and gave additional ideas. It was apparent that the children were keen on the idea of the dangers of CO and expressing these through drama, at times quite graphically. They enjoyed the idea of a hospital scene with someone suffering from CO poisoning; demonstrating the symptoms; and the idea of a rogue gas engineer.

We discussed the key points of the film and what the message should be.

To get appliances checked: placing more emphasis on the fact that people need to take responsibility for getting appliances checked and being vigilant about legitimate engineers’ as oppose to over focussing on the ‘rogue element’.

The group agreed with this although they were still keen to have the dramatic elements of the dangers.

Half way through the session 4 the teacher left the classroom and was replaced by a mentor/teaching assistant. This proved difficult in that the new teacher was unaware of the project and themes and could not support in the same way. This meant that working in three groups, as originally planned, proved quite challenging in terms of getting the planned tasks done in a way that we had expected. Children also found it difficult revisiting the strapline and logo and felt that their previous/initial ideas were good ones: some children went on to do more drawings of the Mole idea and others proposed additional strapline ideas.

Session 5 to 9 – rehearsals and filming

During sessions 5 to 8 the regular teacher was replaced by teaching assistants. The discipline of the children was relaxed as a result. This was compounded by the fact that the animation could only really hold the attention of two students at a time and therefore others became part of the film crew. This meant that not everyone had a key role to play and led to disruption. In the final
sessions these children were tasked to undertake some peer led evaluation using flip cameras and conducting interviews. These children took responsibility for this and were fully engaged.

All the children were given the opportunity to take part in all the tasks/roles involved and some found natural preference for one task. Two children were not able to be filmed due to lack of consent. One of these was able to do a voice over and the other took a lead on the directing/camera operating and also enjoyed some of the animation. All the children performing chose and agreed with each other their character roles in the film.

The animation was preferred by certain individuals. Each pair seemed to find it useful working together and tapping into different skills, i.e.: some had a good eye for detail, others had a steady hand and they shared creative ideas. Others found animation to be frustrating or “hard” due to the nature of it being very concentrated, slow in achieving results and requiring lots of patience.

All the children seemed to have a really good knowledge of the key learning points around CO. One of the learning methods used that the children embraced was the learning of the CO poisoning symptoms. This was done through devising performed rap like sequences. The children were quickly able to recall all the symptoms by referring back to their rap/strapline pieces. The children also championed the role play that the two facilitators conducted in the first session and this went on to influence the style/genre of the film.

One of the key challenges of the project was to negotiate the content with children. There were some tensions between what the key messages are in raising awareness of CO and what the children wanted in terms of creating an exciting drama. The adult team worked hard to take on board the children’s ideas and tried to make clear where decisions had to be made in order to get the right message across. In the end the children made full use of the agreed script and were able to inject the drama as well as fun that imbued the overall process.
Appendix 2 – logo sketches
Appendix 3 – Gas Safety Quiz

GAS SAFETY QUIZ FOR PARENTS

1. How often should you get the gas appliances in the house checked?
   a. Every six months
   b. Every twelve months
   c. Every two years

2. If a gas appliance is working safely, what colour should the flame be?
   a. Blue
   b. Yellow
   c. Orange

3. What do gas appliances need to work safely?
   a. Oxygen
   b. Nitrogen
   c. Carbon dioxide

4. Which gas is known as the Silent Killer?
   a. Carbon monoxide
   b. Oxygen
   c. Nitrogen

5. Who should service gas appliances?
   a. Anyone who has read a book on it
b. A Gas Safe Registered engineer

c. Anyone who is good at DIY

6. Did you know that we were learning about Gas Safety at Park Hill School? Yes/no

7. Have the gas appliances in the house been serviced within the last twelve months? Yes/No/Not sure

8. Is anyone in the household aged over 60? Yes/no

9. What is your postcode?

10. Who do you call in the event of a gas emergency?

   a. The police

   b. The fire brigade

   c. The National Grid gas emergency service 0800 111 999

GAS SAFETY QUIZ FOR PARENTS – ANSWERS

1. How often should you get the gas appliances in the house checked?

   a. Every six months

   b. **Every twelve months**

   c. Every two years
2. If a gas appliance is working safely, what colour should the flame be?
   a. Blue
   b. Yellow
   c. Orange

3. What do gas appliances need to work safely?
   a. Oxygen
   b. Nitrogen
   c. Carbon dioxide

4. Which gas is known as the Silent Killer?
   a. Carbon monoxide
   b. Oxygen
   c. Nitrogen

5. Who should service gas appliances?
   a. Anyone who has read a book on it
   b. A Gas Safe Registered engineer
   c. Anyone who is good at DIY

6. Did you know that we were learning about Gas Safety at Park Hill School?
   Yes/no

7. Have the gas appliances in the house been serviced within the last twelve months? Yes/ No /Not sure
8. Is anyone in the household aged over 60? 
Yes/no

9. What is your postcode?

10. Who do you call in the event of a gas emergency?
   a. The police
   b. The fire brigade
   c. The National Grid gas emergency service 0800 111 999