Individual and community resilience to extreme weather events amongst older people in south Islington: attitudes, barriers and adaptive capacity

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1 Background

During the UK's last major heat wave, in 2003, London's rate of excess mortality was 42% – compared to an average of 17% across the rest of England. The risk posed by warm weather is especially high in central London's so called 'urban heat island', within which temperatures can be as much as 10°C higher than in the countryside lying just outside the capital. Hot weather is therefore a greater risk in London than elsewhere in Britain, and is one which – compared to the better known dangers associated with cold weather – is often overlooked.

Islington is the most densely populated local authority area in the UK. 206,100 people inhabit just 5.74 square miles, and there is a lower proportion of green space than any other local authority area except the neighbouring City of London. This lack of natural provision makes Islington especially vulnerable to the dangers posed by extreme weather conditions, and in particular to the risks attached to heat waves. Many residents live in tower blocks and other types of social housing in which people are packed close together. With fewer parks and green areas to retreat to the risk for more vulnerable residents is higher than in neighbouring boroughs such as Hackney and Camden.

There are also several parts of Islington which are designated Flood Risk Zones – including near Farringdon station and in the lower Caledonian Road area to the southwest of the borough, as well as on St Luke's Estate in Bunhill. Residents in these areas may be increasingly threatened by flood risk as climate change makes precipitation patterns unstable.

In addition to these geographical/ physical issues, the social makeup of Islington further reduces its resilience to the effects of extreme weather. It is the 14th most deprived local authority area in England and has high levels of social inequality. Its proximity to the City of London has caused a steady process of gentrification. As a result a transient population of students, young professionals and migrant workers live alongside an established but increasingly isolated core of long-term social housing residents, with very little interaction across and between these groups. Reserves of social capital run low, and there are high levels of long term illness among more longstanding residents. Cardiovascular and respiratory conditions are especially prevalent and the male life expectancy is the lowest of any London borough.

As climate change makes weather less predictable it is important to assess residents' attitudes towards, and preparedness for, heat waves and flooding, so as to ensure that there is a coherent policy in place for these weather conditions, both at the national and local policy levels (in the same way as there is for cold weather). Although the focus of this study is on south Islington, we hope that findings will have broader implications for the entire borough and, indeed, for urban areas across the UK.

Please see Appendix E (Section 12.5) for more detailed maps of the south Islington area and London's Urban Heat Island.

2 Aims

The aim of this project is not to explore the health implications of extreme weather (these are well known) so much as to assess the factors influencing the behaviour and attitudes of older residents in relation to it. In particular we want to establish:

- Whether older residents put their faith in informal support networks (i.e. family and friends) or more formal safeguards (i.e. local and national government) during extreme weather;
- The extent to which older residents feel they have the power to adapt and tailor their homes to cope with extreme weather and climate change;
- How well informed residents are about the risks posed by extreme weather conditions;
- The language and priorities of those most vulnerable to climate change – so that future attempts to educate residents about extreme weather can be couched in terms which connect with people;
- The practical steps that local authorities can take to mitigate against the risks posed by extreme weather, and how these measures would be received, in particular whether residents would use community cooling facilities during hot weather;
- How future attempts to gather climate change data can be done in a more innovative way, which engages with residents better and produces more accurate data as a result.

The final report will feed into Islington Council's Seasonal Resilience Plan, as well as informing the approach of the Seasonal Health Interventions Network (SHINE) and partner organisations. It will also inform models of best practice for the private housing sector.

We hope the research will be of use for other urban local authorities across the UK and the rest of Europe who face similar challenges.

3 Methodology

3.1 Approach

The project has primarily surveyed the views and behaviours of those over the age of 65. This group are more susceptible to health problems associated with extreme weather, and are also the demographic most likely to have suffered as a result of the social changes that Islington has undergone in recent decades. A nominal number of those surveyed were slightly younger than 65 (aged between 60 and 64).

The project focuses on the area of the borough formerly contained within the Borough of Finsbury. This is the area closest to the City of London and other business districts, and as such is the place where lack of green space, high population density, and shortage of social capital are most pronounced.

Respondents were drawn from aggregated council lists, and as such are almost all council tenants or leaseholders. A minority lived in other types of social housing – most notably in properties owned by Peabody. Residents of social housing tend to be poorer, more isolated, and worse affected by the negative consequences of gentrification. As such they represent a particularly vulnerable demographic in relation to extreme weather.

3.2 Research components

There are several components to the project:

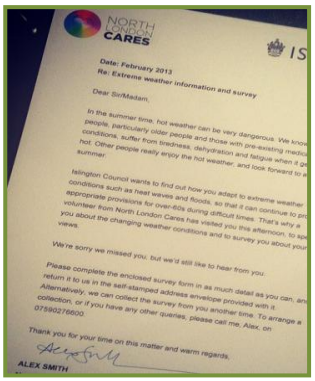
- **A quantitative study surveying over 450 Islington residents**, all aged 60+;
- **3 x focus groups** of residents aged 60 and over, two of which were held at St Luke's Community Centre in Bunhill, with the other hosted by The Peel Centre in Clerkenwell;
- **10 x Case Studies** of those vulnerable to extreme weather (subjects for case studies drawn from the quantitative part of the project);
- **22 surveys of organisations** who work with people vulnerable to climate change (i.e. healthcare providers).

The quantitative study is the most substantial part of the project, providing robust data on the attitudes of older residents. The majority of the data (approximately three quarters) was obtained through one-on-one conversations with residents on their home doorsteps. The rest were gathered by putting copies of the surveys, explanatory letters and stamped addressed envelopes through letterboxes. The face-to-face/door-to-door element to the fieldwork allowed researchers to engage more deeply with respondents than if surveys had been conducted online or over the phone, and to get clearer, more accurate data.

The qualitative elements to the research (focus groups and case studies) provide broader context and allowed us to drill deeper into some of our data, so as to understand it better. Respondents to the quantitative component were not given any incentive to answer surveys, but those who participated in the focus groups were each given £20 as thanks for their time.

The surveys of organisations provided an additional dimension, offering wider context and an understanding of the limitations and possibilities of policy in relation to climate change in Islington and beyond.

3.3 Challenges and solutions


NORTH LONDON CARES

Date: February 2013
Re: Extreme weather information and survey

Dear Sir/Madam,

In the summer time, hot weather can be very dangerous. We know people, particularly older people and those with pre-existing medical conditions, suffer from tiredness, dehydration and fatigue when it gets hot. Other people really enjoy the hot weather, and look forward to a summer.

Islington Council wants to find out how you adapt to extreme weather conditions such as heat waves and floods, so that it can continue to provide appropriate provisions for over-60s during difficult times. That's why a volunteer from North London Cares has visited you this afternoon, to speak you about the changing weather conditions and to survey you about your views.

We're sorry we missed you, but we'd still like to hear from you.

Please complete the enclosed survey form in as much detail as you can, and return it to us in the self-stamped address envelope provided with it. Alternatively, we can collect the survey from you another time. To arrange a collection, or if you have any other queries, please call me, Alex, on 07590276600.

Thank you for your time on this matter and warm regards,

ALEX SMITH

The most important innovation during the fieldwork period was the decision, made at the halfway point, to use stamped addressed envelopes to target difficult-to-reach individuals. This approach allowed us to access the views of isolated, ill, disabled, extremely old or non-English speaking residents, as well as those who were simply not at the house when we called. This gave a wider range of respondents and a larger sample size.

Below is a more detailed matrix of the challenges faced:

Challenge	Why?	Solution
Engaging with those who were most isolated.	Residents who were particularly isolated were often unwilling to come to their doors. This meant that there was a potential for the research to be skewed to reflect the attitudes of more sociable residents.	We put copies of the survey – along with an explanatory letter and a stamped addressed envelope – through the letterboxes of people who repeatedly didn't open their doors. This approach seemed to bear fruit (over 100 surveys were returned by post) so we hope that we went some way to reaching those individuals who we couldn't speak to face-to-face.
Engaging with those who were old, ill or didn't speak fluent English.	Residents who were old, ill or had poor English were hard to engage with but were an important – and potentially vulnerable – demographic. There was a danger our findings would be skewed against them.	Where possible we gave copies of the survey – along with an explanatory letter and a stamped addressed envelope – to carers and visiting family members, so that they could help respondents fill them in. Alternatively we asked carers/ visiting family members to act as translators and mediators for us.
Doing the survey in cold weather/dealing with a demographic who were at times closed off.	This made respondents less willing to engage on the issue and were on occasion openly annoyed at what they deemed a pointless project.	This was where the benefits of face-to-face interaction were most obvious; being able to engage with someone directly gave researchers time to explain the importance of thinking long term and to set out clearly the dangers of climate impact.
Limited number of respondents.	There were a finite number of over 65s living in the project area.	We were careful to code as we went, and to return to doors on several occasions at different times of day. Using group activities at community centres enabled us to corral older residents.

3.4 Outcomes

Altogether we visited 1,004 addresses, returning at least once to all doors at which we hadn't made contact on the first occasion, and delivering surveys with stamped addresses to everyone who we still weren't able to speak to on the second. 466 surveys were completed, meaning that 46% of the residents we approached ultimately filled one in. This is an extremely high proportion for a project like this – especially given the time of year. It suggests that:

a) flexibility – giving envelopes etc – is a good way of helping shier residents to participate on their own terms, and that
b) people over 65 are a demographic who benefit from face-to-face dialogue; combining the data collection with a level of community engagement improved wellbeing in some cases and made respondents generally more willing to participate.

One focus group participant articulated clearly the desire for more contact. Her view illustrates the general sense that if older residents come to see national government and council schemes as a form of pastoral care – rather than an instrument of state intrusion – they are more likely to engage and be receptive to intervention programmes:

I think they should have an independent body which gets older people's phone numbers from the Council – and that body phones up everybody to chat to them and find out how they are and if there were any problems they could send a person round. ***Irene, Bunhill***

4 Summary

Key findings:

- The sample we surveyed are a predominantly white, working-class and often socially conservative group, living in an increasingly diverse and cosmopolitan area. They feel out of step with changes that have occurred (and are occurring) in the borough. As a result social bonds are poor and older residents are often suspicious of change.
- Despite in many cases suffering from poor health and long-term illnesses which could be exacerbated by hot weather, respondents do not take the problems attached to heat waves as seriously as they do those of cold weather. This is largely due to a lack of receptivity rather than a lack of information. People are resigned to the problems of extreme weather; they believe it is an uncontrollable consequence of 'Mother Nature', and feel that little can be done to mitigate against it.
- The majority do not worry about heat waves any more than they did ten years ago, and in fact welcome the prospect of hotter weather. They are philosophical – at times to the point of fatalism – about the risks attached.
- Social resilience is reasonably good. Although respondents were often keen to present themselves as more capable than they in fact were, most did seem to have good networks of family and neighbours to call upon in the event of a crisis.
- There is a small but significant minority – about 10-15% – who are genuinely socially isolated. This group have low amounts of social contact (once a week or less), poor support networks, and a very limited relationship with their neighbours. They suffer from poor social capital and do not take many of the necessary steps for heat wave resilience (i.e. drinking water).
- There are few disparities between segments within our sample, with little attitudinal variation between men and women, those with health conditions and those without, etc.
- Respondents rely overwhelmingly on family for help, as well as on friends and neighbours. They do not automatically think of more formal support networks.
- They are often sceptical about climate change and about overly scientific approaches. The language and priorities they apply emphasise common sense and everyday problem solving.
- Although most follow general advice about hot weather, there are several areas where residents are poorly informed. Most notably there is a widespread misconception that opening windows can cool the home, as well as a lack of clarity about fan use.
- Most residents within our sample had a reasonable degree of 'adaptive capacity' in relation to hot weather, and generally tended to feel they have control over their immediate environment. Problems with adaptive capacity come about when security concerns and other issues prevent night time ventilation, as well, on occasion, as when control of heating is centralised by the building.
- On average people consider anything above about 28°C a heat wave – a threshold 4°C below the daytime temperature designated by the Met Office to trigger a heat wave alert in London.
- There is widespread scepticism about the idea of so called community cooling facilities, although a small minority say they would make use of these types of provision. Surprisingly, those with low social contact appear slightly more open to the idea.

- There is virtually no awareness or experience of flooding, and residents by and large do not feel that flooding concerns apply to them, especially as many live in high rise blocks. Respondents in Bunhill are marginally more aware of the topic than those in Clerkenwell and Pentonville.
- Residents in the over 65 bracket respond well to research which is conducted face-to-face and which has a communitarian dimension. This approach is more personal and informal, and puts at ease respondents who might otherwise be unwilling to engage.
- The danger posed by hot weather is generally not taken seriously by organisations working with people who may be vulnerable to it.
- Focus group participants generally responded well to visual communication aids, noting the clarity of the materials they were shown.

Recommendations:

Below are our recommendations for improving resilience to climate change among older residents.

We suggest the following steps to educate and inform:

- A widespread campaign, applying visual communication to encourage residents to close windows and curtains during the day and open them at night, and raising awareness of the fact that opening windows in the day in fact just allows hot air in.
- An audit of fan use in hot weather, possibly feeding into a campaign encouraging older residents to only use fans at certain times and above certain temperatures.
- A targeted campaign using innovative methods like direct contact to encourage those residents who are most isolated to drink water; this would focus on the most vulnerable 10% or 15%.
- Tightly focused effort to increase awareness of potential flood dangers among those living in Flood Risk Zones.

We suggest the following practical assistance:

- A sustained effort to reduce noise pollution during the hottest 3 months of the year, focusing in particular in areas where residential and commercial districts overlap (i.e. Whitecross Street, Farringdon Road).
- Efforts to 'security proof' windows so that residents can control how wide open they are at night.
- Work with pest control departments to develop ways of countering animal entry (e.g. providing residents with nets that can be spread over open windows to reduce squirrel and pigeon entry).
- Ensure that all residents aged 65 or older have a fan that they can use in extreme weather; this could be done in tandem with the effort to educate people on fan use (see above).
- Lower the Met Office heat wave threshold for London from 32°C to 28°C, as our research suggests that this is the temperature at which respondents report beginning to suffer.
- Pilot the idea of community cooling facilities, publicising effectively so that residents can become accustomed to the idea, and focusing in particular on the individuals who have least social contact.

We suggest the following approach:

- Combine with local voluntary sector organisations to give all practical/ educative initiatives a communitarian dimension; this will increase wellbeing and make individuals more receptive.
- Emphasise agency and efficacy, so that older relatives feel they are agents in their own destiny and can mitigate against the dangers of hot weather.
- Couch all advice and help in a way which speaks to the values of 'common sense' and everyday practical support, avoiding communications which appear 'top down' or overly scientific. Phrases like "Letting the heat in" or "Blowing warm air around", for instance, are more effective than formal or scientific language. (This kind of advice applies to most people, regardless of age, but is particularly salient among those aged over 65).
- Use the term 'unpredictable weather', rather than making references to heat waves or global warming. This chimes with the experiences of older residents, many of whom do not believe that heat waves and other effects of climate change are likely, but do concede that there has been a shift away from clearly defined seasons and towards less predictable weather.
- Work to raise the profile of hot weather as a risk to older residents, so that it is taken more seriously by organisations working with vulnerable people.

5 Demographics: Who we spoke to

Within the parameters set – i.e. targeting social housing residents over 65 – we aimed to get as representative a cross-section as possible of residents in the project area. Islington is a diverse place, but its social evolution means that social housing residents aged over 65 who are living in this pocket of the borough do not reflect the demographic make-up of the wider populace of the area.

5.1 Location

All respondents came from the south Islington area. A slightly smaller proportion came from Clerkenwell than from Bunhill, and a minority were from the third area surveyed, Pentonville.

Table 1: *Area*

Area	%
Bunhill	54.3
Clerkenwell	39.1
Pentonville	6.6
N = 453	

5.2 Age and gender

The majority of respondents (57.7%) were aged 75+, the oldest of our three age categories. 65-69 and 70-74 year-olds made up around one fifth each. This perhaps reflects the UK's aging population, with many residents, even in inner city areas like Islington, now living well into their 80s and 90s.

Table 2: *Age*

Age	%
60-64	2.1
65-69	18.8
70-74	22.1
75+	57.0
N = 456	

Females outnumbered males by a ratio of nearly 3:2. This is probably because women tend to live longer than men, although other social factors may also contribute to the disparity. There was a tendency, for example, for women to 'do the talking' in the relationship.

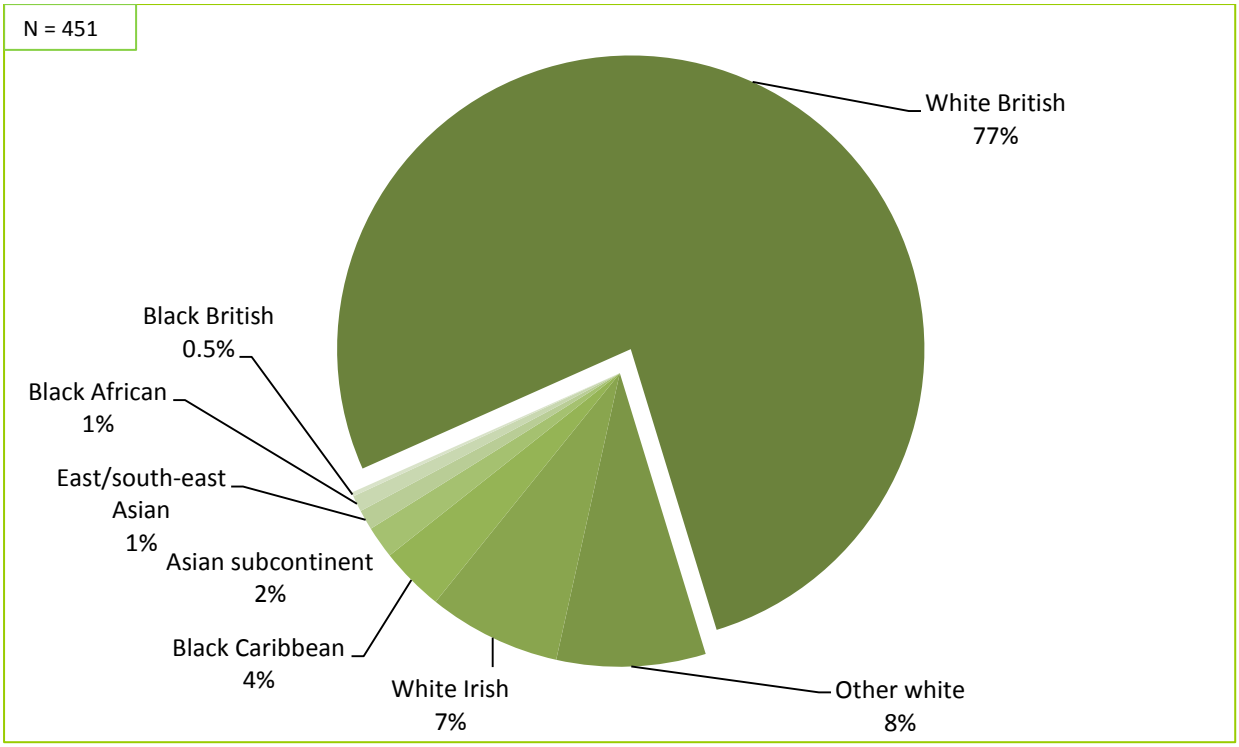
Table 3: *Gender*

Gender	%
Male	40.5
Female	59.5
N = 459	

5.3 Ethnicity and place of birth

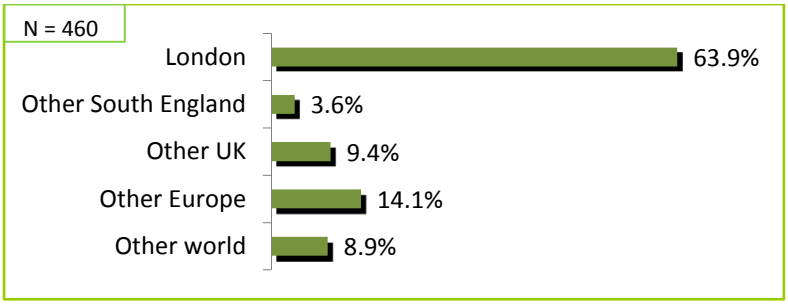
Despite Islington being a very multicultural borough, the ethnic make-up of our sample was overwhelmingly White British, reflecting the greater proportion of White British people amongst the older population. More than two thirds came from this group, and those that did not were in most cases either White Irish or White European. An even smaller proportion were Black Caribbean or Black African (4.4% combined), and there were a similar number of Asian respondents. Significantly there was in total only one Black British or Asian British person surveyed, with all other non-white respondents identifying as first generation.

Chart 1: *Breakdown of the ethnicity of respondents*



When asked where they grew up the sample was again fairly homogenous. 70.2% originated from London, within which the majority came from Islington – in many cases from only a few streets away. Many simply answered the question with the word 'Here'. A surprisingly low number came from elsewhere in Britain, with those who were not Londoners by extraction tending to be first generation immigrants from Ireland and other parts of Europe (usually Italy, Greece or Cyprus), or in some cases the from Caribbean.

Chart 2: *Where respondents grew up*



5.4 State support

Due to our sampling method respondents were almost entirely social housing residents. These comprised of council tenants and leaseholders (92.4%) and housing association tenants (6%). The majority of those we spoke to (55.9%) were in receipt of some form of means tested state subsidy – Pension Credit, Housing Benefit or Council Tax Benefit.

The issue of state support was a divisive one. There seemed to be little logic to who received benefits and who didn't, with some respondents appearing to forsake benefits as a matter of personal pride, and others bitterly resenting that they weren't entitled to any. In addition, it may be the case that some respondents were confused, unsure or unaware of whether they receive benefits, or of which entitlements they do receive.

Bernard and Ethel, both 71, Charles Townsend House, Clerkenwell

"Bernard didn't even retire until last year, so we don't really consider ourselves old, although I'm starting to creak a bit these days. I worked at the primary school, as a dinner lady, Bernard was a postie. We're Londoners. Islington from the start! I was born on this street and Bernard was born two streets down. He was in the year above me at secondary school. The area's changed a lot.

"Our daughter lives across the road, in Michael Cliffe House, and my godson's five minutes away too. We know Pam and William on one side and Audrey and Ken two doors down. We've lived here 47 years so it would be a surprise if we didn't know the neighbours. Having said that a lot of them are new, and they change a lot, so it's hard to keep track.

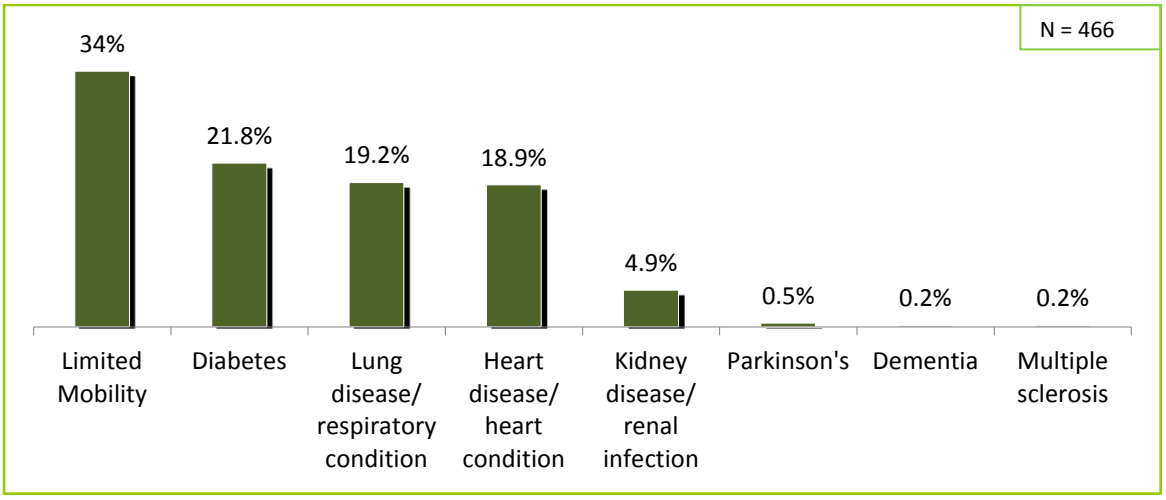
"I drink a lot of water and fruit juice when it's hot, but Bernard prefers tea. If it's very hot we'll get out of the house, pack a lunch and go over for a picnic in Regent's Park.

"I don't think either of us would use a community cooling facility. We like to be outdoors."

5.5 Health conditions

Long-term illness was common, especially, as might be expected, among those in the older age category. Overall 55.6% of respondents said they suffered from at least one of the health conditions we mentioned which could impact on people's ability to cope with extreme weather conditions.

Chart 3: *Percentage of respondents suffering from the health conditions we mentioned*



Further to those medical conditions broached by us, respondents volunteered a range of additional health problems, including cancer, strokes, high blood pressure and deafness or blindness, all of which could plausibly affect their ability to adapt to extreme weather conditions.

Only 33.5% of those surveyed reported a fully clean bill of health.

6 Social resilience

Respondents' levels of self-reliance and the amount of support they had varied greatly. This was evidenced by the huge range of conditions in which people kept their homes and presented themselves – from recently vacuumed carpets and newly ironed shirts to squalid flats and unwashed clothes – as well as people's desire and ability to connect to other local people, services and activities.

Janet, 91, Farriers House, Bunhill

"I'm house bound, and I can't move very easily on account of the arthritis, so it's not difficult for me to stay out of the sun. My daughter comes over two – maybe three – times a week. Aside from her I haven't seen anyone for years. I think there are a lot of other old people on this estate, but I don't know them to speak to.

"I can't open the windows, living round here, but my daughter's set up a nice little fan that I can use in hot weather when I'm watching TV, and another one for when I'm in bed. So I don't struggle with the heat. My father was in the Foreign Service and I grew up in India, so hot weather doesn't bother me too much anyway. It's supposed to be good for my bones actually."

6.1 Support networks

We asked residents who they would turn to if they were struggling with extreme weather, encouraging them to name all the support outlets they might use if they were in trouble. The vast majority said family. As long-term residents of the area a number had family living extremely close by – in some cases on the same street – and gave the sense of having strong networks of children and relatives to call upon if they were in need of help. In many cases family members acted as carers. Participants in our focus groups were quick to identify family as the first port of call:

I don't think the Council looks after the elderly anyway. I think it's more neighbours and family and people like that. People rely on others to rally around. If you rely on the Council, you wouldn't get anything done. ***Maureen, Clerkenwell***

Firstly, a lot of responsibility is on yourself. But perhaps the Council or agencies could do a bit more to make sure people are OK who don't have friends and family. ***Alan, Clerkenwell***

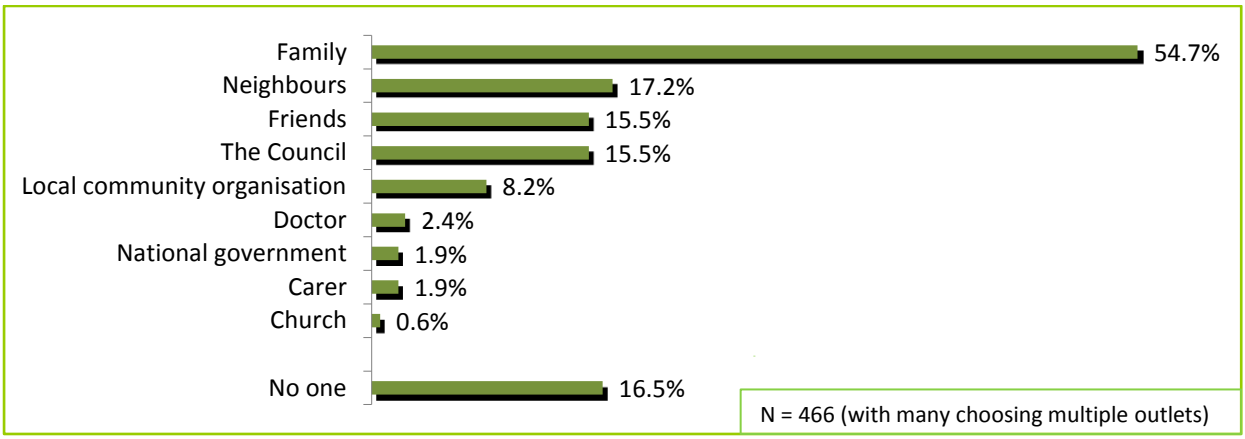
Among those who would not or could not turn to family a number said they would turn to neighbours, friends or the Council respectively. A similar figure said they would not turn to anyone in the event of extreme weather. This latter group were a mix of the least socially resilient and the most; vulnerable and isolated respondents, who had no one to turn to, and capable, self-reliant residents, who were confident they could look after themselves.

Some people like sociability and others are individuals and like doing their own thing. For me it's an irritation to be bugged. ***Bryan, Bunhill***

The government can't do anything, they can only advise you what to do. They can pay for adverts to go on the telly, but not much more. I think it's down to the younger members of the family to look after people. ***Alan, Bunhill***

A small minority of respondents named the local community organisations, wardens, concierges etc who ran their buildings, and a handful named other support outlets.

Chart 4: *Who people would turn to in the event of extreme weather*



Overall the emphasis on family would seem to corroborate the theory that people turn to informal networks of support before formal ones. Although a significant portion did say they might turn to the Council, much greater emphasis was placed on family, friends and neighbours, and there was almost no discussion of national government. The amount of faith that people put in local community organisations varied from one estate to the next.

One of our focus group respondents summed up nicely how people saw the relationship between formal and informal networks, articulating the idea that informal outlets were where people would turn first, but that the buck stopped with the council or government:

Friends and neighbours look after us well while we're here if it's hot. They bring round drinks and the local carers try their best. But ultimately it's council and government who should work together to solve any serious problems. ***Joan, Bunhill***

When residents were asked more explicitly whether they felt they had strong support networks in place the response tended to be an unerring 'Yes' (71.4%) – perhaps partly dictated by personal pride – with a small but significant minority answering 'No' (13.2%) or 'Sometimes' (14.5%).

Table 4: *Do you feel you have a strong support network of people around you?*

Do you feel you have a strong support network of people around you?	%
Yes	71.4
No	13.2
Sometimes	14.5
Not sure	0.9
N = 454	

Although there was some overlap, those who said they would not turn to anyone for help were not necessarily the same individuals as those who identified themselves as poorly supported. The former group were often fatalistic, and avoided help of their own volition, whereas the latter were in most cases genuinely isolated.

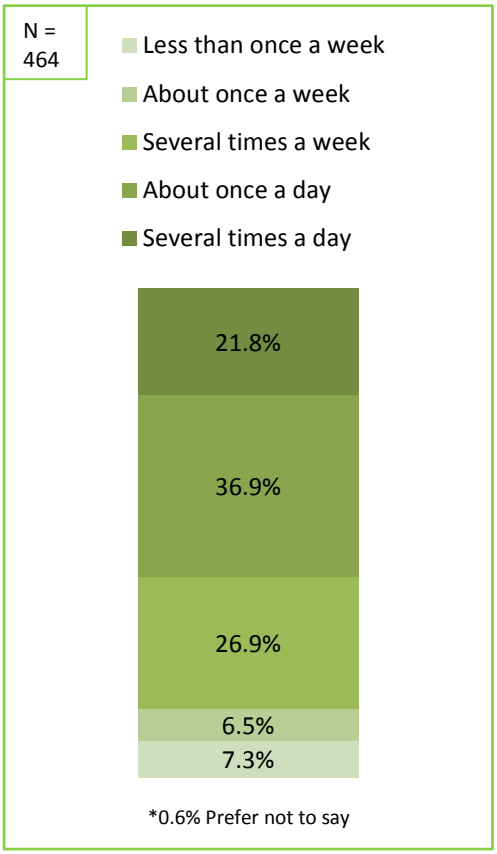
6.2 Social contact and relations with neighbours

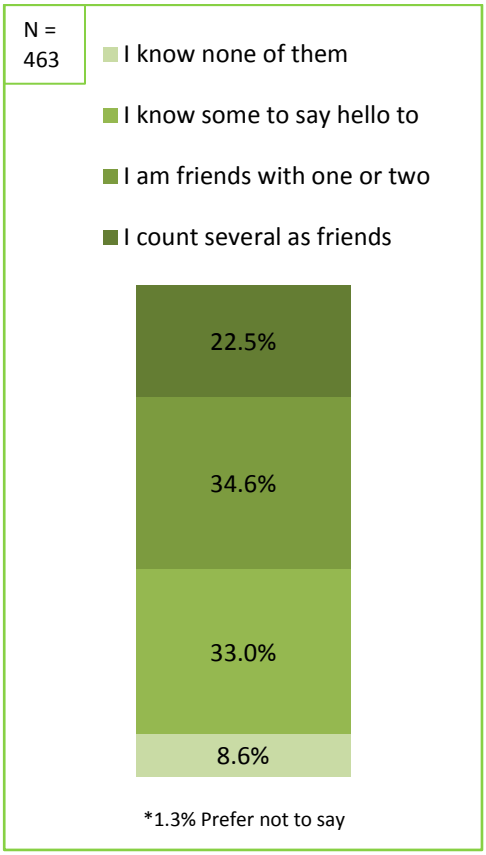
Most residents – over half (58.7%) – said they saw people once a day or more, and only a small number (13.8%) had social contact once a week or less. This suggests a high level of social activity among residents, which can only be a good thing for the social cohesion of the area and the individuals concerned.

Having said this, respondents tended to have varying notions of 'social contact'. Some counted events like a trip to the shops or a visit from their carer as social contact, whereas others had more sophisticated social interactions; the general impression was that respondents were perhaps slightly less socially active than they claimed to be.

Chart 5: *How often respondents make social contact*

Chart 6: *How well respondents know neighbours*





Respondents seemed, by and large, to have good relations with their neighbours. Nine out of ten at least knew their neighbours to say hello to, and many had relationships which were far better than this. Many had occupied their homes for many years, so had had a long time to get to know the people living around them. Very few said they had no relationship at all with neighbours.

Having said this it is worth noting that even those who had strong relationships tended to differentiate between long-term social housing residents, with whom they were on good terms, and private tenants, with whom they had very few dealings. 'They're always changing' or 'They move on every six months' were both common observations about younger, private tenant neighbours.

Look what happened years ago. When we all lived in the block we all knew each other. But now, as some have passed away, bought a house, moved out of London, you've got students, fly-by-nights, sub-letters, whoever – and that's why you don't know anyone. ***Christine, Bunhill***

As we can see from looking at the charts above, respondents' answers to these two questions were remarkably similar. Those who had a lot of social contact knew their neighbours well; those who socialised fairly frequently were on nodding terms with neighbours. And there was a small group – around 10% or so in each case – who had very little social contact and did not know their neighbours at all.

6.3 Political outlook and attitudes towards the council

Respondents tended to be insular and socially conservative. Their political outlook was usually very localised, with almost no mention of national government or political issues, and in many cases a perceived sense of having been left behind or forgotten by local authorities.

Attitudes to the Council were mixed, and although some said they would turn to the Council in the event of extreme weather many others were cynical. Participants in our focus groups expressed this on several occasions:

I think it's the Council's responsibility myself. You're paying your tax, you're paying this and that to these people. When you do get in touch with them they don't do enough to help. ***Terry, Bunhill***

The council don't do anything, be it winter or summer. ***Joan, Bunhill***

The council can give more to community centres like St Luke's. Then you're focusing in on the people. Community centres know their people. They should give money to these organisations, and that should work. Smaller, more direct groups than just the council, who know how to keep an eye on vulnerable people. ***Kathryn, Bunhill***

7 Hot weather

Hot weather was a bigger issue for the majority of people surveyed than flooding. Although not a major priority – particularly given the time of year at which the research was conducted – overheating was clearly something which most residents had dealt with in the past, and which they felt had some bearing on their lives.

7.1 Attitudes to hot weather

Many respondents were initially scathing about the merits of a survey concerning hot weather. This was compounded by the fact that fieldwork took place during very cold weather, between November 2012 and February 2013. Having said this, a significant minority were immediately open to the terms of the survey, and many more were prepared to engage once they had had it explained in more depth. It would be fair to say, though, that most respondents thought weather so hot it was debilitating was extremely unlikely, and did not consider heat waves a comparable health threat to cold snaps.

You talk about this extreme weather, but when do we ever get any? Extreme cold, maybe! Normally it's around 70°F in the summer, but we never really get it that hot, do we? You get a month of sun if you're lucky – so all that talk about extreme weather, I can't see it. *Alan, Bunhill*

When asked whether they worried about heat waves more than they did ten years ago over three quarters said they did not. Many interpreted the question as one of whether the weather had become hotter in general during the last decade, rather than as something relating to their own health, age or ability to cope.

Table 5: *Do you worry about heat waves more than 10 years ago?*

Do you worry about heat waves more than 10 years ago?	%
No	75.4
Yes	21.8
Not sure	2.8
N = 459	

Teresa, 65, St Mary's Tower, Bunhill

"I'm Irish and very pale, so I don't like the sun. I've also just come out of hospital with pneumonia, and I'm a hay fever sufferer. If the weather gets too hot it plays havoc with my chest and my eyes start to stream.

"I used to sit in the house sweating when it was warm, trying to ventilate the place by opening the windows. Then a friend told me to start closing the windows in the daytime. She's a good friend so I trusted her – otherwise I'd have thought she was having a joke. Anyway, I tried closing the windows, just for the hell of it, and it worked.

"I'm lucky, because I worked in a doctor's surgery for 20 years. I was aware of skin cancer before a lot of my friends, and was always careful to stay out of the sun. I'd say for the last 10 to 15 years I've been especially careful of the sun – as I've felt myself getting older."

Some participants in our focus groups did say that they worried:

Years ago when I was young it didn't make any difference to me. But once you pass 60, 65, you feel the heat and it gets too much. I must have my windows open. When I go to bed at night, they've got to be open. ***Terry, Bunhill***

It makes you tired now. In '76 [a heat wave year] I could sit for hours in the sun, but now I can't. ***Rose, Bunhill***

Anecdotally, in relation to climate change, contributors tended to divide into two camps when the subject was mentioned: those who unquestioningly accepted climate change because they had been told it was happening (without taking it especially seriously) and those who were openly sceptical. Some in the latter category cited newspaper articles, television programmes, or simply the evidence of their own eyes ('Things are getting colder if anything', 'There's less pollution than when I was growing up'), although many simultaneously noted that the weather had become more unpredictable and the seasons less clearly defined over the course of their lifetime.

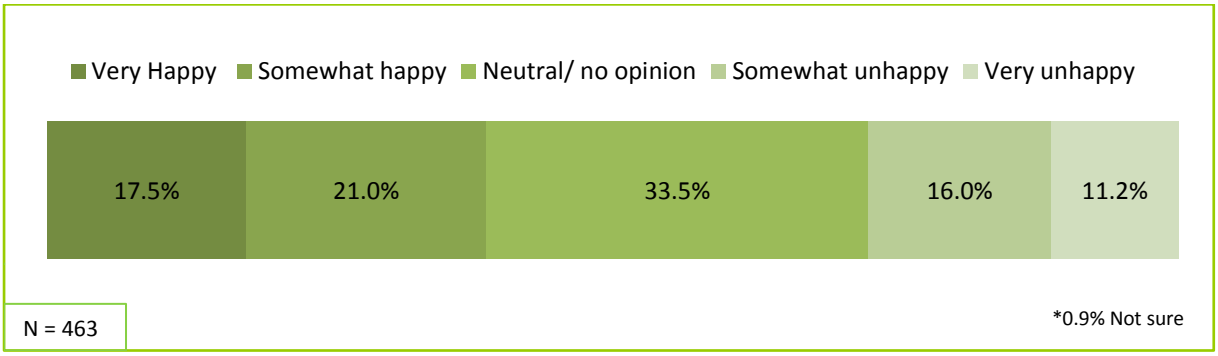
This latter complaint came up a lot during our focus groups:

Years ago we were used to good summers and good winters. What we get now is not the same. You don't know what you're doing. ***Nina, Bunhill***

1976 was an unusual summer. We've not had one like that since. We've had normal summers after that. But as the atmosphere, the ozone layer has gone, the seasons are altering. No disrespect to any people coming to this country, but there's more cars on the roads and more stuff going up into the sky. ***Irene, Bunhill***

When asked how they would feel about the prospect of hot weather a significant number of respondents – about one third – said that they would be 'Neutral' or have 'No opinion'. Many within this group were fatalistic, stating that 'There's nothing you can do about it is there?', or that 'There's no use worrying'. Those who had an opinion were more inclined to be 'Somewhat happy' or 'Very happy' than to be 'Somewhat unhappy' or 'Very unhappy' at the prospect of a heat wave.

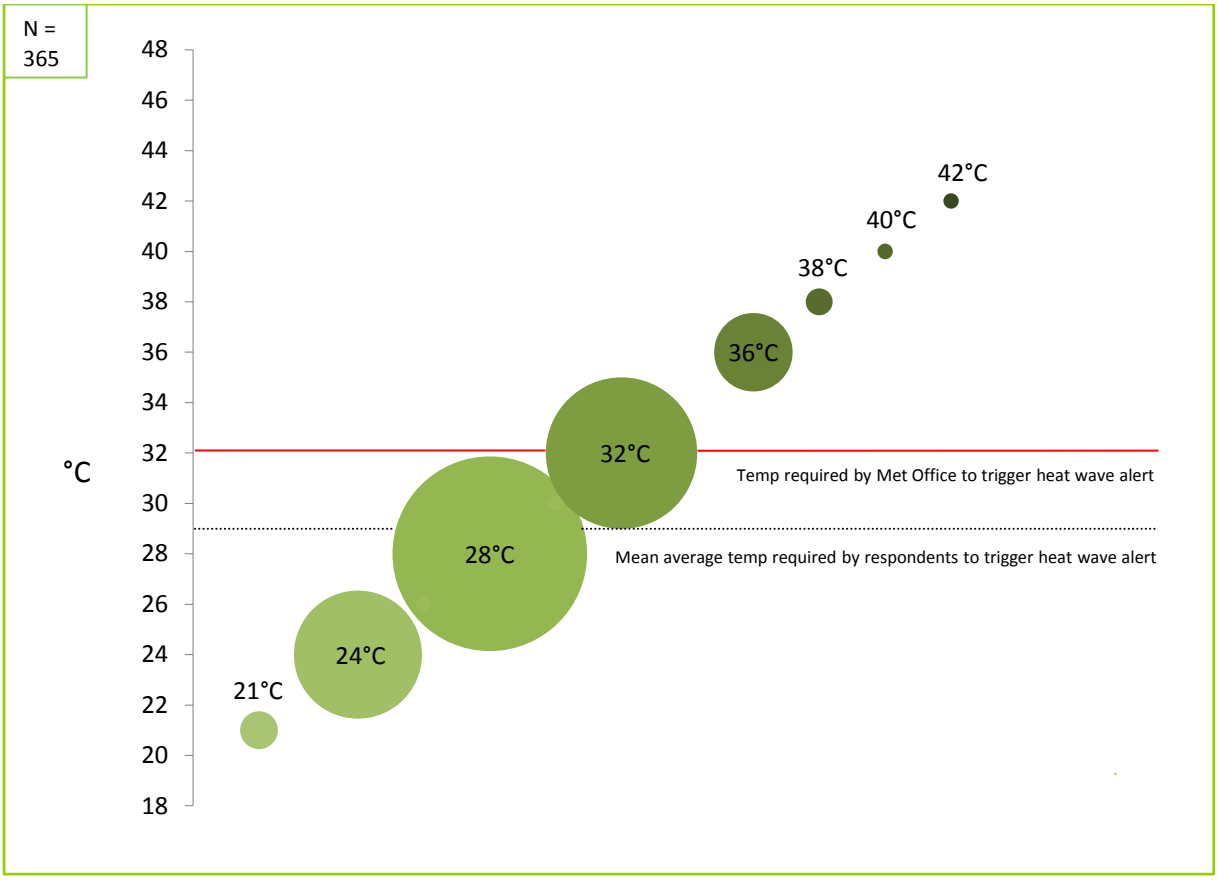
Chart 7: *How people would feel about the prospect of a heat wave*



These findings are of some concern, suggesting that respondents do not feel they are agents of their own destiny in relation to hot weather, as well as that they do not approach heat waves with the necessary caution.

The Met Office's Heat-Health Watch system classifies 32°C as the daytime temperature required to trigger a heat wave alert in London. Interestingly when we asked over 65s to speculate on the temperature required to qualify as a heat wave many went for a number lower than this. The mean average temperature put forward by respondents as a heat wave indicator was 28.9°C or 84.1°F. (The majority were more comfortable using Fahrenheit than Celsius).

Chart 8: *What respondents consider constitutes a heat wave (size of bubble indicates number of respondents who chose this temperature)*



A significant number (22.0%) were unable to answer this question, and did not appear happy to quantify heat numerically, preferring more impressionistic measures such as 'When you have to stay indoors'. This was perhaps symptomatic of a wider cynicism about meteorology and science per se:

Years ago weather forecasters knew what they were doing. They'd forecast so and so, and nine out of ten times it would happen. Now, they give us the wrong idea of what it's going to be like. ***Terry, Bunhill***

I tend to listen to the weather forecasts. They give me a number, I double it, add on thirty, take off a hundred – and it gives me an idea. ***Inez, Clerkenwell***

'Red sky at night, shepherd's delight; red sky in the morning, shepherd's warning' – that's the easiest way to predict the weather!
Nina, Bunhill

Evelyn, 73, Rosebery Avenue, Clerkenwell

"Before he passed away my husband used to love the sun, but I've never been a hot weather person. I like it when it's cool. It's a different type of heat in London to when you go on holiday – really stifling.

"Years ago I used to be able to leave the windows open all night, but not anymore. The area's changed a lot, and these days you get hooligans on their scooters going down Farringdon Road all night, and the bars kicking out at 2.00 or 3.00 am. There's a big problem with crime too. I live on the first floor but I don't feel comfortable leaving the balcony door open at night, because neighbours of mine have been burgled.

"It wasn't always like this. I moved to the house in 1988, and back then the street was very quiet, with lots of greengrocers and small companies. Nowadays there are expensive coffee shops on every corner."

Overall, most people (a combined 68.4%) said they felt either 'Somewhat informed' or 'Very informed' about the health impacts caused by very hot weather, with a minority (15.5%) admitting to being 'Badly informed' or 'Very badly informed'. Again there was a possibility that personal pride was a factor here. In any case there was very little sense – either among the well or the badly informed – that people wanted to become better educated about hot weather. Those who said they were informed often answered without thinking or said that it came down to 'common sense', and respondents who were less informed frequently expressed the fatalism seen elsewhere, suggesting that at their age the health effects of hot weather were inconsequential.

7.2 Preparedness for hot weather

7.2.1 Adherence to good practice

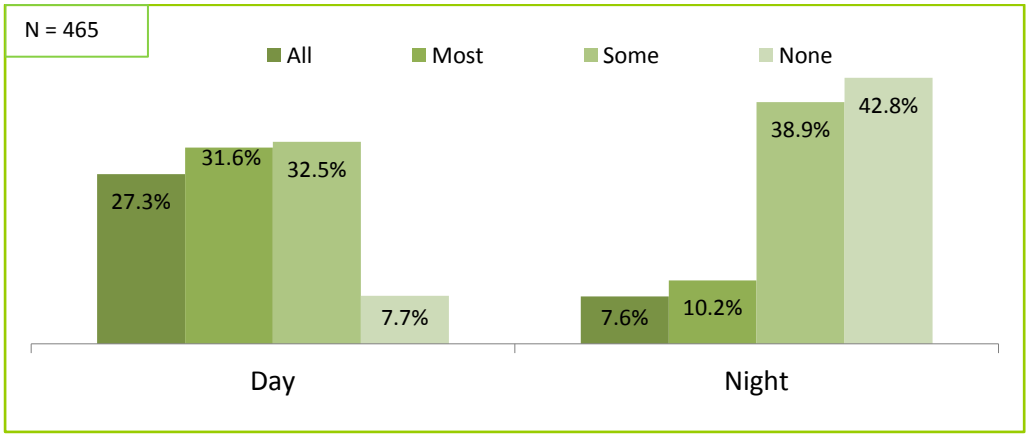
There are several measures which Islington Council advises residents to take in order to guard against the risks of hot weather. We asked respondents about the steps they take, on each point of good practice providing gentle prompts to understand whether they take the necessary steps.

Below is Islington Council's advice, along with an analysis of whether older residents follow it:

- <u>Open windows at night and close them during the day</u>
  The majority of respondents do the exact opposite of this. When asked what steps they take in hot weather 76.9% cite opening windows or doors during the day, with only 36.9% saying they keep them open at night. Only a tiny fraction (4.4%) take the step of actively closing windows during the day in hot weather.

  When we asked in more detail exactly how many windows people kept open during the day and at night respectively, a combined 58.9% said they opened 'All' or 'Most' of their windows during the day. At night, by contrast, this figure was down to 17.8%. This is the opposite of what local authorities would advise people to do.

Chart 9: *Comparison of how many windows respondents open in the daytime and at night*



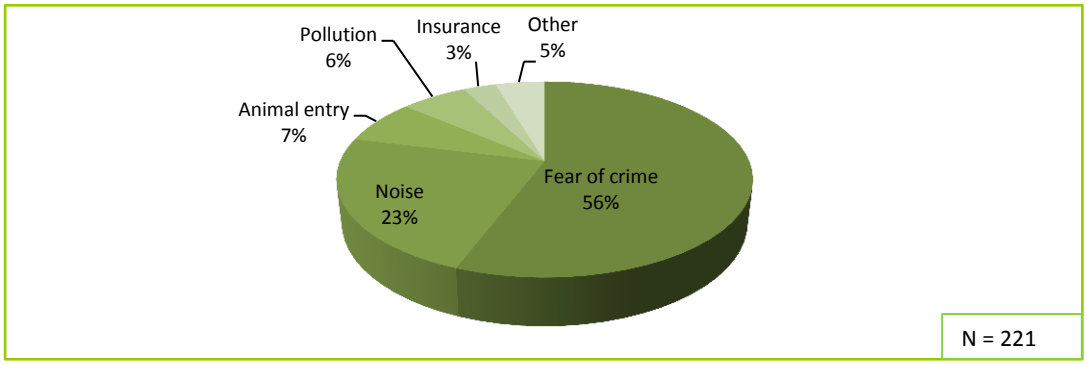
The decision to open windows during the day appeared to be largely driven by gut instinct. It suggests a lack of information among respondents, with most believing that they were taking the necessary steps to stay safe. Many spoke of opening doors and windows so as to get a 'through breeze' from one side of the building to the other:

I open the windows for one thing. I open all the windows if it's very, very hot. It's alright, that, because where I live you either get the wind going that way or the other… ***Nina, Bunhill***

I don't understand people who shut windows. We open them all, and if it's still hot we'll open the street door, and the balcony door. We like fresh air. We like a through-draft. ***Christie, Bunhill***

The decision to close windows at night, by contrast, did not appear to be a case of gut instinct or lack of information, but rather was the consequence of security or noise concerns. There seemed to be a desire to leave windows open at night were it not for these issues, and indeed many who were living in high rise flats or on quiet streets did. An additional issue for residents was the problem of 'animal entry' – the animals in question usually being squirrels or pigeons.

Chart 10: *Reasons for reluctance to open windows*



Overall it would seem that the failure to close windows during the day and the failure to open them at night come from very different places. The former can be solved by better education, whereas the letter needs to be addressed with practical measures to counter noise, animal entry and, most significantly, fear of crime.

If you've got windows running along a balcony, you get intruders coming in unfortunately. If you walk into another room, as quick as that they can get in and get out again. *Margaret, Bunhill*

Last year, a squirrel opened my daughter's freezer and sat there and ate a frozen pizza – and I've got the pictures to prove it. A squirrel, in President House, bold as brass! *Christie, Bunhill*

- <u>Drink water and avoid alcohol</u>
  61.6% said they drank lots of water in hot weather, and generally respondents seemed aware of the importance of staying hydrated. A smaller but still significant number – 20.5% – said they avoided alcohol, and many others beyond this professed to not be big drinkers in general (although there is a tendency among the population as a whole to under-report alcohol consumption). A few respondents – 2.6% – said they did not drink water because they believed there were greater medicinal benefits to either tea or alcohol. However, this kind of sentiment was not widespread, and in general this seemed to be an area where respondents were in line with council advice.

Ray, 76, Bevin Court, Clerkenwell

"Hot weather? Chance would be a fine thing. The steps I'd take if there was a heat wave would probably be to go outside, get a nice cold pint of Guinness in front of me and soak up as much sun as possible. After all, it's not like we get a lot of it.

"I grew up in St Lucia, so I don't worry about the heat over here. And besides, I'm an old man. There are worse ways to go than a heat wave, just ask some of my friends. I put my faith in a little phrase called 'C'est la vie!'

"For me it has to be pretty hot for it to be a problem. I wouldn't complain unless it was somewhere in the 40s. It's not something I worry about at all, to be honest."

- <u>Stay out of the sun during the hottest parts of the day</u>

Nearly half of respondents (48.9%) said they stayed out of the sun during very hot weather. This is a solid proportion, and suggests an awareness of the dangers of exposure to sunlight and UV rays. Some admitted to having been 'sun worshippers' when they were younger, but said they were now more wary. Again there were a minority of 11.4% (i.e. slightly larger than in the case of alcohol and water consumption) whose actions ran counter to advice. These people say they go outside and in some cases sunbathe when it's hot.

In general, however, this seems to be another area where most people are taking the necessary precautions.

My point is that older people sit indoors and get too hot. If they came up here to the club they can get a bit looked after, have a little drink and things and there are other people around them. ***Terry, Bunhill***

I don't like it too hot. I'm not a sun worshipper, never will be. I find it quite boring how people can lie on the beach, toss and turn to get a tan. I've no idea how they do that. When I could drink, I would drink – but not water: I drank beer, which is the wrong thing to do but I don't care. I don't do that anymore. ***Alan, Clerkenwell***

- Use fans but only when it is very hot

  The energy and environmental costs of using fans or other cooling devices means that, in general, councils advise people against using them too regularly. Having said this they are an important precaution to have in place as a last resort. At present over half of respondents use fans. A significant minority say they do not and about one in ten makes only occasional use of them.

  Table 6: *Do you use fans or other cooling devices in hot weather?*

Do you use fans or other cooling devices in hot weather?	%
Yes	51.4
No	37.6
Sometimes	10.1
Not sure	0.9
N = 457	

Alex, 67, Wycliffe House, Bunhill

"I feel terrible. The wife goes out to work every day but on account of my chest I can't do much, so she has to work full time and look after me. I hate being such a burden. We don't get any benefits, so it's hard for her.

"The cold's the real problem here. It affects my chest and makes it more difficult for her to care for me. The house is fine when it's hot. What she does, my wife, is just opens the back door, opens the front door, and you get a nice through breeze. We've got a gate on the front door so you can lock than and still get the breeze. We don't use fans; we don't need to.

"All the things you need to do when it's hot are pretty obvious. As I said, it's the cold that bothers me. I just wish the council would do something about the draft under the door. They put some sealant on it last winter but it did no good."

It is difficult to draw conclusions here as we do not know how often the respondents who answered 'Yes' actually use their fans. What we can tell is that there are a significant minority who either would not use or would not have access to a fan if they were struggling with the heat. It is important that further work is done here to guarantee that all residents have access to fans when they need them, while at the same time ensuring that they are educated in how often to use them.

A handful of respondents mentioned other steps, including drawing curtains and blinds, taking cold showers, avoiding physical exertion, and wearing lighter/ fewer clothes.

7.2.2 Adaptive capacity

Respondents seemed, by and large, to feel they had adaptive capacity within their homes, and although in a wider sense there was a degree of fatalism. They believed, on an immediate practical level, that they had control over their surroundings. Although most (53.7%) did not have a cool room in their house, a significant minority (37.3%) did, with many saying they could retreat to a bedroom, or to a room on the side of the building which the sun could not reach during the heat of the day. Given that the question of whether people felt they had a 'cool room' in their home was an unusual one, it is interesting to note how few respondents said they were 'Not sure' (9.1%). The overall impression was that respondents had thought about the question in the past, and were aware of the limitations and possibilities for adaptation.

I don't need to worry about the heat in my house. I'd maybe open the balcony door to get the breeze. *Peggy, Clerkenwell*

Most residents seemed happy that the measures available (use of fans, opening of windows and doors etc) were sufficient to give them control over the temperature in their homes. The main inhibition on people's adaptive capacity, it would seem, was the issue of opening windows at night (as previously discussed).

Further to this it is interesting to note that no-one mentioned turning the heating down or off as one of the steps taken in hot weather. Indeed, a few complained that they were reliant on the council to adjust temperatures centrally. This was not widespread, and varies from one estate to the next, but it is perhaps an issue that could be explored further.

Effie, late 70s, Gower House, Bunhill

"This 'global warming' all seems a silly, given we haven't had a hot summer in years. Scientists say it's happening but it doesn't seem to make much sense. When I was young there was smog so you couldn't see in front of your face, but it's apparently more polluted now?

"I'm a carer for my husband and both of us suffer in the heat. I usually sling the windows open when it's hot – in the daytime that is. I wouldn't keep them open at night. You'd have to be stupid to do a thing like that. At night we have two fans, one pointing at my husband, one at me. We keep them on every night throughout the summer, from June until September. It's expensive, but needs must.

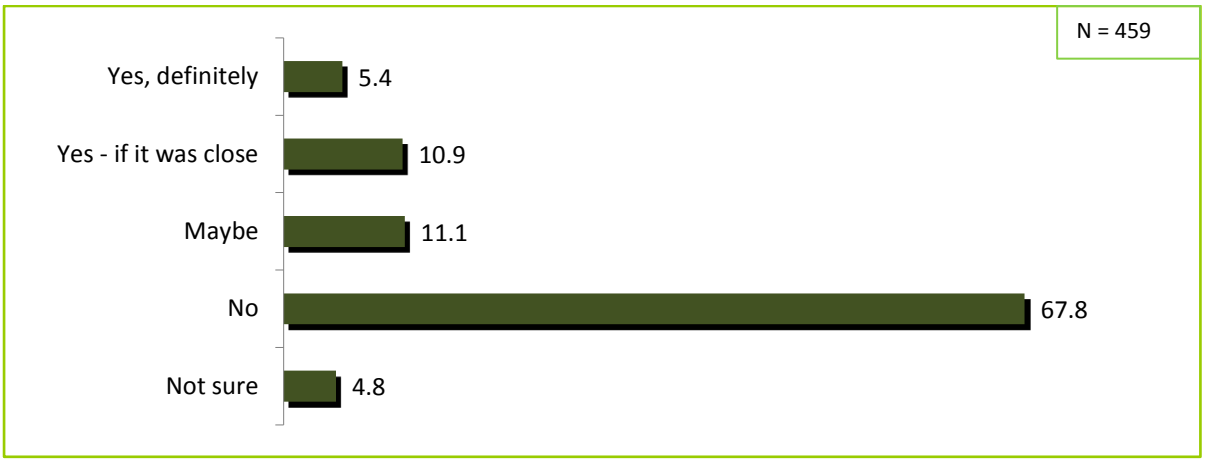
"I consider myself lucky in some ways. My daughter lives in a big block and they can't even turn off their central heating when it's hot. It's controlled externally.

"A cooling facility at St Luke's or somewhere is a nice idea, but I don't think I'd use it because I've got my husband to look after."

7.2.3 Cooling facilities

The idea of cooling facilities laid on by the council or other local community organisations during hot weather was not, by and large, one that appealed to residents. An overwhelming majority said that they would not use this kind of facility, and the idea was unpopular across all segments – regardless of age or mobility. Having said this a small minority – more than one in five – suggested that there was at least some possibility they would, so it is not necessarily worth discounting the idea completely. Many respondents appeared to struggle to get their head around the suggestion at first, so a well publicised pilot scheme might make residents more receptive.

Chart 11: *Would people use cooling facilities at community centres*



7.2 Vulnerable groups

The sample we were speaking to were in the first instance vulnerable, being over 65 and social housing residents. However, within this demographic it is important to look at which groups and segments are particularly at risk.

7.2.1 Demographic segments

There was surprisingly little difference between demographic segments. Gender did not appear to play any factor at all in how vulnerable people were to hot weather. Neither did age make a great deal of difference, the only distinction being a slight propensity among those in the younger bracket to say they were better informed about hot weather: 76.4% of 65-69 year olds deemed themselves 'Somewhat informed' or 'Very informed', compared to 64.7% of those who were 75+.This may indicate better education about the risks of hot weather among younger respondents, but also, perhaps, a greater reluctance to admit to ignorance or incapacity.

Respondents who originated from hotter countries, meanwhile, tended to be slightly less well informed. Of those whose ethnic origin was Asian, Black Caribbean, Black African or continental European 56.9% felt 'Somewhat informed' or 'Very informed' about hot weather, compared to 68.4% of those who had grown up in the UK. The former group (46.9% of whom used fans) were also marginally less likely to use fans or cooling devices than the latter group (53.0%), and appeared to have a higher threshold for hot weather, with a mean heat wave alert estimate of 30.5°C (compared to the overall mean estimate of 28.9°C). [Please not that there the sample for the former group was small (66 respondents)].

There was surprisingly little difference between those with health conditions and those without, although there was a slightly greater likelihood that those with health conditions would worry about heat waves. 23.3% of those with health conditions said they were more concerned about heat waves than ten years ago, compared to 18.2% of those without.

7.2.2 Less socially resilient residents

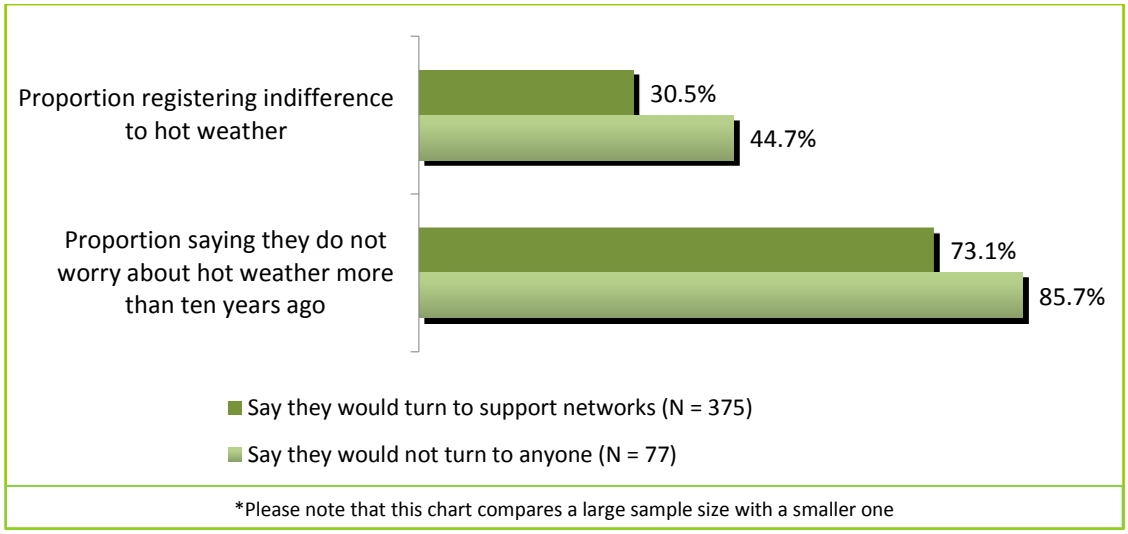
We analysed respondents' social resilience using four criteria: use of support networks, propensity to identify themselves as well-supported, level of social contact and relationship with neighbours (see section 6 for more detail). Below is an analysis of how each of these criteria impacted on residents' susceptibility to the risks of hot weather:

- Use of support networks
  Respondents who said they would not turn to anyone in extreme weather were no less informed than other residents. However, they tended to be a little more fatalistic those who said they would look for help. This section of our sample is difficult to access (being particularly unreceptive to assistance/ intervention) but they represent a vulnerable group; one which disregards the risks of hot weather and refuses/ feels unable to ask for help.

If a heat wave comes it comes: we can't do anything about it... ***Terry, Bunhill***

If there was a heat wave tomorrow it wouldn't change how I behave much. I wouldn't wear cardigans and jumpers: I'd wear something cool. And I'd just get on with it. ***Maureen, Clerkenwell***

Chart 12: *Indifference and worry about hot weather – Those who would turn to support networks vs Those who would not*



- Propensity to identify themselves as well-supported

  Respondents who said they did not have good support, or who expressed ambivalence about their level of support, tended to be less positive about the prospect of hot weather than better supported residents, and were marginally more likely to worry about it more than ten years ago. However, this did not necessarily to translate into good practice, with poorly supported respondents tending to use less fans, drink less water, and be less likely to describe themselves as well informed about the risks of hot weather.

  Chart 13: *Attitudes to hot weather – Those with strong support Vs Those with weaker support*

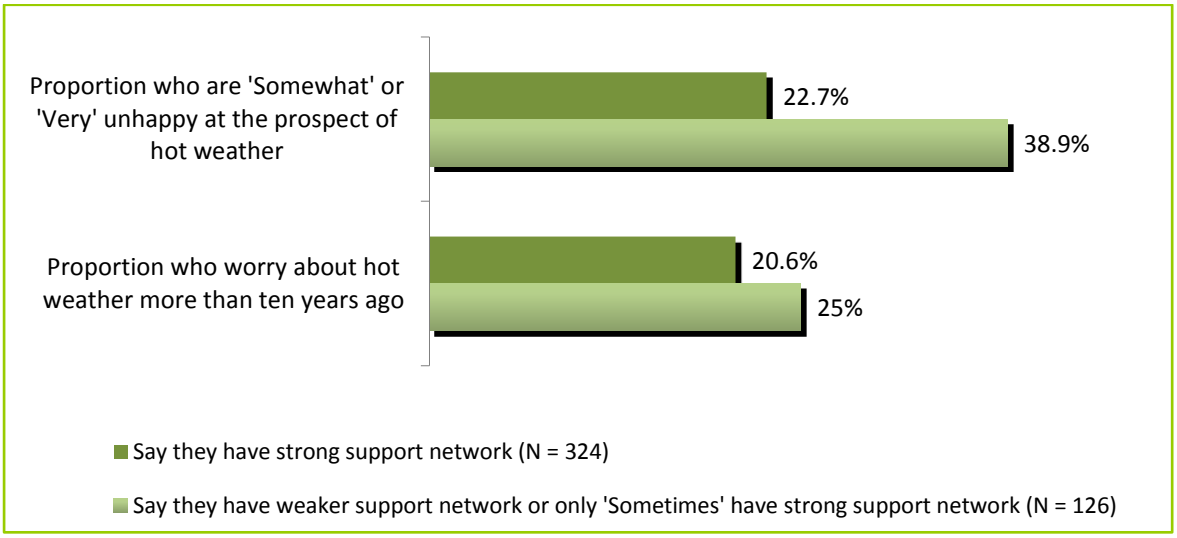
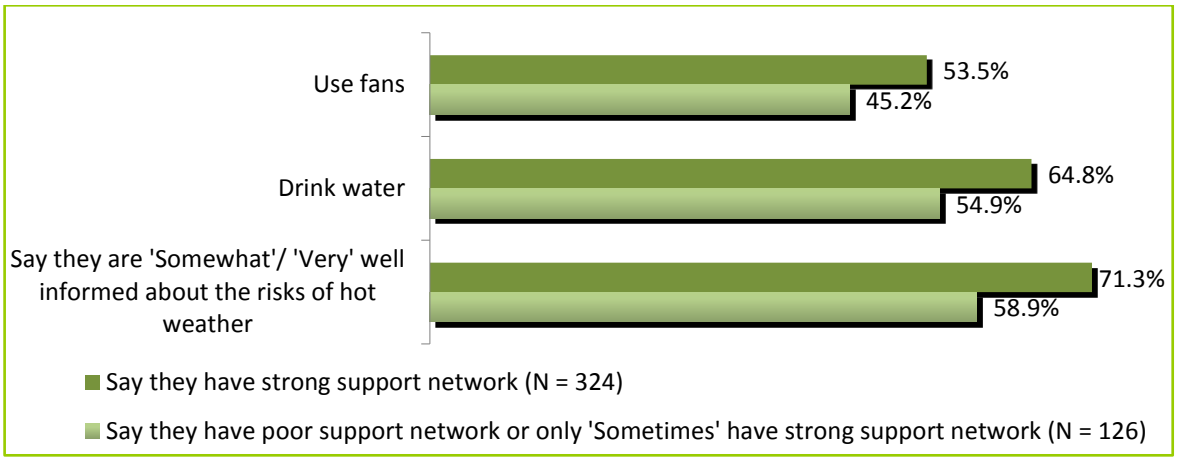


  Chart 14: *Steps taken – Those with strong support Vs Those with weaker support*



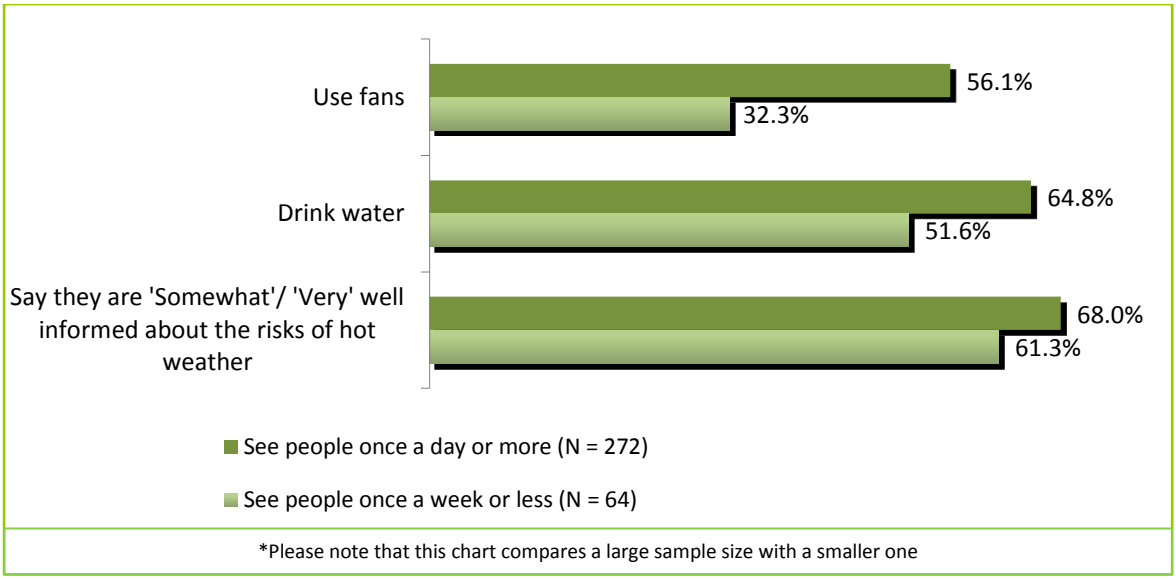
- Level of social contact

  It was a very similar story with social contact. Those who had a lower amount of social contact were less likely to be happy at the prospect of hot weather than those who saw people a lot. Of those who socialised once a week or less 34.9% were likely to be

'Somewhat' or 'Very' happy at the prospect of hot weather – compared to a figure of 42.8% among those who socialised once a day or more.

However, those who had low levels of social contact were again less likely to translate their dislike of hot weather into practical action. As with those who said they did not have strong support networks, those with little social contact were again less likely to use fans, drink lots of water, or consider themselves well informed about the dangers of hot weather.

Chart 15: *Steps taken – Those with high social contact Vs Those with low social contact*



*Please note that this chart compares a large sample size with a smaller one

Perhaps predictably, those with low amounts of social contact were considerably more likely to stay out of the sun during hot weather. Of those who made social contact once a week or less 58.1% cited staying out of the sun as one of the steps they take. This compared to 44.4% among those who socialise once a day or more, and may be an indirect benefit of low social contact, with respondents less inclined to meet people or do things during hot weather. If this is the case then it is an imperfect compromise, reducing the risk of exposure to the sun but increasing the dangers of overheating indoors.

One interesting outcome of our survey is that those with lower levels of social contact are slightly more open to the idea of community cooling facilities. 31.7% of those who saw people once a week or less said they might or would use community cooling facilities, compared to 23.5% of the respondents who socialised once a day or more. Those with high levels

Ian, 71, Joseph Trotter Estate, Clerkenwell

"I don't have much family. Used to be mates with the fellow next door, but he kept leaving the radio on at night, making noise, and we fell out. These days we don't speak. If he wants to make the effort then he can but I'm not going to. I don't know the neighbours on the other side. They're foreign. Just moved in.

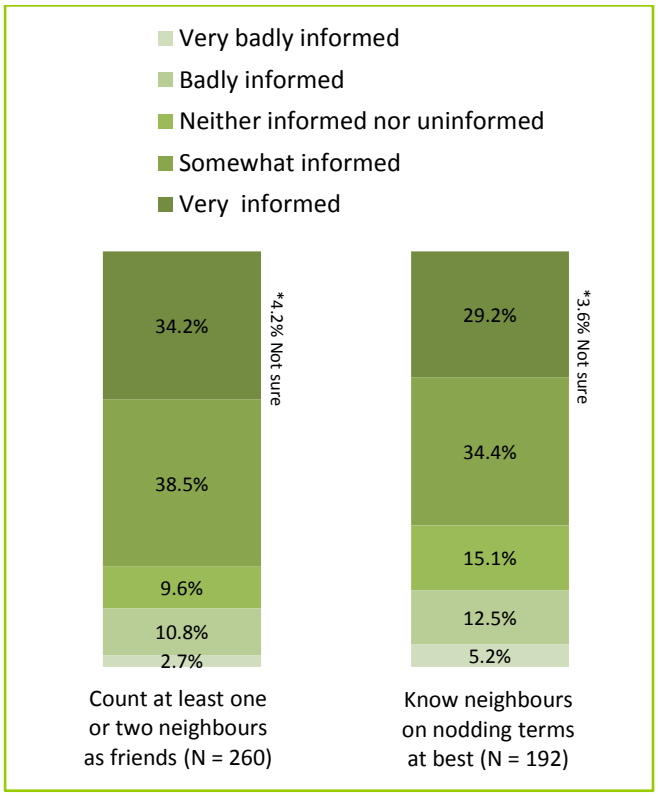
"I look after myself, mostly. I've got a list of medical problems as long as your arm, so I don't like the hot weather much. I stay indoors – keep myself to myself. I've got the telly and I drink tea when it's very warm, 'cause it's supposed to cool you down. I don't really know the 'official' steps you're supposed to take. Just get on with it, I guess..."

of social contact were 11.4% more likely to answer No to the community cooling facilities question.

- Relationship with neighbours

  Those who did not know their neighbours, or who were only on nodding terms with them, were less likely to feel informed about the health risks of hot weather than people who described their neighbours as friends.

  Chart 16: *How informed people feel about the health risks of hot weather – Those who are friends with neighbours Vs Those who are not*



Ellie, 80, The Triangle, Bunhill

"I have water when it's hot, but I prefer tea. I've never liked fans – they're far too noisy. I don't drink alcohol.

"When you've been around as long as me you don't worry about a bit of sunshine. Some people don't look after themselves, but all it takes is common sense. I don't worry about heat waves any more than I ever have. It's just the weather – you can't change it.

"I can deal with hot weather: open windows, get outdoors etc. The council should concentrate on things they can change."

In addition to this, respondents who were not friends with neighbours were slightly less likely to take steps such as drinking water; 58.9% took this step, compared to 64.4% of those who were friends with their neighbours.

Within the relatively large group who were not friends with their neighbours, there was a group who did not know their neighbours *at all*. This segment was small – only 40 people – but it never the less makes up a statistically significant proportion of respondents, forming just under ten per cent of the overall sample. Respondents who did not know their neighbours at all were, like those who had little social contact or who had poor support networks, much more likely to dislike hot weather but much less likely to take the necessary precautions.

Overall it would seem that there are two groups that are vulnerable:

The first group are those who are fatalistic and who dislike intervention. They do not use support networks and do not take the threat of hot weather particularly seriously, preferring to rely on 'common sense' and an ethos of self-reliance. Although not necessarily isolated in the traditional sense, they are a hard group to reach on account of these things.

The second group are genuinely isolated. They are the 10 – 15% (sometimes a little less), who have lower amounts of social contact, poorer support networks, and no relationship with their neighbours. This group do not like hot weather, but due to a lack of contact and poor social cohesion, they do not take the necessary steps to mitigate against the dangers it poses.

Arnold, 82, Balfe Street, Kings Cross

"To be honest it's not something I've ever thought about, flooding. Not since the barrier went up in '82. My daughter works in The City and commutes in from Oxfordshire, and her house is vulnerable. So I feel really sorry for people that do have to deal with it. It must be horrible, losing all your stuff overnight like that. It would be losing the sentimental things that was really upsetting.

"In London I think we're safe though. My flat's on the first floor so it would have to be quite a flood to get up here. The only flooding I've had was when the bloke upstairs let his bath overflow. Complete wally. I had to get the council in to fix my ceiling.

"Come to think about it there was a time it rained very heavily – fifteen years ago or so, now – and the guttering outside my window got blocked. It overflowed and the bedroom wall had a damp patch for a week or two. But I wouldn't go so far as to call it a 'flood'."

8 Flooding

As described above, there are three main areas with an elevated flood risk in south Islington: the immediate vicinity of Farringdon Station, the immediate east of King's Cross Station, and St Luke's Estate in Bunhill. Our survey included respondents from all three of these areas, but in spite of this the topic was in most part a non issue.

8.1 Attitudes towards/ experiences of flooding

There was very low awareness and experience of flooding, with few participants having given the subject any consideration. 80.9% said they did not worry about flooding any more than they did ten years ago. A high proportion of respondents lived above the ground floor, so even if the area were to flood they were not immediately vulnerable. Of the small minority who said they did worry about flooding more than they did ten years ago, several turned out to worried in general terms, on others' behalf – i.e. concerned for people in Oxfordshire and the West Country – rather than on their own account. In general most viewed the prospect of natural flooding of their own homes as unthinkable.

Focus group participants deemed floods impossible, or else so unlikely that it was pointless to think about them:

I'm 19th floor so I'm alright. And my mother's 90 and she's never known any flooding in London. I'm not worried at all. ***Alan, Bunhill***

What will be will be. ***Joan, Bunhill***

An overwhelming majority had never experienced flooding, and their first instinct was to cite internal flood damage – baths overflowing, leaky boilers etc – when the subject arose. Those who had experienced natural water damage often mentioned small problems that came about as an indirect consequence of heavy rain, such as gutters overflowing or water collecting on flat roofs. No one had experienced serious flood damage.

I don't worry about it. In years to come it could happen, maybe. The first thing that would get hit is the Underground, where the Thames is. But they've got that barrier for us that they built a few years ago just in case. ***Irene, Bunhill***

I think we're fairly lucky, especially where I live. We're well away from being flooded up in Islington. ***Ruth, Clerkenwell***

Table 7: *Have you ever experienced natural flooding?*

Have you ever experienced natural flooding?	%
No	88.4
Yes	10.6
Not sure	1.0
N = 410	

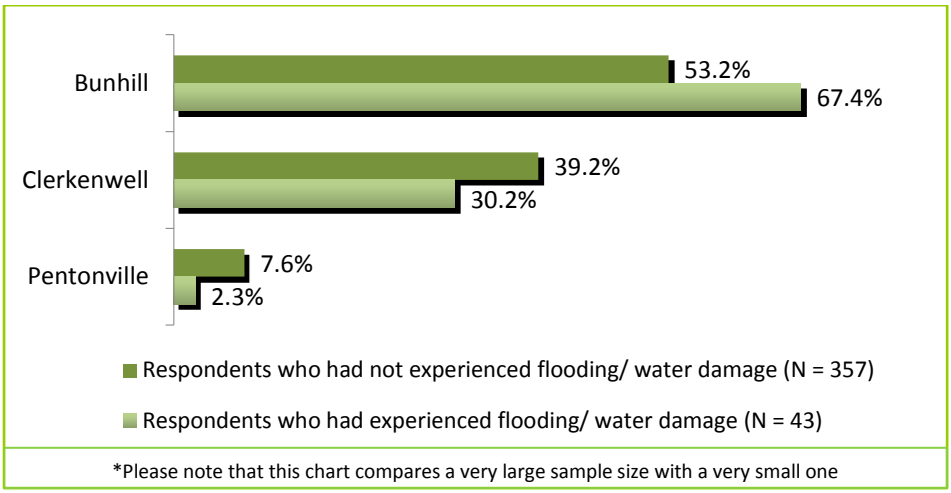
Of the small number who had experienced flooding about half had required professional restoration. In almost all cases the respondent's home was either 'dry' very soon afterwards or suffered no long-term damage in the first place. Numbers here are so low that it is difficult to draw any wider conclusions.

Most respondents were inclined to think that they did not have insurance against flooding (68.5%). 17.8% said that they did, and 13.7% were unsure. Although most ventured a Yes or No answer here, the overall impression was that this was not a question most knew the answer to. The majority made reference to insurance with the council, which they either assumed covered flooding or assumed did not (depending on the individual).

8.2 Differences across areas

Although concerns about flooding were rare, it is worth noting that residents in Bunhill were slightly more likely than average to say they had experienced flooding or water damage, and also had a higher propensity to say they worried about it more than ten years ago. Several of those who said they were more worried came from on or near the St Luke's Estate, perhaps indicating a slightly higher awareness of the risks in this area than in south Islington's other Flood Risk Zones. [Again, numbers here are extremely low, so it is hard to extrapolate broader significance.]

Chart 17: *Where respondents live – Those who have experienced flooding/ water damage Vs Those who have not*



9 Insulation

In addition to surveying respondents about heat waves and flooding, we asked whether their homes had been fitted with insulation in the past two years. Among other things insulation can be a means of reducing internal temperatures during heat waves.

The question often confused respondents, many of whom appeared to be unsure about what constituted 'insulation'. All in all just under one third had received insulation of some kind, usually in the form of double-glazing, drought protection on external doors, or wall cavity insulation.

Table 8: *Has your home been fitted with insulation in the last two years?*

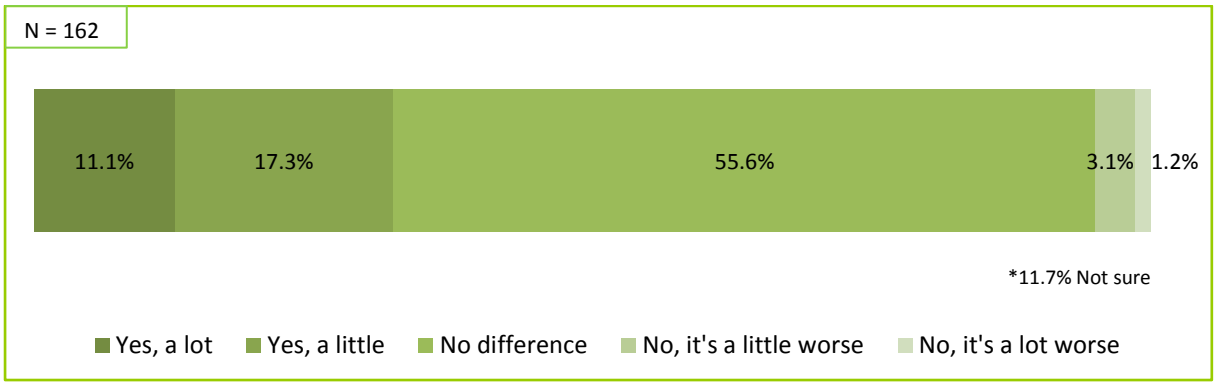
Has your home been fitted with insulation in the last two years?	%
No	59.9
Yes	31.8
Not sure	8.3
N = 456	

Insulation was a big issue for some people. One resident articulated clearly the need for insulation during one of our focus groups:

I think all Council houses should have cavity wall insulation. We've tried because we live on an Islington Estate but we're Circle 33. I've tried to get them to do it, because I'm disabled, but we're not getting any response. In the winter that house is dreadfully cold. It's warm in the summer but in the winter it's like ice. We have to have the heating on all the time, which is running bills up to £200 a month. ***Joan, Bunhill***

However, for most the insulation – where it had taken place – had had no impact on dampness and mould growth. In the cases where people had noticed a change it was usually for the better, with just over a quarter of those who had received insulation reporting a reduction of some kind.

Chart 18: *Impact of insulation on dampness and mould growth*



10 Survey of organisations

We surveyed 22 service providers responsible for the wellbeing of vulnerable residents in Islington. These included tenants' groups, community centres, charities and lobby groups, housing and social care providers etc, and ranged from very localised service providers whose remit was restricted to a single ward, through to national organisations. The intention was to understand how well the risks attached to extreme weather were understood, and the safeguards that organisations had in place to mitigate against them.

Although some demonstrated high awareness and a good level of adherence to good practice, the majority did not take extreme weather conditions seriously enough, and were in many cases difficult to pin down on the subject. Below are the findings from this research component. A more detailed breakdown of the numbers can be found in Appendix A (Section 12.1).

Findings

- General approaches to extreme weather:
  - Of the 22 groups surveyed only 6 had a plan for extreme weather; a further 5 did not, but said they were working on one;
  - Most believed that the Council (8), National Government (5) or the NHS (4) were responsible for protecting vulnerable people from extreme weather; only 3 of the 22 said it was the responsibility of their own organisation;
  - Only 4 of the organisations had ever had to help a service user with extreme weather, perhaps explaining the lack of coherent contingency plans exhibited by most;
  - There was no correlation between bigger service providers and better preparedness for extreme weather, with many small organisations appearing to be as prepared as national outfits.

- Hot weather:
  - 11 – i.e. half – of the organisations said they were 'Somewhat' or 'Very' prepared for the risks posed by heat waves; only 4 felt their service users were prepared and only 5 felt that the issue was something which concerned service users;
  - Only 4 had heard of the National Heat Wave Plan – 3 of these implemented it;
  - Organisations deem 30.8°C the mean average temperature to trigger a heat wave – nearly 2°C higher than the average among residents;
  - Over 75s and those with respiratory conditions were each deemed particularly vulnerable to hot weather by all 22 organisations;
  - Other groups suffering from health conditions (i.e. those with heart conditions, dementia, mental health conditions, and those who were bed bound) were all considered vulnerable by at least half of the organisations surveyed;
  - Only 3 organisations of the 22 worry about heat waves more than 10 years ago;
  - Only some of the organisations took practical steps such as receiving monitoring temperatures during hot weather (11), communicating the dangers of heat waves to older residents (10) and providing cool rooms (5) for service users.

- Flooding:
  - 8 of the 22 organisations said they were ‘Somewhat’ or ‘Very’ prepared for the risks posed by flooding; only 4 thought their service users were also prepared;
  - Surprisingly 11 service providers claimed to worry about flooding more than 10 years ago – considerably higher than the equivalent figure for heat waves.

11 Appendices

11.1 Appendix A: Evidence review

Evidence on social and community resilience to heat wave events in the UK is limited, and it is not the purpose of this research to explore the health impacts of extreme weather – these have already been extensively detailed (Vardoulakis & Heaviside, 2012).

We have started from the assumption that extreme weather is bad for residents' health, but that there are certain behaviours which can mitigate against the risk it poses. Current evidence in this area includes:

- Vulnerable residents within inner-city London's Urban Heat Island are likely to suffer most directly from the effects of climate change (Graves et al, 2001). This is due to:
  - High population density and few green areas;
  - Poor drainage;
  - Air pollution;
  - Low social capital.

- There is some evidence (Abrahamson et al, 2008) to suggest that individuals are unconcerned by/ resistant to the climate risks posed by overheating. There appears to be a link between social isolation and susceptibility to the negative effects of hot weather (Semenza et al, 1996; McNaughton et al, 2002; Klinenberg, 2002).

- There is inconsistency between studies (Abrahamson et al, 2008; London Councils, 2011; Chowdhury et al, 2012) over who people look to for support during extreme weather. For example:
  - Abrahamson et al suggest that vulnerable residents looked to informal networks;
  - London Councils suggest that people looked to local authorities, regardless of age or social class;
  - Chowdhury et al found that people generally believed that government institutions had primary responsibility to minimise heat wave risks.

- There is some evidence to suggest that vulnerable individuals do not engage with messages surrounding extreme weather/ heat waves. For example:
  - Hot weather is regarded as a positive thing;
  - Heat wave events are considered rare.

- The National Heat Wave Plan for England will become increasingly important as periods of high temperature become more frequent. The plan emphasises the importance of communicating the dangers of extreme heat. However, the 2007 evaluation of the plan (Johnson & Bickler, 2007) was unable to draw strong conclusions.

- Evidence from the US suggests that only around half of residents who had guidance went on to take preventive actions (Sheridan, 2007; Kalkstein & Sheridan, 2007).
    - Evidence suggests older people are less likely to take preventive actions (Kalkstein & Sheridan, 2007; Semenza et al, 2008; Perry & Lindell, 1997), and that they do not see themselves vulnerable to the risks of hot weather (Abrahamson, 2008).

- 'Adaptive capacity' is the means by which individuals can adapt their homes to mitigate the impacts of extreme weather – i.e. how much control they have over their physical environment (Graham & Rawlence, 2012).

- Cooling centres are a potential solution, and are used in locations such as New York City, but it is unclear whether they would be a cost-effective or widely used (Hansen et al, 2011; Semenza et al, 1996):
    - Research from the 2003 French heat wave suggested that older people who visited cooling centres were less likely to die from heat-related causes (Vandentorren et al, 2006);
    - Cooling facilities were implemented in Canada, but research suggested that there was little awareness of them among communities, and that they were not used (Alberini et al, 2011).

- Studies such as Chowdhury et al's (2012) found a high degree of fatalism in relation to heat exposure.

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11.2 Appendix B: Survey of organisations in numbers

Below are the charts and tables providing a more detailed breakdown of our survey of organisations:

11.2.1 Who we spoke to

Chart 19: *What is the nature of your organisation?*

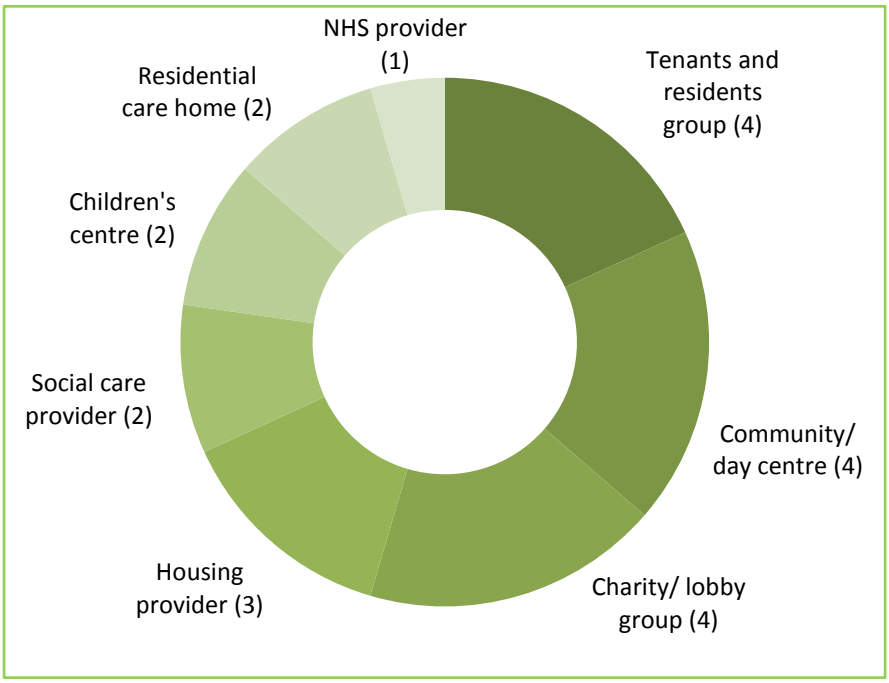


Table 9: *What area does your organisation cover?*

Area covered	
UK	2
London	2
Islington	7
South Islington	3
Clerkenwell	2
Bunhill	6

11.2.2 Extreme weather in general

Chart 20: *Does your organisation have a plan for extreme weather?*

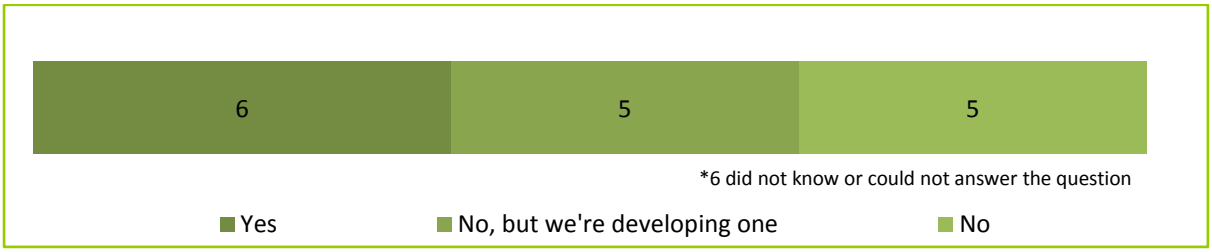


Chart 21: *Who is responsible for protecting vulnerable people against the impacts of extreme weather?*

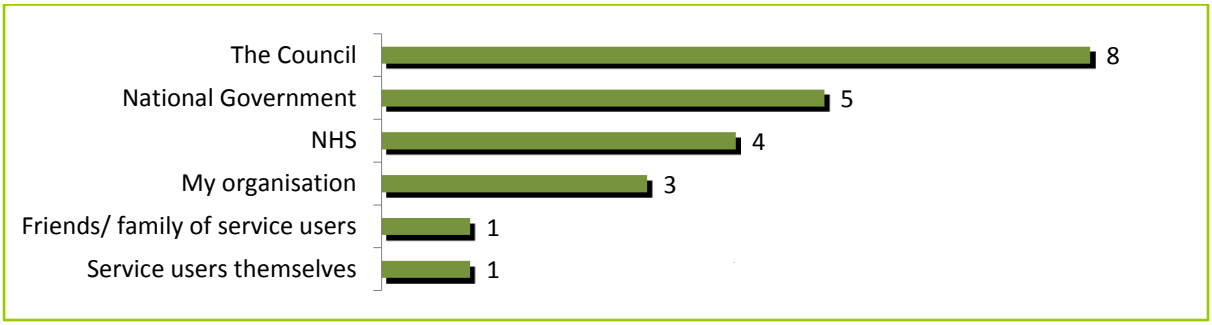


Table 10: *Have you ever had to assist a service user with the consequences of extreme weather?*

Have you ever had to assist a service user with the consequences of extreme weather?	
Yes, with flooding	2
Yes, with flooding and overheating	2
No, never	16
Not sure/ could not answer question	2

11.2.3 Heat waves

Chart 22: *How prepared is your organisation for heat waves? How prepared are your service users for heat waves? How concerned are your service users about heat waves?*

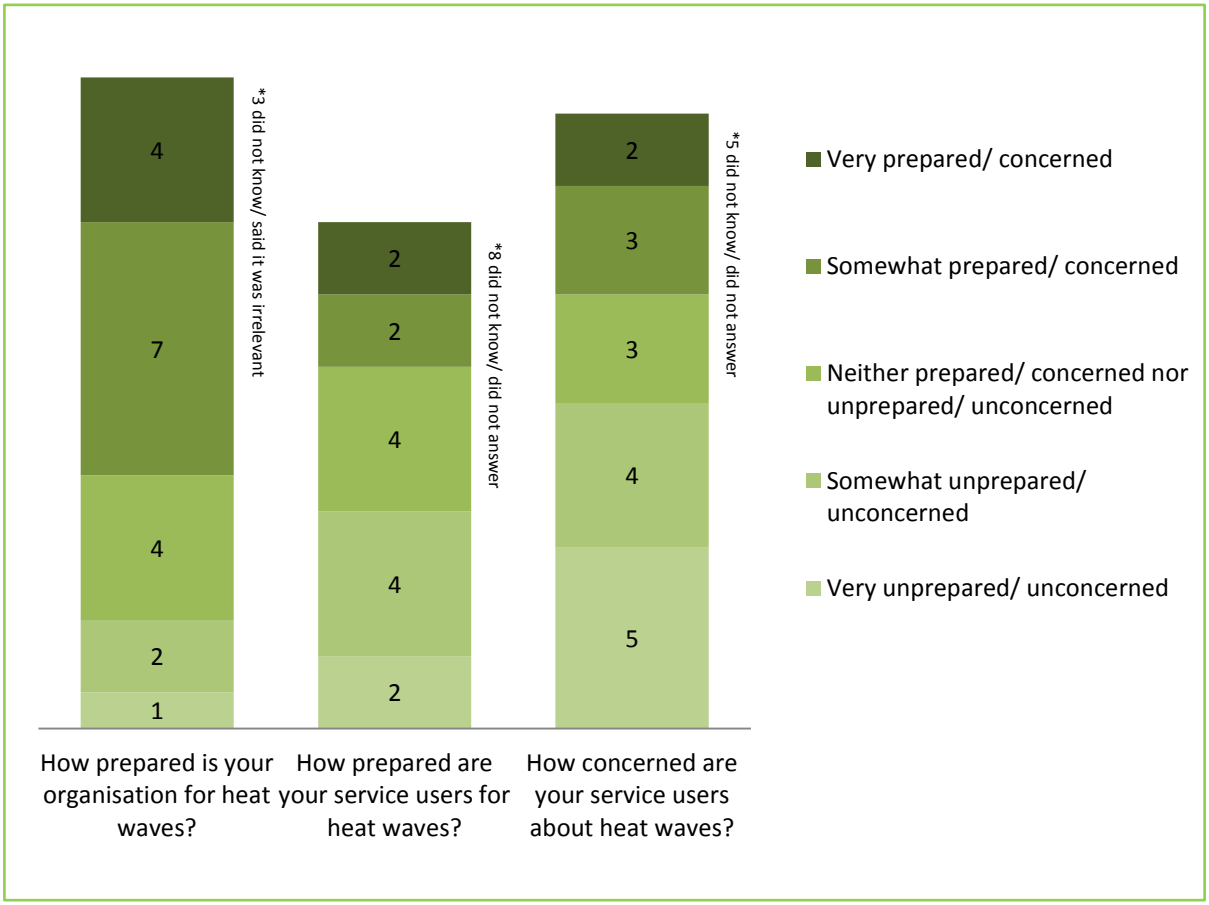


Table 11: *What daytime temperature do you think triggers a heat wave alert?*

Heat required to trigger a heat wave alert	
36°C	3
32°C	10
28°C	5
24°C	2
Mean Average Temperature = 30.8°C	

Table 12: *Are you aware of the National Heat Wave Plan?*

Are you aware of the National Heat Wave Plan?	
No	15
Yes*	4
Not sure/ didn't answer	3

*3 of the 4 who had heard of the National Heat Wave Plan implemented it.

Table 14: *Do you worry about heat waves more than ten years ago?*

Do you worry about heat waves more than ten years ago?	
No	17
Yes	3
Don't know	2

Chart 23: *Which groups do you think are particularly vulnerable to high temperatures?*

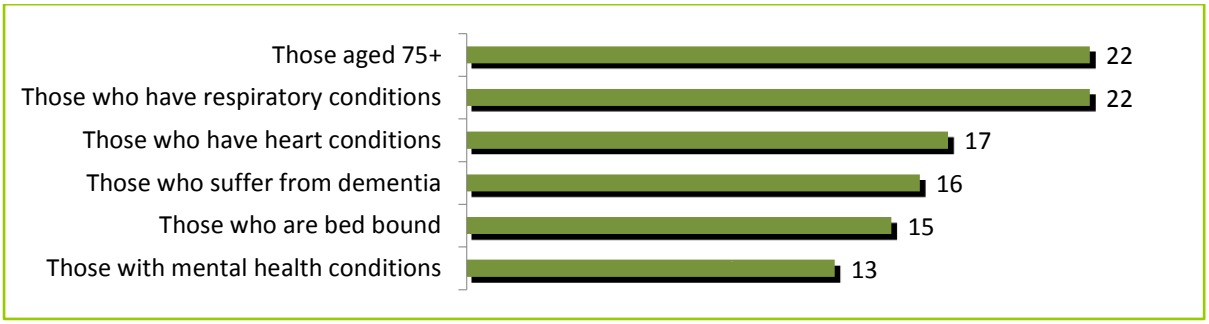
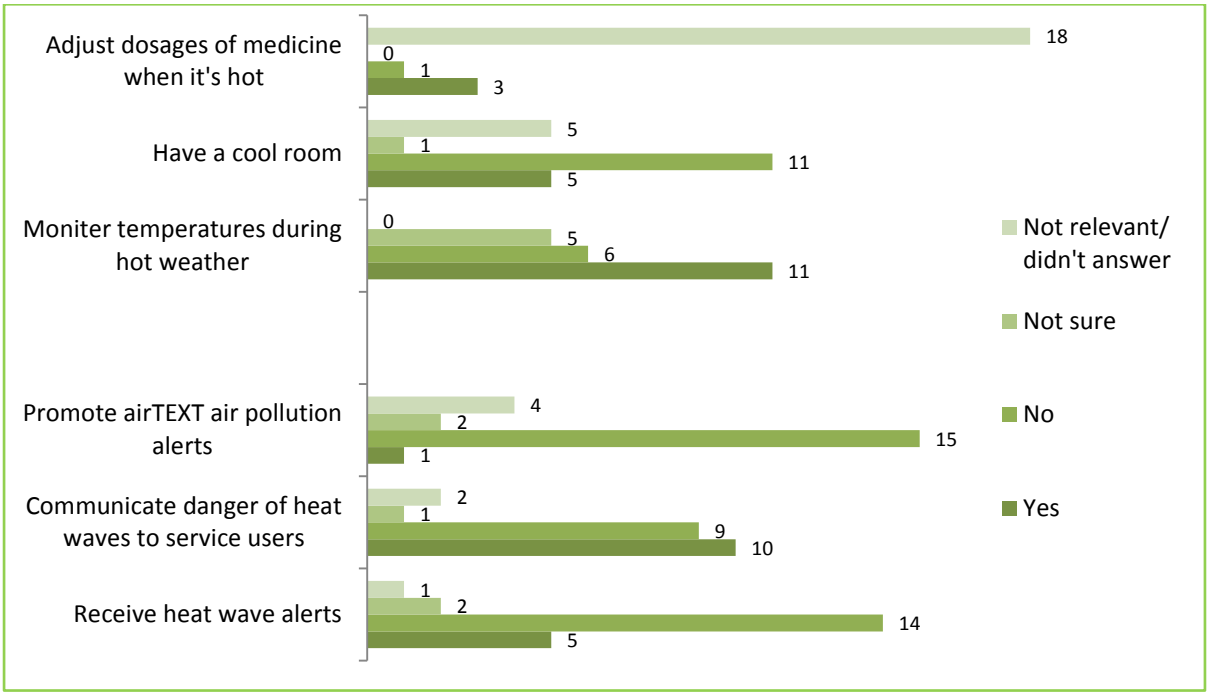


Chart 24: *Practical steps and attempts to inform taken during very hot weather*

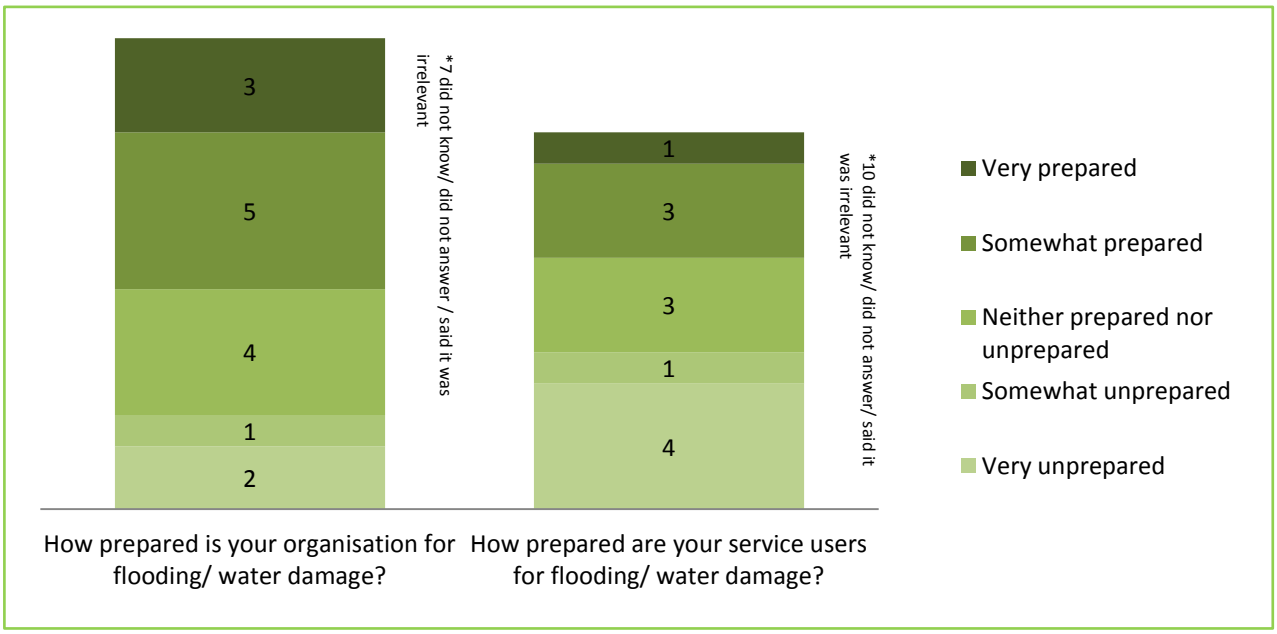


11.2.4 Flooding

Table 14: *Do you worry about flooding more than ten years ago?*

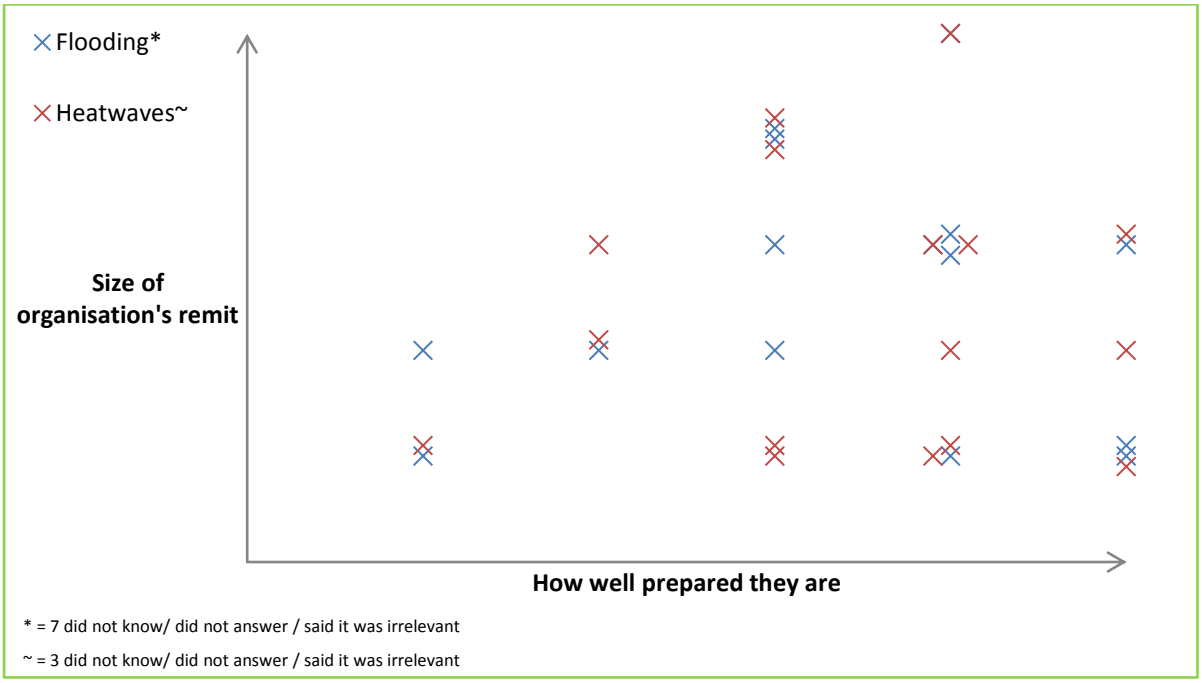
Do you worry about flooding more than ten years ago?	
No	11
Yes	11

Chart 25: *How prepared is your organisation for floods? How prepared are your service users for floods? How concerned are your service users about floods?*



11.2.5 Remit of organisation

Chart 26: *Preparedness of organisation Vs Size of organisation's remit*



* = 7 did not know/ did not answer / said it was irrelevant

~ = 3 did not know/ did not answer / said it was irrelevant

11.3 Appendix C: Example survey

CRISP - Climate Resilience Islington South Project

RESIDENT SURVEY

Islington Council, North London Cares and University College London are conducting a project, funded by the Department for the Environment, Food and Rural Affairs (DEFRA), into residents' attitudes towards extreme weather events and the barriers facing them in adapting their homes/ lifestyles. We will also be interviewing service providers and later conducting focus groups.

1. Address

_____

2. Area

Bunhill	Clerkenwell	King's Cross/Pentonville

3. Age

65-69	70-74	75+	Other/prefer not to say

4. Gender

Male	Female	Prefer not to say

5. Ethnic origin

_____

6. Housing tenure

Council tenant	Housing association tenant	Council leaseholder	Private tenant	Other

7. Are you in receipt of a means-tested benefit such as Pension Credit, Housing Benefit or Council Tax Benefit?

Yes	No	Not sure	Prefer not to say

8. Do you have any of these health conditions? (choose all that apply)

Cardiovascular disease (heart)	Respiratory disease (lungs)	Diabetes	Parkinson's disease
Renal insufficiency/kidney disease	Multiple sclerosis	Limited mobility	Prefer not to say

9. Where did you grow up?

London	Other South England	Other UK	Other Europe	Other world (please specify):

---

10. Who would you look to for support in the event of extreme weather such as a heat wave or flood? (choose all that apply)

Family	Friends	Neighbours	Council
Local community organisation	National government	No-one	Other

11. How much social contact would you say you had?

I see other people several times a day	About once a day	Several times a week	Once a week	Less than once a week	Prefer not to say

12. How well do you know your neighbours?

I count several as friends	I am friends with one or two	I know some to say hello to	I know none of them	Prefer not to say

13. Do you feel you have a strong support network of people around you?

Yes	Sometimes	No	Prefer not to say

---

14. In hot weather, would you: (choose all that apply)

Close windows during the day	Open windows at night	Drinks lots of water	Avoid alcohol
Stay out of the sun during the hottest parts of the day	Carry on as normal	Prefer not to say	

15. In hot weather, how many windows do you open during the *day time*?

None	Some	Most	All	Not sure

16. In hot weather, how many windows do you open during the *night time*?

None	Some	Most	All	Not sure

17. Do you use fans or other cooling devices in hot weather?

Yes	No	Sometimes	Not sure

18. Do you have a cool room in your home that you could retreat to during hot weather?

Yes	No	Not sure

19. Would you use a community cooling facility such as a community centre to keep cool during the day?

Yes, definitely	Yes, if it was close	Maybe	No	Not sure

20. Would you feel comfortable leaving your windows open at night to cool your home?

Yes	No	Not sure

21. If no to 20, why?

Fear of crime	Noise	Pollution	Insurance	Other:

---

22. If weather forecasters announced a heat wave, would you?

Be very happy	Be somewhat happy	Neutral/no opinion	Be somewhat unhappy	Be very unhappy	Not sure

23. What daytime temperature do you think triggers a heatwave alert?

24C/75F	28C/82F	32C/90F	36C/97F	Other:

24. Do you worry more about heat waves than you did 10 years ago?

Yes	No	Not sure

25. How informed do you feel about the potential health impacts of hot weather?

Very informed	Somewhat informed	Neutral/no opinion	Badly informed	Very badly informed	Not sure

---

26. Has your home been fitted with any insulation in the last two years?

Yes	No	Not sure

27. If yes to above, have you noticed any reduction in dampness and mould growth?

Yes, a lot	Yes, a little	No difference	No, it's a little worse	No, it's a lot worse	Not sure

---

FLOODING SECTION MAY NOT BE RELEVANT FOR ALL RESPONDENTS

28. Do you have insurance against flooding/water damage?

Yes	No	Not sure

29. Have you ever experienced a flooding/water damage event in your home (not internal)?

Yes	No	Not sure

30. If yes to 28, did you have any professional restoration?

Yes	No	Not sure

31. Have you had a reoccurrence of dampness relating to the flooding/water damage?

Yes, a lot	Yes, a little	No	Not sure

32. How long did it take until you felt that your home was 'dry' again?

Less than one month	Between one and six months	Between six months and a year	More than a year	It's still not 'dry'	Not sure

33. Do you worry more about flooding/water damage than you did 10 years ago?

Yes	No	Not sure

---

34. Would you be willing to take part in a University College London study comparing temperatures and humidity inside and outside homes? You would receive £20.

Yes	No

35. Would you be interested in taking part in a focus group of local residents exploring these issues further? You would receive £10.

Yes	No

36. If you would like to take part in either of the above or enter the prize draw to win £50 of supermarket vouchers for completing this survey, please give a name and contact number below.

Name:	**Contact telephone number:**

11.4 Appendix D: Focus groups breakdown

Below is a breakdown of our focus groups. All three comprised of social housing residents aged 60+. There was a roughly equal gender mix. Participants were recruited through a combination of individuals expressing an interest during the quantitative fieldwork period, and existing networks and relationships with community centres. A £20 incentive was provided.

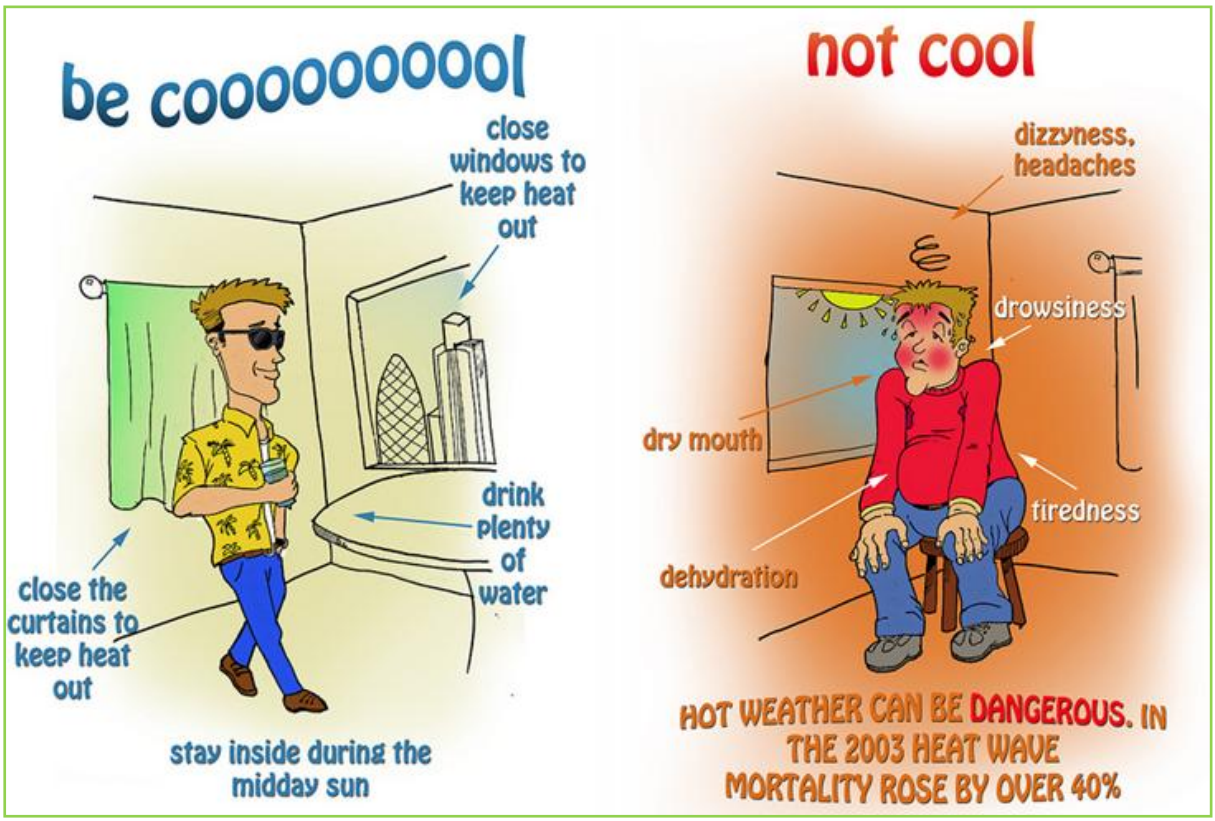
Group No.	Date	Number of participants	Names	Location	Area
1	December 6th 2012	4	Nina, John, Terry, Irene	St Luke's Community Centre	Bunhill
2	January 4th 2013	8	Inez, Maureen, Alan, Ruth, Denne, Lydia, Mary, Peggy Maria	The Peel Centre	Clerkenwell
3	March 11th 2013	11	Iris, Margaret, Christie, Alan, Bryan, Luigi, Rose, Kathryn, Alan, Roberto, Margaret	St Luke's Community Centre	Bunhill

11.5 Appendix E: Leaflets

Below is an example of the kinds of visual aids we tested on respondents in focus groups. Generally speaking they were received positively, and were praised by several for their straightforward advice and informal tone.

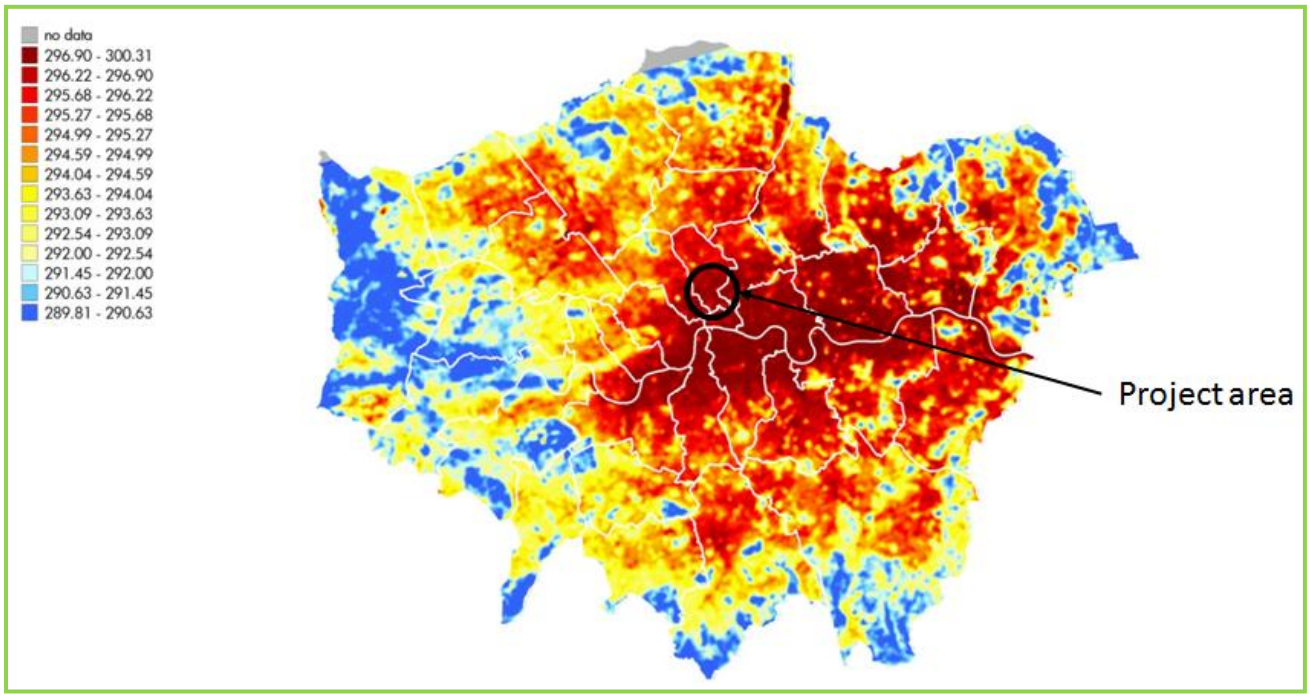
It's a lot quicker to understand this way. The colours help: the red signifies the heat; the cool one is blue. That's pretty clear. ***Alan, Clerkenwell***

I think these cartoons are a good idea, because if I get information written on a long page I will tend to read the first two or three lines, roughly know what it's about and think "I know all that" and then put it down. So I think a visualisation is a good idea. ***Inez, Clerkenwell***

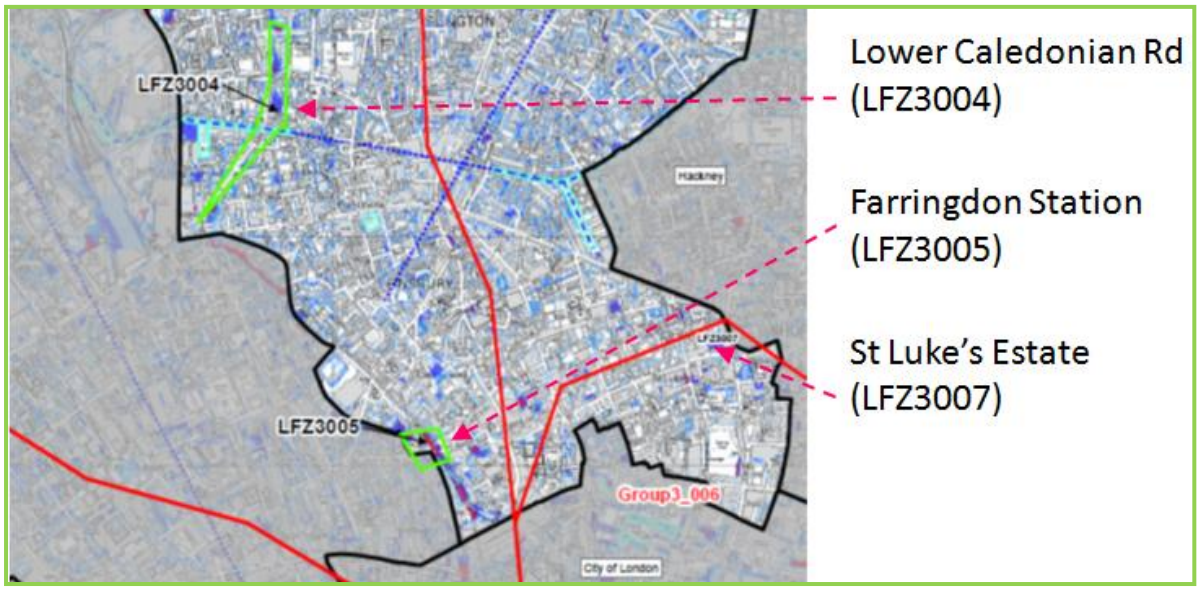


11.6 Appendix F: Maps

Map 1: *London's Urban Heat Island*



Map 2: *South Islington Flood Risk Zones*



Map 3: South Islington Climate Vulnerabilities