

LEHII Case History: Southampton Street



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1. Introduction

Southampton Street is a three bedroom terraced house built in 1860 and located in Hanover, Brighton. Its owner Dani Ahrens and family moved to the house in 1994 and, motivated by climate change and sustainable living, the house has gone through extensive refurbishment. Measures include for example improved windows, new heating control and boiler, and loft and external wall insulation. Southampton Street is located in an area of thriving community action, with local groups such as Hanover 10:10 and Hanover Action for Sustainable Living - that later joined together as Hanover Action.¹ The local groups promote sustainability through various events and workshops. Ahrens' own house refurbishment journey has benefited from locally-led but national government-funded programmes that have sought to demonstrate the benefits of energy efficiency refurbishments.

Technical features

- Condensing boiler
- Draughtproofing
- Double glazing (part)
- Heating controls
- Loft insulation
- Solid wall insulation (external, front and back)

1.1. Key insights

- Southampton Street is located in an area of thriving community action and awareness for sustainability, providing also a range of local know-how in housing retrofit
- National planning policy change in early 2013, which reclassified external wall insulation from an extension to an improvement, was adopted by Brighton & Hove City Council and enabled the Southampton Street case to install external wall insulation in an area which had previously been difficult in terms of acquiring planning consent
- Whilst barriers to housing retrofit remain - including issues such as cost, potential disruption and difficulty of making decisions over suppliers and materials - projects such as the Green Deal Pioneer Places show that housing retrofit can have benefits by providing warmer and healthier homes
- At a time when government policy support for housing retrofit is lacking, willing individuals like Ahrens and proactive organisations such as Hanover Action and the Low Carbon Trust, who organise events and talks around sustainable homes, can play a valuable role in keeping retrofit in the public eye

- There was no key intermediary communicating between the broader scheme and the residents. Rather, the residents got confused about the range of people and organisations contacting them.

2. Background: Sustainable living in Hanover

Ahrens and her family moved to Southampton Street in 1994 and have over the years improved the house with various energy efficiency measures. Motivated by climate change, sustainable living and interest in buildings, Ahrens wanted to address the impact of her own home and measures installed over the years include for example improved glazing, new roof and loft insulation, draught proofing and solid wall insulation.

The area of Hanover, where Southampton Street is located, has an active community spirit and a reputation for an interest in sustainability amongst residents: "*It's known as 'Muesli Mountain', locally. You've got a lot of people up there who would be willing to seek environmental improvements to their property given the opportunity.*" (interview comment, Alex Hunt, Bright Green Homes). In 2009, a small group of local people got together for a film viewing on sustainability at the Hanover Community Centre, from the back of which Hanover Action for Sustainable Living (HASL) was set up. This group later joined forces with Hanover 10:10, another local climate action group, and both have been operating under the community group Hanover Action since 2015. HASL, Hanover 10:10 and subsequently Hanover Action are dynamic local groups and have organised a number of events to promote sustainability, including for example meetings with Brighton's Green Party MP Caroline Lucas, expert presentations, panel discussions, film screenings, social gatherings, gardening events, cycling workshops and energy efficiency demonstrations.

Ahrens too was involved in Hanover Action especially during 2010-2013 when she organised car-free street events and promoted cycling. She was especially motivated by the fact that cars tended to dominate the local streets, despite the relatively low level of car ownership in Hanover (interview comment, Dani Ahrens).

"We did several events in the streets. They were looking at how we could use the street space better and not just for storage for cars and trying to start a discussion about transport." (interview comment, Dani Ahrens)

From her involvement in Hanover Action, Ahrens got to know other people in the local community. One of the events, which Ahrens attended at the Hanover Centre in 2012, was 'Warmer Hanover Houses'², an exhibition and talks on how to improve the energy efficiency of the area's houses. The event was endorsed by the Mayor of Brighton & Hove City Council³ and speakers included, for instance, Alex Hunt from a Brighton-based building company Bright Green Homes and from the Green Building Partnership. He presented results of 50 detailed energy surveys carried out in the Hanover area in 2012.

The Green Building Partnership⁴ - which was set up in 2012 as a co-operative by seven small companies with different speciality areas, who wanted to compete together against larger building companies (interview comment, Alex Hunt, Bright Green Homes). Local resident Paul Early spoke of his personal experience of retrofitting a Hanover home in 2008. One of the presentations, by architect Duncan Baker Brown from BBM Sustainable Design, focused on a project funded by Local Energy Assessment Fund (LEAF), a £9.3m government fund for community projects⁵. This had, in 2011, analysed the possibility of applying external wall insulation to a whole terrace of houses in Southampton Street. Also Ahrens' house, located on Southampton Street, had been part of that study.

"Somebody approached me and said, "Will you let people inside your house as part of this project to measure the insides of the rooms and do calculations of how much energy could be saved?" I think my next door but one neighbour was also involved with this. It might have been him who put me in touch with this. So anyway, that was fine. It didn't seem like a big problem just to let people in so they could measure the rooms and do their calculations about energy efficiency." (interview comment, Dani Ahrens)

The LEAF-project completed a feasibility study to show residents what external wall insulation would look like on all the houses on Southampton Street, including a final report on how external wall insulation could be installed, taking into consideration planning issues and aesthetics⁶.

2.1. Assessing refurbishment needs for the Southampton Street home

Having been keen to find out more about energy efficiency measures meant that Ahrens was identified by Hanover Action as one of local residents that could potentially be interested in taking part in further housing improvement projects.

“Various people that I vaguely knew or knew through this network of Hanover Action got in touch with me and said, “Will you talk to people about energy efficiency in your house?” and I said, “Yes,” not really expecting anything to come out of it. So I thought that the process was about information gathering, potential for retrofitting insulation on these houses, what a difference it could make.” (interview comment, Dani Ahrens)

One such project was run by the Low Carbon Trust⁷ in 2012, a Brighton-based not-for-profit organisation set up in 2001 to create and manage environmental projects. The ‘SWAP’ project was funded by the Energy Saving Trust and surveyed 25 houses with solid walls across Brighton & Hove, providing tailored advice on how those homes could be improved and made “warmer, healthier and cheaper to run”⁸. Ahrens’ house was part of that study and it received an EPC rating of D, with a potential to achieve B with recommended measures. These included insulation in the floors, solid walls and the roof, improved windows, draught proofing, a more efficient heating system, heating controls, and low energy lighting, and installing solar electric (PV) or solar thermal panels. However, for Ahrens the cost of the proposed measures, with an estimate of £18,000, were too high.

“They gave us a report, which said, “All you could do to this house is external wall insulation and that would cost you £10,000 pounds or something.” And so we just put that away. We couldn’t afford to do that, we didn’t have that kind of money. So basically what it said to us was, “There’s not much you can do to improve the energy efficiency of your house unless you’ve got a lot of money.” So I kind of thought that was the end of the story.” (interview comment, Dani Ahrens)

Soon, however, another opportunity presented to Ahrens to take part in another research project, the ‘Green Deal Pioneer Places’.

3. Green Deal Pioneer Places

The Green Deal Pioneer Places was a jointly run project by Brighton & Hove City Council, Brighton & Hove 10:10, The Green Building Partnership and Low Carbon Trust in 2013. The project was funded by the then Department of Energy and Climate Change (DECC) who wanted to encourage the uptake of its new Green Deal⁹ programme. As interest in the Green Deal had been slow to start with, the

government provided funding for local authorities to undertake free Green Deal assessments (interview comment, Alex Hunt, Bright Green Homes).

The partners in Brighton received £250,000 from DECC and aimed to find out how the Green Deal would work in practice. The project was managed by Mischa Hewitt through the Green Building Partnership, while Brighton & Hove 10:10 was in charge of communications (interview comment, Mischa Hewitt, Low Carbon Trust). Brighton & Hove City Council was largely "*in the background coordinating the overall project and doing various things*" (interview comment, Mischa Hewitt, Low Carbon Trust), but they were very supportive. Especially meetings with Miles Davidson, Housing Sustainability and Affordable Warmth Manager, Nick Hibberd, Executive Director of Economy, Environment and Culture services, and Geoff Raw, then Director of Environment, Development and Housing, and later the Chief Executive of Brighton & Hove City Council were valuable (interview comment, Alex Hunt, Bright Green Homes).

The Green Deal Pioneers Places funding enabled the partners to complete 100 free Green Deal assessments in Brighton & Hove. These were picked randomly from 450 applications, and some people in fact were "*very reticent to do anything*" and had to be convinced that each £150 Green Deal assessment was in fact free (interview comment, Alex Hunt, Bright Green Homes). Of the 100 assessments the project selected 10 houses that also received actual refurbishment works, up to £10,000 each (interview comment, Alex Hunt, Bright Green Homes). These houses were chosen to represent a mixture of housing types and geographical spread in Brighton (interview comment, Mischa Hewitt, Low Carbon Trust).

"The process for the ten was we were looking for a good geographical spread. We wanted one or two in different neighbourhoods, where people could go and visit the projects. Because we were mindful of Eco Open Houses, and that people could actually go and visit real-world examples. We had a range of criteria. We were looking for different housing types, as in their forms, so different wall types, houses that we would be treating in different ways, some internally, some externally, and so on. We were just looking for quite a wide spread, really, geographically and so on." (interview comment, Mischa Hewitt, Low Carbon Trust)

The project plan also involved opening up the ten renovated properties during the Eco Open Houses Brighton & Hove 2013 event, to showcase to the public what had been done (interview comment, Mischa Hewitt, Low Carbon Trust). With the project, the Green Building Partnership wanted to demonstrate how the Green Deal process would work in practice across the city, while also demonstrating that it was possible for small companies to work together to deliver this (interview comment, Alex Hunt, Bright Green Homes).

“Genuinely, we thought that we could demonstrate that a number of small local companies could use small local installers to deliver what the Green Deal was supposed to be all about, which was energy efficiency improvements which would be financed through a pay-as-you-save scheme, the Green Deal. What we really hoped was to demonstrate to Brighton & Hove City Council that we could do it and that they wouldn’t need to rely, particularly, on someone like Carillion or the Kier Group.” (interview comment, Alex Hunt, Bright Green Homes)

As for contracting the actual building work, the Green Building Partnership did a tender process, though they did have a “*preferred list of contractors who had expressed an interest in working in this field*” and could also do the work in required timescales (interview comment, Alex Hunt, Bright Green Homes). Of the total of 10 housing, the building company Bright Green Homes “*took on the contract to do four small renovations, which were loft insulation, new boilers, new lights, heating controls, TRVs and cavity wall insulation*”, while the Green Building Partnership had a project manager and a contracts manager who managed the remaining six larger renovations involving external and internal wall insulation (interview comment, Alex Hunt, Bright Green Homes). The project tried to use as many local suppliers as was possible and cost effective (interview comment, Alex Hunt, Bright Green Homes). Weekly meetings with all partners ensured that any issues that may arise during the project, such as ensuring smooth running of logistics in a short project, could be dealt with (interview comment, Alex Hunt, Bright Green Homes). However, managing a number of small contractors to ensure good quality work proved time-consuming, though was nothing out of the ordinary for building projects (interview comment, Alex Hunt, Bright Green Homes).

"There were frictions, like there always are on building sites. You've got a limited amount of money and something crops up on a residential house that you weren't expecting. Who's going to pay for it?" (interview comment, Alex Hunt, Bright Green Homes).

The Green Deal Pioneer Places project had very tight timescales - initially the project was going to be for two months, but was extended to four months (interview comment, Mischa Hewitt, Low Carbon Trust). Funding for the project was announced in December 2012 and all the works had to be completed and funds spent by May 2013 (interview comment, Alex Hunt, Bright Green Homes).

"It felt like DECC had found some money down the back of the sofa and didn't want to admit that they hadn't spent their entire budget in case, when the next year's budget was planned, they wouldn't get the same amount again." (interview comment, Alex Hunt, Bright Green Homes)

The project felt rushed and required a lot of administrative tasks that cost extra. With more time it could have been better organised by DECC (interview comment, Alex Hunt, Bright Green Homes). The very tight timescales meant challenges, especially as the Green Building Partnership wanted to deliver good value for money with the project (interview comment, Mischa Hewitt, Low Carbon Trust).

"We've always been very, very careful with our VAT analysis around energy efficiency, so energy saving materials in buildings, because with careful VAT treatment you can save projects quite a lot of money. So between those mechanisms we pushed the budget as far as we could." (interview comment, Mischa Hewitt, Low Carbon Trust)

3.1. Planning consent and solid wall insulation

The Green Building Partnership were keen to include a mixture of houses in the project, but they also wanted to include ones with solid walls in order to examine the benefits of solid wall insulation, to *"demonstrate that by putting external wall insulation on a solid wall property it would not only improve the look of the house but make it much warmer and toastier"* (interview comment, Alex Hunt, Bright Green Homes). The project also allowed them to examine external wall insulation in Brighton, at a time when it was difficult to get planning permission for external wall insulation in the city (interview comment, Mischa Hewitt, Low Carbon Trust). However, in January 2013 the Department for

Communities and Local Government (DCLG) had passed a technical note which reclassified external wall insulation from an extension to an improvement and which Brighton & Hove City Council also adopted (interview comment, Mischa Hewitt, Low Carbon Trust).

"It's about the subtlety of the language. The improvement means that essentially you don't need planning permission, and if you don't need planning permission the work can be carried out as permitted development. For us, because of the timeframe of the project, planning has got a statutory eight-week window, and if it's complicated it will take longer than that. So for us, we didn't really have time to be putting in planning applications for ten projects. Happily, the council adopted that guidance. Which is great, because essentially it meant that in certain areas, not in all areas, and if it's a conservation or an Article 4 conservation area obviously that's not the case, but in most areas you can just get on and do external wall insulation without planning permission, as it's permitted development under that technical note published by DCLG. So that was really good." (interview comment, Mischa Hewitt, Low Carbon Trust)

As Ahrens' solid wall property had been part of the SWAP project, that provided an energy assessment, and she had put her name down on Hanover Action's mailing lists, she was also contacted about the Green Deal Pioneer Places.

"They said, "This energy assessment, Green Deal assessment, normally costs such and such an amount of money and you can have it for free if you let us do this as part of this project." So I said, "Okay"". And then they phoned up and said, "You know you did that energy efficiency and we gave you that report, now we've got some funding. We might be able to do some of this work on your house." So I said, "Great. That's lovely." (interview comment, Dani Ahrens)

Ahrens was happy to take part in the project as she wanted a more energy efficient house, wanted to save energy and was also very pleased to have the work completed for free as her family could not contemplate spending a lot of money on refurbishments themselves (interview comment, Dani Ahrens). Ahrens' Green Deal assessment was completed in April 2013 and works began soon after, as the house was quite straightforward to work with and her family was in a position to have renovation

works take place – though they did not want to have internal wall and floor insulation in the basement open plan kitchen / living area due to potential disruption (interview comment, Dani Ahrens).

"We were just able to say, "Yes, you can come and do it at the time you want to and we haven't got all twiddly bits on our house that are going to be troublesome and we don't mind what you do." We were quite accommodating for the project and I think there were some people they'd had discussions with, it turned out that it was no good for them in particular ways. We did do a bit of that because at first they came and said they wanted to do internal insulation in this room and we said we couldn't cope with the disruption of that because that would have raised the floor up, we'd have had to take all the kitchen cupboards out and it was the summer. It was exam time." (interview comment, Dani Ahrens)

Before works could commence on the external wall insulation, the Low Carbon Trust applied for permitted development consent from Brighton and Hove planning department on Ahrens behalf, which made the process straightforward for her (interview comment, Dani Ahrens).

"They [the Low Carbon Trust] came and talked to us about it and said, "This is what we're going to apply for." I guess that's another advantage of it, having been done in this project way, is that we didn't have to think about that. And they were doing it. But I was aware that one of the reasons why this project could happen at all was that the Council had changed their minds about this type of work. So I know, again, from Paul [Early], from that talk I went to at the Hanover Centre, that he'd had a lot of trouble getting planning permission for external wall insulation. And that people in this area had because it is visible from the street if you're looking for it and it does extend out above the footway." (interview comment, Dani Ahrens)

Another issue that the Southampton Street house needed to address in regards to external wall insulation was an Oversail Licence, given the house's location overhanging a public highway (interview comment, Mischa Hewitt, Low Carbon Trust). Up until the Southampton Street case, *"any project that had anything overhung a public highway, whether it's a big shop awning that's a couple of metres, or whether it's 100mm of external wall insulation"* had to apply for the same Oversail Licence (interview

comment, Mischa Hewitt, Low Carbon Trust). However, with the Green Deal Pioneer Places project, the Brighton & Hove Council streamlined the application process for that licence, so that what used to be a £107 one-off fee became a £114 payment and “*they just grant you a licence to oversail a public highway up to 100mm*” (interview comment, Mischa Hewitt, Low Carbon Trust). This was groundbreaking as it meant that anyone could go ahead and apply for the oversail licence to install external wall insulation - especially important for an area like Hanover where many buildings have ended up oversailing public highways over the years as the area has developed (interview comment, Mischa Hewitt, Low Carbon Trust).

3.2. Installing external wall insulation and other energy efficiency measures

Before the external wall insulation could be installed, Ahrens’ house had to have small modifications. The house had a small structure outside the back door, which had to be taken off and then put back on after the insulation was installed (interview comment, Dani Ahrens). This was taken down by Bright Green Homes, who was asked to step in after another carpentry company had let the project down (interview comment, Alex Hunt, Bright Green Homes).

“We took that down - the timber one - so that they could then put the external wall insulation up without the thermal bridging, and then reattach the lean-to to the back of the house once the work was complete. We did a bit of the moving of pipes - rainwater pipes, 4-inch soil stacks, and what have you on the rear elevation.” (interview comment, Alex Hunt, Bright Green Homes)

The actual wall insulation was installed by Beaumont Facades over a few days and it felt like a very fast and relatively smooth process to Ahrens, though she was away from the house quite a lot of the time while the works were being done (interview comment, Dani Ahrens).

“They did it very fast, I think, because our house hasn’t got a bay and it hasn’t got any extra bits. They put the scaffolding up. They did it in just a few days, because it was very fast. It was relatively disruptive compared with not having any work done, but in terms of building work, it wasn’t that bad because they were always outside the house. So they weren’t making a load of plaster dust in the house or taking up our floorboards or turning our water off, or any of those things that builders do. (interview comment, Dani Ahrens)

Ahrens' house already had had a new boiler installed, and now draught proofing and thermostatic radiator valves were fitted. The house was also fitted with a smart meter, as part of the original project plan was that householders would do electricity monitoring for two years after the retrofit works had been completed (interview comment, Alex Hunt, Bright Green Homes). Ahrens, however, did not think that this part of the project was very well managed (interview comment, Dani Ahrens).

"They gave us a smart meter or something but they've never asked us for the measurements, as far as I know. Perhaps once. So I feel like it hasn't been monitored very well." (interview comment, Dani Ahrens)

The project also included a plan that the Green Building Partnership would go back a year later, to have a review and check through the whole process. However, these visits never took place, due to the closure of the Green Deal programme (interview comment, Alex Hunt, Bright Green Homes).

"In the end, we did contact all the householders and said, "We're going to come and do surveys." We got the response back of, "Why would you bother? The Green Deal is dead, isn't it?"" (interview comment, Alex Hunt, Bright Green Homes)

For the funder DECC too evaluation of the complete project was minimal (interview comment, Alex Hunt, Bright Green Homes).

3.3. Taking part in a multi-partner project

Ahrens thought that whilst the Green Deal Pioneer Places project was pretty well organised it was not always clear to her what the relationship between the different people from the different organisations involved in the project was (interview comment, Dani Ahrens). During the four-month project, Ahrens dealt with people from the Low Carbon Trust, the Permaculture Trust, Brighton & Hove City Council, Bright Green Homes and the building firm Beaumont Facades (interview comment, Dani Ahrens).

"I remember Misha [Hewitt of Low Carbon Trust] and I remember one of the organisations was the Low Carbon Trust. But I'm pretty sure there were other things. They would send us letters. They would have several different logos and the people who were doing the actual

work, were called Beaumont Facades, the building firm. I have a feeling there were some other people and I'm still not clear who they were, but different people would ring up. I did feel a bit like there were possibly too many people involved in this project. The Council were involved in it in some way. Then there were the Eco Open Houses people, so there was Caroline from the Permaculture Trust. There was a woman from the Council called, Francesca. She was involved with the Eco Open Houses side of it. I think there was probably someone else as well. What would happen would be, someone would ring up and they'd say, "It's so and so from green eco building carbon something." And I'd say, "Oh yes." And they'd ask me things or tell me things, and I was never clear what all those relationships were. It didn't really matter but sometimes, if I had to ask something, like, "When is it going to start? How long is it going to take?" It wasn't clear to me who I should ask." (interview comment, Dani Ahrens)

The project also involved much of form filling as Ahrens had to fill in questionnaires for the project organisers. However, given her own experience of working in the voluntary sector, Ahrens understood that this was how many externally funded projects worked and that with partnerships there were usually always several people involved (interview comment, Dani Ahrens).

"My relationship with the people from the Low Carbon Trust was quite a lot about sending them information or filling in questionnaires so that they could prove they've done whatever it was they promised to do for the money, which is fine. I understand how that works. I work in the voluntary sector. That's just the way things are. You have to spend a lot of time asking people to fill in questionnaires." (interview comment, Dani Ahrens)

Overall the project was easy for Ahrens as most of the decision-making on issues such as technology was taken by the project organisers, who suggested the best measures for her house - and they seemed trustworthy (interview comment, Dani Ahrens).

"The firm that actually installed the [external wall] insulation, I was quite pleased with them. They clearly knew what they were doing and they'd done it lots of times before. They were managing this whole thing of 'install insulation on 10 different houses across Brighton all at once' and they seemed to be able to do that. We met the guy who was the boss of the

company and he seemed very nice. That was all fine. I felt like they knew what they were talking about. I thought the Low Carbon Trust people clearly knew what they were talking about as well and they had decided to go with these people.” (interview comment, Dani Ahrens)

This was different from previous works that Ahrens had had in the house, for example when they had their roof refurbished and had to choose materials themselves (interview comment, Dani Ahrens). From the Green Building Partnerships point of view, Ahrens was an excellent client and “*she was one of the most keen, and quite easy and straightforward to work with*” (interview comment, Alex Hunt, Bright Green Homes). However, for them, the project would have benefited from a longer timeframe to plan things properly (interview comment, Alex Hunt, Bright Green Homes).

“Time is necessary. You need time to plan. Rushing the projects creates unnecessary opportunity for mistakes, and cracks, to appear, into which mistakes disappear. Because it’s not planned out, our responsibilities weren’t clearly laid out, as well as they should have been. When things went wrong or issues cropped up, it was hard to know whose responsibility it was for putting that right. There was an enormous amount of admin created in the process, that was a bit unnecessary, that there could be and should be systems in place to allow that to be lessened.” (interview comment, Alex Hunt, Bright Green Homes).

4. Learning

4.1. Addressing solid wall properties

The Southampton Street case has been an interesting project for all partners involved, but especially as it addressed the typical problems of Hanover houses, i.e. of having a basement, solid walls and suffering from damp, condensation and draughts – and showed that these can be addressed and solved (interview comment, Paul Norman, Hanover Action).

“For us it is important because it is an example of what can be done and it has been done. So it is not like an ambition, a vision that is out there or it may or may not be possible. This

actually has been achieved, this is entirely technically possible. There is no reason why we can't do it right across Hanover." (interview comment, Paul Norman, Hanover Action)

The Green Deal Pioneer Places project also delivered one of the first few ground-breaking developments in relation to external wall insulation in properties which oversail public highways (interview comment, Mischa Hewitt, Low Carbon Trust).

"One of the most amazing things for me, the two major outcomes of that project, were the adoption of that guidance [DCLG reclassifying external wall insulation as an improvement], meaning stuff became permitted development, and also the oversailing of the public highway. Which meant for a small fee, a nominal fee, probably 1% of the cost of the work or whatever, you could then just have the licence to Oversail as well, so sweeping the barriers out of the way." (interview comment, Mischa Hewitt, Low Carbon Trust)

All in all the project met Ahrens' expectations of reduce energy usage and that the works would be completed quickly and with minimal disruption as promised by the project team (interview comment, Dani Ahrens). "We demonstrated that it was something like a 16% improvement on their energy efficiency" (interview comment, Alex Hunt, Bright Green Homes). Ahrens has been particularly pleased with the external wall insulation, which has made a real difference in the energy efficiency of her house and she has been keen to recommend it to others too (interview comment, Dani Ahrens).

"I would be happy to recommend that to people and I do when they come around for the Open Houses. I say, "This is good." And the thing I do say to people is, "If you're going to spend money on the outside of your house, you may as well do this."" (interview comment, Dani Ahrens)

4.2. Taking part in Eco Open Houses and sharing experience with others

One key benefit from the Southampton Street project has been Ahrens' willingness to share her experience with others, especially by taking part in the Eco Open Houses event three times, beyond the initial project requirements, in 2013, 2014 and 2015.

"It was really good that they have entered in the Eco Open Houses fairly regularly, ...if anybody is thinking about moving this direction, they can actually go round the home and

see what has been done and talk to the people...obviously one of the beauties of the Eco Open Houses in general, it is actually people's ordinary living spaces which have been opened up to strangers to come in. Ask them about their home." (interview comment, Paul Norman, Hanover Action)

Hanover Action has also publicised those Eco Open Houses which are in Hanover, encouraging people to actually visit their neighbours who have undertaken building refurbishment, thus promoting public engagement at community level (interview comment, Paul Norman, Hanover Action). In an area like Hanover, which has several properties with solid walls, events like Eco Open Houses can really demonstrate how such houses can be improved.

"Once you have done your loft if you live in Hanover / Elm Grove it is actually the walls because there are no cavities in the building. So it is actually the next level of prioritisation. Actually it is quite a huge barrier for this housing stock in Brighton." (interview comment, Paul Norman, Hanover Action)

By taking part in the Eco Open Houses and showcasing her house to others has allowed Ahrens to share important lessons. Although for Ahrens, taking part in the Eco Open Houses was somewhat peculiar, given that she was not as interested in the technical details of the refurbishment as some of the visitors were (interview comment, Dani Ahrens). Nevertheless, Ahrens happily took part and she even checked her gas usage and made graphs to show that her usage had reduced by about a third in the first and second year following the refurbishment works (interview comment, Dani Ahrens). In fact, several people, who either live locally in Hanover or in Brighton, have approached Ahrens to ask more about the external wall insulation. She also thought that her house made a good example as the insulation is not clearly visible and the house looks like a normal house on Southampton Street (interview comment, Dani Ahrens).

"It's actually really unobtrusive and if you walk down the street you don't think, "Oh goodness, why is that house different from all the others?", You just don't notice it unless it's pointed out to you. Most people don't even notice that it sticks out in front of the other houses because it's very flat." (interview comment, Dani Ahrens)

While taking part in the Green Deal Pioneer Places project was beneficial to Ahrens in terms of having her house improved, she was not convinced by the Green Deal initiative and this was something she also shared with her Eco Open Houses visitors (interview comment, Dani Ahrens).

"I wasn't very impressed with the Green Deal as a concept. So although it was supposed to be a Green Deal pilot example thing, when people came round in the open houses, I always said I felt like the Green Deal wasn't a very good deal for a person doing work on their house because it just meant you wouldn't see the immediate benefit in terms of lower bills. Basically, it was a loan and it wasn't clear to me how that would work with if you wanted to sell your house, because it was a debt attached to the house in some way." (interview comment, Dani Ahrens)

Instead, given the urgency of climate change, Ahrens sees that the government should invest in refurbishing the UK's existing housing stock, possibly doing whole rows of houses if that was the most cost effective (interview comment, Dani Ahrens). This would mean looking at houses "*as a resource for the nation*" and treating it as a collective problem with a collective solution (interview comment, Dani Ahrens).

4.3. A new approach to retrofit needed, though challenges remain

Houses like those in Hanover are a good example of the challenges that are linked to addressing climate change, especially since most of government focus on buildings has been on new buildings in the past (interview comment, Paul Norman). However, it is also important to link the learning from project such as Southampton Street to a broader agenda on "*how can we get whole street retrofits going on*", to make it more cost effective (interview comment, Paul Norman, Hanover Action).

"Nationally, this kind of housing is very difficult to engage with and there is not enough profile at a national level about how to retrofit these kind of houses, which are not going to disappear but they do need to be retrofitted – if we are going to meet the climate change targets." (interview comment, Paul Norman, Hanover Action)

Events like Eco Open Houses can help keep the issue on the agenda, but there are also large financial challenges ahead (interview comment, Paul Norman, Hanover Action). Projects like the Green Deal

Pioneer Places show that “*these aren’t things that have short payback periods*” but they require “*long term investments in infrastructure*” and as they involve residential properties that will be used for years to come, they need to be considered as “*an investment in our country*” (interview comment, Paul Norman, Hanover Action). Leaving it all to individuals can mean a slow, daunting process, not only in terms of the amount of money required, but also issues such as deciding which firms and materials to use, and applying for planning consent, complicating the process (interview comment, Dani Ahrens).

“I really think the government should just do this. The government should just insulate everybody’s house and put solar panels on where they can and not have all this silly ‘enter into a credit agreement so that you can get this done’. As I said, I think it’s an emergency. We need decisive, national action to tackle climate change.” (interview comment, Dani Ahrens)

However, there is little policy support in place from the government, or other, political parties to undertake a national approach to retrofit and barriers that exist are actually increasing, for example community groups like Hanover Action have struggled to get financial backing for insulation projects (interview comment, Paul Norman, Hanover Action). This has also meant that an increasing number of people will end up suffering from fuel poverty (interview comment, Paul Norman, Hanover Action).

“We applied for funding for a project through the Council Environmental Sustainability Fund for Community Groups and they wouldn’t fund insulation that was going to be installed by volunteers in people’s houses which would contribute to carbon reduction in the city; they wouldn’t fund it because it was classed as capital expenditure. That is a roll of insulation.” (interview comment, Paul Norman, Hanover Action)

Ahrens herself did not feel like she invested a lot of time on the project, or thought about it a great deal, instead she was happy to go along with what has suggested to her (interview comment, Dani Ahrens). This possibly also meant that she was more willing than some other people might have been, which might also “*be a thing, an obstacle, to mass retrofitting of insulation on people’s houses. Other people might not be so amenable*” (interview comment, Dani Ahrens). Norman had noted this too in another project, ‘Hanover Loft Insulation Project’¹⁰, which Hanover Action run with BHESCO in 2015 and which offered free insulation especially to low income groups (interview comment, Paul Norman,

Hanover Action). The project included an online survey of people who wanted their homes insulated, to which 30 people responded, providing Hanover Action data on suitable properties (interview comment, Paul Norman, Hanover Action). To their surprise the number one barrier to people not insulating their lofts was not money, but the requirement for storage even for things that were not in use anymore (interview comment, Paul Norman, Hanover Action).

"The number one barrier that came up for people not insulating their house was something that was very unexpected for us as a group, which wasn't really cost. It wasn't really inertia although it is sort of linked to inertia. It was actually they were using their lofts for storage. And every single person who was interested in getting their loft insulated wanted a storage solution as well. And that created a problem for us because we didn't have the resource to enable that. It was also interesting because actually people were not willing necessarily to fund themselves a loft storage area if they had got free insulation. So, again, something quite basic is actually people are not willing to make that step in making that decision unless everything is provided to them. Which is actually, it is done by a reputable company, it is managed through us, a trusted local community group. But actually they wanted a no change issue which was 'all my stuff, no matter how much is just stuff that I would never look at again, has to be there'". (interview comment, Paul Norman, Hanover Action)

The Hanover Loft Insulation Project ended up linking to national 'Garage Sale Trail' that took place in September 2015 across four cities, encouraging people to "*upcycle stuff and declutter their lives*" (interview comment, Paul Norman, Hanover Action). Hanover Action "*tapped into that as a way of actually saying, "To enable loft insulation we need to declutter our lofts"*" and they had one person interested in this project from their initial survey (interview comment, Paul Norman, Hanover Action). This turned out to require a large amount of "*voluntary effort and resource to work with this one individual to declutter their loft, to work with her, to persuade her what she needed to do*" (interview comment, Paul Norman, Hanover Action).

"Working with BHESCO and ourselves, we had to effectively beg, borrow and construct a loft storage area for her to actually get the insulation done. Volunteers over quite a few visits helped her move all her stuff, helped her to move it out the way for the contractors to come in. There was a limited amount of money so the contractors just needed the all clear

to get in and out quick to do it at the cheapest possible price. But that relied upon a huge network of people who were willing to do that. It was more pro bono work from BHESCO, work for us as a community group to work to enable that to happen. There was a lot of labour involved just to persuade one person to insulate their house. But it has been done.”
(interview comment, Paul Norman, Hanover Action)

Hence, for Norman at least, the key for improving the energy efficiency of the UK's building stock is not only about engaging in energy efficiency, but creating wider discussion also around comfort, so that “*a house that looks good, that is comfortable and functions for them as residents is really important as well as the energy efficiency gains that are being made in the insulation of the building*” (interview comment, Paul Norman, Hanover Action). This will also require finding the best ways to engage with people who might have additional barriers, not be motivated by retrofits or willing to spend any of their money on them (interview comment, Paul Norman, Hanover Action). The Southampton Street case shows that quite often the people who engage are motivated to do the right thing and, like Ahrens, have been active for example in community action (interview comment, Paul Norman, Hanover Action). This can, therefore, lead to “*a very distorted impression about what the challenge is because actually we are working with people who want to do the right thing and want to make the transitions*” (interview comment, Paul Norman, Hanover Action).

The challenge remains of how to scale up retrofits and achieve them at community scale, without it being “*window-dressing or one or two examples which look very nice and individually benefit that individual household but, actually, don't really take us any further*” (interview comment, Paul Norman, Hanover Action). Therefore a group like Hanover Action is committed to “*transform communities in a sustainable way*”, though this is not an easy task especially as “*people are locked into this idea of their own personal space and property*” and often “*carbon reduction targets are actually benefiting individual homeowners or landlords*” (interview comment, Paul Norman, Hanover Action). Furthermore, one-off measures are often easier to sell to householders as they can be conducted through one contractor and with technologies such as external wall insulation for instance, most of the work takes place outside of people's homes (interview comment, Alex Hunt, Bright Green Homes).

“It's one of the huge benefits because you don't have to interfere in people's lives. You don't have to expect them to be in. You don't have to deal with them doing the school run

in the morning and, "What do they do with their pets?" if you've got builders going in and out of the front door." (interview comment, Alex Hunt, Bright Green Homes)

The project also showed how difficult it can be for co-operatives, such as the Green Building Partnership, to flourish because "*you had a number of companies that had ever so slightly different ideologies about how things should be done*", and who were not able to compete with larger organisations for local authority contracts in the end (interview comment, Alex Hunt, Bright Green Homes).

"The Partnership went into a bit of an implode after the project. It suddenly became apparent that whatever happened, Brighton & Hove City Council were going to use one of the big companies via a Mid Sussex Partnership. A lot of the other members of the Green Building Partnership either just stopped contributing or helping. They decided that there wasn't going to be enough money in it for them, and they felt that they'd do it in their own separate ways." (interview comment, Alex Hunt, Bright Green Homes)

While the Green Building Partnership still exists, "*it is pretty dormant now, we do not actually do very much at all*" - the most recent activity was a seminar on retrofitting traditional buildings organised together with Green Register in May 2016 (interview comment, Alex Hunt, Bright Green Homes).

Especially at present political climate, whereby "*the whole green agenda has been somewhat pushed into the background*" (interview comment, Alex Hunt, Bright Green Homes), it will be a challenge to get political momentum behind promoting sustainable homes for achieving wider climate targets. There is large potential in retrofits for the UK's building industry and slowly, an increasing amount of trade associations too have started to see those benefits (interview comment, Alex Hunt, Bright Green Homes). However, in the short term future, the sustainable building sector will most likely be driven by committed and interested individuals like Ahrens, small companies such as Bright Green Homes and community organisations like Brighton Energy Coop (interview comment, Alex Hunt, Bright Green Homes), the Low Carbon Trust or Hanover Action for that matter.

5. Summary

The Southampton Street case is a prime example of the challenges that many of the UK's existing homes face – an old house built in an era when solid walls, basements and no insulation were the norm. The owner Dani Ahrens showed a keen interest in sustainability, being also proactive in her Hanover neighbourhood. Through activities such as attending sustainability events organised by local community group Hanover Action, and speaking to neighbours, Ahrens became aware of opportunities that would allow her to retrofit her house and a project like the Green Deal Pioneer Places enabled her to have that work done for free. Local partnership, the Green Building Partnership, who ran the project together with Brighton & Hove City Council, wanted to demonstrate how a group of small, local, companies could deliver national policy at local authority level, and compete against larger contractors. The Green Deal Pioneer Places project was delivered to tight timescales and demonstrated that a technology like external solid wall insulation, which had previously been considered as hard to obtain planning consent for, could be successfully delivered. However, the Green Deal Pioneer Places project was not without its challenges, with a multi-organisation involvement causing confusion to the client at times, and in the end also resulting in differences of opinion within the partnership. In an era of diminishing political support for low energy housing and especially retrofits, cases like Southampton Street show that even enthusiastic individuals like Ahrens require some form of support to have their homes refurbished.

Data Sources

The case study history is based on four digitally recorded and transcribed in-depth interviews, all carried out in person. It also draws on background material such as the Hanover Action archives<sup>1,Error!
Bookmark not defined.</sup> and Eco Open Houses Brighton & Hove archives^{3,7}.

References

- ¹ Hanover Action: towards a sustainable community: <http://www.hasl.org.uk>
- ² Warmer Hanover Houses event details: <http://hanovercommunity.org.uk/2012/hanover-news/warmer-hanover-houses/>
- ³ Brighton & Hove Council Press Release, 30 November 2012
http://www.hasl.org.uk/uploads/5/7/0/1/5701575/bhc_press_release_warmer_hanover_homes.pdf
- ⁴ The Green Building Partnership: <http://www.greenbuildingpartnership.co.uk/wp/>
- ⁵ DECC Local Energy Assessment Fund (LEAF) Evaluation Report:
<https://www.gov.uk/government/publications/decc-local-energy-assessment-fund-leaf-evaluation-report>
- ⁶ Hanover Wall Insulation: <http://hanovercommunity.org.uk/2012/environment/ewi/>
- ⁷ Low Carbon Trust: <http://www.lowcarbon.co.uk>
- ⁸ Low Carbon Trust, SWAP Project: <http://www.lowcarbon.co.uk/services/swap-project>
- ⁹ The Green Deal was a loan-based initiative aimed at improving the energy efficiency the UK's housing stock. The programme had an initial start in October 2012, with an official launch in January 2013. However, due to poor uptake, the government ended the programme in July 2015.
- ¹⁰ Hanover10:10: <http://www.hasl.org.uk/1010.html>