



Supporting local authority advice and guidance on adapting suburbs to climate change

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THE ARCC NETWORK

The performance of UK buildings and infrastructure is critical to our national well-being and economic stability. To ensure policymakers and practitioners have the best available evidence for decision-making, EPSRC is investing in research to improve resilience in the urban environment. This includes projects within the Adaptation and Resilience in a Changing Climate (ARCC) programme and the overarching network. By engaging research projects and a wide range of national, regional and local stakeholders, ARCC maximises and accelerates the use of outputs from across the academic community to inform the development of a more sustainable built environment. A good example of this process in action is the Suburban Neighbourhood Adaptation for a Changing Climate (SNACC) project which has provided evidence on how existing UK suburban neighbourhoods can be adapted to withstand the impacts of climate change. Project evidence has implications for residents and local policy makers involved in strategic planning policy, community resilience, asset management and retrofitting programmes.

THE SNACC PROJECT

The SNACC project was set up to provide answers to the question: How can existing suburban neighbourhoods be adapted to reduce further impacts of climate change and withstand ongoing changes? Key to the success of this project was its collaboration with the University of the West of England, Oxford Brookes University and Heriot-Watt University working with Bristol and Oxford City Councils, Stockport Metropolitan Borough Council, White Design and ARUP to ensure outputs were relevant and useable.

All project partners were involved in developing a portfolio of potential adaptation strategies for suburbs (including individual dwellings and whole neighbourhoods) and clustered these into testable adaptation packages. Modelling was then used to determine the technical performance of these packages against a number of criteria, including their impact on carbon reduction and the extent to which they ameliorate specific impacts (e.g. overheating, flooding). They also examined the acceptability of the adaptation packages in terms of their impact on house prices, visual intrusion, and their relative trade-offs between cost and benefits for the key agents necessary to bring about the changes proposed.

PROJECT DETAILS:

www.snacc-research.org

THE BRISTOL CITY COUNCIL CASE STUDIES

Bristol City Council was a key member of the project team bringing important local knowledge and experience of policy and planning to focus the work programme, and by feeding in its specific requirements for evidence at relevant points in the process.

Two of the six suburbs highlighted in the project, representing different suburban typologies, were in Bristol: the inner-historic suburb of St Werburghs and the relatively newly built medium/high density suburb of Upper Horfield. Residents and a range of local stakeholders, contributing through project workshops, gave valuable insights into the challenges of adapting homes and suburban neighbourhoods to climate change.

Key outcomes from the SNACC project of use to Bristol City Council included a better understanding of packages of potential measures suitable for its specific climate, building stock and socio-economic conditions. The research highlighted how the process of change in suburbs is complex, with multiple stakeholders, and the need to take advantage of any opportunities to include adaptation options during both routine repairs and major refurbishments. A better understanding of how residents view the risks of climate change in their neighbourhoods and what motivates them to make changes to their environment was developed and shared.

SNACC and Bristol City Council took the opportunity to present their findings at the 2012 ARCC Conference, to an audience that included other local authorities and stakeholders to disseminate the research to the broader local policy and practice community.

VALUE OF THE RESEARCH IN SUPPORTING LA GUIDANCE AND ADVICE

Bristol City Council's own evaluation of its involvement with the SNACC project identified that the process had helped build its own evidence base for climate risks in the city, had emphasised the complex nature of local governance of adaptation and had highlighted the attitudes of residents to possible adaptation strategies:

"Our involvement and commitment to the SNACC project has been more than validated through the wealth of results generated by the research team. The research has also facilitated a dialogue with colleagues about the challenges facing our neighbourhoods."

The City Council produced a Practice Note on Climate Change and Sustainability in 2011 setting out the adaptation measures that applicants for planning approval could employ in the design and construction of a proposed development. More recently, Lucy Vilarkin, the City's Sustainability Officer, has brought the findings of the SNACC project on overheating to the attention of her colleagues in the Housing and Energy Team who are responsible for delivering the Government's Green Deal. Lucy is working with planning officers on an Advisory Note for developments recommending the use of 'future weather files' to ensure comfortable conditions during hot weather and building future-proofing.

FOR THE FUTURE

SNACC's findings continue to be shared across Bristol City Council helping to promote further engagement with its partners and communities, including its neighbourhood planning forums. In particular, the City Council recognises the need to work with other key stakeholders to provide information for communities on pathways for change in suburbs and the need to ensure house and neighbourhood improvements provide robust, safe and comfortable homes into the future.

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