Understanding and measuring social sustainability

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Abstract   Social sustainability is a new strand of discourse on sustainable development. It has developed over a number of years in response to the dominance of environmental concerns and technological solutions in urban development and the lack of progress in tackling social issues in cities such as inequality, displacement, liveability and the increasing need for affordable housing. Even though the Sustainable Communities policy agenda was introduced in the UK a decade ago, the social dimensions of sustainability have been largely overlooked in debates, policy and practice around sustainable urbanism. However, this is beginning to change. A combination of financial austerity, public sector budget cuts, rising housing need, and public and political concern about the social outcomes of regeneration, are focusing attention on the relationship between urban development, quality of life and opportunities. There is a growing interest in understanding and measuring the social outcomes of regeneration and urban development in the UK and internationally. A small, but growing, movement of architects, planners, developers, housing associations and local authorities advocating a more 'social' approach to planning, constructing and managing cities. This is part of an international interest in social sustainability, a concept that is increasingly being used by governments, public agencies, policy makers, NGOs and corporations to frame decisions about urban development, regeneration and housing, as part of a burgeoning policy discourse on the sustainability and resilience of cities. This paper describes how social sustainability is emerging as a practice in urban regeneration in the UK and draws on Social Life's work in improving the social outcomes of development for communities. It includes a detailed assessment of experimental work carried out in 2011 for the Berkeley Group, in partnership with the University of Reading, to develop a social sustainability measurement framework, which will enable Berkeley to evaluate community strength and quality of life in regard to new housing developments.

Keywords: *Social sustainability, urban regeneration, community well-being*

WHAT IS SOCIAL SUSTAINABILITY?

Social sustainability is a process for creating sustainable, successful places that promote well–being by understanding what people need from the places in which they live and work. Social sustainability combines design of the physical realm with design of the social world — infrastructure to support social and cultural life, social amenities, systems for citizen engagement

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and space for people and places to evolve (Ref. 1, p. 16). In the UK, social sustainability is closely linked to concerns with well-being, social capital and quality of life at a neighbourhood level.

THE SOCIAL LIFE OF CITIES

For decades, urban policy and strategy have been dominated by thinking about the physical city: landmark architecture, transport, housing, urban development and, increasingly, the technological infrastructure to create smarter, more productive and greener cities. Clearly, social issues such as health, education, employment and public safety matter to city leaders, but policy and public services deal with people in the abstract rather than the particular, which is why plans so often diverge from reality in unpredictable and unintended ways. The social life of cities, in particular the ordinary, the small-scale and mundane aspects of urban life, are commonly overlooked as a source of insight and inspiration for city planners and decision makers.

Looking at the everyday life of city streets and neighbourhoods provides a perspective on cities, social change and the radical variety of urban life that is dramatically different from thinking about the city as an intelligent network or transport system with pre-defined ideas about how people will behave. Studying a high street, a neighbourhood park or a local café can reveal much about the health and resilience of a community, eg what ideas such as local, global or belonging mean in multi-ethnic, multi-lingual cities such as London, as revealed by Suzanne Hall's[2-4] research about south London's Walworth Road or Martha Radice's[5] work on streets in Montreal. And, how focusing on lived experience in a particular place can teach much about understanding the larger forces and changes at work in cities.

UNDERSTANDING URBAN SUSTAINABILITY

The geographer Professor Ash Amin is among those calling for a better understanding of everyday urban social life to be brought into the debate about cities, planning and policy making. He writes about the 'being-togetherness'[6] that city life demands — the challenges of constantly negotiating diversity and difference in close proximity — and how the particular spatial organisation of cities plays a role in intensifying the experience of integration or exclusion, marginalisation or inequality. Amin suggests it is time to re-imagine the idea of the 'Good City' — an urban space that is open, inclusive, supportive and welcoming for all — because the reality of city living is so far from this ideal for so many people. He proposes a 'practical urban utopianism' that refocuses planning and urban development on the lived experience, social challenges and political resources of today (rather than those of an ideal and imaginary utopian future) with the relatedness of city life at its heart.

Rebalancing how one understands urban sustainability to take account equally of social, economic and environmental issues brings the well-being and quality of life of individuals and neighbourhoods back into the debate and, in the process, reconnects spatial and policy planning to peoples' real needs and everyday lived experience. This means taking account of the messy reality of urban social life: the needs and aspirations of different neighbourhoods, some wealthy, some less so; the needs of old and young people, families and people working in the city in all kinds of occupations; and the multitude of different factors it takes to survive and flourish in the city — access to jobs, good-quality housing, safe and integrated neighbourhoods, educational opportunities, affordable healthcare, having

family, friends and support networks, the chance to take part in the social and cultural life of the city, ways to participate in political decision making and voice concerns.

PUTTING PEOPLE AT THE HEART OF PLACE-MAKING: RESEARCH BY SOCIAL LIFE

Social Life is working with private- and public-sector organisations to put the concept of social sustainability into practice in urban planning, design and development. It works in partnership with housing associations, local authorities, planners, architects and developers to bring the lived experience of residents and local businesses into the planning and design process. It uses a variety of research methods, with an emphasis on in-depth qualitative work: ethnography, focus groups, street-based interviews and mapping spaces and experiences from the perspective of local people. Its aim is to understand how people's everyday experience — their use of streets and public spaces, their choice of routes through a neighbourhood, their awareness of local history and culture — shapes and influences their understanding of place.

The insights from these research methods provide a rich picture of local experience that can inform the design and planning process. Sometimes, this work illuminates distinct local patterns of social life, such as recent work in Hackney Wick and Fish Island, which identified the intricate relationships between informal and formal living; also how working spaces and social networks can be rooted in a specific neighbourhood, but connect to creative communities internationally. Work in the Aylesbury Estate showed how a corner shop can become a key social hub for local residents, albeit an informal space and not a designated 'community venue'.

MEASURING WHAT IS KNOWN ABOUT SOCIAL SUSTAINABILITY

Social Life is involved in several projects that focus on measuring the social effects of regeneration. These include work for Notting Hill Housing Trust to benchmark the outcomes from the regeneration of London's Aylesbury Estate. For the London Borough of Sutton, Social Life has developed a measurement framework in order to assess the impact of neighbourhood interventions on current residents. Both these projects build on work carried out for the Berkeley Group, in partnership with the University of Reading, to develop a social sustainability measurement framework that will enable Berkeley to evaluate community strength and quality of life in regard to new housing developments.

The Social Life/University of Reading research team used social sustainability as a conceptual framework to bring together and measure a wide range of factors that are known to influence quality of life and community strength.

A review of academic literature and policy work identified what is known theoretically and practically about social sustainability and its relationship to the built environment.[1,7–13] Insights from this work were combined with evidence from UK national government surveys about the relationship between well-being, quality of life and local factors such as community involvement. See Table 1 for an example of the factors identified as contributing to urban social sustainability from the literature reviewed for this project.

DEVELOPING A FRAMEWORK AND INDICATOR SETS

Based on this review and detailed qualitative work undertaken by Social Life in 2011,[1] the research team developed the following definition of social sustainability

Table 1: Urban social sustainability: contributory factors as identified in the review of literature (in no particular order) by Dempsey et al. (2009) (quoted Dempsey et al.[11])

Non-physical factors	Predominantly physical factors
Education and training	Urbanity
Social justice: inter- and intra-generational	Attractive public realm
Participation and local democracy	Decent housing
Health, quality of life and well-being	Local environmental quality and amenity
Social inclusion (and eradication of social exclusion)	Accessibility (eg to local services and facilities/employment/green space)
Social capital	Sustainable urban design
Community	Neighbourhood
Safety	Walkable neighbourhood: pedestrian friendly
Mixed tenure	
Fair distribution of income	
Social order	
Social cohesion	
Community cohesion (ie cohesion between and among different groups)	
Social networks	
Social interaction	
Sense of community and belonging	
Employment	
Residential stability (vs turnover)	
Active community organisations	
Cultural traditions	

that could be operationalised by the Berkeley Group:

> Social sustainability is about people's quality of life, now and in the future. It describes the extent to which a neighbourhood supports individual and collective wellbeing. Social sustainability combines design of the physical environment with a focus on how the people who live in and use a space relate to each other and function as a community. It is enhanced by development which provides the right infrastructure to support a strong social and cultural life, opportunities for people to get involved, and scope for the place and the community to evolve. (Ref. 14, p. 9)

A framework and a set of metrics were developed to measure the experience of residents living in new housing developments against this definition of social sustainability. The framework consists of three dimensions (see Figure 1):

— 'Amenities and infrastructure' captures past attempts to lay the foundations for a thriving community through design and provision of services.

— 'Social and cultural life' illustrates the present, how people experience the development.
— 'Voice and influence' illustrates the residents' potential to shape their future.

A fourth dimension, 'Change in the neighbourhood', captures the impact over time of a new community on the surrounding neighbourhoods and wider area. It was identified as important to a practical assessment of social sustainability at the local level, in particular for understanding how new development changes the demographic profile of a neighbourhood and housing affordability. But this dimension was not included in the initial testing process because the chosen research method involved benchmarking primary survey data against large-scale national data sets. The data set required to benchmark the 'Change in the neighbourhood' dimension is the 2011 Census, which was not available at the time of the research, but has since been released.

The three different dimensions of the framework contain 13 different indicators
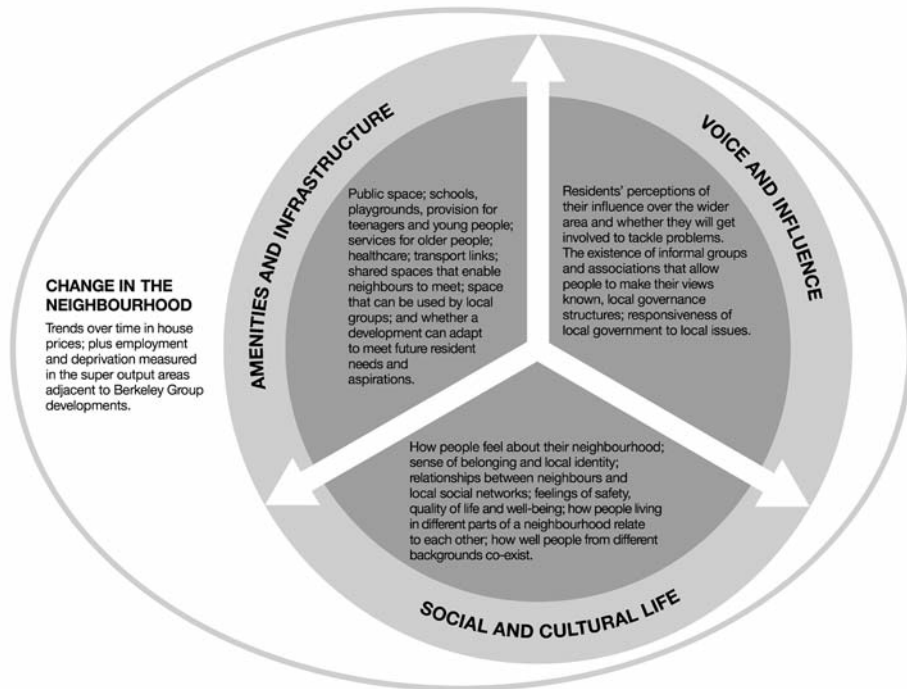
Figure 1: Four dimensions of social sustainability assessment framework

(see Figure 2). Each indicator is informed by a number of different questions, drawn primarily from pre-existing national data sets or industry-standard assessment tools. In total, 45 different questions were used to inform the indicators. This approach was chosen because the research team wanted, where possible, to develop a resident survey and site survey that used pre-tested and validated questions, and to have the ability to benchmark the resident survey findings against national data sets.

The indicators for the 'Social and cultural life' and 'Voice and influence' dimensions were created by selecting questions from four national data sets: the Understanding Society Survey, the Taking Part Survey, the Crime Survey for England and Wales, and the Citizenship Survey (see Table 2). A number of questions were created for the 'Social and cultural life' dimension where appropriate questions did not already exist.[15]

The indicators from the 'Amenities and infrastructure' dimension of the framework were created by selecting questions from the Building for Life assessment tool,[16] an industry standard that is endorsed by the British Government, from the Public Transport Accessibility Level (PTAL) tool (an assessment used widely in London), and from additional sources of secondary data about residents' travel habits. Additionally, a number of questions were created for this dimension where appropriate questions did not already exist.

TESTING THE FRAMEWORK

The framework was tested by carrying out an assessment of four different housing developments that had been completed in the past five years (see Table 3 for summary details). On each of the four sites, a resident survey and site survey were carried out, and a small number of contextual interviews with local stakeholders (such as the estate manager, a community representative or council officer) provided additional qualitative

Figure 2: Thirteen indicators in the social sustainability assessment framework

Source: Berkeley Group, 2014

Table 2: National surveys included in the initial analysis

British Household Panel Survey/Understanding Society (BHPS/US)
Institute for Social and Economic Research (ISER), 1996 to present
100,000 individuals in 40,000 British households
Data used from 2008–09 Innovation Panel Waves 1–2
Taking Part (TP)
Department of Culture Media and Sport, 2005 to present
14,000 participants
Data taken from 2010–2011 survey
Crime Survey for England and Wales (formerly British Crime Survey (BCS))
Home Office,1986 to present
51,000 participants
Data taken from 2010–2011 survey
Citizenship Survey (CS)
Department for Communities and Local Government, 2001–2011 (biannual to 2007, annual 2008–2011)
11,000 participants
Data taken from 2009–2010 survey

insights to aid interpretation of the survey results. In total, 598 face-to-face interviews were carried out with residents of the four housing developments. A quota sampling method was used to ensure that the survey responses reflected the tenure mix for each housing development.

The results of the resident surveys were benchmarked against geo–demographic classifications. The Office of National Statistics Output Area Classification (OAC) was used for questions taken from Understanding Society and Taking Part surveys, the Index of Multiple Deprivation (IMD) for the Crime Survey for England and Wales, and the Citizenship Survey. This enabled the responses of people living on the four Berkeley housing developments to be compared with the average responses that would be expected

Table 3: The four test sites

Name of development	Typology	Where	Brief description
Empire Square	Regeneration	In London Borough of Southwark, South London Inner city	Former warehouse site, 567 homes, 30% affordable
The Hamptons	Suburban dwellings	In London Borough of Sutton, South West London Suburbs	Former sewage works, 645 homes, 33% affordable
Imperial Wharf	Urban	In London Borough of Hammersmith and Fulham Inner city	Former gas works, 1428 homes, 47% affordable
Knowle Village	Rural/semi-rural	In Winchester City Council area, Hampshire Rural	Former hospital for mentally ill, 701 homes, 31% affordable

for people from comparable social groups in comparable areas.

The differences between the actual and expected scores were subjected to statistical testing. These results were then used to populate the 'Voice and influence' and 'Social and cultural life' dimensions of the framework. These benchmarks are referred to as the 'benchmarks for comparable places'. A small number of questions underpinning the 'Social and cultural life' dimension were created specifically for the framework, to fill gaps where there were no appropriate pre-existing questions from national surveys. Consequently, it was not possible to benchmark the results of these questions, so an assessment was generated by comparing results across the four sites.

The results for the 'Amenities and infrastructure' dimension of the framework were based on the site survey, which followed the structure and scoring system of the original Building for Life survey, and a combination of PTAL scores and assessments of secondary data about residents' travel patterns and transport provision on the developments.

The performance of the four developments was rated against the different indicators and a RAG (red–amber–green) rating system created to provide a simple graphic representation of the results. The RAG rating system was adopted for two reasons: to present the results in a form that is practical and meaningful for different audiences, but, in particular, to enable development teams and local government partners to consider how they plan and invest in new housing developments at different points in the planning process; and secondly, to enable presentation of a range of responses rather than a single social sustainability 'score'. The RAG ratings were constructed to reflect the results from different data sources, where green indicates a positive result, higher or better than would be expected, yellow a satisfactory result in line with comparable areas, and red a negative response, lower than would be expected. An example of RAG rating can been seen in Figures 3 and 4.

ASSESSING THE SOCIAL SUSTAINABILITY OF KIDBROOKE VILLAGE

Since 2012, Berkeley Group has carried out a further four post-occupancy social sustainability assessments, at Beaufort Park and Woodberry Down in north London, and Kidbrooke Village and Royal Arsenal Riverside in south-east London. This section summarises the findings of a social sustainability assessment of Kidbrooke Village, which was carried out at the beginning of 2013.

Figure 3: New family housing at Kidbrooke Village, London by Berkeley Homes

Kidbrooke Village in the Royal Borough of Greenwich, south–east London, is a £1bn regeneration project which, over the next 15–20 years, will create a new suburban community on the site of the former Ferrier Estate (see Figure 4). It is one of the largest regeneration schemes in the UK and has been planned to provide a new mixed-tenure, mixed-used community with 4,800 homes, schools, shops, health facilities, restaurants, offices, community facilities and open spaces.

The social sustainability assessment included a random household survey of 125 residents (24 per cent of occupied households at the time) using tenure-based quotas and an independent site survey. Figure 5 shows the resulting RAG rating (derived from statistical comparisons with national benchmarks) against the 13 indicators in the framework.

Figure 5 shows that 10 of the 13 indicators are positive for Kidbrooke Village, which means that residents' experiences were above the benchmarks for comparable places. Two of the indicators — adaptable space and local facilities — are rated as satisfactory, which means a comparable experience to the benchmarks. One of the indicators —

links with neighbours — is red, meaning that the residents reported experiences below the benchmarks for comparable places.

Analysis of the qualitative interviews and the resident and site surveys behind the RAG ratings suggest that most people living at Kidbrooke Village already feel settled and secure and feel that they 'belong' in the community, despite many having lived there less than a year.

Although Kidbrooke Village is a new community, many of the first residents are returning to the neighbourhood, having previously lived on the Ferrier Estate. The research shows that 'old and new' residents are getting along well, and social housing providers report that returning residents are very happy with the quality of their new homes and with the improvements to the public realm. Much work has been done by housing providers and others to make sure that residents who are returning to Kidbrooke Village are housed close to people they know. Arguably, this is reflected in the high levels of belonging and satisfaction that many residents report, which translate into positive indicators for well-being and local identity.

However, Kidbrooke Village residents report relatively low levels of interaction

Figure 4: New apartments at Kidbrooke Village, London by Berkeley Homes
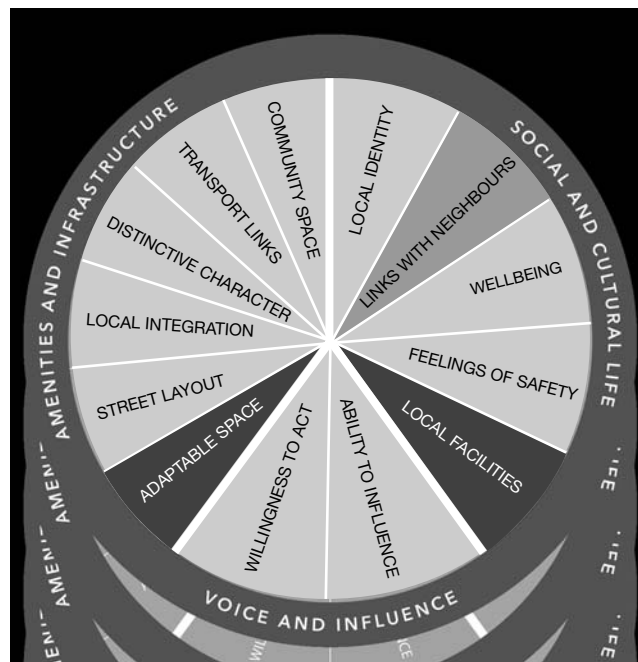
Figure 5: RAG Rating for Kidbrooke Village
Source: Berkeley Group/Social Life 2013[17]

with their neighbours compared with the benchmark, which is why the 'links with neighbours' indicator is red. This result is not surprising, given that almost 77 per cent of survey respondents had lived in their homes for a year or less. This indicator includes six separate questions, three of which are about regularly talking to neighbours, exchanging favours with neighbours, and seeking advice from neighbours. Residents living in social or affordable housing reported higher rates of

neighbourly behaviour than private residents: they were more likely to speak regularly to other neighbours, to have local support networks to call on, and to feel that people could be trusted — again reflecting the return of previous residents.

Both the indicators measuring 'Voice and influence' were rated as positive, which reflects high levels of consultation on environment and success in achieving change. Over 71 per cent agree that they can influence decisions affecting the local area.

Five of the indicators measuring 'Amenities and infrastructure' were positive, and one was satisfactory. These indicators are assessed through an independent site survey. The architecture and high-quality materials used in the residential and public areas were felt to be important in giving Kidbrooke Village a distinctive character. Spatial planning and design have also been used to create streets and open spaces that are intended to be friendly, and to encourage interaction between neighbours. Particular attention has been paid to making sure that the same high standards of design and materials are used in all housing types, so that there is no visible difference between different tenures.

Kidbrooke Village also received a satisfactory rating for the adaptable space indicator. All family homes have small back gardens, which provide residents with the possibility of undertaking small future building extensions/adaptations. The development includes a variety of open spaces that could be seen as opportunities to involve residents in making decisions about use, design and long-term management of the public realm.

EMERGING LESSONS

This framework is the first attempt by a UK house builder to operationalise and measure the concept of social sustainability. The initial project was experimental, but has subsequently been adopted by Berkeley Group and mainstreamed across the business. Some valuable lessons have emerged from the initial development work, as follows:

— *Need for analysis of underlying factors:* The measurement framework has been developed to provide a single house builder with the means to highlight findings about specific developments (whether positive or negative). It has been designed to help illuminate emerging patterns by enabling broad-brush comparisons with appropriate benchmarks for comparable places or other new housing developments. It does not, without supplementary analysis, identify the underlying factors or practical concerns that play an important part in shaping how people experience a place.
— *Contextual, qualitative work:* In-depth contextual interviews were carried out to enable the research team to interpret the survey findings. Although these insights were not scored or formerly represented in the final assessments, they became an essential part of the project enabling contextual analysis of the results.
— *Snapshot versus longitudinal data:* This measurement framework has been designed as a practical, replicable tool. It is has been created not to track a large sample of residents over a long period, but to provide a snapshot of community strength and quality of life at a point in time. This approach is not as robust as a large-scale longitudinal study in tracking changes in communities and individuals, and neither is it designed to measure the impact of any specific intervention. If applied periodically, however, (say two, five and ten years after completion)

and/or to a range of different developments (as in this study), the framework can provide opportunities for meaningful comparisons over time. What is lost in robustness is gained in ease of use — and meaningful information emerges from this relatively low-cost approach.

— *Mixed methods and data sources:* One of the major challenges in constructing this framework was combining the different types of data that underpin each indicator. Different types of data were selected to contribute different insights and perspectives to the framework. The site survey work focuses on predicting the likely outcomes for residents based on the well-established assumptions and experience of urban design practitioners, that good design and provision of community facilities will have a positive impact on outcomes for residents. The residents' survey attempts to measure what happens in communities after they are completed. For example, the data reflected in the 'Social and cultural life' dimension investigates how people feel about their neighbourhood, their neighbours and their own well-being. The residents survey also attempts to look ahead to capture data about whether residents are willing and able to have a say in shaping the future of their local area ('Voice and influence'). It was impossible to aggregate information directly from the site survey (with a three-tier grading system from a single source) and the residents survey (with a broader sample with statistically benchmarked responses). Doing this would have generated misleading results. The two types of data were therefore split between different dimensions of the framework.

— *Scope:* This measurement framework has been designed for a particular housing developer. The focus, therefore, was on the aspects of community strength and quality of life that a house builder could reasonably be held directly accountable for, or could influence through relationships with public agencies. This has meant that some important dimensions of social sustainability are not represented in this framework; specifically, measures focused on social equity and justice and access to education and employment. They have been excluded where they are beyond the control or influence of a house builder.

CONCLUSION

When regeneration is property led, contracting regimes tend to impose their own logic on investment and hiring, and commitment to local benefit is lost. Key informants noted a common requirement to spend public funds quickly (called 'front-ending') to achieve early visual results to boost investor confidence and lever in private funds. This can push the development process too fast to link it to the requisite employment strategy and the community participation, skills assessment, training and adult basic education that need to go with it.

Innovative, socially responsible new business models are needed to incentivise developers to take a long-term interest and stake in new communities. Evidence suggests that the most successful developments in Europe generally involve a partnership between commercial providers and local government with the private sector taking a long-term stake in the development through service charges or rental income. Research from the Chartered Institute of Housing suggests that, in the UK, the highest quality and most successful schemes tend to be led by non-commercial owners and developers.

In policy and practice terms, more work is needed to define the concept of social sustainability in planning theory and policy, and to investigate what supports social sustainability at the neighbourhood level to ensure that the policy agenda does not overtake the research and evidence base as Dempsey *et al*. identify (Ref. 11, p. 290).

While there is clearly a need for a more rigorous approach to defining and theorising social sustainability, much work is needed to examine how the idea is deployed in planning practice, in particular, to understanding how the concept is translated by different players and used as justification for making decisions about interventions and investments in the material and social fabric of cities.

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