Low carbon frameworks

THE GREENING OF SOCIAL HOUSING PROJECT - THE COMMUNITY ENGAGEMENT REPORT

INDEX

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1. INTRODUCTION

Adopting a people-centred approach towards retrofitting is a new area of research; the recently emerging 'social-technical' approach to retrofitting is a move in this direction, acknowledging a more holistic understanding of how people use their homes that encompass lived experiences and cultural understandings of utilities like water and energy (Chiu et al 2014). This social approach to retrofitting underpinned the methodology of community engagement in the Greening of Social Housing (GOSH) project. This report outlines the context for the project specifically exploring the decision to implement a green retrofit in a social housing project and the chosen approach to the concept of greening. It will then discuss the chosen methodology of the community engagement process along with the objectives of the engagement. Finally, it will identify key lessons learnt from the community engagement process and suggest recommendations for future community engagements should this project be replicated in other social housing stock. The report will also contributes towards the gap in documented knowledge of community engagement in retrofit social housing projects. There is little research investigating and documenting methods of community engagement used in the process of retrofitting social housing stock. Consequently, there is little research monitoring the impacts of such methods A literature review conducted to identify the latter issues also revealed that there are few studies which explore how greening of space and place, behaviour change and well-being are related.

2. BACKGROUND

South Africa's first comprehensive approach to a greening project involving social housing institutions (SHI) is underway. The project seeks to establish a basis for a systematic 'greening' of social housing; integrating on-going tenant engagement and monitoring and evaluation that will demonstrate financial benefits to both tenants and social housing institutions, as well as broader social and environmental benefits to society. The community engagement process described in this report forms part of this larger project.

There are currently two pilot greening projects underway - one retrofit and one new build. The retrofit project is located in Brooklyn, Cape Town. The Boom Flats are managed by social housing institution Communicare. This report will focus on the Boom Flats, where it is envisaged that twenty units housed in five buildings will benefit from green technology upgrades, or a retrofit.

Figure 1: Two apartment blocks of the Boom Flats - Hibiscus (left) and Eikehuis (right)

Source: WWF staff

2.1. DESCRIPTION OF BOOM FLATS

The Boom Flats were built in the 1960s, and consist of five apartment blocks with 20 units - five units per block. They are all one bedroom apartments with a lounge, kitchen, en-suite bathroom and an outside balcony. Some balconies have been converted into a second room or enclosed balcony.

They are situated in a low income suburb with a high crime rate – break-ins, theft, robbery and drug related crime. Boom Flats has no perimeter fence to enclose the block with the remnants of wire the original wire gates. There are communal spaces around the blocks and as a result there is a lot of thorough fare traffic which tenants deem as unsafe and vandalism and theft was reported. Some tenants use the washing lines in the inside of the external area in Boom Flats, and two tenants on the ground floor of Keurboom flats have established gardens.

2.2. TENANT PROFILE OF BOOM FLATS

The Boom Flats tenants have a mixed demographic profile. Just under half are employed, and 38% are pensioner only households. Incomes range from the lowest possible income R1250 – South Africa's old age pension grant - through to over R7500 earned by dual income, employed tenants.

Employment status of Boom Flats
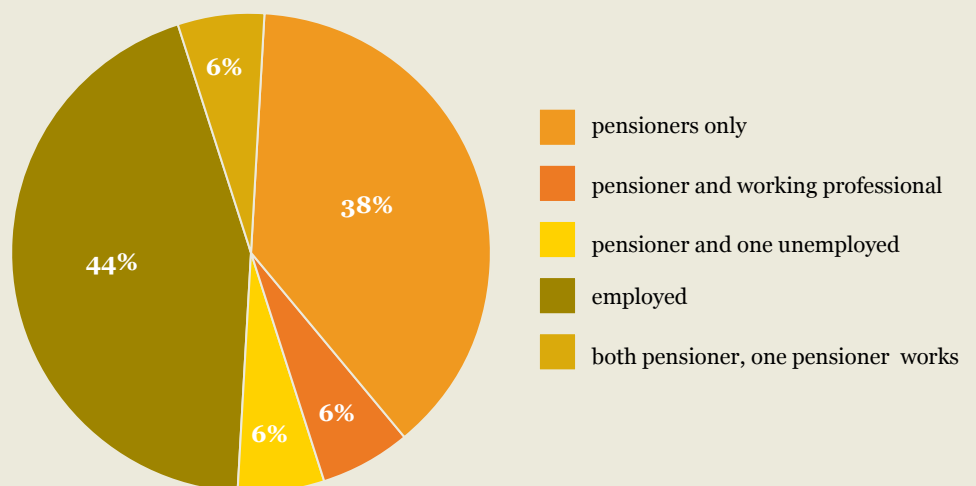
Figure 2: Employment percentage of Boom Flats tenants, 2015

There is only one household - of two tenants - which survives on one pension. Most of the pensioners receive money from family, deceased spouses' pensions in addition to their own pensions, or from working.

The demographics of the flats are mixed, as reflected in the Figure 3 below. This information drew no real correlations of note apart from one household's choice of energy - a paraffin stove - which was culturally significant. Tenants did remark on perception of racist tension which was reported from white and coloured households. The import for them was that the sense of community was compromised.

Racial Profile of households
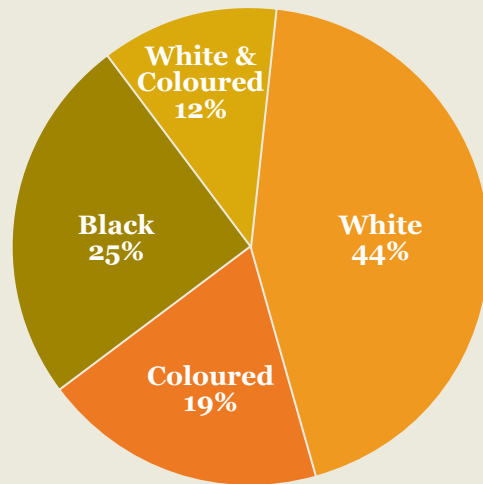
Figure 3: Racial profile of households

Over half of the households were headed by male and female spouses/life partners. Just under half were headed by women – either by themselves or with dependents.

Gender of Households
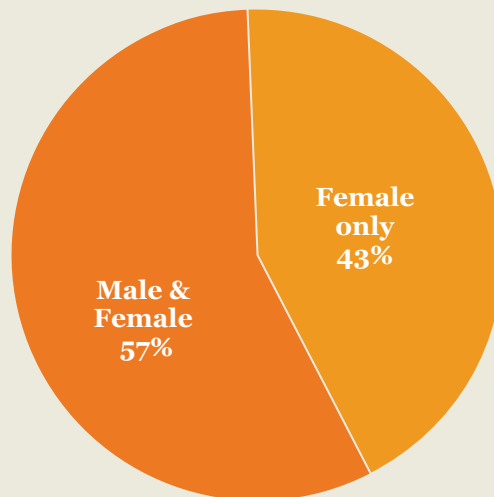
Figure 4: Gender of Households

The majority of the households earned between R3000 and R4000 a month. The second largest segments were households earning between R1250 and R3000 and R4000 and R5000.

Rentals are calculated according to income and are subject to increases over the years. Tenants pay between R783 and R1533 in rent (figures supplied by Communicare from 2013). The rent reported by tenants vs the rent reported by Communicare has slight variations, but nothing notable.

Household Income
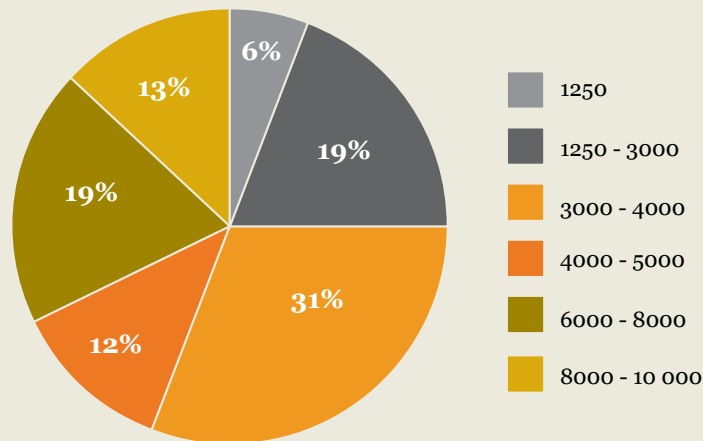
Figure 5: Household income of Boom Flats

The percentage of incomes in Boom Flats varies with 31% of tenants falling into the R3000-R4000 a month income bracket. It is noteworthy that 32% of the tenants earn over the R7500 ceiling which means they do not technically qualify for social housing. These households are dual income households with permanent employment. The next significant number consisted of households with a state pension income.

Percentage of income: electricity
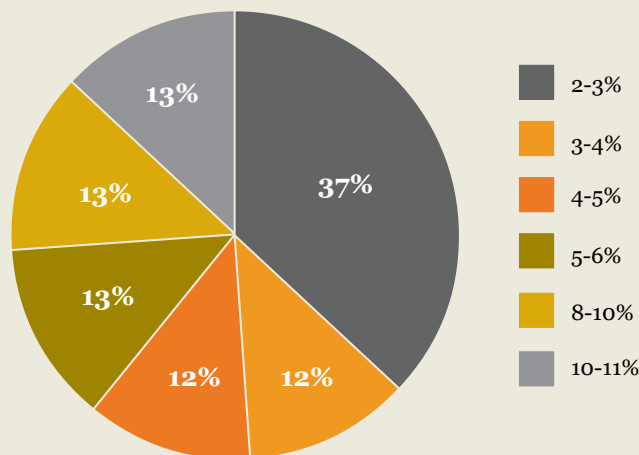
Figure 6: Percentage of income: electricity

The portion of income that electricity costs tenants ranges between 2% and 11%. A scan of StatsSA indicates that electricity and housing cost are generally are conflated and therefore one would have to combine rental and electricity to compare the relative expense of accommodation to what the national averages are. Housing and electricity range between 15.1% in the lowest income bracket (R0 – R54 344) and 14.3% in the second quintile (R54345 – R151727) (UNISA Bureau of Market Research, 2011). In some cases, combining rent and electricity resulted in 78% of a tenant's income, therefore indicating that this is a significant expenditure for this tenant. The tenant in this latter case uses a minimal amount of electricity; a weekly hot bath is shared between two tenants in a bid to manage their energy expenditure. If the remainder of their disposable income amounts to R157 a month, freeing up this amount is in essence almost doubling their budget. At the other end of the continuum, tenants paying up to 3% was the largest portion of the sample.

And barring one income of R2350, the rest of the tenant's incomes ranged from R7000 – R10 000. These tenants were spending between R100 and R200. They ranged from between 1 - 3 tenant occupancy. Freeing up this expenditure would also benefit these tenants. This research indicates that reducing the energy bills of the Boom Flats would have a very positive impact on tenants' budgets – whether they choose to spend it on more energy, thus increasing comfort, or on other things.

Figure 7: household income and expenditure patterns in South Africa, 2011.

Expenditure Group	<R54 344	R54 345- R151 727	R151 728 - R363 930	R36 931 - R631 120	R631 121 - R863 906	R863 907 - R1 329 844	R1 329 845+
	%	%	%	%	%	%	%
Alcoholic beverages	3.0	4.5	2.8	2.0	1.8	1.9	1.6
Cigarettes& tobacco	1.8	2.3	1.5	1.1	0.6	0.6	0.2
Clothing, footwear & accessories	7.6	8.4	6.1	3.9	2.8	2.6	1.6
Communication	1.0	1.6	2.2	2.3	2.3	2.1	1.4
Domestic Workers	0.2	0.2	0.7	0.9	0.7	0.8	0.9
Education	2.4	3.4	4.8	4.7	4.1	3.5	3.1
Food	47.7	35.2	21.7	14.7	11.3	9.8	6.8
Furniture & household equipment	1.9	3.0	3.0	2.7	2.5	3.1	2.4
Holiday/ weekend (excl transport)	0.1	0.1	0.4	0.7	1.0	1.2	1.5
Housing & Electricity	15.1	14.3	16.0	16.2	15.6	14.3	14.3
Income tax	0.8	3.3	8.7	15.2	17.7	19.8	25.4
Insurance & funds	0.9	2.0	3.8	5.1	4.7	5.3	4.7
Medical & dental	2.8	3.1	7.8	9.3	10.8	10.0	6.0
Miscellaneous	2.7	4.4	4.2	3.1	3.1	3.0	3.8
Personal Care	4.0	3.6	2.8	2.0	1.6	1.3	1.0
Reading matter & stationary	0.2	0.5	0.6	0.6	0.4	0.6	0.3
Recreation, entertainment & sport	0.9	0.9	1.5	2.5	2.8	3.3	2.9
Savings	0.3	1.2	1.9	2.7	3.1	3.0	9.5
Support of relatives	1.0	1.9	0.8	0.3	0.4	0.4	1.2
Transport	4.1	5.1	9.0	9.6	12.2	13.1	11.0
Washing & cleaning materials, etc	1.6	1.1	0.7	0.4	0.4	0.3	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: UNISA, 2011

2.3. MAPPING THE CONTEXT OF SOCIAL HOUSING AND "GREENING"

Social housing institutions provide homes to households with a monthly income of between R1 500 – 7 500 month. In a broader context, external stressors like environmental degradation, water scarcity and the depletion of fossil fuels are leading to food insecurity, an increase in utility costs and related energy poverty. Thus, continued affordability of housing for these families may depend on preserving and reining in the operating costs of the buildings and the rapidly rising utility bills. "Greening" in the context of social housing is an opportunity to address the needs of at risk households, using the capacity of SHIs and new technologies to address not only climate change, but to also investigate innovative solutions to address energy and water challenges, both present and in the future. Green technologies and low carbon living options create a sustainable way of living that also brings about improved well-being.

Tenant engagement is carried out in a number of different ways. In South Africa, community development work is often carried out by organisations working in partnership with SHIs, although these often have the same board members (NASHO Community Development, 2012). Tenants are not represented on these boards, as SHIs are run like social companies which, although they are not geared towards making a profit, operate off a balance sheet and offer a service to tenants.

As a concept "greening" is understood to encompass technology, policies, conservation and resource management. In the context of this report, "greening" means the installation or retrofit of green technologies to make homes healthier, more comfortable, and more energy efficient in ways that reduce their environmental footprint, reduce utility bills and improve occupant well-being. Green technology is a term used for various products, systems and equipment used for the purpose of conserving the environment. These technologies aim to counter the collective negative effects mentioned previously, and thus boost the quality of life in social housing communities.

In terms of application within GOSH, "greening" includes matters such as energy generation, water conservation, building technology, waste management, air quality, transportation, home efficiency and even food production. The approach to greening the Boom Flats consists of two tiers. A preparatory phase aimed at engaging tenants with the aim of establish a baseline of consumption patterns; fostering a dynamic in which tenants feel valued, consulted and heard; managing expectations as to what the process entails, what benefits would be realised and how they would be impacted; extracting data about consumption patterns which could inform the technical retrofit interventions; and maintaining an open channel of communication between tenants, WWF, Communicare and other project partners and suppliers. Greening also involves the development of social capital and resources which can provide support and enhance standards of living.

The second phase applies to the physical retrofit process, the application of appropriate technologies designed to increase comfort levels, address energy poverty by reducing electricity bills, and to reduce consumption of utilities. Although it must be noted that the application of greening in a poverty context does mean that some objectives are forfeited as reducing electricity bills might lead to increased consumption of electricity if tenants choose to allocate the savings to increased energy comfort.

2.4. KEY CLIMATE CHALLENGES FOR SOCIAL HOUSING INSTITUTIONS

Driven by rising energy costs, growing scarcity of water, and the evolving health needs of aging populations, SHIs will face an across-the-board need to update and upgrade their existing building stocks SHIs also face the need to comply with the addition of SANS 10400 to any new builds and or extensive renovations. SANS 10400 is a new addition to South Africa's National Building Regulation for Energy Usage in Building. Energy will become a progressively more significant component of tenant expenses. SHIs face increasing water costs as water is covered by the SHIs in tenants' rentals. Given the available income tenants have, billing tenants for water in addition to electricity will severely affect tenants quality of life, and could also see them leaving housing stock for cheaper, less desirable accommodation as per the trend observed by the Madulammoho Housing Association. Indoor air quality and energy poverty are intrinsically related. Mold incurred by poor design and construction of buildings, or through human behaviour to deal with energy poverty, has a big impact on human health. Poor indoor air quality impacts poor tenants, the elderly and disabled tenants for a variety of reasons — weak immune systems (due to malnutrition and lack of access to proper medical treatment) and health bill costs incurred. To complicate the issue, in many SHIs, the "low hanging fruit" on the energy efficiency tree has already been harvested e.g. incandescent lamps have been replaced by compact fluorescent bulbs; and electrical geysers with solar water heaters. Yet energy costs as a percent of disposable income continue to rise, often resulting in energy poverty in low income households. The retrofit will include harvesting the "higher fruit" of energy efficiency. Typically the retrofit will include upgraded windows; insulated building structures, dual flush toilets, efficient showers heads and rain water harvesting.

While offering the opportunity for more savings, these interventions offer the potential for savings in energy costs. Energy consumption is tied to water consumption – less water used for bathing or washing clothes and dishes means less energy used. This assumption may speak to a middle to upper income home, however the dynamics in poor households could see an increase in consumption due to having more money to spend on energy. Sealing a home or building structure so that it retains heat in winter and cools the air in summer leads to energy savings - but can also lead to reduced air exchanges and impact indoor air quality unless addressed. All of this retrofitting will be costly – and is dependent on the seamless implementation of these services by the occupants themselves – particularly the elderly who spend most of their time at home and indoors. Facilitating the "seamless interaction" between people and technology is the focus of the community engagement process in Brooklyn.

2.5. WWF'S APPROACH TO COMMUNITY ENGAGEMENT IN THE GREENING OF SOCIAL HOUSING PROJECT

Buildings themselves don't consume utilities like water and energy, rather it is the people who live in them that do. This not only makes it difficult to predict the savings that will come from a retrofit, but also highlights the need to address occupant behaviour in greening programmes. Amongst those behaviours that have the biggest environmental impact in the home are our habits – linked to how we ensure indoor comfort during seasonal changes, how we cook, use lighting and wash ourselves. The focus of the community engagement aspect of the GOSH project is human behaviour; recognising that the interaction of technology and people affect greening project outcomes. A component of the community participation was to direct tenants' attentions to the financial implications of energy savings so as to ensure they were made aware of the rebound effect should they decide to spend their additional income on more energy.

In order to fulfill the goal, WWF engaged with a group of tenants in the Boom Flats where the retrofit is being planned. By working with tenants we learn about their hopes, dreams and aspirations for the process of shifting towards a "greener" community. A group of tenants from Boom Flats volunteered to become the "greening stewards". The greening stewards met weekly over a period of almost two years The information from the study—combined with input from other stakeholder organisations - intends to create a realistic road map for community engagement for social housing institutes who embark on greening their housing stock.

The process of selection of the greening stewards stemmed from an initial introductory meeting with all the tenants, Communicare, WWF-SA and NASHO. Following this, the Tenant Engagement Research lead made telephonic and personal contract with all the tenants to discuss the project in more detail and invite them to attend the weekly meetings. Tenants who came were pensioners who were unemployed and who didnt have many external engagements. The core group consisted of 4 households and four blocks were represented. These stewards were tasked with communicating with other tenants – generally those who were employed during the day — in their blocks to pass on news about the meetings. In some cases this worked, where tenants had relationships with other tenants. In other cases, neighbours were insular and avoided contact with outsiders in general.

The approach sees community engagement as integral to a retrofit because it ensures that concerns and behaviours of community residents are considered in the greening project plans. Projects where disenfranchised communities have a genuine voice in the planning and implementation of projects, are more likely to realise the expected utility "savings". In addition to this, building improvements can facilitate social interaction, improve social connections that deepen opportunities for engagement and builds social capital whilst instilling a sense of pride for the physical environment. Engagement with tenants as a community provides a mechanism for cultivating this voice and maximising the likelihood that the outcome (predicted savings) of the green techonologies will reflect the input.

A range of mechanisms were employed to engage the tenants of Boom Flats; the technique fitting the purpose. If SHIs want to truly engage their communities to bring about changes at a personal level, the best results will be obtained by really thinking through what approaches, interventions and messages are most likely to work. Hopefully this work at one SHI will serve as a resource for others.

3. THE ENVISIONED OUTCOMES OF THE CASE STUDY

The community engagement aspect of the GOSH project focuses on 20 households from culturally diverse backgrounds. The diversity of these households is encouraging as it demonstrates that the lessons learned apply to a diverse cultural group and therefore are applicable to other SHI tenant profiles. The critical areas are:

3.1. INTEGRATING A PEOPLE-CENTRED APPROACH INTO THE GREENING OF SOCIAL HOUSING

- The participatory planning and design of retrofitting required a successful community engagement process

- Participatory community engagement as a tool and by-product for individual and social empowerment that leads to improvements in well-being

- The development and implementation of methods for raising awareness on the links between individual behaviour change and climate change

- The importance of building green constituencies in social housing projects

- The strengthening of social capital and social cohesion amongst diverse cultural groups as part of the greening initiatives undertaken

- The influencing of national programmes and policies on the greening of social housing projects through the development of best practices

3.2. CREATING A PLATFORM FOR ADVOCACY FOR THE GREENING OF SOCIAL HOUSING

The link between the greening of social housing and benefits of improved well-being of communities appeals to SHIs and government. Highlighting the role that green buildings can play in delivering on government priorities to improve housing, health and well-being can motivate that greening retrofit programs be adopted widely in policy and regulations.

Greening creates greener, healthier communities that are diverse, affordable, inclusive and healthy places to live, work and play.

3.3. THE COMMUNITY ENGAGEMENT METHODOLOGY FOR "GREENING FROM THE INSIDE OUT"

It has been demonstrated that there is significant potential to reduce emissions with the installation of green technologies. That is not to say that providing better choices (through technology) will in itself bring about the change that is needed; the human element can never be left out of the equation. By combining the approaches, it is envisaged that even greater reductions will be well within our grasp.

Behaviour change programs to reduce greenhouse emissions are about encouraging people to reduce their reliance on fossil fuels. There are various ways that was this addressed in the community engagement notably by encouraging people to:

*   use utilities like energy and water more efficiently (compact fluorescent lights, insulation etc) switching to green technologies (eg solar hot water)
*   a lifestyle shift – reducing your carbon footprint (eg establishing a food garden, recycling organic waste).

For effective changes like this to happen the behaviour change element focused on the social context by:

*   demonstrating greening options
*   facilitating the choices made
*   establishing social norms that reinforce these choices.

Shifts in life style choices include:

*   reducing the use of insecticides
*   using environmentally friendly household cleaning products
*   Composting organic waste

Thus far each of the greening stewards report having made at least one lifestyle change to greener living!

3.3.1. TYPES OF ENGAGEMENT

The community engagement process involved a range of activities. One way to understand different types of engagement with the Boom Flats community is through a continuum from informing (reflecting a low level of engagement) through to active participation (reflecting a high level of engagement).

Informing took place when a decision was already been made or action was required, and the project team needed to make sure that those affected are aware of the facts.

Consulting took place when the project team required some input, feedback or advice on preferred technologies before part of the project or decisions on this was progressed.

Active participation took place when the WWF-SA team collaborated with specific stakeholder groups or the community to work out what needs to be done and to develop solutions that are incorporated into decision making.

All engagement processes in the study sought to inform, most had some level of consultation and some included active participation.

3.3.2. STAGES OF ENGAGEMENT

In general the integration of a behaviour change approach in the community engagement within a greening project included the following stages:

1. Identifying and selecting behaviours that would achieve project objectives
2. Identifying barriers, opportunities and benefits of each behaviour using local research
3. Developing strategies drawn from participatory techniques to address barriers
4. Piloting the strategies and adjusting as appropriate
5. Next steps: Monitoring and evaluation during installation of the green technologies using direct measurement of project outcomes where possible

3.3.3. FOCUS AREAS USED FOR ENGAGING THE STEWARDS TO CHANGE TO "GREEN" BEHAVIOUR

This section describes a range of tools utilised to motivate people and equip them with the knowledge to improve their utility use and shift towards greener living. The engagement sought to initiate shifts in behaviour through drawing on lessons from research and case studies, covering feedback on consumption, advice and guidance, motivational educational workshops, and peer-to-peer working groups. Also, the different focus areas integrated into the capacity building activities in order to influence behaviour change amongst the greening stewards are outlined. These different factors need to be targeted in order to encourage lasting behaviour change.

In the greening project, weekly meetings were conducted over a period of one year to discuss topics central to changing behaviour. The meetings with the greening stewards broadly encompassed capacity building on:

- **Literacy on utility use and consumption:** to develop awareness and understanding of how much water and energy households consume and the waste produced; and how much individual activities contribute to this.

- **Knowledge of behaviour:** demonstrating and discussing the different ways that behaviour and choices can reduce the use and consumption of utilities.

- **Influencing beliefs about climate outcomes:** instilling a belief that reducing utility use is desirable and that taking action will make a difference to the environment.

- **Self-efficacy & empowerment:** discussing how each person is capable of changing their behaviour, including having the time and resources necessary to change.

- **Social and household norms:** infusing a shared desire to reduce utility use as normal and socially desirable within the group.

- **Feedback on consumption:** this included examining each household's energy bill and providing feedback on energy use, as well as making comparisons between people within the community and outside. Feedback could also be provided in real time such as through the smart metering or through regular energy monitoring by the household. In-depth interviews were conducted with 16 households to establish a baseline of consumption behaviour.

- **Tailored advice and guidance:** providing general hints and tips on saving utilities such as water, waste and energy (using the City of Cape Town guide[1]), or providing individuals with tailored information that reflects their specific needs (through household utility use and consumption audits).

- **Motivational campaigns:** these sought to trigger changes in behaviour and included the use of incentives (like sourcing donations for seedlings and compost to assist with establishing a community gardening project).

[1] Copies of the City of Cape Town's Smart Living Handbook were obtained and distributed to tenants

- **Peer-to-peer working:** this involves making use of community networks (such as the greening stewards and social outings on green technologies) thus enabling residents to deliver engagement activity directly to their peers (in the form of champions i.e. the greening stewards).

3.3.4. TECHNIQUES USED DURING THE COMMUNITY ENGAGEMENT PROCESS

- Targeted households through home visits in an awareness campaign on the benefits of green homes including lower utility bills, improved family health and a vibrant, healthy local environment

- Organised a few community meetings to educate people about the benefits of a retrofit and give project updates

- Circulated information guides to greening the home

- Make it public. Articles were written highlighting the work being undertaken and published on social media[2]

- Hosted workshops on the types of green technologies and the benefits of each

- Arranged tours to events or exhibitions on green technologies

- Held seminars in the community space to get people to stop and think about where they live and what they want

- Organised a green challenge – encouraged each person to make one shift to green living by changing their behaviour or choice

- Arranged for experts to come and inspire people about what is possible

4. MAIN THEMES ARISING FROM INVESTIGATING THE HUMAN ELEMENT OF UTILITY USE AND CONSUMPTION USING A PEOPLE-CENTERED APPROACH

Here we show how a range of factors influence how people behave, including lifestyle factors, personal attitudes and beliefs, levels of awareness about an issue and social norms. These different factors need to be targeted in order to encourage lasting behaviour change.

4.1. EXPERIENCES OF ENERGY POVERTY AND DECREASED WELL-BEING

The term "energy poverty" describes the disproportionate burden of electricity and other utility costs on low-income households that reduce the funds available for food, clothing, medication and other basic necessities.

Rising energy costs have an impact on all, but low-income households are hit hardest. Low-income households often pay a very high percentage of their income on energy costs. While energy poverty can often be the result of lack of income, it can also be the result of the quality of housing. For example, if a home lacks insulation or draft-proofing, has inefficient heating appliances or has other inefficient appliances, energy costs will remain high despite the tenant's best efforts to conserve energy. High energy costs and low incomes are a painful combination. In the cold winter months, families have to choose between food and keeping themselves warm. They may be forced to live in moderate to extreme discomfort and health can be affected.

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[2] Articles published by Reliance Compost and Communicare

In order to adequately heat their homes, prepare food and live in safe conditions, people need energy. Housing in disrepair leads to higher risks; unhealthy exposure to damp, mold and fungus (e.g. from poor insulation, and/or inadequate ventilation) can cause a wide range of illnesses, including asthma and other respiratory diseases. Although these health risks apply to all people, the elderly and children are especially vulnerable.

4.2. RECOGNITION AND ACTIVATION OF SOCIAL CAPITAL AS AN UNTAPPED RESOURCE

Interviews also revealed how tenants use existing networks for information on dealing with fuel poverty and associated issues around damp and cold draughts. Residents relied on information from friends and family comparing their situation to others and sometimes acting as a spokesperson for other residents in the same block. These networks were only revealed through interviews and social engagement. If the project had not had the engagement component this may have gone undiscovered. There is latent potential to 'uncover' this information further and sensitively build on it to assist and support residents in dealing with the retrofit process. The fact that this information already exists in communities and has not been imposed via information from Communicare or others, may mean that it is likely to work better.

4.3. DISCOVERING THE DISCONNECT BETWEEN LIVED EXPERIENCES AND ENVIRONMENTAL DRIVERS

The findings suggest that there is a disconnection between policy drivers and the actual experience of living with fuel poverty. The consequences of this disconnect is demonstrated by using the example of energy use. The findings show that low- income households use energy efficiently, their water consumption is low, their waste is at a minimum. Discussions suggest that they use only as much as they can afford to pay for. There is evidence of fuel poverty and food insecurity[3]. Environmental concerns are therefore less of a priority than saving money.

This is particularly challenging for the GOSH project to realise its objective of reducing consumption and the cost of consumption, as many households are already frugal with their energy use out of necessity. In addition, improvements as a result of the retrofit, may also result in a rebound effect, where households take advantage of lower running costs to raise comfort levels through additional use of electricity, thereby offsetting any potential savings in utility use.

4.4. DISTRUST OF THE SOCIAL HOUSING INSTITUTE AND SKEPTICISM

There was a prevailing sense of doubt amongst tenants that they could impact on the project outcomes. This was partially due to difficulties they reported in getting maintenance issues in their homes resolved through the current system. The people interviewed felt that both their age and their living situations led to them being overlooked. Some tenants often felt intimidated to speak up, and feared losing their homes. Some felt that staying involved was challenging because they felt that promises made by Communicare were often not kept.

4.5. HOUSING QUALITY & SECURITY OF TENURE

Three key structural problems were presented – safety, dampness and poorly insulated flats. All these impacted on households in terms of physical and mental health problems. People spoke of being unsure of where to get help or what their rights were, and when maintenance problems are reported they remain unattended. Tenants often described feeling powerless in their relationship with the social housing institute and this had effects such as stress, depression and anxiety. The elderly in the community appeared to feel more vulnerable to adverse housing conditions than those that who were employed.

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[3] Food insecurity was not measured directly in the survey, but is anecdotal evidence obtained through discussions with tenants and via questions in the survey related to cooking patterns (i.e. one hot meal a day and no further meals)

4.6. SOCIAL COHESION AND THE IMPORTANCE OF RELATIONSHIPS

Safe, secure and affordable accommodation was seen as essential to developing social relationships amongst neighbours that lead to positive outcomes to wellbeing. Housing that was unsuitable in terms of affordability, location and quality was said to contribute to negative wellbeing outcomes for people. People discussed housing in the context of 'home', a space where they could rest and relax, for family and social interaction. Increasing community level participation in the greening project – including developing relationships between and within the Boom Flats community– will be required to make the kind of sustainable changes required.

4.7. PRACTICING AUSTERITY

For low income households ways of mitigating the impact of austerity were felt to be limited or in some cases non-existent. The elderly were most at risk of financial pressures. Mechanisms for reducing expenditure included skipping meals and implementing energy saving measures. Problems of being unable generate extra money and fear of accumulating arrears caused worry and fear around eviction. Reliance on state pensions and ability to pay increasing rentals are of major concern.

4.8. LESSONS LEARNT

Simply improving social housing through greening social housing will not be sufficient to improve all aspects of wellbeing other factors highlighted:

Participants considered stability and security of tenure as being central to wellbeing. They wanted change that ensured that they lived in homes with increased comfort levels, well-ventilated in summer and adequately heated in winter. Greening efforts should lead to savings for the household – increased value and appreciation. The importance of creating a communal green space and ensuring the safety of tenants with adequate fencing were highlighted as key aspects to the greening project. Environmental concerns should not be placed above tenant wellbeing but seen as integral. Finding solutions in one area requires exploration of solutions in all areas that contribute to improved well-being.

5. SUCCESS FACTORS IN TENANT ENGAGEMENT

Engagement should not take a one-size-fits-all approach as different participants favoured different techniques. Often the effectiveness of a technique came down to the way in which it was delivered. Personal engagement with households, home visits, regular face to face meetings or through phone calls, were most effective at getting and maintaining buy-in. Engaging with all members of a household gets better buy-in and group events provided an opportunity for residents to share experiences and tips, and be motivated by the success of others. Locally-based researcher who established a rapport with residents over a period of time helped to overcome mistrust or scepticism, particularly among elderly residents. Keeping messages simple, focused and tailored where possible worked well.

6. CHALLENGES IN TENANT ENGAGEMENT

Key challenges included coordinating engagement beyond the greening stewards to other tenants. It was difficult to motivate residents to attend group events, keeping the greening stewards interested and committed to participating in the weekly meetings.

7. RECOMMENDATIONS

7.1. SET A CLEAR PURPOSE FOR GREENING USING A PEOPLE-CENTERED APPROACH

A people-centered approach, acknowledges the human element. Establish a clear vision, targets and baseline for changing the well-being of tenants through the greening project. The greatest success is achieved in meeting greening objectives when stated in terms of a 'vision' for a desired end-state, at the end of an engagement pathway for transformative change, one that is empowering, participatory and enhances well-being. This should be accompanied by concrete short and medium term goals and outcomes.

7.2. A BODY FOR COORDINATING AND FUNDING GREENING PROGRAMS SHOULD BE CREATED

Greening social housing comes with cost and resource implications for those delivering it. Documented case studies on the successful installation of green technologies indicate the need for ongoing support to households over a longer period of time to continually reinforce key lessons and maintain motivation. The consequences of this situation not only compromise the confidence of the greening process, but also the performance and effectiveness of the retrofit and along with this, potentially, the wellbeing of residents. Although cautionary, this observation can only be assessed through a post retrofit engagement.

7.3. DEVELOP AND SUPPORT GREENING CHAMPIONS

Tenants should be identified and recruited to provide advice and guidance to households during the retrofit; training and education should be arranged to support their work in their communities.

7.4. ENGAGE COMMUNITIES EARLY AND OFTEN

It is important to invest time upfront to engage households early on to maximise the success of engagement later in the project. Some households were initially reluctant to engage, however once the benefit of the greening project was outlined, the level of willingness to take part increased. Frequent weekly meeting with the greening stewards were held and feedback meetings with the community were arranged.

7.5. CONSTANTLY EXPLORE WAYS TO COLLABORATE

Continue to expand the number of people and organisations that are involved in the greening project and subsequent actions (like establishing a community garden or recycling) so that the work is continually energised, sustained and expanded with new opportunities and insights to shift to greener living.

7.6. MAKE ENGAGEMENT CONVENIENT AND SOCIAL

It was often difficult to motivate tenants to participate in group meetings. It worked well when we ensured that the time and space was convenient to the community. Providing basic needs like food and transport can improve participation. In communities with children, perhaps childcare should be considered. The greening stewards also suggested linking feedback meetings to a social event.

7.7. RESEARCH AND EVALUATION SHOULD BE INGRAINED IN GREENING PROGRAMS

Establishing a research design to capture baseline data which can be used to assess the outcomes of a greening intervention has multiple benefits. As this greening project demonstrates, it can be an engagement tool in itself, enabling feedback to be given to households and providing a platform for discussing utility use. It will help refine and plan future engagement activity. It provides evidence to help make the business case for greening programmes. It supports bids for green funding, as well as advocating for more supportive policy.

7.8. GREENING PROGRAMS SHOULD ADVANCE SOCIAL AND ENVIRONMENTAL JUSTICE

Global climate change is both an environmental and a social issue. It follows that for people to understand their own impact on the environment, it needs to be explained to them as a social issue. Embracing the concept of social and environmental justice is therefore critical if SHIs are to reinvigorate their fundamental purpose of providing housing to the most vulnerbale in society.

8. CONCLUSION

The evaluation of the community engagement process demonstrates that this approach can maximise behaviour change and engagement activities that can potentially bring about a shift to green living.

Throughout the sector there is a need for a growing emphasis on social relevance of the greening of social housing. Meeting environmental objectives places too much emphasis on the before and after effects of retrofitting and not enough on the social processes. The significant detrimental impacts of living in fuel poverty and the untapped resource of existing social capital are issues that can go unnoticed given the dominance of environmental objectives at the policy level and a lesser focus on social objectives. Close coordination with the community has provided an opportunity to observe the pre-implementation process of retrofitting, from meetings with the management team through to choice of technologies.

The experiences, highlighted above, have led to the suggestion that a more holistic approach to retrofitting, integrating the separate components, could help.