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ABC-RP Resident Engagement, Health & Wellbeing ORP

The Team:

The Active Building Centre Research Programme at Swansea University

Overarching aims:

Understanding how people and communities use and interact with the new technologies and energy systems embedded within low carbon homes.

Examine wellbeing outcomes of low carbon homes (financial, health & social wellbeing benefits).

Analysis of communication methods, material & policy.

Wider stakeholders were also interviewed to understand the challenges faced in context with resident feedback.

Methodology:

Multimodal survey methods. Including: evaluation through occupant surveys, interviews, diaries.

Welsh Government Housing Decarbonisation

- **Innovative Housing Programme (IHP) (2017- present)**
 - New Build, phase 1-4 155million
 - Supporting innovation in housing delivery in Wales. It is targeting innovations in three key elements of the housing supply process: construction techniques; delivery pathways and housing models.
- **Optimised Retrofit Programme (ORP) (2020- present)**
 - Phase 1- 20million, Phase 2 -50million
 - Whole house approach, aims to transform the quality and sustainability of social housing, dramatically decrease the cost of domestic heating services in Wales and boost the green economic recovery.

Resident research



Wellbeing Framework

Measures & exploration via online survey & qualitative interviews

- Self assessed & objective measures inc. mental health
- Health issues effected by built environment
- No. of GP & hospital visits
- Short Warwick-Edinburgh mental health scale

- Social networks, social participation, loneliness
- Inclusion, use, belonging, neighbourhood
- % accessed natural env at least once in the last year.
- % agreed that they belong to the neighbourhood.

- Household income
- Household expenditure on energy
- Essential spending
- Discretionary spending

Wellbeing Outcome

Health

Social

Financial

Potential Cost Benefits

Health
Improvements

Social Benefits

Household
savings

Retrofit

Nov 2020 - present

ORP Project	Retrofit measures	No. of houses complete*	Resident expression of interest/conversation	Resident completed research	No. Professional Interviews	Comms materials for analysis provided
LA 1	EWI, Roof, PV, Battery, IES	55	15	7 (13%)	1	Provided
LA 2	Hybrid, PV, battery, IES	24 out of 44	10	6 (25%)	1	Provided
LA 3	Hybrid, IES	39 out of 57	10	4 (10%)	1	Provided
LA 4	Various	7 (all voids)	n/a	n/a	1	Provided
Pathfinder Consortium (26 RSLs)	Various	Varies	5	0	8	10 out of 26 provided

*At the time of the interviews

Retrofit - Resident feedback

- Residents have commented that they did not have a choice to Opt out.

Some Residents have turned off their heat pumps once they saw how much energy they were using.

Residents have commented that they don't understand what an IES/sensor is for.

Residents have commented that they didn't realise the extent to what they had agreed to (measures & monitoring).

Sensors & systems in homes are bulky and positioning is poorly thought out, residents no longer feel a sense of pride in their homes.

Residents have said there is no one to talk to when something goes wrong.

Some residents have said it was a bad experience but is now worth it (warmer home).

Neighbours have a lot of influence e.g. some have waited to see what their neighbour has first.

Saving money on fuel bills was the main motivator for residents

Private house owners would have been prepared to pay for the retrofit.

Resident feedback - Process

- Greater clarity about the retrofit *process* was wanted by the majority.
- Time frames, details, when/who/anything tenants could or should do in preparation.
- Concerned with who would be their key contact in the event of questions or problems.
- Those that described a more positive experience tended to be more satisfied with the level of communication and information and responsiveness to any queries or issues:

“project manager from <retrofit organisation> and she seemed to be managing the project, and she was very good. She was always on the end of the phone whenever you needed her” Tenant B1015

Resident feedback - Process

- Residents and Professionals commented on disruption, and intrusiveness of Process
- Surprised at the size of some of the new technologies (particularly heat pumps), and the space required to site new batteries or pipework for instance, more disruption than anticipated.
- One tenant commented that they would have gone away for a couple of weeks.
- While another tenant interviewed mentioned that among neighbours:

“Everybody’s moaning about it they just all say the same thing really. The battery pack’s noisy. Some of them have lost space altogether under the stairs and stuff. Some of them have had issues about where it was going”. (Tenant B1012)

Resident feedback - Systems

It was apparent that there was some uncertainty as to how to operate the different technologies – with several commenting on the lack of written or verbal information provided to them.

“If that’s one complaint I had to have, would be communication was poor. ...] We’ve had to wing it between us, me and my wife really. We’re learning as we’re going along because we haven’t been given a handbook, or we haven’t been given a little chat by somebody or anything. We’ve sort of got on with it, you know.” (Tenant B1013)

Some residents were using the thermostat and not the app:

“RES2: We’ve got an app for the heating we can use. -Well yes but to be honest it’s easier just doing it the old way.[...] Me personally I just go upstairs and turn it up but there is an app on <participant’s> phone that she uses sometimes. [...] They programmed it for you didn’t they? (husband talking to wife).” (Tenant B1011)

Resident feedback – Energy Usage

Most respondents were aware of energy saving measures (not leaving tv on standby, turning off lights, always doing a full load of washing etc). Having access to ‘free’ energy may have the opposite effect with people using devices within the home, in a less frugal way.

“Well I’m not scared to use my washing machine now. I put that on, yes, because when I was using it before, I used to wait until I had a big load. But now, I’ll just put it on because I know I’m not using as much. [I can use the drier more, whereas if it’s been raining, I’ve had to put it up on the radiators around the house. But now, no, I’ll just shove it in the dryer. My solar panels are paying for it.” (Tenant B1012)

RSL/LA Professional Feedback

Information and communication both within the organisation, and between RSLs was perceived as lacking causing uncertainty within the process.

Communication between RSLs tended to focus only on the 'good news' stories, this contrasted with what was happening on the ground.

Lack of consistent messaging among contractors and tenants with different engineers giving conflicting messages, which has implications for tenants and how they use the technology.

The lack of accurate information or training also fed down into interactions with tenants, with potentially negative consequences in term of operation of the systems.

New Build

May 2020 - Feb2022

Site	Number of homes	Construction and technology fitted	Participants	Comms Materials analysed
Casesite 1	9 flats Completed 9/1/19	MMC timber-based frame Ground source heat pump Photovoltaic panels- community electricity	1	Y
Casesite 2	14 homes (1 block of flats and 5 pairs of semi detached homes) Completed 30/11/2020	Offsite MMC timber-based frame. Passivhaus approach. EAHP & MVHR - combined heating and vent system, exhaust air heat pump, with preheated air from transpired solar collectors (TSCs). TSC hot water tank storage. PV pre-heat system. PV & Battery Intel controls	5	Y
Casesite 3	8 homes Completed 15/6/21	Offsite modular MMC- Low embodied carbon construction. SMILE (Sustainable Construction for Integrated Low Energy). 2 house types. 1 Elec panels, 1 gas fired PV & battery Storage.	3	Y

New Build - Resident feedback

Tenants were satisfied with their new homes, and the lower energy bills and thermal comfort.

Perceived financial, and health benefits from the move to a new low carbon home.

Some of these benefits can be attributed to a better neighbourhood environment as well as improvements to physical and mental health resulting from low carbon technologies.

Energy bills were lower, residents purchasing new energy consuming technologies, now that their energy cost is lower, which may in future offset any savings.

Residents were environmentally aware.

Old habits - Windows open/thermostat up/not using the app.

Issues could be addressed by better communication using different modes of transmission, written, oral and video.

Engagement materials analysis - method

- Engagement materials (letters, emails, newsletters 14 RSLs & LA's)
- Communication (frequency, method, is there a plan or ADHOC)
- Reading age & ease
- How the data is presented – is it clearly laid out- written/diagrams.
- Does it explain the process of retrofit
- Opt in /opt out
- Content analysis

Engagement materials analysis - Results

Majority of the 14 analysed were at graduate reading level.

Materials were positioned around climate change targets and framed as 'this is something that Government says we must do', not saving money.

Not all had a clear opt in/opt out message.

Only two RSL had material written in an accessible way at an appropriate reading level, with a reading ease score of 70.

Results were reflected in the narratives of the professionals.

One social landlord said that they were only giving tenants aged 60+ years '*the big picture*'.

Engagement materials analysis - Results

Engagement approaches are varied

Different approaches & messages across LAs and RSLs.

Leading to some confusion & residents not wanting to participate.

Could lead to problems down the line...

- Residents not realising what they signed up for.
- Asking to have it removed or not using the systems as intended.
- Even more resource needed from RSLs for ongoing issues.

Lesson/Challenge	Recommendation	Next Steps
<p>Current material is aimed at graduate level readers & residents are not fully aware of what they are agreeing to.</p>	<p>Tenant Engagement materials need to be written in an accessible way, and readable for a wide range of reading levels. Residents prefer videos and face to face.</p>	<p>Recruiting tenants' groups to help draft the material.</p>
<p>Limited consideration from the tenants' perspectives and their desires and expected outcomes of retrofit.</p>	<p>Involve tenants in the process from the start, engagement days, Q&A's, show technology.</p>	<p>Sero 'tech bus' tour.</p>
<p>Anxiety and uncertainty of residents contending with new equipment with new user interface requirements, leads to residents not using systems correctly.</p>	<p>Behavioural interventions – e.g. tailored information and support Additional training and support must be ongoing to allow tenants to adjust their own heating as and when they need. Supporting digital inclusion for all age groups – reducing potential for widening inequalities.</p>	<p>Improve the relationship between user and technological system -working with tenants to identify their needs.</p>
<p>Tenants and professionals were surprised at the intrusion, disruption and size of systems.</p>	<p>Walking tenants through the process, to discuss where technologies will be fitted, is important and should be good practice. If this is not practicable - then a demonstrator house or video could be used to show tenants what will done to their home.</p>	<p>Show homes/video content.</p>

Lesson/Challenge	Recommendation	Next Steps
Lessons and best practice are often lost.	Forums to share good and bad stories, materials and processes.	ORP 2 Forums, CoP's, recommendations are being picked up.
Residents seeing new energy from PV as 'free' and being less frugal. Residents values were based around saving money.	Carbon literacy training for residents to ensure greater education.	
Values in engagement materials were for WG or UK Gov.	Tenant engagement materials need to reflect tenants' priorities and values. Needs assessment approach.	Positioning retrofit as energy saving, cost efficient, warmer home.
Lack of knowledge & training at organisational level, not just team on the ground.	Extend training to other members of staff at organisation, e.g. call centre, complaints, comms.	Training should be ongoing, refresher.
No one to talk to about complaints/concerns.	Ensure there is a contact or team responsible for responding to tenant complaints, queries and concerns. Residents should be provided opportunities to be listened to and supported prior, during, and after the installation.	Ensure that the issues are picked up and lessons are learnt and incorporated into next stages of the retrofit process and this reassurance is passed onto tenants. Acknowledging that issues raised are important to tenants and require a response is critical to greater acceptance of the process.
Monitoring and Data Protection ambiguity.	It should be made clear to tenants and RSL staff what is being monitored, by whom, and where that data goes.	The process of data monitoring needs to be clear and transparent.

Good Practice Engagement Examples

Be honest, go on the journey together.
Updates!

Don't be too technical.

Look at other RSL messaging material for appropriate reading age
e.g. Cadwyn and Newydd Housing

Resident testimonials (a balanced view), videos, show homes.

Citizens assembly –
Bottom up

Training – Carbon Literacy

Clear messaging & guidance across Wales from WG

Bigger Picture followed by more detail

Have a complaints process

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