



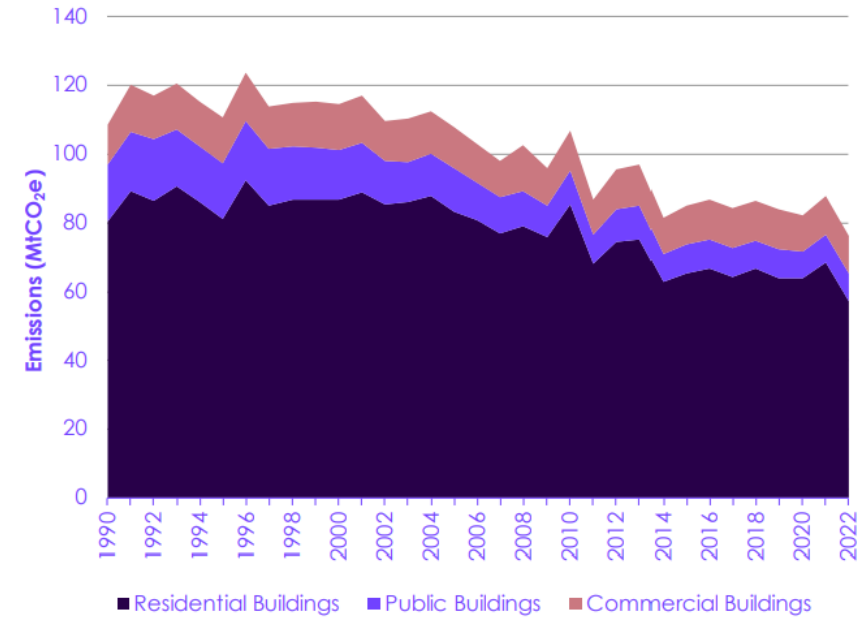
UNDER ONE ROOF: the social relations of energy retrofit in multi- owned properties

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The Problem

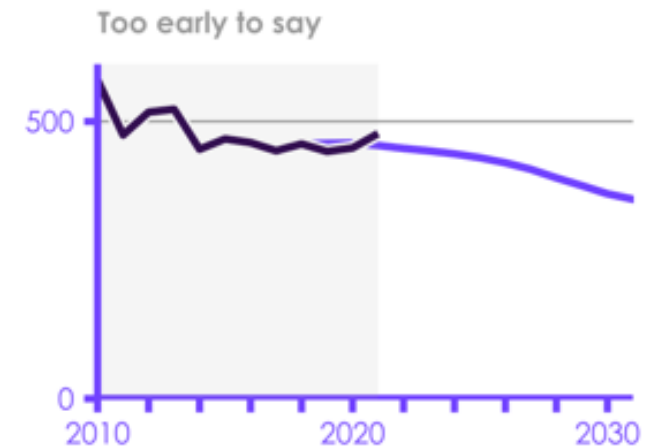
- Residential buildings account for 13% of the UK’s carbon emissions in 2022.
- Between 2014 and 2020, buildings emissions have flat-lined.
- We saw a (temp adjusted) downturn in 2022 due to record energy prices but as bills fall once again, expectation is, we will see some rebound.
- “Overall energy demand will drift further off track without faster deployment of energy efficiency measures in homes.” (CCC 2023)

Figure 5.3 Buildings emissions (1990-2022)



Source: DESNZ (2023) Provisional UK greenhouse gas emissions national statistics 2022; BEIS (2023) Final UK greenhouse gas emissions national statistics: 1990 to 2021.

b) Final energy demand in residential buildings (TWh)



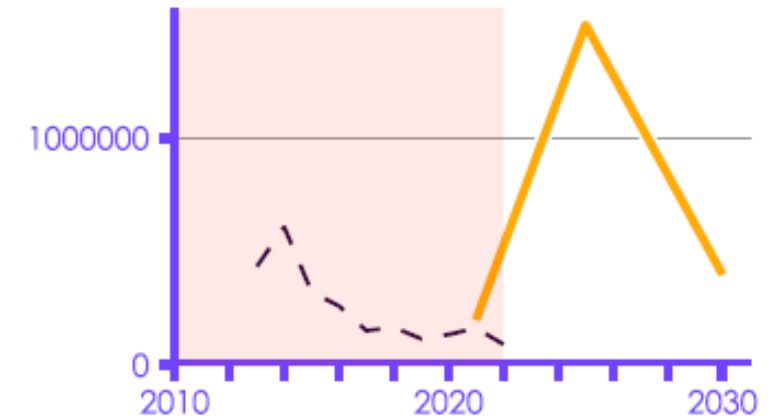
Source: CCC

The Cause

- **Fabric first:** 2022 saw installed policy-funded measures fall by 56% year-on-year, whilst energy bills doubled.
 - 2025: Annual deployment needs to increase x16 (UK Gov Carbon Budget Delivery Plan).
- **Heat pumps:** 69,000 new domestic heat pumps installed in 2022. (40,000 retrofits).
 - **2022:** Half CCC's Balanced pathway projection for 130,000 installations.
 - **2028:** Five years to reach annual roll-out of 827,500 (CCC pathway); a x12 increase.
- UK's energy efficiency policy approach is not working
- It assumes that households are:
 - **Economically rational actors** who are seeking to improve their welfare would invest in measures that result in net savings over the long term.
 - **Singular, autonomous decision makers.**

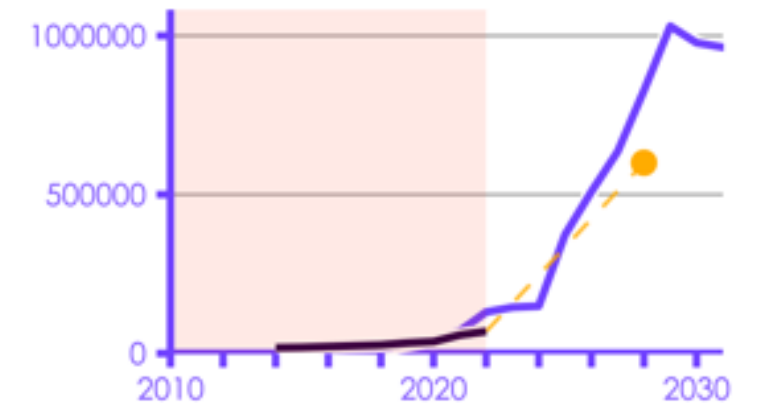
g) Households receiving energy efficiency measures

Significantly off track



h) Heat pump installations (residential)

Significantly off track



— Historical data — Government ambition
 — CCC recommended path -●- Linear interpolation

The Project

‘Whole Person - Whole Place’ energy solutions for net-zero neighbourhoods

The project

- Policy making logic ignores households’ social networks & how social relationships shape retrofit decisions.
- Unpack the relationships householders share with their local community and how these shape their retrofit decision making.
- **UK Energy Research Centre (UKERC)** funded 2020-2023.
- Consortia: Leeds (lead), Strathclyde and Sussex, plus 13 partners.
- Three case studies: Otley, Brighton and Glasgow.



UKERC
UK Energy Research Centre



Brighton



Leeds



Glasgow



SPOTLIGHT: Multi-owned properties

- Multi-owned buildings (MoPs) - flats, apartments, tenements etc. – are buildings subdivided into separately owned flats.
- These account for:
 - 21% of households in England and Wales ([Census 2021](#))
 - 36% of Scotland households live in flats ([Census 2011](#))
- Existing research does not adequately consider how the social relations between neighbours affect retrofit decision-making.
- This is especially true in MoPs, which are hotspots of social relational networks.

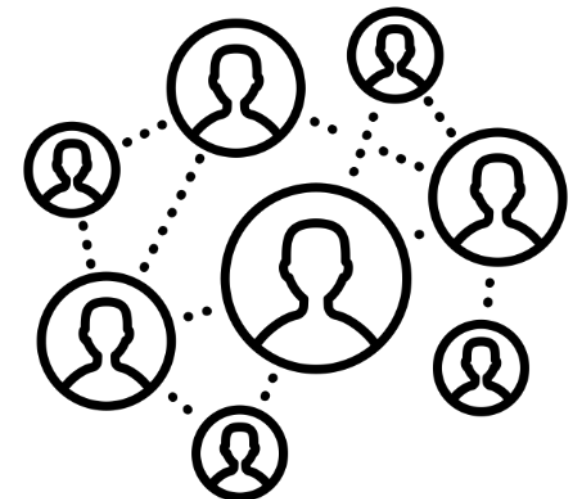
Share of MoPs in UK



England and Wales



Scotland



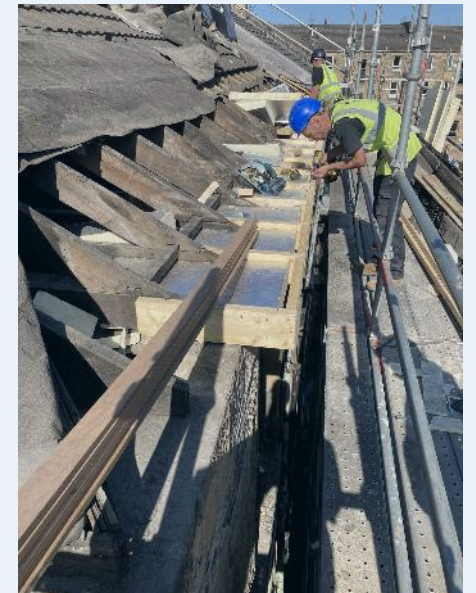
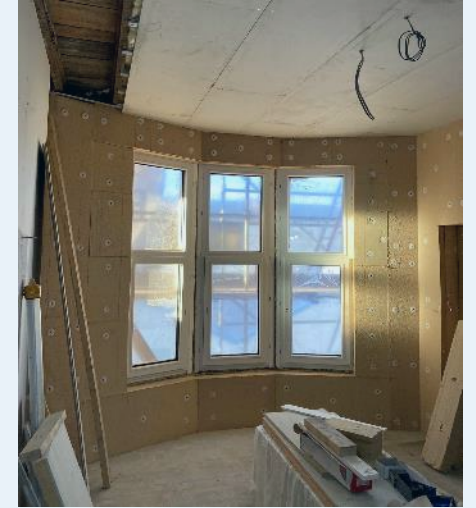
CASE STUDY: Scotland's tenements

“Two or more related flats at least two of which: (a) are, or are designed to be in separate ownership; (b) are divided from each other horizontally.”

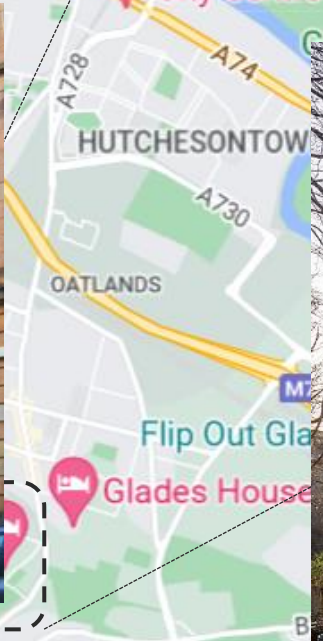
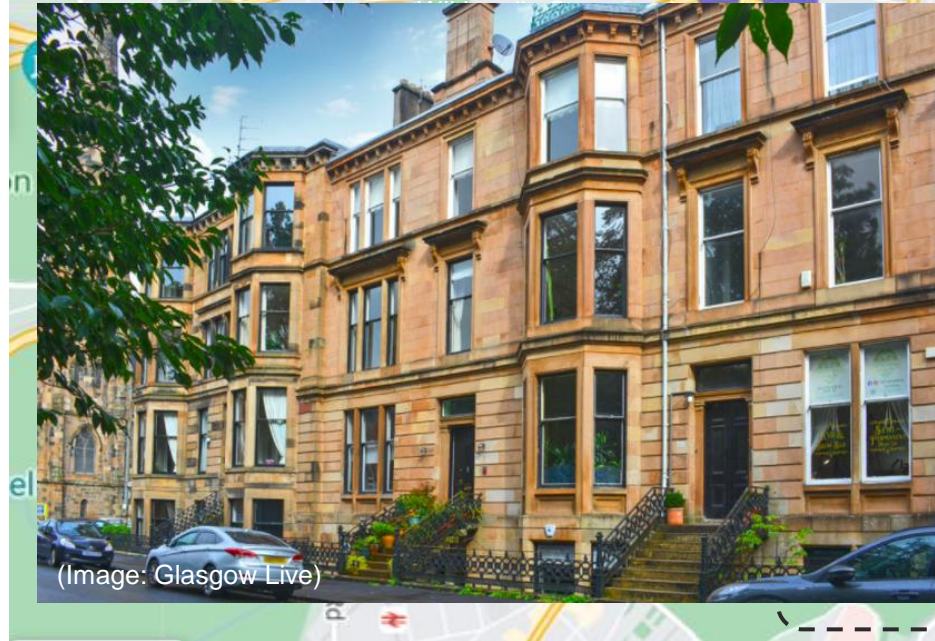
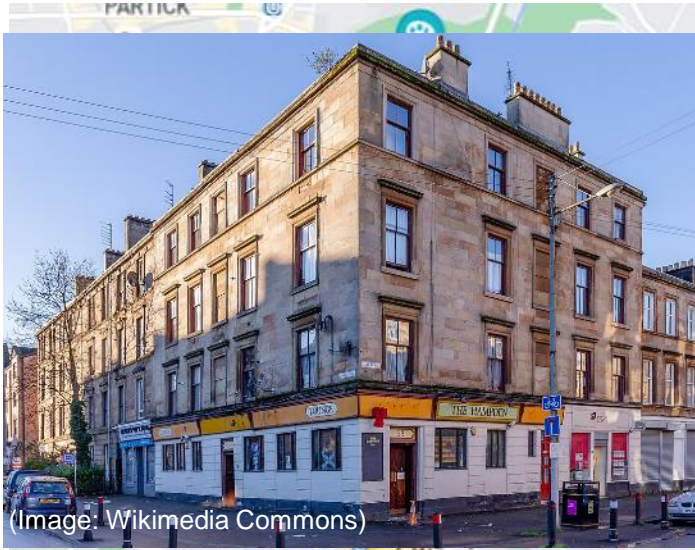
[Tenements Scotland Act 2004](#)

In 2021:

- 31% of tenements are EPC band C or below ([Housing Survey](#))
- 25% in fuel poverty versus 20% average (pre-energy crisis!) (ibid)
- 35% were built pre-1919 ([Housing Survey](#))
- 71% of pre-1919 buildings in a state of ‘critical disrepair’.
- Conversation rules mean many very expensive to retrofit to EnerPHit standard
 - Niddrie road pilot in Glasgow saw £44,000 for the basic refurbishment and a further £32,000 for retrofit ([Gibb](#)).



[Niddrie Road retrofit demonstration project](#)



CASE STUDY: Glasgow, Crosshill

- **Rationale:** Why Crosshill, Glasgow?
 - 73,000 tenements in Glasgow; more than a fifth of the city's stock ([Gibb](#))
 - Very high share of: a) pre-1919 tenements; b) fuel poor homes; c) poor energy efficiency and d) owner-occupiers and private rented.
- **Question:** How do the kinds of relationships the 'able to pay' have with their: a) friends and family; b) neighbours; and c) locally relevant organisations help or hinder retrofit?
- **Data:**
 - 15 in-depth interviews with 'able to pay' homeowners; 11 living in tenements.
 - 15 in-depth interviews with local and national organisations (e.g. local government, local community groups, Scottish national bodies).
- **Sample:** owner-occupiers who self-identified as having undertaken significant renovations within the last 5 years; partly or wholly self-funded.

	Crosshill	Glasgow	Scotland
Mean Gross Household Income (p/w)	<u>£807</u>	£635	£699
Tenements (% of total dwellings)	<u>65</u>	61	28
Households per hectare	<u>24.5</u>	15.8	0.3
Pre-1919 dwellings	<u>89%</u>	28%	20%
Fuel Poverty	<u>35%</u>	25%	25%
Tenure			
Owner-occupied	<u>61%</u>	47%	64%
Social renting	<u>4%</u>	36%	24%
Private rented	<u>32%</u>	16%	11%
Energy Efficiency (mean SAP rating)	<u>59</u>	68	66

RESULTS

Neighbours

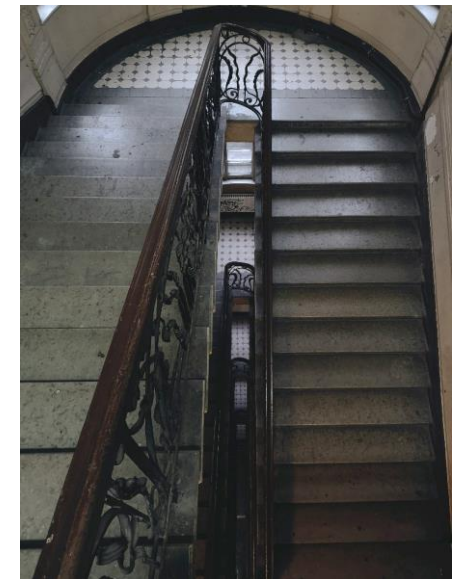
- Communal areas a fundamental part of tenements – e.g. stairways, shared gardens - providing a common space where neighbourly bonds can be forged.
- They offer a rich cluster of relational ties, with potential for peer-support, knowledge sharing, group leadership etc.
- BUT because of the proximity of neighbours, shared-ownership etc. MoP households must put in more relational work to deliver retrofit vs those not sharing a roof:
 - Need absolute majority for improvement works.
 - Negotiating payment for communal works.
- Fear of aggravating tensions, especially noise, disruption and/or damage to property, a barrier to retrofit.
- Differential wealth makes communal work challenging.

“I’m fine financially and I can put some money towards stopping my house from falling into a hole.

[For] some of the other people in the building, it was a much more daunting prospect, getting that sort of money together” HH3



Source: Wikipedia [gillfoto](#)



Source: [Ekaterina Astakhova](#)

Property Managers (aka factors)

- Property Manager (PMs) offer a “one-stop-shop” for repairs and collecting payments, as maintenance is out-sourced by residents.
- Also PMs can commence work, within their maintenance remit, with a minimum of relational work for owners →
- BUT presence of a PM can reduce the necessity for frequent contact between neighbours; removing a platform for social relational work necessary to initiate retrofit.
- This can precipitate a **cycle of decline and repair** rather than proactive improvement of the building.
- PMs often mistrusted due to overpricing, lack of transparency and underperformance →
- They face no regulatory pressure to deliver improvement works (e.g. retrofit), meaning resident activism is still essential to deliver retrofit.

“The roof got done a few years ago as well but...there was no consultation to that, nobody instigated that within the block. [The factor] came, identified an issue and went up and fixed it” (HH10)

“Pretty much all of my friends who live here have had issues with their factors” (HH6)

Residents associations

- Governance of communal areas might be:
 - a) Wholly informal, e.g. Being managed by informal relations between owners or
 - b) Organized by an owners' association.
- Cases of informal governance having completely broken down, e.g. disengaging, warring factions (vetoing).
- **Absence of formalised rules** for tenement governance means householders must start largely from “scratch”, to establish the rules of the relations with fellow building dwellers and their property managers.
- We identified very few owners' associations →
- Leadership undertaken by those who have the time and resources to undertake it. Where these are absent, resident-driven retrofit is highly unlikely.

Owners' association example

The association holds regular meetings to discuss:

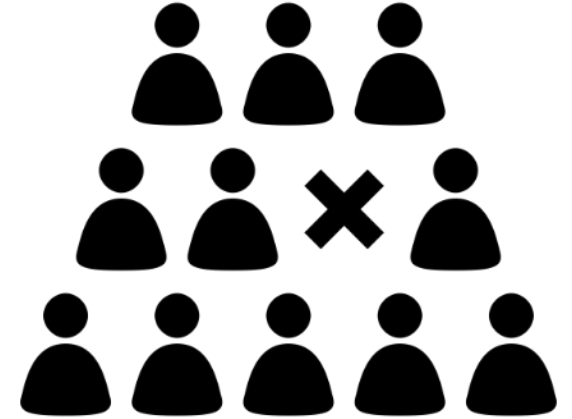
- a) maintenance and improvement of the communal areas of the building and
- b) sourcing monies from owners for renovations.

Catalysed by discovery of a dead woman (overdose) in the communal garden. Since then, everybody agreed to start paying' into a maintenance fund managed by the owners association.

Managed by one of the householder, who is unpaid.

Landlords

- Tenements with majority private-rented do not (directly) have the critical mass to deliver retrofit. **Retrofit relies on discretion of landlords.**
- Relational work for retrofit made more difficult yet where **landlords are absent, disinterested and/or resistant.**
- Underlying this we find ‘split incentives’ for landlords, where landlord investment in energy efficiency cuts tenant costs (only).



Created by Magicon
from Noun Project

“Dragging his feet about putting in money” (HH3)

“[The landlord is] not accessible at all ... in our five years of being here, we’ve seen one of them once” (I14)

Councils

- Conservation rules presented barrier to retrofit, e.g. double glazing.
 - Highly bureaucratic: “two months minimum” for replies.
 - Conservation-standard retrofit more expensive (e.g. timber sash-and-case)
- **Carrot and stick:** Council already uses *incentives* (grants) and *compulsory powers* (mandatory eviction) to encourage/force emergency maintenance. Can act as a catalyst for action →
- Council a trusted partner that takes responsibility for relational work (e.g. contacting all owners).
- BUT lack of integration between building conservation/maintenance and energy efficiency
 - e.g. when the structural work were completed ‘they pulled all of that insulation out’ (HH3), which was government funded!
- None of our households were familiar with Home Energy Scotland; the agency tasked with delivering retrofit advice and financial support across Scotland.

The last Gorbals tenement

Source: [Thomas Nugent](#)



“Now that the council are saying they might go to compulsory repairs, everyone’s like, let’s quickly do something ... ‘cause it’s probably going to end up costing us a lot more money [if we do it independently of council support]” (HH8)

Policy recommendations

1. Mandatory incorporated owners' associations

- Represent households regarding how the building will be managed and maintained
- Needs corresponding support re capacity (e.g. central support) and capability (e.g. skills training).

2. Expand tenant rights

- Allow tenants (e.g. rented for >2 years) to vote on building governance to tackle absentee landlords to help: a) tenants live in better conditions; b) apply pressure on landlords to act on tenants needs; and 3) remove blocks on building governance.

3. Regulation of Property Managers

- Mass representation: 357 Scottish property factors versus 36% of households.
- Mandate and support them to act on retrofit and to deliver on energy efficiency standards.
- Establish as social enterprises, charities or cooperatives to improve accountability, transparency and trust.

4. Local council as trusted coordinator of area-based retrofit

- Adequately resource councils to exercise incentives (*carrots*) and regulations (*sticks*)
- Align repair/maintenance *and* retrofit schemes: “two birds – one stone”
- “Level the playing field” of affordability within tenements, to release critical mass.
- Provide a list of trusted traders
- Relax conservation rules and/or subsidise measures in conservation areas.
- Raise awareness of advice and financial support available, e.g. Home Energy Scotland.

Contact



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Next Steps

- Follow-on 6-month project with Under One Roof - Scotland's only charity dedicated to improve the lives of tenement flat owners by promoting the upkeep of their buildings. We are co-developing a path forward to overcome relational barriers to energy efficiency in multi-owned properties
- Whole Person-Whole Place consortium have submitted a bid to UKRI/ESRC for £2m RELATE project to pilot social relational approaches to retrofit across the UK.



Funding opportunity

Place-based approaches to sustainable living: outline stage