



CHANGeworks

Delivering positive low carbon living

Multi-occupancy retrofit case study: maximising opportunities for delivering Energy Efficient Scotland

ACE Retrofitting Conference 16 May 2019

Changeworks is...

Scotland's leading environmental charity delivering solutions for low carbon living



Changeworks managed retrofit (1)



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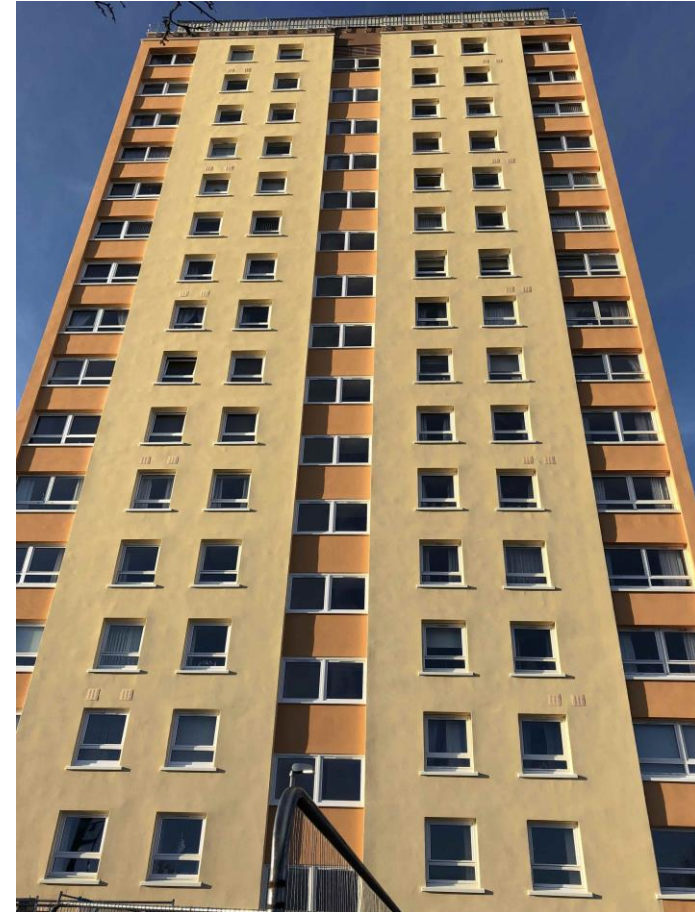
Changeworks managed retrofit (2)



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Changeworks managed retrofit (3)



Urgency!

‘realising 1.5 consistent pathways would require rapid and systematic changes on unprecedented scales’

1.8 million homes in Scotland failing to meet energy efficiency target!

66,000 properties/year over 20 years
(Energy Efficient Scotland) to achieve
EPC C 2040



Raeburn Heights



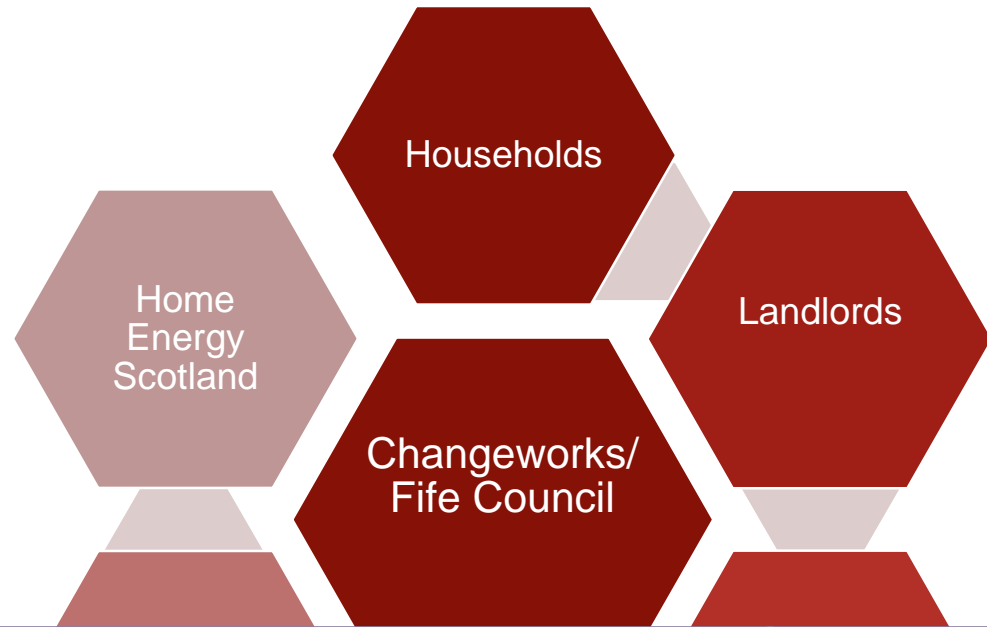
- 50 year old multi-storey flat
- Glenrothes, Fife Council area
- 61 no fines properties, External Wall Insulation opportunity
- Council Tax Band A
- 59 properties private tenure (97%)
- Initial engagement 2016 with bid early 2017

Timeline (Two year project)



	2017				2018				2019	
	Qu1	Qu2	Qu3	Qu4	Qu1	Qu2	Qu3	Qu4	Qu1	Qu2
Early engagement										
Funding bid submitted										
Tender publication onPCS										
Tender return										
Tender award where contractor is appointed										
Pre start meeting										
Commencing date and install period										
Building Warrant approved mid-August										
Monthly Meetings										
Completion Date Mid-End May										
Closure Meeting May										

Stakeholder roles and responsibilities



A project management team acting independently of the contractors, ensuring quality and effectively overseeing communications with residents engenders trust and provides continuity throughout the project lifetime

Resident structure and engagement

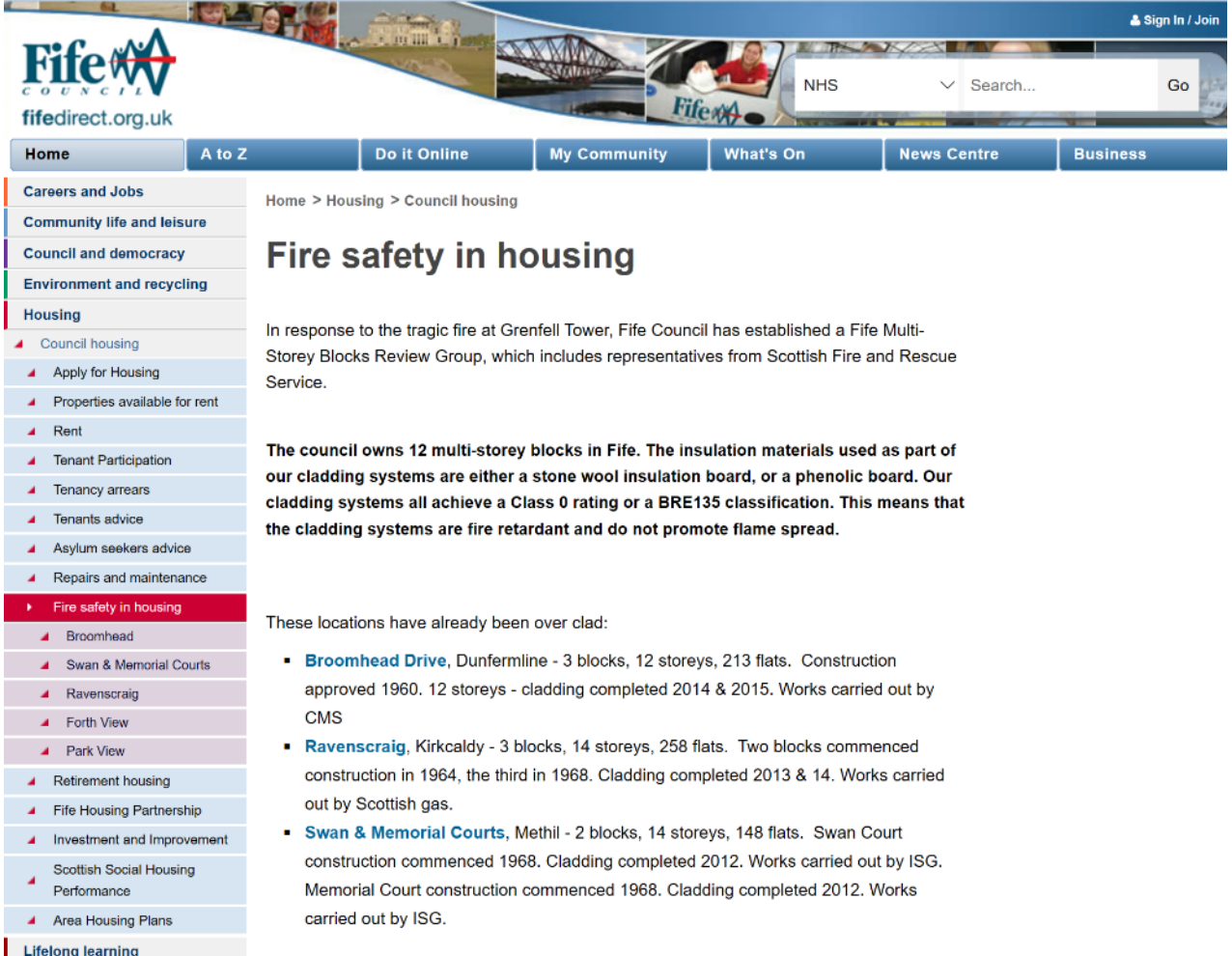


- Residents group: Raeburn Heights Owners Association
- Proactive in contacting the Council and Home Energy Scotland
- Admin Assistant played a critical role in engaging with landlords and owner occupiers (sign up and monitoring and evaluation)
- Sign up numbers through HES 91.8% (56 properties)

Whole property retrofit requires engagement with all residents. Current requirements for residents associations are not in place and factors are not prevalent. The Tenements Act can be deployed but is not the ideal solution. Issues of engagement and obligation need to be addressed in future legislation

Fire safety

- Grenfell Tower tragedy: significant impact on some projects and perceptions of external cladding
- Proactive engagement with residents with Fire Services attending
- Clear statement from Fife Council
- Very few enquiries received from residents regarding fire safety



The screenshot shows the Fife Council website with the following structure:

- Header:** Fife COUNCIL logo, URL fifedirect.org.uk, and a search bar with 'NHS' selected.
- Navigation:** Home, A to Z, Do it Online, My Community, What's On, News Centre, Business.
- Left Menu:** Careers and Jobs, Community life and leisure, Council and democracy, Environment and recycling, Housing (expanded to show: Council housing, Apply for Housing, Properties available for rent, Rent, Tenant Participation, Tenancy arrears, Tenants advice, Asylum seekers advice, Repairs and maintenance, Fire safety in housing, Broomhead, Swan & Memorial Courts, Ravenscraig, Forth View, Park View, Retirement housing, Fife Housing Partnership, Investment and Improvement, Scottish Social Housing Performance, Area Housing Plans), Lifelong learning.
- Breadcrumbs:** Home > Housing > Council housing
- Section Title:** Fire safety in housing
- Text:** In response to the tragic fire at Grenfell Tower, Fife Council has established a Fife Multi-Storey Blocks Review Group, which includes representatives from Scottish Fire and Rescue Service.
- Statement:** The council owns 12 multi-storey blocks in Fife. The insulation materials used as part of our cladding systems are either a stone wool insulation board, or a phenolic board. Our cladding systems all achieve a Class 0 rating or a BRE135 classification. This means that the cladding systems are fire retardant and do not promote flame spread.
- Text:** These locations have already been over clad:
- List of Locations:**
 - **Broomhead Drive**, Dunfermline - 3 blocks, 12 storeys, 213 flats. Construction approved 1960. 12 storeys - cladding completed 2014 & 2015. Works carried out by CMS
 - **Ravenscraig**, Kirkcaldy - 3 blocks, 14 storeys, 258 flats. Two blocks commenced construction in 1964, the third in 1968. Cladding completed 2013 & 14. Works carried out by Scottish gas.
 - **Swan & Memorial Courts**, Methil - 2 blocks, 14 storeys, 148 flats. Swan Court construction commenced 1968. Cladding completed 2012. Works carried out by ISG. Memorial Court construction commenced 1968. Cladding completed 2012. Works carried out by ISG.

Building upgrades

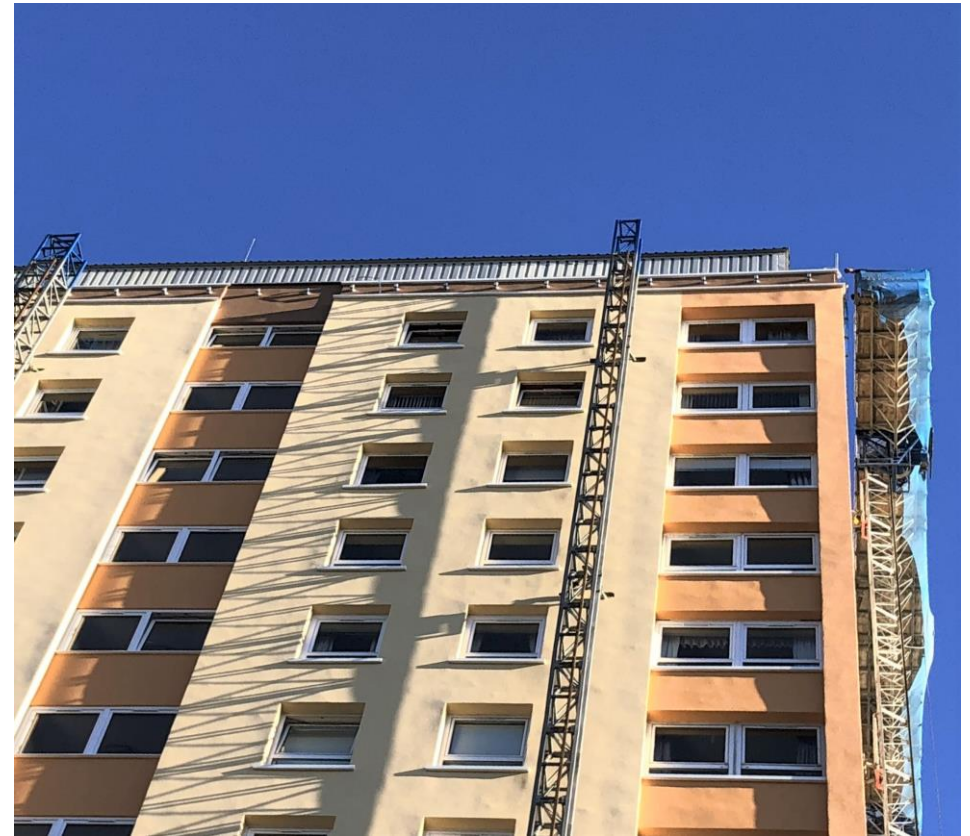
- Energy Efficiency Upgrade
 - Insulation to all external elevations
 - Roof not insulated due to presence of water tanks
 - Insulation in tank room, drying room and porch
 - District Heating potential longer term opportunity

A whole building approach to retrofit can be challenging given constraints on funding and timing. However it is preferable to set out a long term masterplan for combined maintenance and retrofit to accrue maximum benefits and take advantage of funding when available

Building upgrades



Building upgrades



Funding

- HEEPS (private properties) £383,500
- Council funding (for social properties) £14,000
- Total £397,500
- Reduced by ECO 2 £20,500

Pulling together the funding package and ensuring compliance is complex and a key function for a managing agent/team. Customer contributions of this scale are not compatible with roll out and require us to reassess our messaging on retrofit and the benefits it brings

Procurement

- **Objective:** attract a best value price in compliance with statutory and regularity orders.
- **Procurement Regulations:** “Works” contract, EU procurement Regulations did not apply
- **Selection of Contractor:** The use of national framework: Scotland Excel Framework, 09-13 Energy Efficiency Contractors, Sublot 2.1 External Wall Insulation (8 tenderers)
- **Form of Contract:** “NEC3 Engineering and Construction Short Contract”, design and build.
- **Tender inclusions:** Community Benefits, Objectives and KPIs
- **Award criteria:** 60 price/40 quality (quality, part of the Framework short listing process)
- **Pricing structure:** Contractors price based on a Bill of Approximate Quantities.
- **Result:** 3 returns - EON had the highest combined Price and Quality marks and awarded the contract.

Quality assurance

Contract	Raeburn Heights, Glenrothes
System Design	[REDACTED]
Inspector	[REDACTED]
Contractor	[REDACTED]
Report No	13
Site Visit Date	W/E 02/11/2018
Programme of works	Mast climber works programmed for completion end of December. . Top coat application ongoing. 1 x day lost to weather conditions this week.
Site Tidiness	Cleaning of windows and cills ongoing, any visible damage to cills will be recorded for repair.
Comments	No change on M6 as top coat application on other elevations has been prioritised this week due to favourable weather conditions.

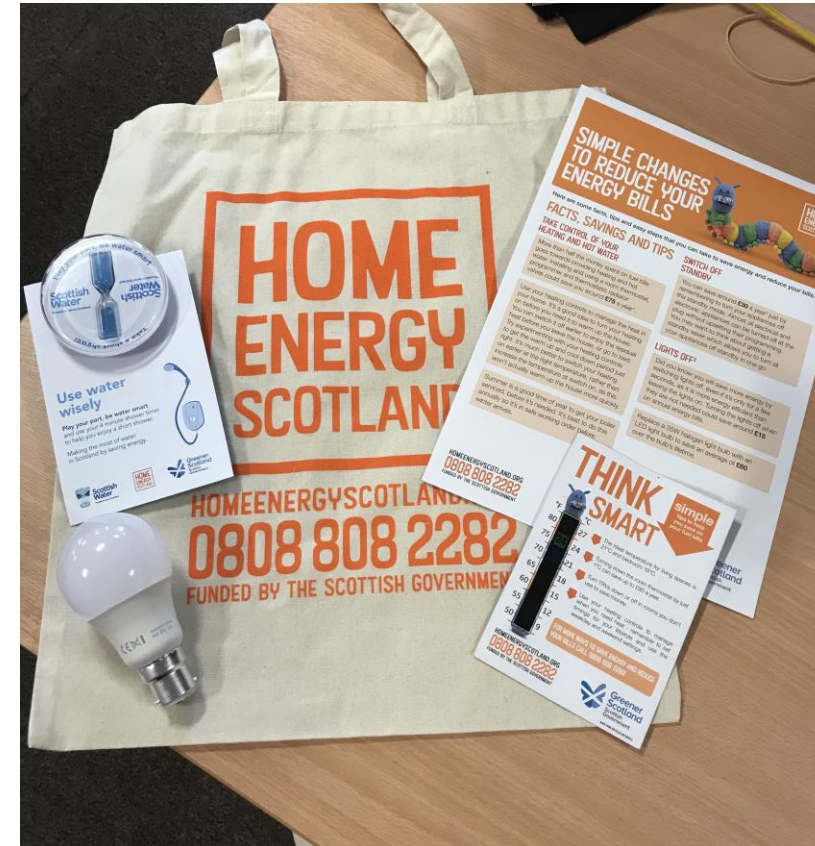
- Changeworks conducted quality assurance
- Weekly on site inspections at every stage of install to ensure problems were identified and rectified at an early stage
- Technical challenges are brought to the

Quality of install is an essential component of any project, ensuring safety and compliance, reducing install related contributions to the performance gap and engendering trust amongst all parties and the public in particular. The later is critical if we are to achieve roll out at scale. The sector has been affected through poor quality installations previously.

Quality Assurance Inspector



Ongoing Communications



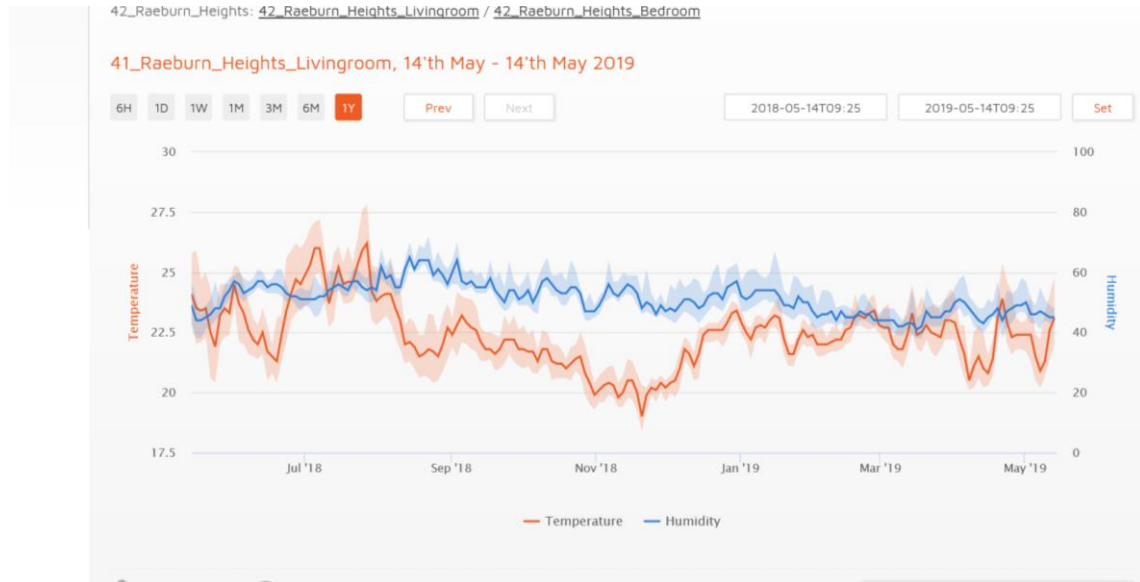
Monitoring and Evaluation

- Monitoring, requested of all participants
 - Minimum of 1 pre/ point of survey/ post install meter reading
 - 3 surveys (pre, during and post)
- Enhanced or In depth Monitoring in 7



Installing the measures is not the goal, its realising the benefit in terms of carbon reduction, energy demand reduction and bills, improved aesthetics, affordable warmth, future proofing and preventative maintenance of householders main asset. M&E should be a requirement for all retrofit projects (esp if publicly funded) with learnings disseminated and evidence based decisions made

Monitors



Community Benefits Event



Movie/Drone



00:00:00:00

Key considerations

- Retrofits should take a long term view and plan for demand reduction covering measures install to the whole building envelope, low carbon heat (inc District Heating) and renewables. This should factor in the maintenance programme
- Multi-occupancy retrofits will be facilitated by policy shifts including whole building EPCs and moves to ensure active residents association and/or factoring
- Trust is critical, the sector needs good news stories. Independent managing agents delivering real quality control with open and frequent dialogue amongst stakeholders
- Messaging around demand reduction has to be smarter than discussions about payback and promote the multiple benefits
- The scale of the performance gap has to be understood. Monitoring and evaluation should be built in to programme delivery

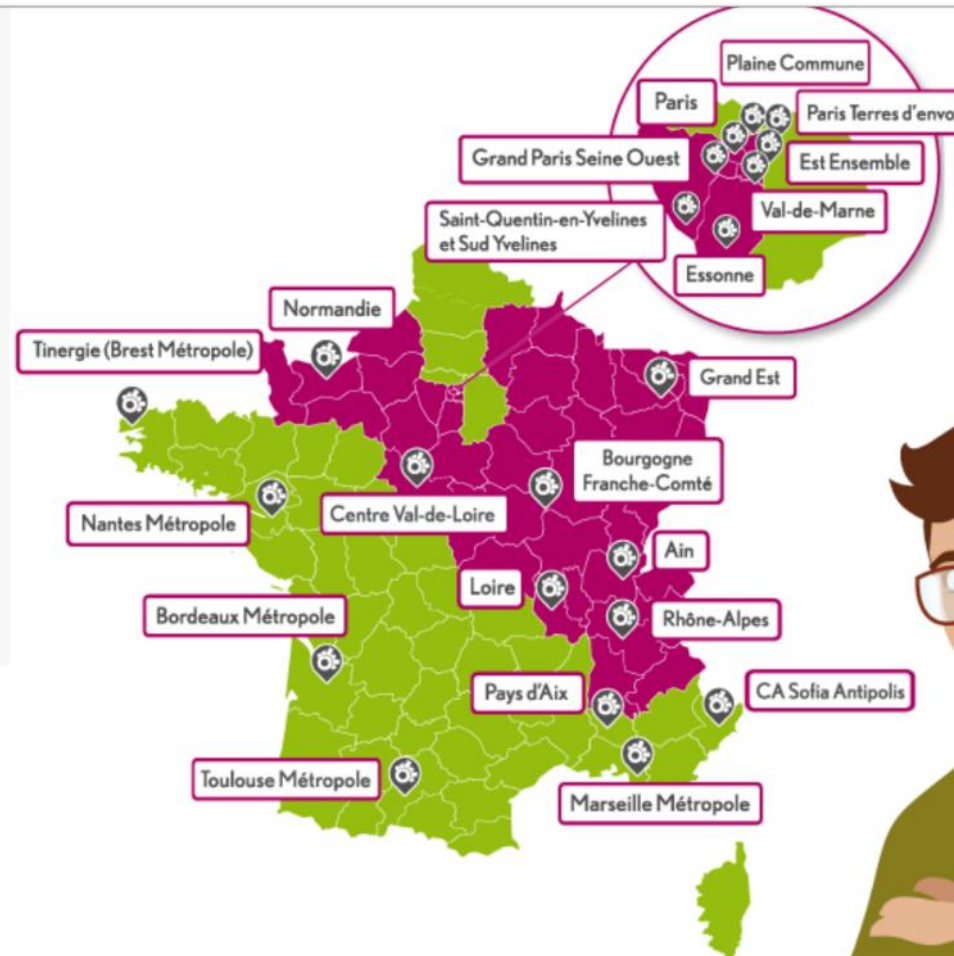
One stop shop



Supply and Demand: A portal

POURQUOI S'ENREGISTRER SUR COACHCOPRO® ?

-  Réduire la facture énergétique de votre copropriété
-  Connaître et profiter des subventions et aides auxquelles vous avez le droit
-  Bénéficier de retours d'expérience réussies de rénovations énergétiques
-  Ne plus avoir trop froid en hiver et trop chaud en été
-  Profiter d'un outil innovant qui vous accompagne tout au long de votre projet
-  Syndic, devenir acteur et valoriser le patrimoine des copropriétés





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Key learnings

- **Advice for any other future projects that wish to upgrade a building with multiple owners**
- Find means to legally avoid it. FC has [Tenement Management Scheme](#)
- Regular communications from the contractor regarding completion date and regular updates. Monday coffee mornings were very useful.
- Regular communications with the factor where key for sign ups and monitoring and evaluation feedback.
- Somebody that leads the project to organize events and coordinate , materials

Big achievements

- [Community Benefits](#) events from the contractor.
- [Eon case studies](#)
- Exceptional monitoring and evaluation response rate from householders .
- Householders/Landlords Payments on time
- Time-lapse video for didactic purposes
- Greenfell tower accident cause a few questions regarding the fire safety. Fife Council published a Council statement and an information session from the contractor to householders .