



- Lister Housing Co-operative - a small housing association in central Edinburgh with 184 flats.
- Tenant-run: all Committee members are tenants.
- Not developing new flats so more time available perhaps for these initiatives.

Changeworks/Lister Renewable Heritage Project

1. Solar panels good because:
 - a. Aim for a good number of flats in project (often only get 'extra' grant funding once).
 - b. We own all properties.
 - c. Good rapport with tenants.
 - d. Fuel price rises - crucial issue.

1. Fit to Listed buildings in Conservation area/
World Heritage Site.

2. Do lots of flats - maximise roof capacity, not just top floor.

3. Meet all planning/Listed consent/building warrant requirements, i.e. everyone can learn from this / encourage officials at CEC.

Special features of RH project



Social housing tenants - passive recipients OR green champions?

1. Lister Committee & Staff plan the project.
2. Tenants: varying degrees keen-ness and wary of having building work in their flat.
3. Key decision not to increase rent as it could cause early withdrawal by tenants.
4. The size/shape of project could not be confirmed until the last minute, when the grant process gave the thumbs up.

Funding - always a key issue



2 main routes:

1. Low Carbon Building Programme Phase 2 (UK Govt) - 50% (was 30%) but does not pay for VAT or fees.
2. SCHRI (Scottish Community & Householder Renewables Initiative) - now CARES (Communities & Renewable Energy Scheme), managed by CES - 30% but covers VAT, fees and more.



CARES - Communities and Renewable Energy Scheme

Lister wanted more grant to make project work - SPEPT / Wider Role to boost the LCBP-P2 or SCHRI grant

A cunning plan - the feasibility study



As permissions were crucial to: a. whether project could work; b. working with CEC officials; we got funding for a Feasibility Study from SCHRI and Edinburgh World Heritage.

This paid for Architect/Str Eng for the following:

1. Listed Building Consent
2. Planning permission
3. Building warrant
4. A start on the Specification

Specifications / Contracts

1. Virtually no RETRO projects to existing housing, especially not to tenements/multi-floor installations.
2. Getting independent advice as many experts are the installers; and variety of systems / panels / approaches.
3. EST guidelines/advice/specifications excellent. Microgeneration Certification Scheme very good too.
4. Blend these with: Architect, Structural Engineer, CDM Co-ordinator (Health & Safety planning).
5. Strong lead from client (Lister = me)



Initially 67 flats chosen using criteria:

1. Good roof space availability.
2. Mix of pitches and flat roofs.
3. Mix of aspect - mostly South facing but some West facing.
4. North & South sides of Lauriston Pl



Contract changes

BUTFlat roof tenement meant extra items:

- a. Roof strengthening for A-frames
- b. Safety harness lines/anchors
- c. Scaffolding during work - costly

And we also wanted:

- d. Roof covering renewal
- e. Skylight (cupola) renewal

Revised contract

1. Pitched roof only - easier / no VAT as we had Listed Building Consent (and a letter from HMRC). No scaffolding.
2. SPEPT, LCBP-P2, EWH funding
3. LCBP-P2 meant we had to tender to the 3 Framework Suppliers for Solar in Scotland. High quality pre-qualification scheme in place but limited no. of firms
4. Submission to LCBP-P2 is done once tenders been received...so prices known, but they Benchmark based on CO₂ saving for given fuel. Our cost submission was higher than benchmark!

Contract Item	Quantity	Unit Price	Subtotal	Percentage	Percentage
	(m ²)	(£/m ²)	(£)	(%)	(%)
Roofing	1000	1000	1000000	100%	100%
Roofing	1000	1000	1000000	100%	100%
Roofing	1000	1000	1000000	100%	100%
Roofing	1000	1000	1000000	100%	100%
Roofing	1000	1000	1000000	100%	100%

Green for go – involve Tenants

Big push to inform and involve tenants:

1. Leaflets, letters, open meetings
(one in evening, one in afternoon)
2. Liaise individual tenants on concerns.
3. Regular News-sheets updating people
4. Work closely with installers -
encourage good telephone and people
skills.



A start at last



Ewan and Hugh (Glendevon)



Thomas of AES (and that Castle)



Crane day
(first thing)

Crane day (mid morning)





Crane day...last few loads

Technical issues along the way...

1. Pipes / Supplies



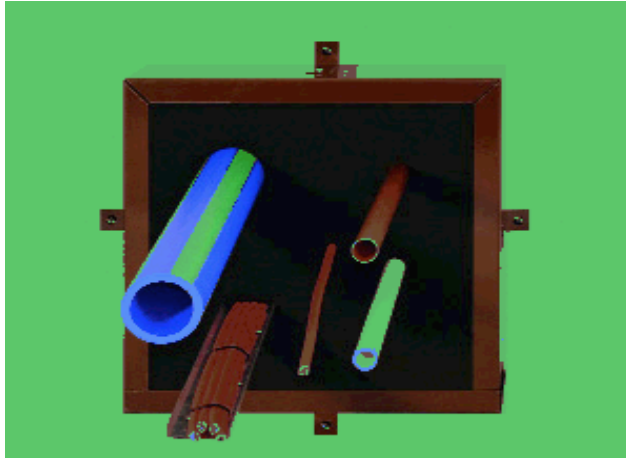
Technical issues along the way...



2. Pipe runs – down the building



Technical issues along the way...



3. Fire-stopping between floors.



Technical issues along the way...



4. Pump-stations - locate in roof space.

Safe working area in loft



Technical issues along the way...

5. Electric cabling to run pump in roof.

(Note colour coding of pipe runs)



Technical issues along the way...



6. Mixer valves to control temperature.



Technical issues along the way...



7. Cylinder size - custom made VIP.
- Standard size – 180 litres
 - Larger flat size - 210 litres
 - Size where gas boiler too low in small hot cupboard – 140 litres
 - One-off size – 120 litres



Technical issues along the way...



8. Sensors - how many/where/cabling.

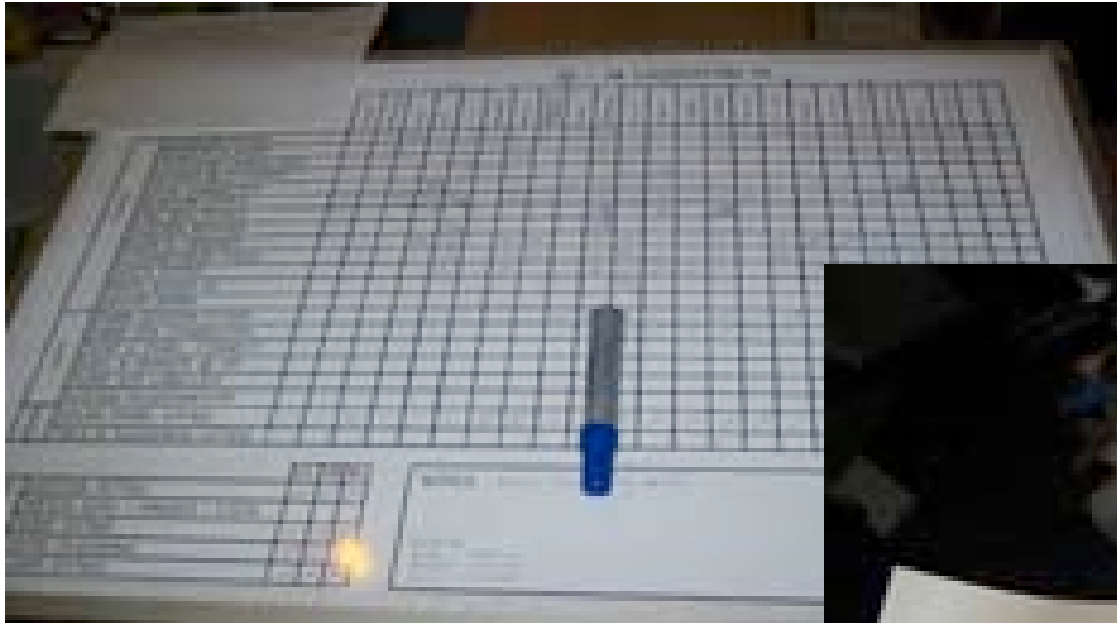
PS this is a 210 litre cylinder

Tenants' concerns

Slats, slats
and slats



Tenants' concerns – information / follow through



Critical success elements

1. Strong consistent support from Changeworks



Critical success elements

2. Funding from ScottishPower Energy People Trust at an early stage enabled us to kick-start our plans.



City Development
Planning & Transport

Lister Housing Co-operative Ltd
24 Lauriston Place
Edinburgh
EH3 9EJ

Application No: 200701543

PLANNING (LISTED BUILDING AND CONSERVATION AREAS) (SCOTLAND)
ACT 1987

DECISION NOTICE

APPLICANT: Lister Housing Co-operative Ltd

With reference to your application registered on 26 July 2008 for listed building consent for the following works:-

Installation of solar water heating panels to inner pitch of Georgian tenement roofs
Scheme:

At
22 - 24 Lauriston Place, 24 Lauriston Place, 22 - 26 Fair Street & 8 - 10 Fair Street
Edinburgh
EH3 9EJ

The Council in exercise of its powers under the above Acts now GRANTS LISTED BUILDING CONSENT for the works in accordance with the particulars given in the application. Detailed plans, relative to this permission, are attached if your application was made on paper. If your application was submitted online, drawings 1-12, as shown on the Planning and Building Standards Portal, represent the approved scheme.

Any condition(s) attached to this consent, with the reasons for imposing them, are shown below:-

Conditions:-

1. The works hereby permitted shall be commenced no later than five years from the date of this consent.

Reasons:-

City Council
Planning
24 Lauriston Place
Edinburgh EH3 9EJ
Tel: 0131 275 2800

Critical success elements

3. Partnership - work with CEC officials (they typically were keen, but cautious to avoid precedents).
New planning guidelines help for the future.

Critical success elements

4. Funding, Funding and Funding

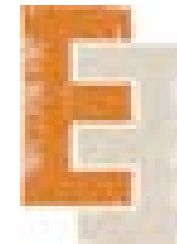
From LCBP-P2



SPEPT



EWB – Edinburgh World Heritage



EDINBURGH WORLD HERITAGE

And SCHRI and EWB for the feasibility study.

And hopefully CARES and Wider Role for Phase II – flat roofs

Critical success elements

5. Time, staff time and more staff time.





Critical success elements

6. Great Contractors
- AES



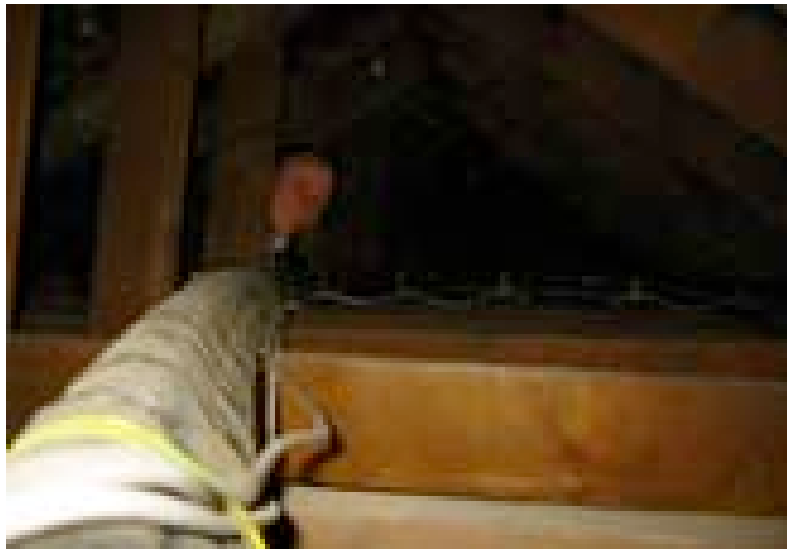
Critical success elements

6. Great Contractors – Glendevon



Critical success elements

7. Strong professional team - led by Michael Fredlander of Lorn Macneal Architects.



Structural Engineers, Robertson Eadie. Here is Andy Russell, checking panel fixings

LORN
MACNEAL
ARCHITECTS



CDM Co-ordinator,
Cameron Miller, of



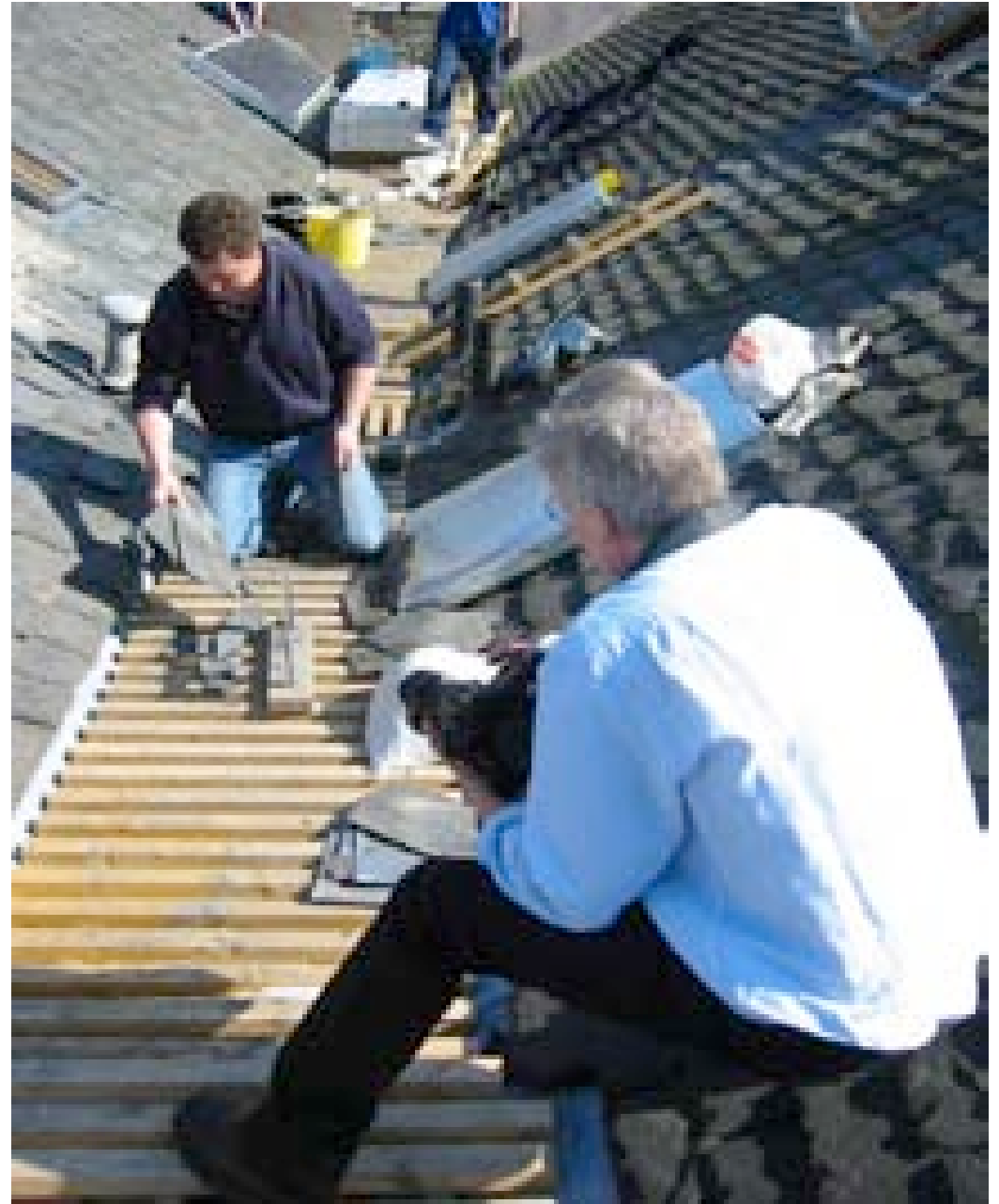
The end result.....



Renewable power, happy tenants



When the sun
shines,
everything
comes to life
....on the roof





FORRES GAZETTE

Forres firm at the forefront of new green technology

By Ken Smith *Published: 25 March, 2009*

SEVERAL lorry loads of solar heat collectors left a Forres factory last Friday headed for Edinburgh and a place in the history books.

AES Solar Systems, based in Lea Road, Forres, is the only supplier of solar panels in Scotland and won the contract to become involved in pioneering work installing the water heating panels on the roofs of seven B-listed Georgian tenements in the historic heart of Edinburgh, a Conservation Area and World Heritage Site. The installation work is being carried out by their local installer, Glendevon Energy.

"We provided 49 panels," said managing director George Goudsmit, "and although this is not the biggest order we have done, it is certainly one of the most important. The panels are being placed in the middle of a world Heritage site in Edinburgh and makes it special."

The £200,000 Renewable Heritage project, benefiting social housing properties, is being run in partnership with Changeworks, Lister Housing Co-operative, Edinburgh World Heritage, eaga Charitable Trust and The City of Edinburgh Council, who have granted all permissions for the work.

"This very much a trial for Edinburgh Council," said Mr Goudsmit, "as there has been a lot of publicity about the project, not just in Scotland, but all over the world. It is so rare that planning permission is given to place solar panels on old buildings like these tenements."

"They obviously preferred to stick with us Scots," said Mr Goudsmit.

Loading up the lorries with solar panels for the historic trip to Edinburgh are staff of Forres firm AES Solar Systems. From left, Campbell MacLennan, Ryan Sutherland, driver David Nellis, Andy Morrison, Thomas Kocinski and managing director George Goudsmit.

