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Delivering Carbon, Financial and Energy Reduction Commitments Within Our New Homes

Ken Gourlay Fife Council

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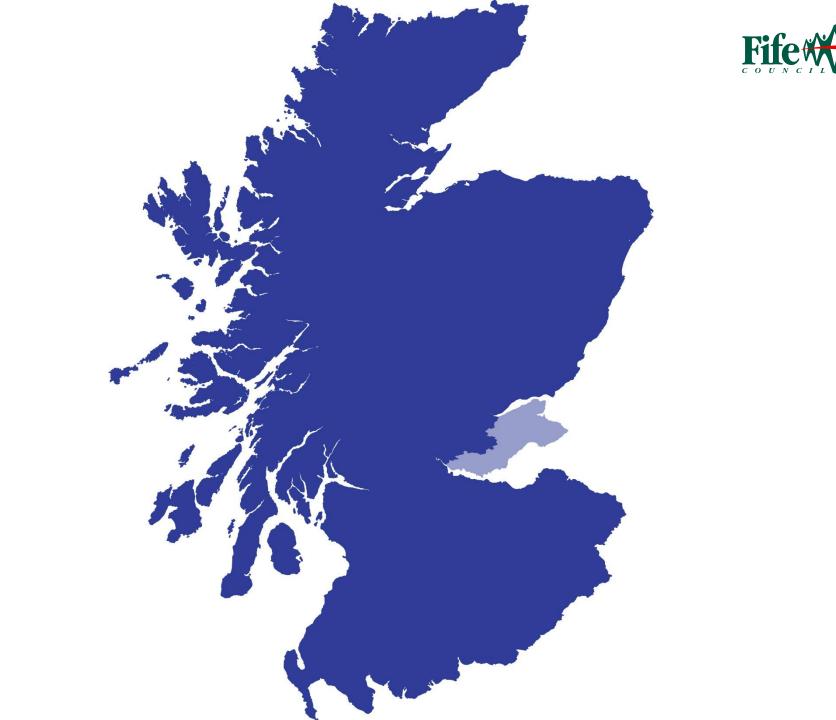
Steelend • Strathkin

Maximising local resources

Renewable energy technologies

New training opportunities

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Fife Council Background

- Population 365K
- 160K households
- £900m budget
- Capital spend £200m (12/13)
- Labour led administration
- 30K Council houses

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Content

What is Fife doing

- Delivery plan for 2,700 homes by May 2017
- Manifesto commitment
- In House (900 units)
- Working with partners (RSLs 1000 units)
- Working with Private Sector (500 units)
- Other initiatives (300 units)



Key Considerations

- Fife Council standards
- Energy efficiency initiatives
- Balancing act capital / revenue / units
- Existing housing stock
- How are we getting on ?

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Fife Council

- Administration commitment to provide 2,700 new affordable homes across Fife
- 120 sites
- Redevelopment of Council land
- Aspirations for quality regardless of who delivers



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Carbon Reduction Strategy

Beyond 2011 Building Regulations
Maintenance (30,000+ existing stock)
Whole life cost - favours passive

- Whole life cost favours passive approach
- Silver Standard



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Fife Council Approach

- 'Fabric First'
- Optimum U Values
- Air tightness max 3.0m³/ hour /m²
- Challenge for construction standards
- Reduced costs for tenants



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Fife Council Approach

• Air leakage...

Windows and doors / floor joists Window sills and reveals / Loft hatches Junctions between internal partitions and ceiling / Light Fittings / Soil and vent pipes and flue outlets /Junctions between the walls and roof / Mechanical Extract Outlets / Service & waste connections..... nd • Wellwood • ` tool • Baintown • Balcur



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Fife Council Approach

Air tightness standard —>

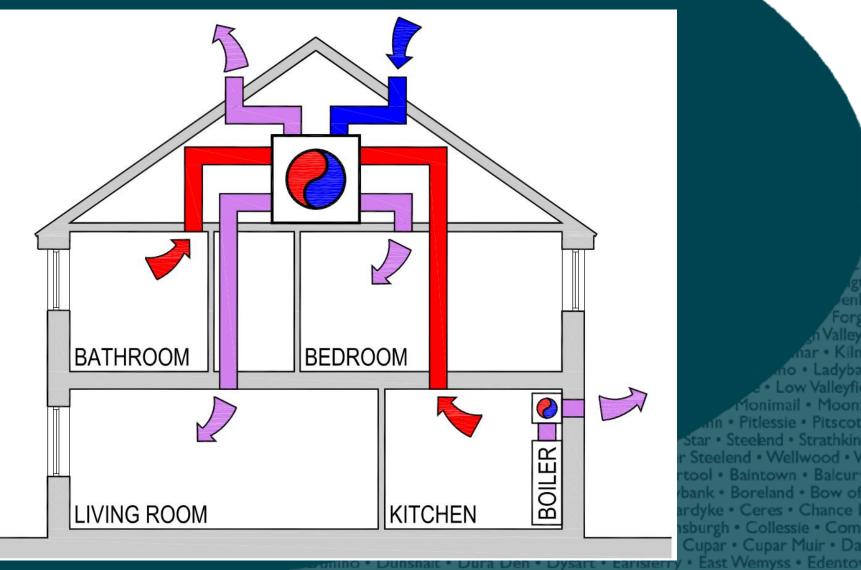
Whole house ventilation system

= opportunity for heat recovery

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Fife Council Approach





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Fife Council Approach

Passive flue gas heat recovery Reduces cost of heating water by ~35%



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Case Study - West Port Cupar



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Redevelop former High School site

- Challenging design brief
- Facade retention
- Access difficulties
- Affordability
- Energy efficiency measures

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New Build Housing Cupar

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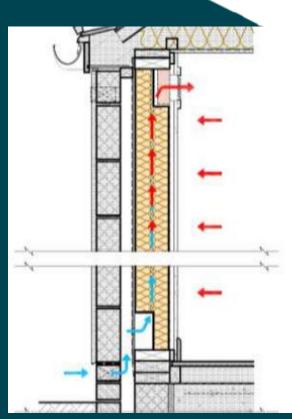
New Build Housing Cupar

21 Fife Council Social Houses for rent 9 Kingdom Housing Mid Market rented properties Cellardyke • Ceres • Chance I **5** Commercial units Coaltown of Wemyss • Colinsburgh • Collessie • Com rossgates • Crosshill • Culross • Cults • Cupar • Cupar Muir • Da

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Ewgeco Energy monitoring System Breathable Wall System Façade Retention

Ewgeco monitors energy use in the home for gas and electricity. It can also provide information on renewable energy product power generation.

Breathable wall draws cold air into the cavity through a cavity insulation heating the cold air as it rises. The wall becomes a heat exchanger warming incoming air by up to 8°C. A single fan in the roof draws the air into the house.



Westport Business Centre

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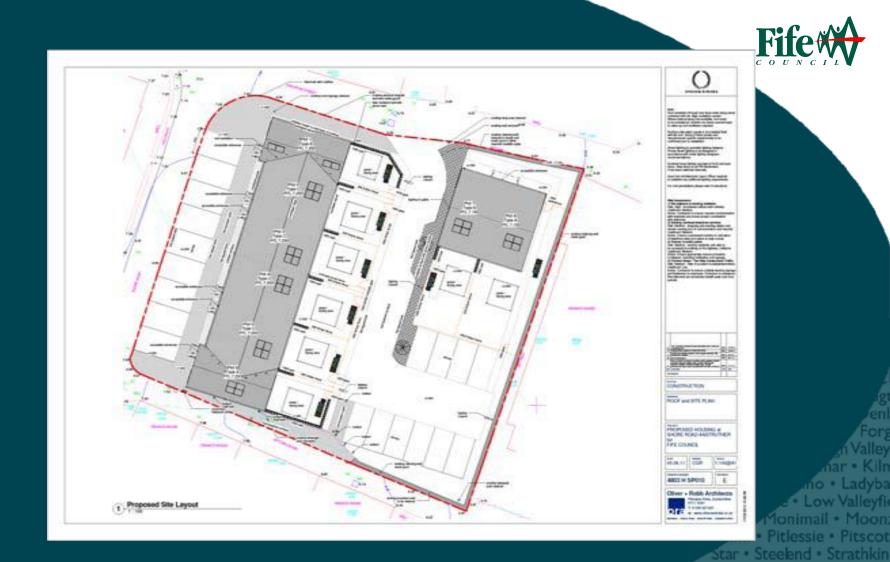
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New Build Housing Cupar

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Anstruther Shore Road – 8 Units Auchtertool Baintown Balcur

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Anstruther Shore Road Solar Thermal hot water system Energy Monitoring Equipment

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Kirkinch Special Needs Housing

Ground Source Heat pumps and Solar Thermal roof panels, under floor heating

Moon

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- Photovoltaic panels
- Ground Source
- Air Source
- MCS Accreditation







Building Services Training Facility

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District Heating - Dunfermline

- Landfill gas
- AD Plant
- Existing housing stock
- New build private Sector
- Public and private buildings



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Conclusions

• Varying approach at present

- Life cycle costs and benefits need further work
- Great opportunity in Fife to stimulate the economy

 Great opportunity to employ and train staff



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Questions

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