



**Falkirk Council**

# **Callendar Park CHP Development Plans**

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# Falkirk Council Corporate Plan

## Priorities:

- Address Fuel Poverty
- Ensure Early Intervention
- Improve Infrastructure and Built Environment
- Be Greener

# Background

- Callendar Park Estate : Build Date 1965-1975
- 9 multi-storey blocks
  - 5 blocks -Electric heating,
  - 4 blocks - Mixed Gas/Electric heating
- Housing option of choice for the elderly, with some in their 90's
- Bottom 15% SIMD 2009
- Electric heating systems due for replacement
- CHP recommended in a 2004 feasibility study

# Journey

- Tenant consultation
- Tour of Aberdeen CHP was arranged with Residents Association
- Held an exhibition event to inform tenants of the benefits & to sign up if interested
- Arranged individual tenant appointments following the Open Day
- Two demonstration flats were available for tenants to visit and ask questions throughout the contract
- Regular newsletters
- Press articles



# Project Summary

- Project qualified for 40% grant Funding
  - Community Energy Partnership
  - Energy Efficiency Commitment
- Gas fired CHP system in use with potential to change to a biomass system
- Controllable Heat interface unit for residents compared to the “uncontrollable” electric storage system
- Hot water available 24hrs per day
- Heating unmetered with fixed weekly costs
- CHP offered lower carbon emissions compared to previous systems

# Project Summary

- 1.12MW Gas CHP engine + 2MW top-up boiler
- 6 Blocks connected to the heat network i.e 400 flats, 71% of residents
  - 5 blocks - electric heating; 1 block - gas heating
- SAP rating of all blocks improved from 35 to 68
- Callendar House Museum connected in 2011
- 2MW back-up boiler for maintenance or system failure
- Electricity generated is sold to national grid

# Project Summary

- All void properties connected to heat network
- Area no longer in bottom 15% - SIMD 2012
- £6.00/wk – 1 bed flat, now £ 9.63/wk
- £7.25/wk – 2 bed flat, now £11.49/wk
- Prices remained the same until 2012
- 58% increase compared to electricity price rises of over 50% since 2008

# Owner Occupiers

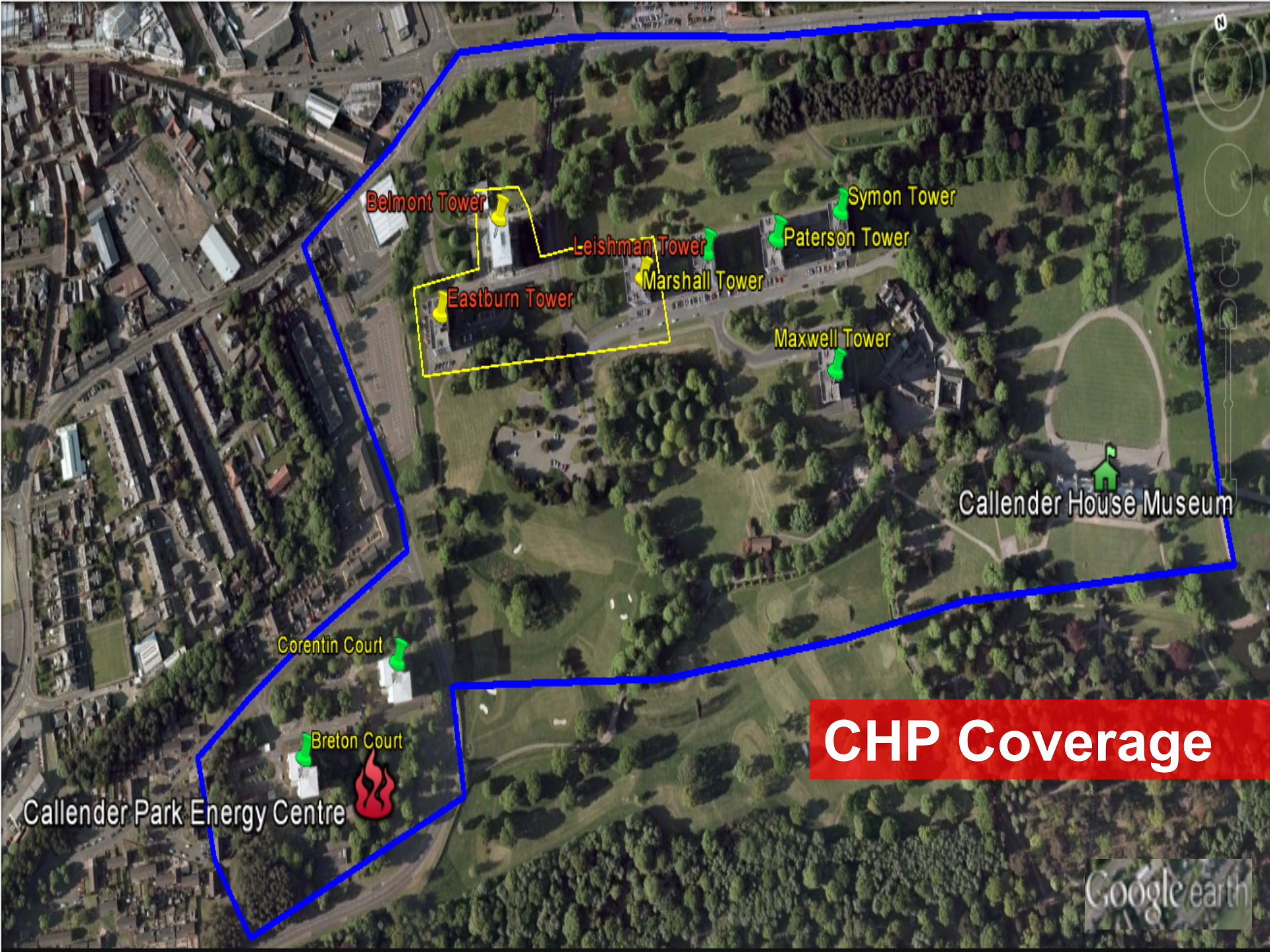
- 36 Owners connected to the CHP network
- 7 Owners funded through Scottish Government Central Heating Programme Grant; further 7 Owners via HEEPS:ABS in 2015/16
- 1 bed - £2280 + vat
- 2 bed - £2522 + vat
- Payment terms were offered
- Weekly charges include additional 50p maintenance fee - £26 per year



# Costs of Project

<b>Total Cost of Project</b>	<b>£2.5 million</b>
<b>Council Contribution</b>	<b>£1.48 million</b>
<b>CEP Grant Funding</b>	<b>£977,500</b>
<b>EEC Funding</b>	<b>£81,692</b>





Belmont Tower

Leishman Tower

Eastburn Tower

Marshall Tower

Paterson Tower

Symon Tower

Maxwell Tower

Callender House Museum

Corentin Court

Breton Court

Callender Park Energy Centre

**CHP Coverage**

Google earth





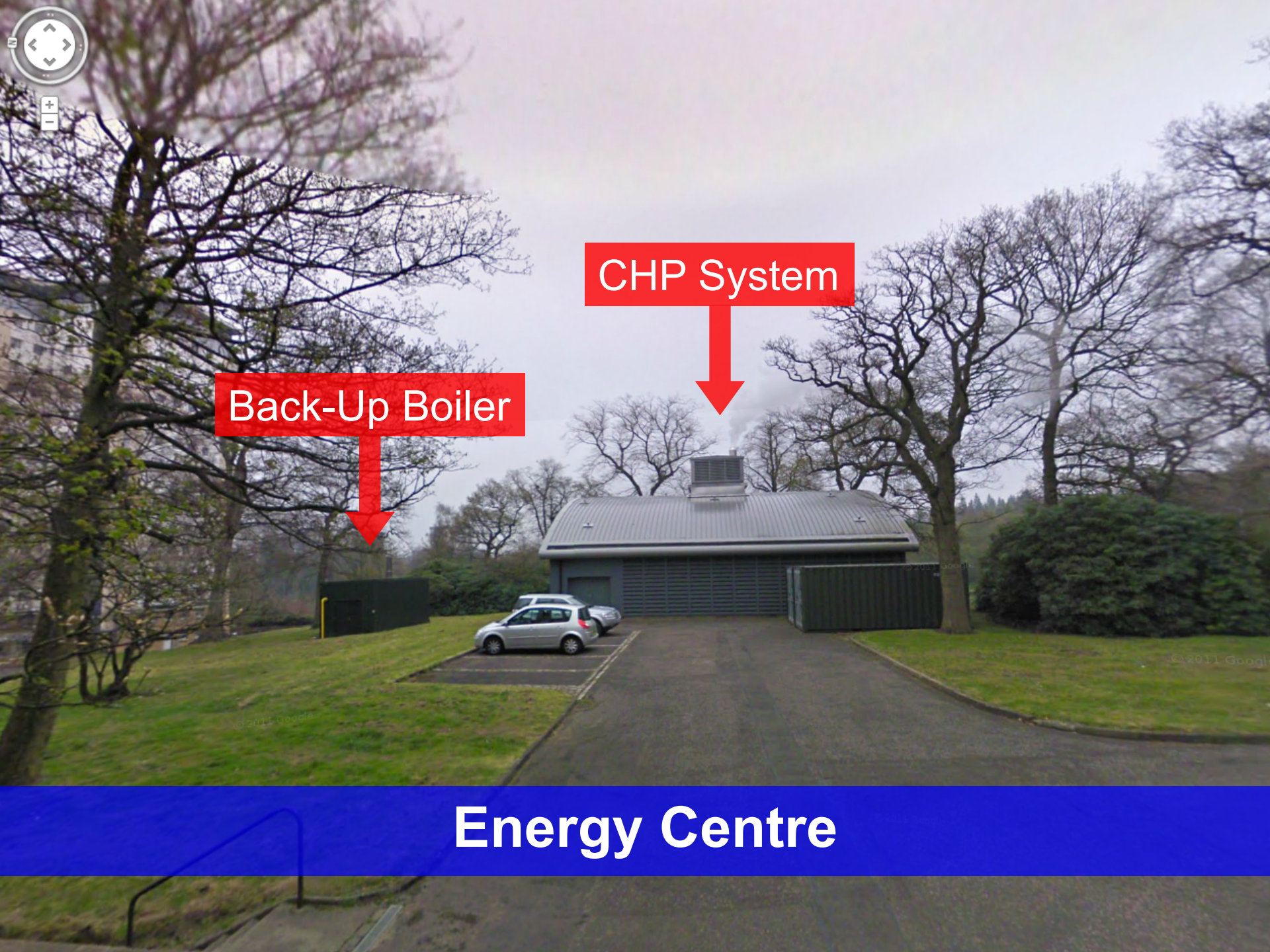
Back-Up Boiler



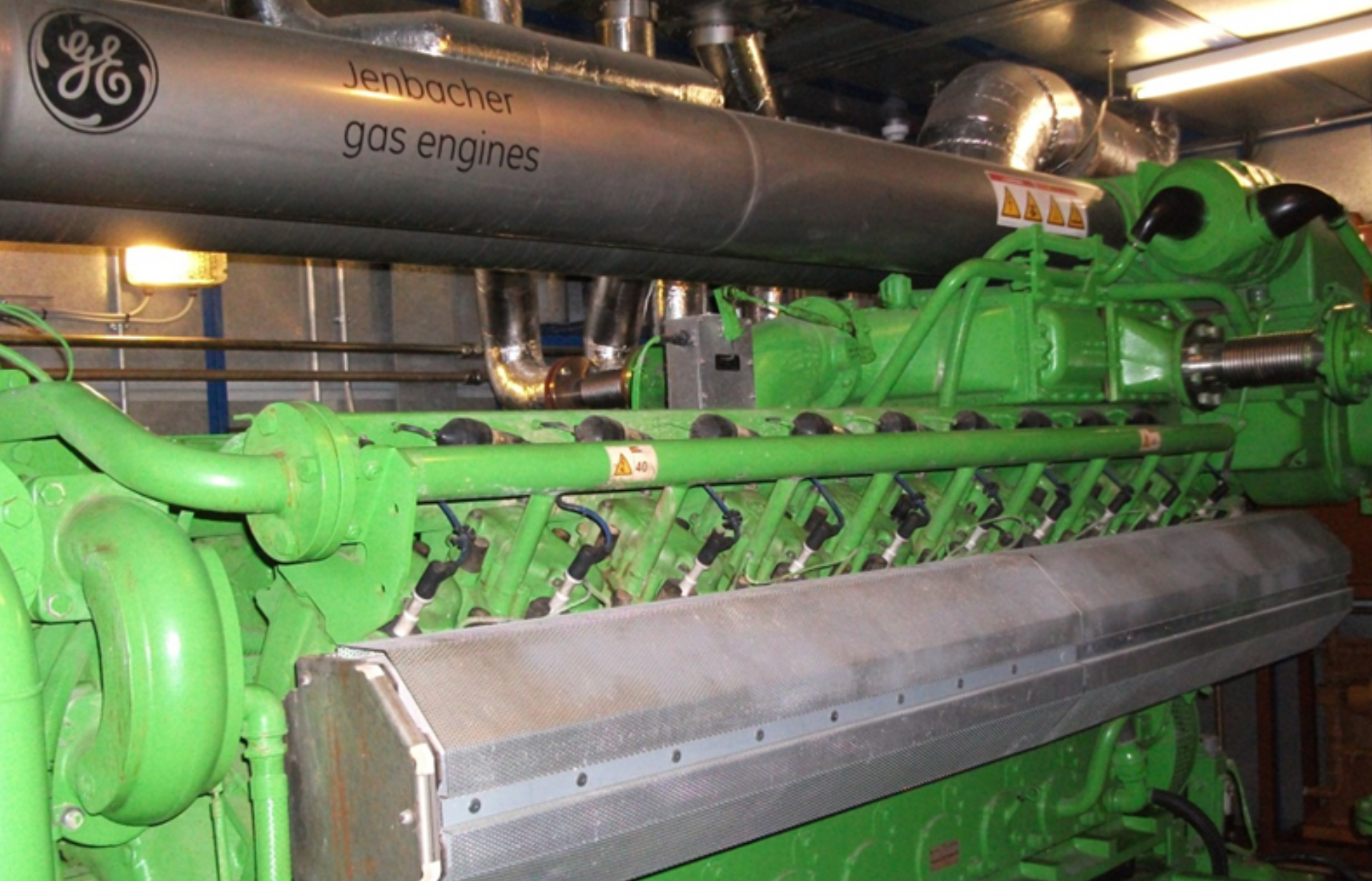
CHP System



Energy Centre







# Energy Systems

## Gas Engine Generator





# Energy Systems

Primary Boiler



# Components In Flats



Demonstration  
of TRV to tenant



Room Stat and  
Programmer

Heat Exchanger

# Maintenance

- Annual check not required for HIU's
- Low maintenance as few moving parts
- Main repair is for leaking valves inside the flats
- Falkirk Council's Building Maintenance Division are trained to carry out repairs internally
- Parts are sourced locally
- Framework of Contractors for the Energy Centre
- Energy Centre monitored daily by Integrated Energy Utilities

# Future Plans

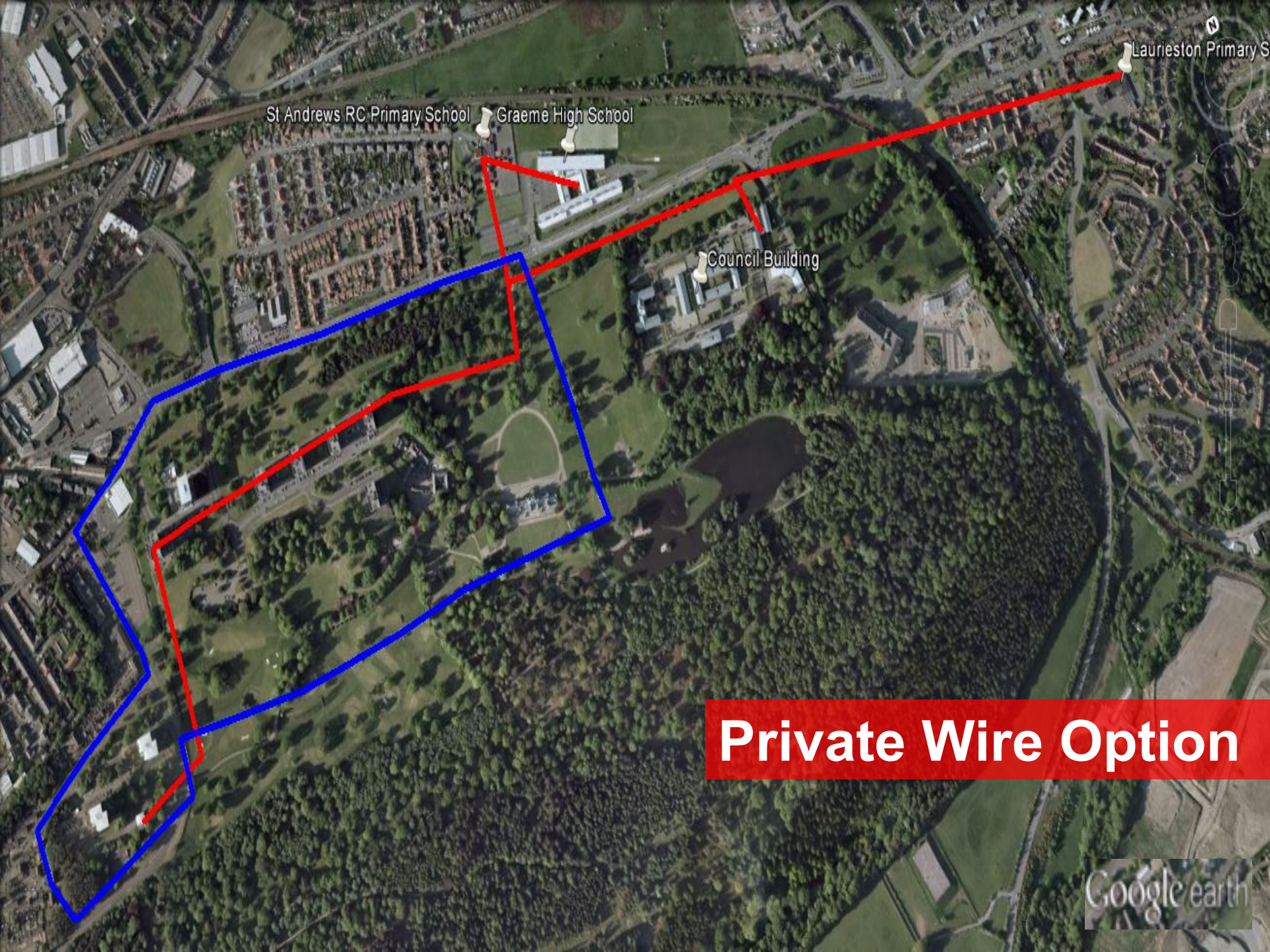
- 3 Blocks to be connected to Heat network  
223 Flats with SE Gas Boilers- no longer on the market
- Current SE duct for flue cannot support HE gas boiler systems
- Replacement parts are becoming scarce
- The average minimum energy consumption for different heating types were estimated to be:
  - 8,120 kWh/annum for Gas boilers;
  - 10,483 kWh/annum for Electric storage heaters; and
  - 6,010 kWh/annum for District heating users



# Future Plans

- Re-engage with tenants yet to be connected
- Implement private wires to schools and council buildings
- Procure required contracts for the CHP extension
- Handover plant maintenance to Facilities Department
- Ensure all work adheres to Heat Network: Code of Practice for the UK





St Andrews RC Primary School

Graeme High School

Council Building

Laurieston Primary S

**Private Wire Option**

Google earth



# Good Practice Guide

- Secure executive commitment /sponsorship
- Involve key partners from outset
- Consider future expansion of Scheme at project inception and future Proof the Energy Centre
- Consider implementing an alternative back-up power system
- Localise procurement of replacement parts
- Apply the CIBSE Heat Network Code of Practice for the UK at every stage

# Corporate Plan Revisited

## Priorities:

- **Address Issues of Fuel Poverty-** Alleviated causes and effects of Fuel Poverty in over 700 households
- **Ensure Early Intervention-** vulnerable group protected from slipping into fuel poverty through lower Fuel bills of £500/£597/year for 1 / 2 bed flat properties
- **Improve our Infrastructure / Built Environment-** High Flats are fit for purpose; External Wall Insulation measure improved energy efficiency
- **Be Greener-** saved tonnes of carbon



The background features a collage of overlapping white rectangular papers, each with a large, dark grey question mark. On the left side, there is a blue crest or logo with a red border. The crest includes a stylized tree at the top, a gear-like shape in the middle, and a landscape with a mountain and a body of water at the bottom. The text "A'" is visible at the bottom left of the crest.

**Thanks for listening...**

**Any questions?**

# Contact

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