



GLENROTHES ENERGY NETWORK

www.glenrothesenergynetwork.co.uk

**LOCAL HEAT SCHEME WHICH IS HELPING TO TACKLE
CLIMATE CHANGE AND FUEL POVERTY**

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What is district heating?



GLENROTHES ENERGY NETWORK
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Working in partnership Fife Council and RWE have created a network providing energy from RWE Markinch Biomass CHP plant to businesses and houses in Glenrothes town centre, lowering energy bills and helping to prevent climate change.



Target to reduce carbon emissions in Fife by
42% by 2020 • 80% by 2050



90% waste and 10% sustainably sourced wood fuel Biomass plant.

Reducing Fuel Poverty

Reducing Commercial Energy Costs

Energy centre supplies low carbon energy to town centre businesses, public sector and domestic customers in the centre of Glenrothes.

Why Do It?

- Statutory duty to reduce reliance on fossil fuels and migrate to sustainable heat sources.

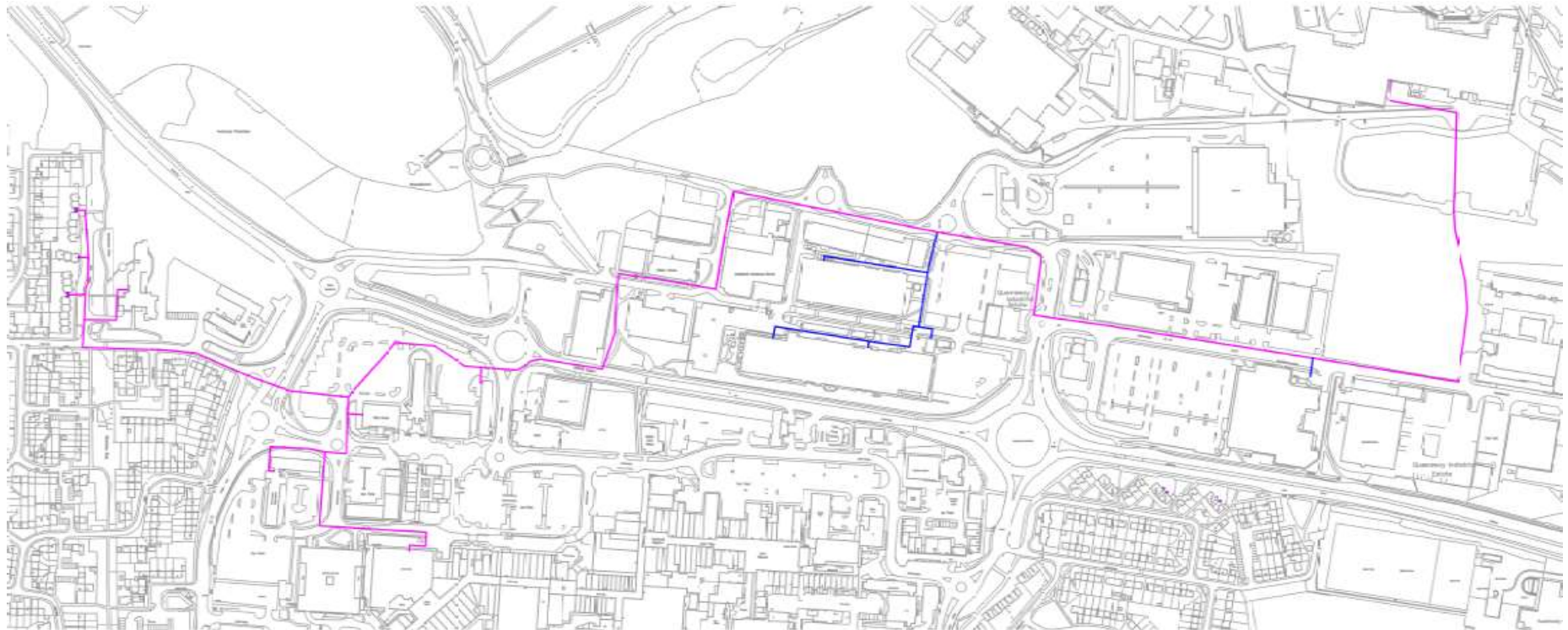
Why Do It?

- Climate Change (Scotland) Act 2009 & Scottish Government Climate Change Plan for Scotland (2017-2032) target - 80% of domestic heat from low carbon sources by 2032 and the reduction of greenhouse gas emissions of 66% by 2032.
- Fife Council target of reducing carbon emissions by 42% by 2020.

GEN - Scheme Details

- 6.8 km of pipe
- 7 customer sites including Fife House Complex plus 45 Council homes
- Annual heat demand 8650 MWh. Potential remains for expansion to 22,000 MWh.
- Carbon savings 2087 tonnes pa
- Provision for expansion to the south of the town centre remains.

Scheme Extents & Route



Progress

- Tullis Russell enters administration April 2015
- 2016 Feasibility work started on DH
- Grant awarded March 2017
- Detailed design, tendered via SCAPE framework – September 2017.
 - Scheme total costs £33.8 m
 - Costs unaffordable

Progress

- ‘*Value Engineering*’ then retender December 2017.
 - Scheme total costs £29.7 m (Council shortfall £5.9 m)
- Costs still too high
 - Further reduction of scope undertaken

Progress

- Reduced scheme tendered Feb 2018
 - Scheme total costs £23.911m
 - RWE contribution £13.573
 - Council Funding
 - LCITP £8.559 m
 - FC borrowing £1.546 m
 - HRA capital £0.233m
- Fife Council approval 26 March 2018
 - Tender to internal approval circa 6 months

Progress

- Heat Network Contract agreement (April to June 18) FC + Contractor
- Energy Centre – site start April 18
 - Building fit out & testing - Aug/Oct 18
- Heat Network Contractor mobilisation – 15 June 18
- Roadworks and excavations start 2 July
 - Commissioning initial section – 8 Dec 18
 - Heat on to Fife House & Rothesay House – 31 Jan 19

Installation

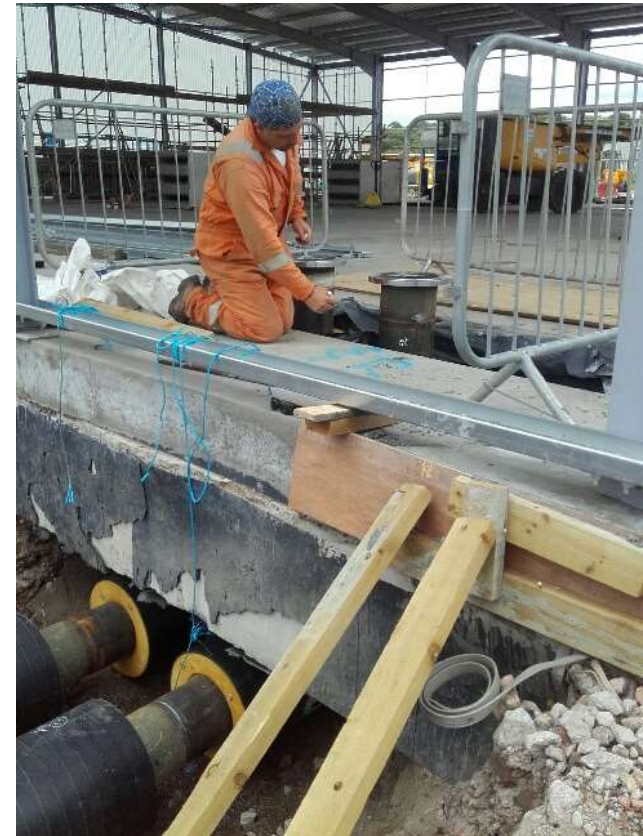
- 7 Civils teams working across Glenrothes
- 5 Sections of network currently being installed simultaneously
- Traffic management planning and public engagement undertaken
- 25% faster installation than any other UK district heating project to date



Energy Centre Site



Energy Centre Frame



Network Pipes Entering Energy Centre





Typical Heat Interface Unit



Typical Substation

Communications plan

- Regular press releases to local media
- Radio advertising on Kingdom FM
- Members & managers briefing
- Intranet articles (inc Fife House car parks), posters, emails and stand at Fife House

Communications plan

- Meetings with key businesses
- Regular social media posts on 'Our Glenrothes' Facebook page
- News items on Fifiedirect and Invest in Fife websites
- Exhibition stand at community events and Kingdom Shopping Centre

Challenges Faced

- Time
 - Procurement
 - Agreeing servitudes
 - Legal Contracts
 - Council Processes
- Budget
 - Financial Modelling
 - Installation costs
- Resources
- Other

Opportunities

- Local employment and investment in the area
- Local Authority led project has time and quality advantages
- In house expertise
- Local Knowledge

Benefits

- Reduced energy costs
- Reduced maintenance costs
- Reduced carbon emissions
- Energy security
- Investment in local economy
- Aid economic regeneration

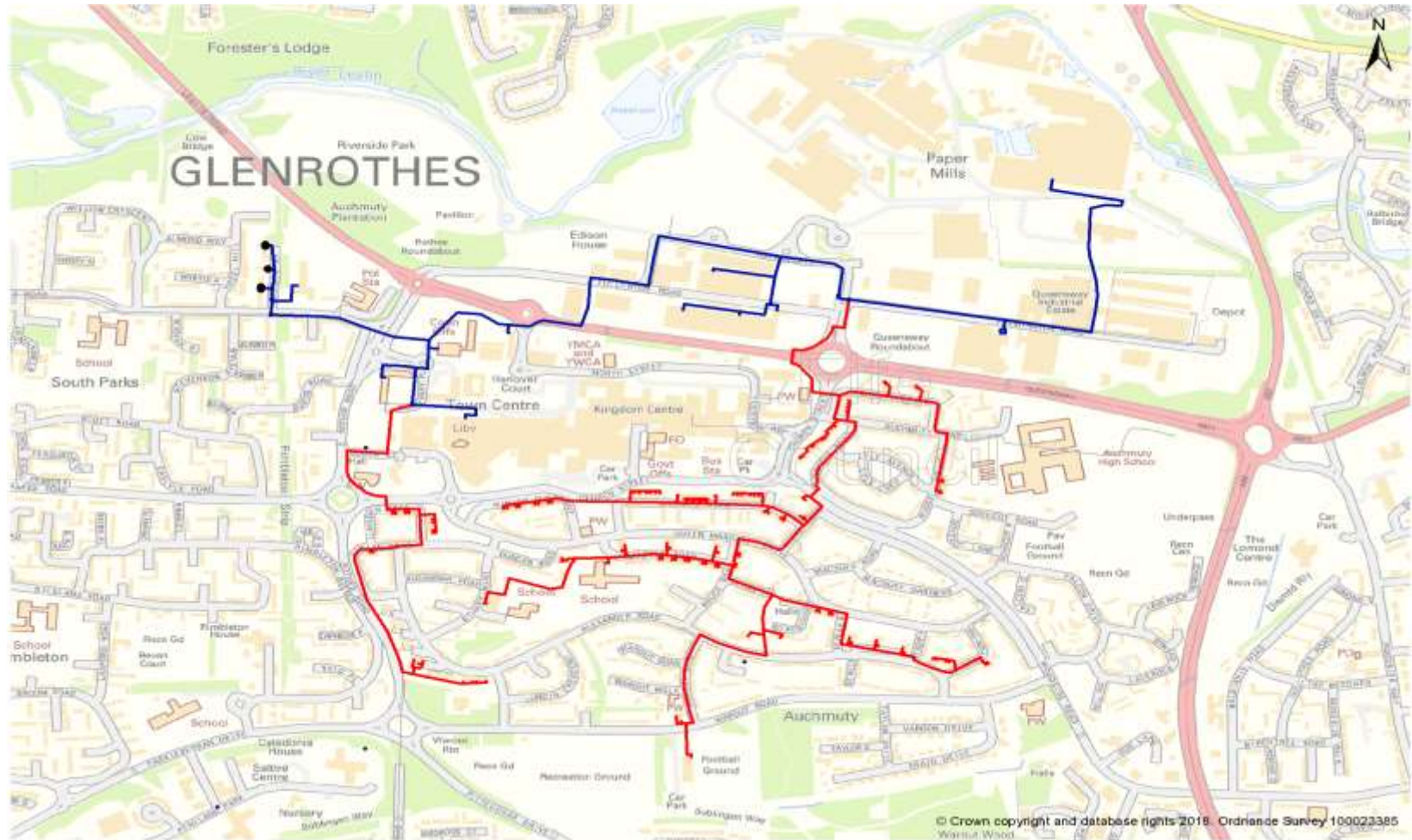
Carbon Savings

- Scheme Total 2087 tonnes
- Fife House complex + Rothes Halls
 - 680 tonnes pa
 - Almost 1% of Fife Council total carbon footprint for 2016/17 – 83,414 tonnes
 - One of the biggest carbon savings projects ever undertaken by Fife Council, along with ORP & Light Fife Green

Next Steps

- Construct & commission network and energy centre
- Finalise customer packages (FC & RWE)
- Operational arrangements
- Heat sales (FC & RWE)
- Heat Metering and Billing Contract is Live
- Future expansion?

Potential Scheme



Summary

- Major investment in Glenrothes - £23.92 m
- Capitalise on existing assets and funding
- Very strong partnership between FC, RWE and Scottish Government
- Communication plans implemented
- Significant carbon savings
- Expansion potential remains

Recommendations

- Benefits with a Local Authority led delivery
- Start as early as possible with procurement and production of legal documentation
- Consider if value can be attributed to non financial benefits
- Retain technical resource on employers team

Questions?

Metering and Billing Framework

- <https://khub.net/group/procurement-for-heat-metering-billing-equipment-and-services>
- Contact Lee Parry (Lee.Parry@fife.gov.uk)