



Timeline for Lerwick District Heating

1997	SIC gives go-ahead to build a new incinerator (now called the Energy Recovery Plant)	2008	An additional 6.5MW boiler is installed at Peak Load Boiler Station
1997	Shetland Charitable Trust agree to proceed with the District Heating Scheme designed around Danish practices	2009	Joined Combined Heat and Power Association (CHPA) which promotes District Heating
1998	First customer connection goes live in November	2009	New pre-payment system introduced
1999	SHEAP offices move from Toll Clock Shopping Centre to the Peak Load Boiler Station at Gremista	2010	William Spence and Neville Martin write paper on the District Heating Scheme for the Institute of Civil Engineers
2000	SHEAP presented with the Engineering Council's Environmental Award	2011	New control system installed at the Peak Load Boiler Station
2001	Pre-payment system installed	2011	Two new larger pumps installed at the Peak Load Boiler Station
2002	Sound area of Lerwick connected to District Heating Scheme	2011	1000th domestic customer connection completed
2006	Large hot water storage tank installed at Peak Load Boiler Station	2012	Governance of Shetland Heat Energy and Power moves from Shetland Charitable Trust to new Board of Directors
2006	Ring mains formed around Lerwick with the completion of the new museum	2014	Connection installed to Northfish biomass plant to feed heat to network
2007	Scheme applications for connections reach capacity for the heat produced	2016	District Heating network transferred from Shetland Charitable Trust to SHEAP
2007	New pumping station built at Quoys, Lerwick	2017	New Anderson High School connected to District Heating Scheme
2007/08	Radio transmitting system installed to collect customer meter readings and transmit them directly to the office on demand	2017	New Eric Gray connected to District Heating Scheme
2008	SEPA produces a DVD about the scheme to encourage other local authorities to consider similar schemes	2017	SHEAP engage the services of a plumber to support customers to maintain their system
		2018	Lerwick District Heating celebrates its 20th year

It's keeping the giving town low

Quietly, effectively and efficiently, the Lerwick District Heating Scheme has been keeping homes and commercial premises around the town warm and providing them with hot water for more than 20 years.

The scheme serves more than 1,100 residential properties and 160 commercial and public buildings, including schools, care homes and the Gilbert Bain Hospital, through 30km of insulated pipes buried beneath the town's streets.

The Shetland Islands Council-owned Energy Recovery Plant (ERP) based at Greenhead is the main provider of energy. Conversion of this waste into heat hugely reduces the expense and environmental impact of exporting it for incineration (often abroad) and the costs and implications associated with landfill. It also generates income through the sale of this energy from the SIC to Shetland Heat Energy and Power Ltd (Sheap).

The ERP is class-leading, achieving consistent "excellent" performance ratings from its regulator, the Scottish Environment Protection Agency (Sepa). In the long term, Shetland looks forward to a future where less waste is generated, but converting what is produced into heat for local households and businesses is a good solution.

The large thermal storage tank based at the Peak Load Boiler Station (PLBS) allows any surplus heat generated through the night to be stored and released during the day, maximising usage of the energy from waste. Oil boilers provide a backup energy source and help to meet peak demand in winter. With many exciting developments in renewables, Sheap is exploring alternative options to reduce dependency on oil at these times.

Customers of the scheme are the main priority. "We pride ourselves on providing great customer service and ensuring the scheme remains available to customers 24/7," says Sheap operations manager Matthew Chattell.

"We want our customers to be happy – with lots of heat and hot water on tap! Our very experienced local engineers are on hand to support and offer advice on the system. Their vast knowledge, quick response and years of hard work has always been warmly appreciated."

The popularity of the system among customers is confirmed by Claire Ward, of Grodians, Lerwick, who has been using it for eight years.

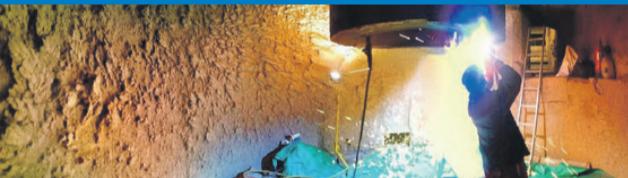
"I love my district heating because there's an endless supply of hot water and no faffing around with thermostats," she says.



Shetland Heat and Power operations manager Matt Chattell (left) and engineering manager Roddy Christie-Henry outside the building.
Photo: Dave Donaldson

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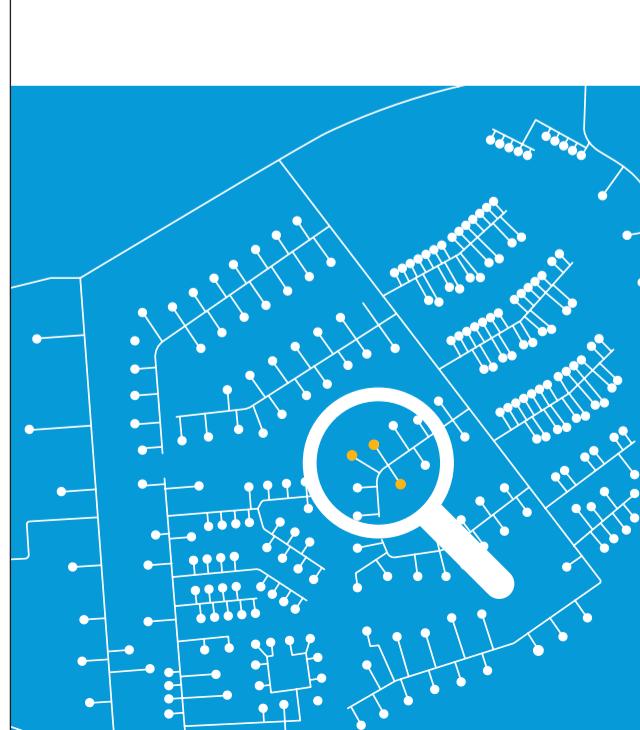
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customers satisfied – and carbon heat for 21 years



"We live in a three-bedroom house and the temperature in the house is constant. The underfloor heating is great too – our cat really likes that!"

"It's cheap as well, and low-maintenance compared to other systems. Keeping a house as warm as ours with another system would cost a fortune."

"We've never had any major problems with it, and any time we have had small issues Larry [Irvine] or one of the other boys has come out right away to sort it. Any time I've had to phone the office they've been really helpful."

Lerwick District Heating Scheme opened its doors in 1998 and was considered to be ahead of its time in Britain. Sheap received the Engineering Councils Environmental Award for Engineering Alternatives in 2000. The design was based on Scandinavian practices as far as possible. This is one of the reasons why it has been so successful. In Denmark district heating supplies over 60 per cent of space heating.

The Scottish Government is now following

Shetland's lead with a major push to establish heat networks and build new waste to energy plants throughout Scotland to help tackle fuel poverty and eliminate landfill.

In Shetland itself, new technologies are opening up exciting opportunities. Having the existing network in place allows Sheap to access new centralised sources which individual customers wouldn't otherwise be able to take advantage of.

"Sheap and the SIC are both looking to the future," says Sheap engineering manager Roddy Christie-Henry.

"Additional waste streams have been brought in to take the place of the recyclable products, ensuring the long-term viability of the ERP and therefore the whole scheme. Disposal of clinical waste is one of the new practices which has brought additional revenue to Shetland and is also helping solve a national problem for NHS Scotland."

"We remain involved with new developments in

Lerwick. Recently we have completed connections to the new Eric Gray Centre, the new Anderson High School and the new hostel. We have existing pipes at the Knab and look forward to being involved in the new development at the site of the old high school. We are working with Hjaltland Housing Association to develop heating solutions for social housing, notably the new Staney Hill development.

"Sheap's carbon footprint is already low but

anything we can do to reduce it further is high on our agenda. We are keen to allow greater numbers of new customers to connect in to the scheme to help reduce fuel poverty in the isles and additional low cost and low carbon energy sources will help us to achieve this."

So, after a successful first 21 years, Sheap is looking forward to keeping the town warm for many years to come.

Employee Profile – Larry Irvine

When did you start working for SHEAP?

Eighteen years ago this month! April 2001 – time flies when you're having fun! I can still remember my first day – Neville Martin showed me the control room and I wondered what I had gotten myself in tae!

What did you do before SHEAP?

I have done various jobs over da years, mostly in oil and process control. I did a lot of Non-Destructive Testing (NDT) work which involved processing most of the things lifted onto offshore platforms. Dat was very interesting work too.

What's your favourite part of the job?

I love working wi' our customers. Dis job involves everything not just wan thing. The variety in a day is great. It always keeps wiz busy and dir is never a dull moment. Luckily I run quite well on strong coffee and we have a good supply of dat.

What do you like doing outside of work?

I love all things mechanical. My wife would tell you it's an illness. I am officially a self-confessed petrol head. I love tinkering with classic cars and Land Rovers and I have a keen interest for history – especially da World War II era.

Do you have any sayings you use regularly?

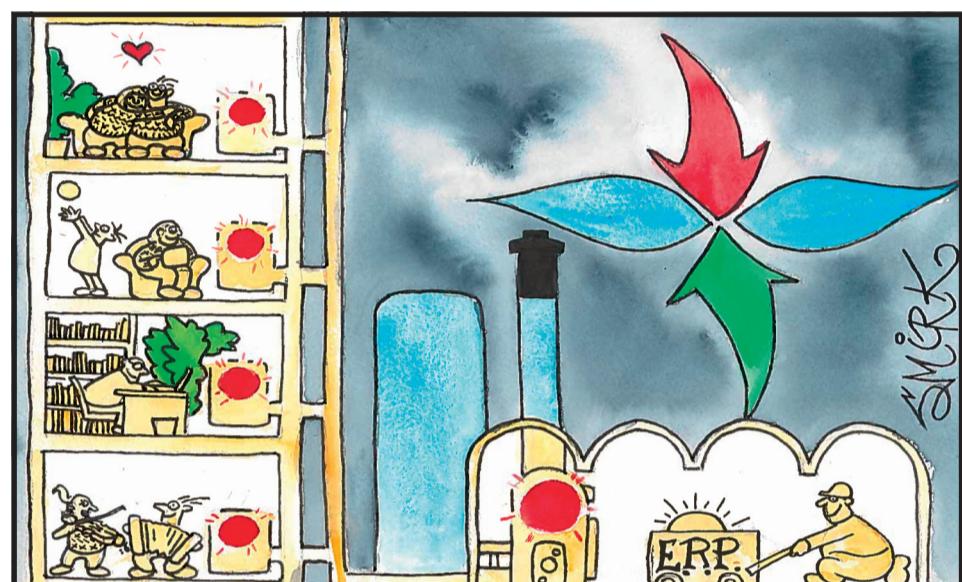
I have been known tae "glip a bun" in between appointments and when asked how my day is going I am usually "happy as Larry".

What do you like about what SHEAP does?

I lik the idea that we play such a big part in keeping Lerwick and Shetland's air cleaner. I can mind years ago going into Lerwick and all you could see was da reek coming from all the chimneys in da toon. It's fine to think that we have helped to reduce the smog and are having an impact on Shetland's environment. Dir is nothing bonnier dan Shetland on a fine day.



Chief engineer Larry Irvine inside the Shetland Heat & Power building.
Photo: Dave Donaldson



Well done to everyone at Shetland Heat Energy and Power on their 21 year anniversary.

Civils Contractor for the Lerwick District Heating Scheme

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