

**Engineering progress
Enhancing lives**

Heat Network Solutions

REHAU. Your district heating partner.
www.rehau.uk/districtheating

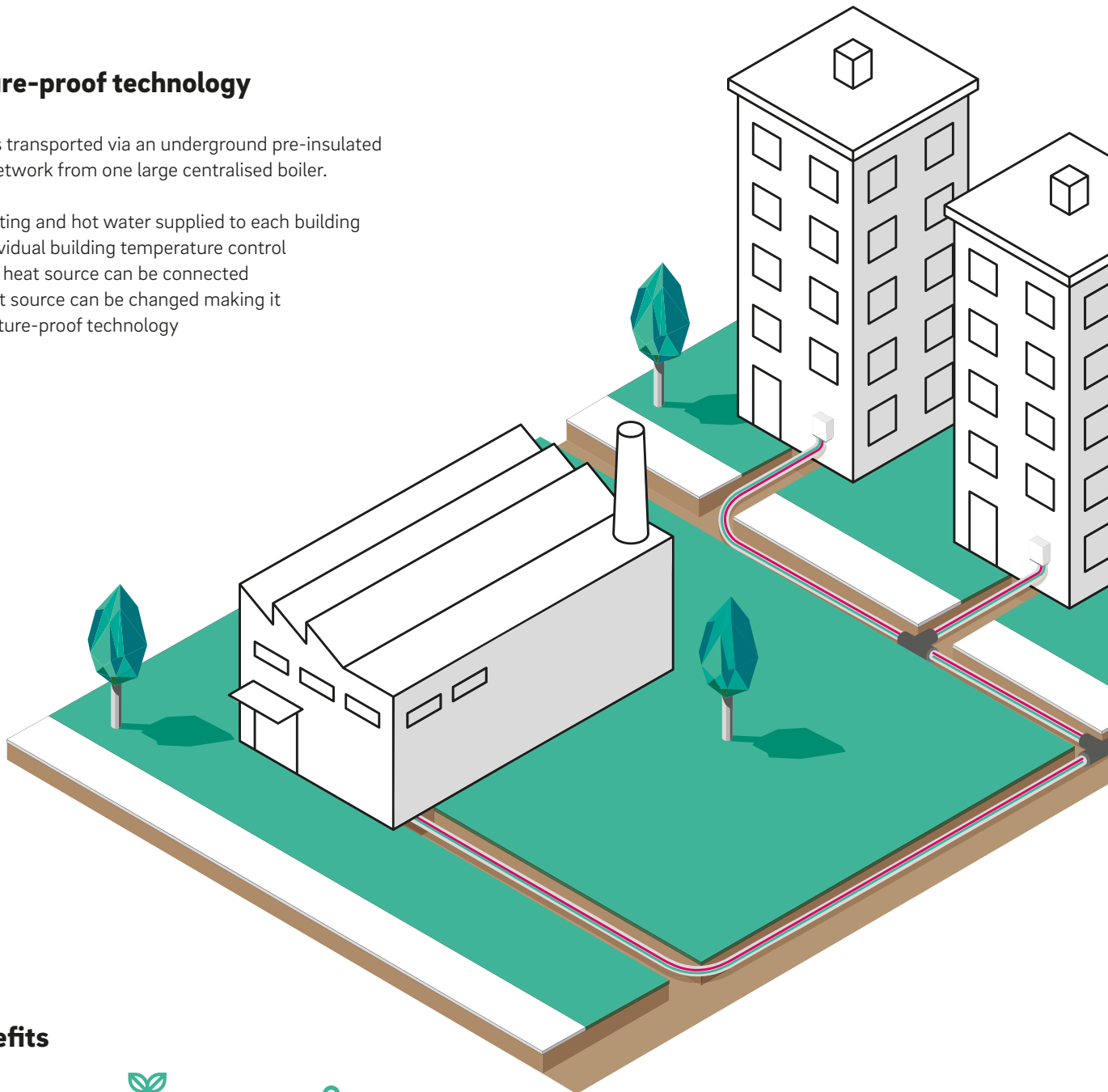


What is district heating?

Future-proof technology

Heat is transported via an underground pre-insulated pipe network from one large centralised boiler.

- Heating and hot water supplied to each building
- Individual building temperature control
- Any heat source can be connected
- Heat source can be changed making it a future-proof technology



Benefits



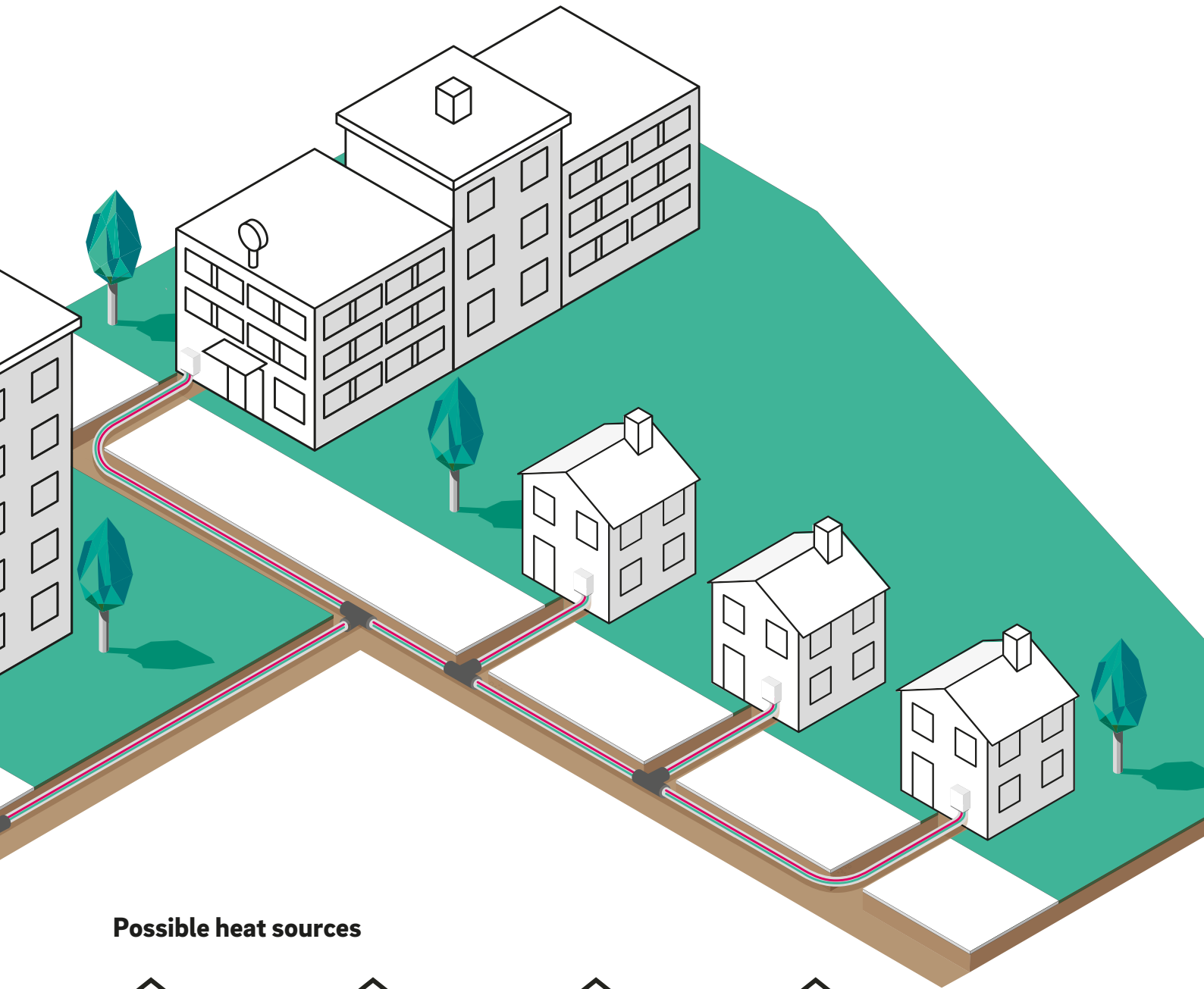
Carbon reductions



Environmentally friendly



Cost savings



Possible heat sources



Gas



**Air source
heat pumps**



**Ground source
heat pumps**



**Water source
heat pumps**



Biomass



**Anaerobic
digestion**



**Energy
from waste**



**Waste
heat**



Design support

What we offer our customers

REHAU's key designers are trained CIBSE Heat Network consultants and can assist with the following using bespoke design software.

Pipe sizing

Effective use of pipe sizes can help reduce both capital costs and heat losses

Optimisation of flow/return temperatures

Achieving lower flow/return temperatures improves heat network efficiency

Diversity

Applying a more realistic diversity can reduce plant sizes and pipe sizes

Pipe routing

Having a more optimised route will reduce material and installation costs

BIM modelling

BIM level 2 models are available for our district heating products

Heat loss calculations

Heat loss calculations are essential to compare different pipes and network layouts

Service you can rely on

UK based team



Largest UK stock of district heating pipes

- Full cutting service
- 25-160mm in both RAUVITHERM and RAUTHERMEX



Proud to support UK production

- Only UK manufacturer of PE-Xa district heating pipes
- Estimated 29% CO₂ reduction
- Production started in 2012



UK sales & technical support

- 3 regional sales offices across UK/ROI with specialist district heating sales team
- On-site support available
- CIBSE-approved CPD presentations on heat networks



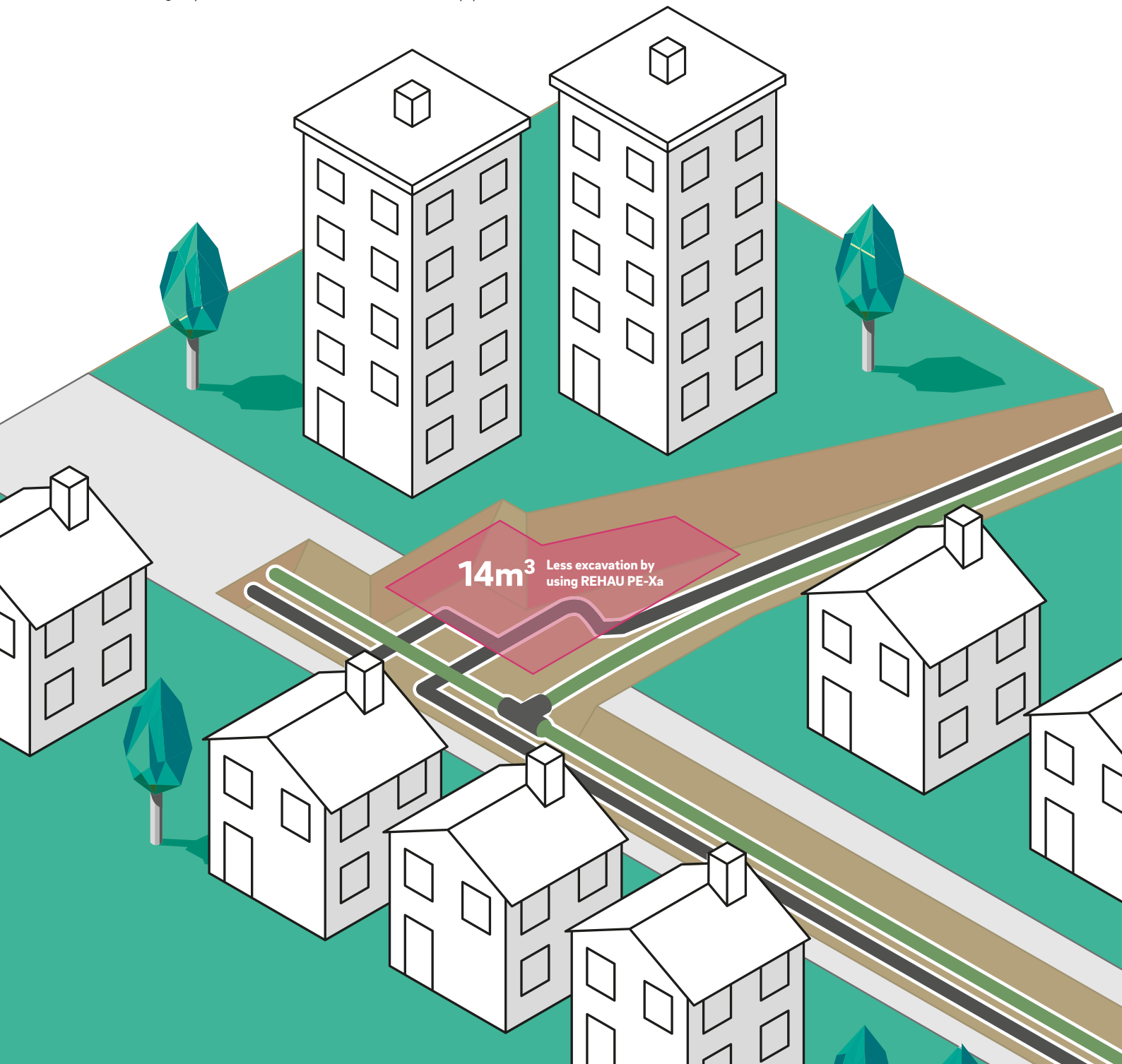
**Estimated
29% CO₂
reduction**

Benefits of REHAU PE-Xa

Versus traditional district heating pipe materials

Installation benefits of REHAU PE-Xa

- Optimised trenches due to PE-Xa flexibility
- Self-compensating in the ground, no need for expansion joints
- Coils up to 570m long
- Retrospective connections are possible
- Savings up to 30% on installation versus steel pipes





PE-Xa quality

Tried and tested

REHAU stands for quality. As a pipe manufacturer, the quality of materials and workmanship directly impacts the performance and lifespan.



Tested

PE-Xa quality tests for over 38 years in the laboratory



Research & development

Our R&D department created a special PE-Xa recipe for our district heating pipes to offer improved thermal performance



Longevity

At 70°C and 8.5 bar, our PE-Xa district heating pipes will last over 50 years (DIN 16893)



Certification

REHAU certified according to ISO 9001



Complete pipe system

High performance pipes, shrouds and fittings



RAUTHERMEX

The solution for medium - large heat networks

- Bonded PU foam with a best in class lambda value of 0.0199 W/m²K
- Largest flexible coiled pipe on the market (140mm)
- Largest DUO pipe on the market (75 DUO)
- RAUTHERMEX Plus available with thicker insulation
- 10 bar option available
- No expansion/contraction, so no requirements for expansion provisions



RAUVITHERM

Flexible solution for small - medium heat networks

- Low weight and high flexibility
- Non-bonded PEX foam
- Only UK manufactured PE-Xa district heating pipe
- Coils up to 330m
- WRAS approval for potable water applications
- Now available up to 160mm
- Outer layer of foam is bonded to the outer jacket



REHAU EVERLOC™
compression sleeve
technology

- No hot works
- 1 billion joints installed worldwide
- Up to 50% faster connections
- Full range of tees and terminations
- Minimal bore reduction



RAUTHERMEX clip shrouds

- New 2nd generation with improved sealing rings
- Up to 20° bending of pipe
- No hot works
- Externally tested to 0.3 bar watertightness to EN 489
- Uses high performance PU foam insulation



RAUVITHERM heat shrink shrouds

- Heat shrink solution
- Can be used with either RAUVITHERM or RAUTHERMEX, or to combine both pipes
- Externally tested to 0.5 bar watertightness to EN 489
- Uses high performance PU foam insulation

PP-R Pipe

Large diameter pipes for heat networks

To meet growing demands for larger heat networks, REHAU now offer pre-insulated PP-R pipes to allow a fully polymer heat network. These can transport over 16MW of heat at 80/50°C.

6 reasons to use PP-R pipe

- No expansion bends – this saves both installation and material costs
- Up to 37% lighter than steel and easier to handle
- Up to 19% lower pressure losses than steel
- Excellent corrosion resistance so no leak detection required
- Can be combined easily with REHAU's PE-Xa for fully polymer heat network
- Over 50 year lifespan at 70°C and 9.5 bar

PP-R pipe SDR 11	Nominal diameter	Outer casing pipe diameter
External diameter	Dimension	External diameter
160 mm	DN 125	250 mm
200 mm	DN 150	315 mm
250 mm	DN 200	400 mm
315 mm	DN 250	450 mm

Larger sizes available on request





REHAU Nexus hot tapping system

First ever for PE-Xa district heating pipes

Unique to REHAU, the REHAU Nexus allows you to add retrospective connections to existing heat networks. REHAU NEXUS has been externally certified to TÜV SÜD for its performance.

Benefits

- Up to 50% cost savings
- Up to 80% faster to install than conventional methods
- Maximum reliability to 110°C due to silicone safety seal



Case Studies

Installations from
across the UK

1 Portmeiron Village, North Wales

Type	Cottages, hotel & other public buildings
Product	3km of RAUTHERMEX
Heat Source	1MW Biomass boiler

2 Piperdam Luxury Resort, near Dundee

Type	Holiday resort (70 lodges)
Product	RAUTHERMEX pre-insulated pipe, RAUVITHERM pre-insulated pipe, Underfloor Heating
Heat Source	200kw - 1MW biomass boilers



3 Eleanor Street, Sheffield

Type	Social housing (170 homes)
Product	2km of RAUVITHERM
Heat Source	1.9MW Gas boiler





4

4 Soho Farmhouse, The Cotswolds

Type	Private estate & holiday cottages
Product	7km of RAUTHERMEX
Heat Source	1MW Biomass boiler & 3MW fossil fuel back up

5 Riverside Installation, Glasgow

Type	Social housing (+300 homes)
Product	RAUTHERMEX pre-insulated pipe
Heat Source	Air-source heat pump



5

6 The Regional Performance Centre (RPC), Dundee

Type	Dundee City Council
Product	RAUTHERMEX
Heat Source	Ground-source heat pump & CHP



6

RAUTITAN MLCP plumbing system

Ideal for communal heating systems

Features

- 10 bar WRAS-approved heating and plumbing system
- RAUTITAN Flex (PE-Xa) and Stabil (aluminium multilayer)
- REHAU EVERLOC™ compression sleeve fitting has been installed over 1 billion times
- Independent certification of a 'cavity-free' joint
- Over 50 year lifespan
- Proven alternative to copper







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03.2024