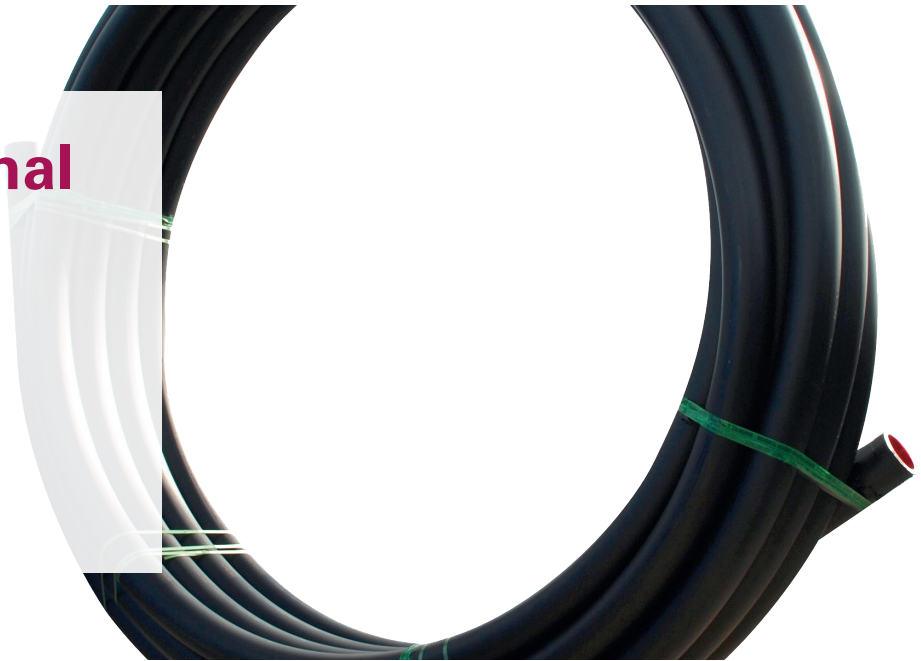


# Geothermal



To cater for the ever expanding renewable energy market **Cirrus** have forged relationships with a number of key players operating in the **Ground Source, Air Source and Biomass sectors**.

Systems are available for single dwellings, district heating & cooling, commercial applications as well as sports pitches (for defrosting) and many others.

**Cirrus** can supply the specialist pipe and fittings needed for the efficient operation of these heating and cooling systems.

**Ground Source** systems exploit the difference between ambient air temperature and the temperature below ground to extract energy for heating or cooling buildings. This energy is transferred by pumping heat transfer fluid through a **polyethylene** pipe, attached to a heat pump or exchanger, which then supplies the building.

There are a number of installation techniques to extract Ground Source Energy. The system employed usually depends on the amount of land available.

Geothermal Coils			
OD (mm)	Length	Black	SDR
32	50m	✓	11
	100m	✓	11
	150m	✓	11
	200m	✓	11
40	50m	✓	11
	100m	✓	11
	150m	✓	11

The most common, where enough land is available, are **Horizontal Collector Pipes** as shown in the picture below.



If space is at a premium **Vertical Boreholes**, typically 80m-200m deep, can be drilled.

Where water is available (such as a pond, lake or river) Horizontal Collectors can be sunk to the bed with weights utilising the water as the energy source. Alternatively anchors can be used.

If the heat pump or exchanger is located away from the property, **WRAS approved pre-insulated service pipes** can be used to transport the hot or cold water to the building with minimum heat loss or gain.