What SAVINGS could you expect for a typical retrofit?

(Loft insulation, external wall insulation, draught proofing, airtightness improvements, ASHP installation, small solar PV array)

Note: All costs and savings are based on typical 2025 prices and will vary between homes.

THE COST

- Fabric upgrades: £25,500
- ASHP: £12,300
- Solar PV: £8,000

Total cost: ~£45,800 (exc. VAT)

THE BENEFIT

- Heating demand reduction: up to 58%
- Total annual energy use reduction (with ASHP): up to 32%
- Annual bill savings: around £1,035/year
- Carbon reductions over 20 years: 44 tCO_2e saved

Total cost: ~£45,800 (exc. VAT)

Typical retrofit payback: ~44 years
(but improves comfort immediately)

Most cost effective carbon and bill savings come from:
External wall insulation + ASHP, after basic fabric improvements.

What's the Best Sequence for a Semi Detached Home?

- Loft insulation + draught proofing
- External wall insulation (EWI)
- Airtightness improvements
- Install ASHP
- Optional: Solar PV

This order gives the greatest comfort, lowest bills, and strongest carbon savings.

Measure	Typical Cost	Annual Savings	Carbon Impact
Loft insulation (to 270+ mm)	£	★★	★
External Wall Insulation (EWI)	£££	★★★	★★★
Internal Wall Insulation (IWI)	£££	★★	★★
Air Source Heat Pump (ASHIP)	££	★★	★★★
Solar PV (5 panels)	££	★★	★

£ low ££ medium £££ high
★ low ★★ medium ★★★ high

FURTHER INFORMATION

Every home is different, the figures provided are typical, not exact.

Prices reflect 2025 cost assumptions and may change.

Savings depend on energy prices, installation quality, and occupant behaviour.

Whole house assessment under PAS 2035 is recommended before starting work.

Thinking about retrofitting your semi detached home?

There is support available to help you understand your options, check eligibility for grants, and find qualified installers.

Xxxxxxx contact details

Broxtowe Borough COUNCIL

Why. . .

Retrofit Your Semi-Detached Home?

SAVE up to £1,035 on annual energy bills

Retrofitting makes your home warmer, cheaper to run, and better for the planet.

A well insulated home needs far less heating, helping to cut rising bills and reduce carbon emissions. Retrofitting also improves comfort, reduces damp and mould risk, and supports the UK's journey to net zero.

Energy Use REDUCED by up to 32%

Heating demand REDUCED by up to 58%

BEFORE
Cold Rooms • High Bills • Drafts

AFTER
WARMER HOME • LOWER BILLS
BETTER COMFORT

June 2026

www.broxtowe.gov.uk

SEMI DETACHED HOMES:

KEY FACTS

Based on typical Broxtowe semi detached homes (built 1900–1960s).

- **Floor area:** 85–90m²
- **Walls:** Mostly solid brick with no insulation (47–60%)
- **Roof:** Often 100mm loft insulation (can be improved)
- **Floors:** Mostly uninsulated solid or suspended timber floors
- **Windows:** Majority already double glazed
- **Heating:** Over 88% use gas boilers

Measure Summaries

Air Source Heat Pump (ASHP)

A low carbon heating system that runs on electricity.

- Works best in well insulated homes.
- Provides stable, steady heat.
- Cuts carbon by up to 77% with typical retrofit.
- Annual bills are typically lower than gas once insulation is upgraded.

Solar PV Panels

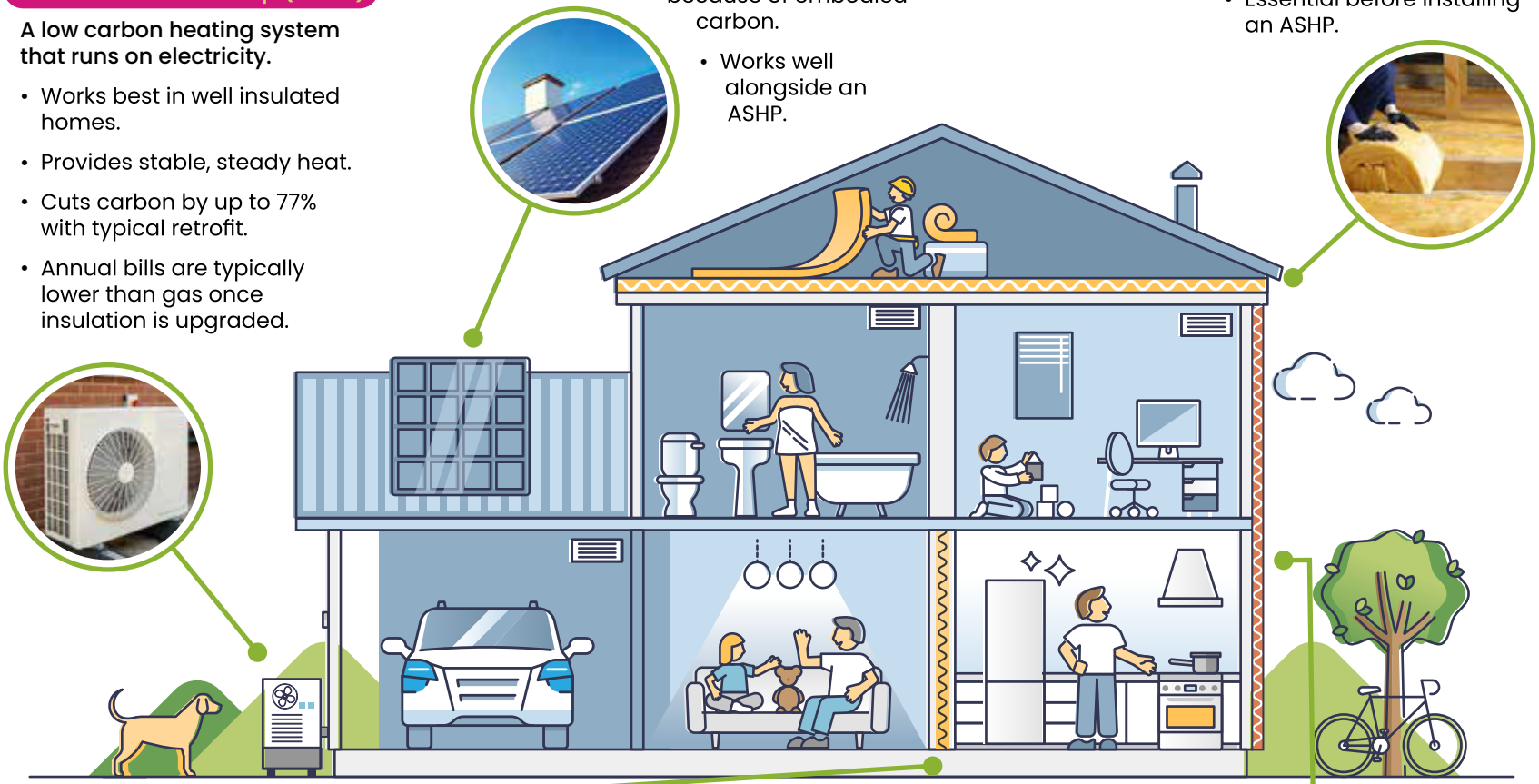
Generate your own electricity from sunlight.

- Good for bill reduction.
- Less effective for carbon reduction over 20 years because of embodied carbon.
- Works well alongside an ASHP.

Loft Insulation

One of the most cost effective upgrades.

- Prevents up to 25% heat loss through the roof (where insulation is poor).
- Essential before installing an ASHP.



Internal Wall Insulation (IWI)

An alternative to EWI if external appearance must be preserved.

- More disruptive.
- Moisture management essential.

External Wall Insulation (EWI)

The single biggest energy saving measure for semi detached homes.

- Cuts heat loss dramatically.
- Less internal disruption.
- Improves appearance and comfort.