

## What are Logix Insulated Concrete Forms?

Logix Insulated Concrete Forms are large hollow building blocks, made from EPS foam. Once assembled into the shape of a building the hollow core is filled with concrete to create a solid, durable structure.

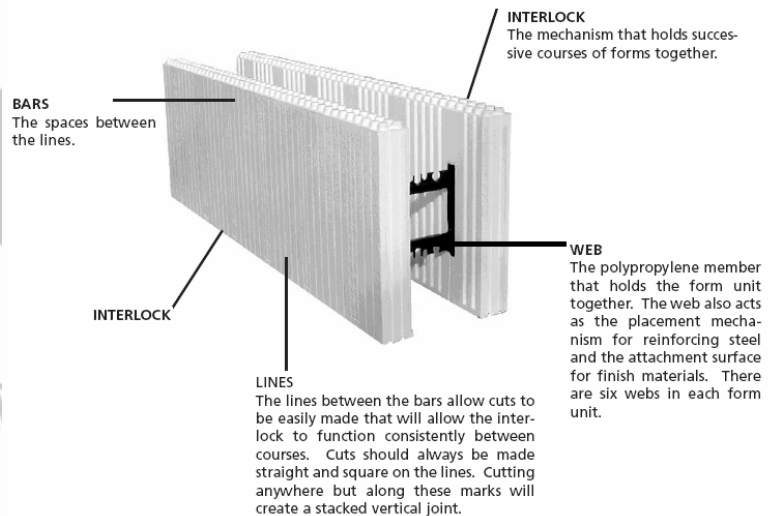
Unlike traditional shuttering, the Logix forms are left in place, permanently, once the concrete has set, to provide excellent levels of thermal insulation. And because the wall is built from solid concrete it easily surpasses the air-tightness requirements within the building regulations.

## Little details make all the difference.

The unique plastic web inside the Logix forms provides real benefits for both builder and home owner.

For the owner the web provides a firm fixing surface for pictures and shelving. It also allows the plasterboard to be mechanically fixed to wall, so you get a quality solid feel when you tap on the wall. Importantly, being plastic, the web won't act as a fast route for heat to escape through the wall, while still creating a barrier to fire.

For the builder the Logix plastic web is easy to work with, enabling finishes to be simply and securely fitted, and any reinforcing steel to be quickly installed without ties.



## What benefits will the homeowner feel in Logix home?

Building with Logix means providing homeowners with a peaceful, comfortable space all year round. Noise is reduced thanks to the solid core. Heating costs are reduced compared to traditional construction, and there less risk of overheating in the summer.

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**Logix Homes cost less to heat.**

In tests against timber frame and masonry homes built to the same insulation levels, ICF homes typically use 35%\* less energy.

**Logix Homes also benefit from:**

- Air-tight construction, typically values <math><2\text{m}^3/\text{m}^2/\text{hr}@50\text{pa}</math>
- Thermal mass
- No cold bridging, even at windows and doors.
- No loss in performance, as there are no steel wall ties or metal webs
- The strength to use solid floors
- Long term insulation performance
- In-built fire, and flood resistance

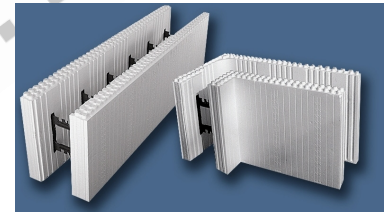


Thermal image of a Logix Home showing minimal heat loss

**Logix Thermal Performance by Range**

**Contractor range:**

- $U = 0.23\text{w}/\text{m}^2\text{k}$
- Suitable for:
  - Energy Savings Trust "best practice"
  - Code for Sustainable homes: level 3
- made from fire retardant white EPS foam



**Eco range:**

- $U = 0.21\text{w}/\text{m}^2\text{k}$
- Suitable for:
  - Energy Savings Trust "best practice"
  - Code for Sustainable homes: level 4
- made from fire retardant Neopor<sup>TM</sup> EPS foam



\* The ICF Effect: ICFA Technology briefings

Logix ICFs create a Superior Environment for your Clients



### **Logix walls offer Superior Sound Insulation**

Logix walls combine a solid concrete core, with low density EPS to provide clients with a quiet peaceful home. And because the plasterboard can be fixed flush on to the Logix wall, without an air gap, clients get a reassuring solid sound when they tap the wall.



### **Logix walls offer Superior Fire Performance**

Every Logix wall is a fire wall. From a minimum of 30 minutes, for the Contractor4 range, up to 180 minutes\* for the **6** and **8** ranges. And that's without any contribution from the finishes.

In independent testing the surface temperature of a **Logix6** wall rose only 11°C, even after 2 hrs exposure to fire.



### **Logix walls offer Superior Moisture Resilience**

Above ground the EPS foam used in Logix walls eliminates the need for extra protection in the form of a vapour barrier, saving time and money. Finishes can be applied directly to the surface, or with a small gap, depending on the finish required.

The performance of the Logix forms is virtually unaffected by moisture meaning they can also be used below ground for foundations or basements even in high table areas.

Build in a Flood risk area?

Logix walls are idea for area at risk of flooding, particularly when finished with wet plaster or cement based wall boards. A Logix wall won't swell or distort when wet, and doesn't support mould or bacterial growth.



### **Logix walls offer Superior Strength & Durability**

Logix walls are typically filled with 25 Newton concrete and the forms are design to withstand proper mechanically compaction. This makes them massively strong when compared to tradition house building methods.

The EPS in a Logix wall is incredibly stable and will continue to insulate without any loss in performance over the life of the building. And because the concrete is wrapped in an EPS blanket it will be protected from the extremes of tomorrow's climate.



\*Dependant on level of reinforcement used.

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### Highly Energy Efficient



**U = 0.23-0.075w/m<sup>2</sup>k**

**Y = 0.04w/mk**

**ACH < 2 m<sup>3</sup>/m<sup>2</sup>/hr**

### Environmentally Friendly & Sustainable



**A+** rated Insulation

**A+ / A** rated Concrete

+ Responsible sourcing Points

### In house Installation Teams



Through "Carbon Logix Ltd" we offer Structural Shell and Turn Key packages including:

- Fixed price
- Structural warranty
- Air Pressure test

### Faster Builds



Carbon Logix teams offer a rapid installation service, reducing prelims and overheads.

### Cost Effective



Competitively priced schemes faster builds, fewer days lost to weather, and easier follow on trades all combine to keep your projects on budget.

### Highly Moisture Resistant



Logix walls don't need an extra vapour barrier, and are unaffected by moisture, making them also ideal for foundations, basements, or areas of higher flood risk.

### Ready to Finish



Logix walls come ready to finish. Plasterboard is simply screwed in place, and the exterior finish can be applied, while your crew work inside.

### Fire Resistance



All Logix walls are fire walls. From a minimum of 30mins up to 3hrs (plus any contribution from the finish), Logix walls can offer superior fire protection.

### Superior Sound Insulation



Logix wall's combination of dense concrete and EPS make them ideal for party walls, hotels, theatres or urban projects.

### Improved Air Quality



Logix ICFs require no preservatives or chemical treatments Logix homes provide a healthy environment to live in.

### Strength & Durability



Logix walls deliver all the strength and performance you would expect from structural concrete. Ideal for basements, Commercial and multi-occupancy units.

### In house UK Manufacturing



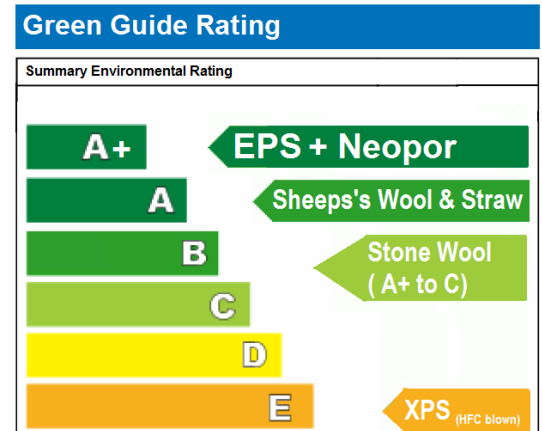
30yrs experience moulding EPS products for the construction industry makes Logix unique among UK ICF suppliers.

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## EPS and the built environment:

- EPS is "A+" rated for Eco points
- EPS is 97% air
- In less than 6 months EPS insulation will save more energy than was used to make it
- EPS won't sag or lose performance over time
- EPS is 100% recyclable
- EPS is CFC and HCFC free, & GWP <5
- EPS is flood resilient EPS won't support mould or fungal growth

EPS is free of preservatives or chemical treatments



EPS is amongst the highest rated insulating materials

For more information visit [www.epskonstructiongroup.co.uk](http://www.epskonstructiongroup.co.uk)

## Concrete and the built environment:



A concrete core from a **Logix** wall

We all know concrete is strong, durable and quiet, but did you also know?

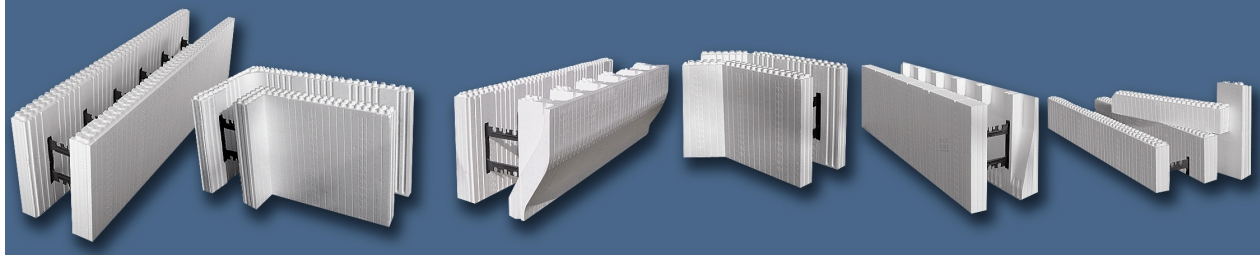
- A & A+ rated mixes are made Logix ICF walls comparable with Timber frame Construction.
- Concrete offers the maximum "responsible sourcing" points in the Code for sustainable homes.
- Concrete is a local material. 90% of concrete is used within 20km of the batching plant.
- Concrete offers the benefits of thermal mass
- Today's concrete is typically less than 7% cement, and has 40% less embodied energy, than concrete made with pure Portland cement.
- Concrete is naturally flood and fire resistant
- The British Cement industry has reduced its CO<sub>2</sub> emissions by more than 25% since 1990 levels.
- 24% of UK aggregate comes from recycled sources
- Steel used in the concrete is 100% recycled

For More information visit [www.sustainableconcrete.org.uk](http://www.sustainableconcrete.org.uk)

# Good. Solid. Logix.™

Made in-house by our experienced team, Logix forms are strong enough to cope with the most demanding of builds. They come in a range of preformed shapes to make your build fast and trouble free.

Logix ICFs are available in a variety of widths and thickness to match your requirements perfectly.



**Logix Contractor Range:** Ideal for all energy efficient buildings.

The Logix Contractor range is designed to combine excellent thermal performance, with solidity & ease of construction, all at an affordable price.

The forms are made from white fire retardant EPS foam, and typically give a U value of 0.23w/m<sup>2</sup>k or better depending on the finish.

- **Contractor6**, (160mm core). The most popular and versatile width. Can be used for basements, external walls and party walls.
- **Contractor4**, (100mm core) is designed for single storey construction, internal walls, & external walls with cast concrete floors.
- **Contractor8**, (200mm Core) Principally used for basements and party walls.
- **Contractor10**, (250mm Core) Principally used for basements.

Contractor4, 8 and 10 are made to order

**Comprehensive Range of Forms**

Logix UK offer a wide range of moulded forms to simplify the building process. The basic components in the range are straight forms and 90° corners, and end-caps.








Logix forms consist of 2, 70mm thick EPS panels, held in place with high strength rigid polypropylene webs, spaced on 8" 203mm centres, which are moulded into the EPS. The webs and EPS combine to make Logix forms extremely strong, yet light and easy to work with. The straight forms are 1.22m long, by 0.406m high (4ft x 16"), meaning 1 block builds 0.495m<sup>2</sup> of wall, yet is weighs only 3kg. Logix corner forms come complete with a unique corner brace, which makes them so strong that they don't need extra bracing during construction. It also makes fixing finishes easy. Logix end-caps and cavity closures, making installing windows and doors easy. Sliding into place within the forms, they keep the concrete back from the opening. This eliminates cold bridging at the openings, and importantly provides a consistent backing for externally finishes to adhere to.

## Logix Eco Range: Making Code Level 4 Simple

The **Eco6** is the same solid, easy to use form, as the **Contractor6**, but this time made from Neopor™, EPS foam to offer 13% better thermal performance, without increasing the wall thickness. U Value = 0.21w/m<sup>2</sup>k



The New **Logix XRV™ Panels** extend the range of U values on offer down to as little as 0.075w/m<sup>2</sup>k

	<b>ECO6</b> U=0.21 298mm
	<b>XRV6-4</b> U=0.17 330mm
	<b>XRV6-5</b> U=0.15 356mm
	<b>XRV6-6</b> U=0.13 381mm
	<b>XRV6-7</b> U=0.12 406mm
	<b>XRV6-8</b> U=0.11 432mm
	<b>XRV6-8/2</b> U=0.075 565mm

**Logix XRV™ panels** combine with the new **Logix** knock down webs to extend the range of Logix ICFs even further.

The new **Logix XRV™ panels** consist of the same Neopor foam used in the **Logix Eco6** range, and are available in 5 different widths from 102mm up to 203mm.

When combined with the **Logix** knock down webs they offer an unrivalled choice of U values as shown on the left.

The **Logix XRV6-4** has the same concrete core as the **Logix Eco6** range, with 102mm (4") of foam instead of the usual 70mm on one face. This improves the U value to 0.17 making code level 4 housing easy to achieve.

The **XRV6-5** is suitable for Passiv-haus buildings and has a thickness of only 356mm, while the XRV6-7 and **XRV6-8** are ideal for code level 5 and 6 homes.

For the really energy conscious among you the **XRV6-8/2** offers an astonishing low U value of 0.075!!

By offering these amazingly low U values, inherent airtightness and low thermal bridging, Logix ICFs are the choice for the energy conscious builder.

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### What can I build with Logix ICFs?

With Logix you can build complete new buildings or extensions, with or without basements up to 6 storeys high.

### How fast can I build with Logix ICFs?

An experienced crew can be expected to build at a rate of 3-4m<sup>2</sup> of wall/man/hr. This includes preparation of the windows and doors, and filling the wall with concrete.

### How does it compare in terms of cost with traditional construction?

The materials are more expensive than bricks, but the speed of build combined with ease of finishing means the overall project cost is competitive with other building methods.

### How do I finish the exterior of the building?

Logix ICF walls can be finished in a variety of ways including rendered, wood cladding, tile hanging, brick or stone finishes. For a list of suppliers of finishes visit [www.logix.uk.com/ICF\\_finishes](http://www.logix.uk.com/ICF_finishes)

### How do I finish the interior?

The most common internal finish is plasterboard. The boards can be placed directly against the wall and screwed into place, giving a solid sound when you tap the wall.

### How do I hang heavy items on the wall?

A single screw in the Logix plastic web can hold 15kg. For items subject to heavier loads, like the hand rail on the stairs, remove a small section of the eps foam and fix back to the concrete through a timber packing piece.

### Can I get a structural warranty on a new build?

Logix ICFs have BRE certification (#122/06) which is accepted by the "NHBC", "Zurich", "Premier Guarantee", and other warranty providers.

### Do the walls need reinforcement?

Most above ground walls can be built without any reinforcement, except above the windows and doors. Basements and retaining walls often require reinforcing, and thanks to the unique Logix web, this can be installed without the need to tie the bars together.

### What sort of concrete do I need?

Typically above ground the mix is C20/25, with a 10mm stone, 120mm slump, pump grade, which is readily available from your local ready mix supplier. For basements the strength is usually increased to C30/35.

### Do I need to compact the concrete?

Yes. Even carefully placed high slump mixes can contain a high proportion of air once poured into the walls. This can weaken the concrete and reduce the life of any reinforcement. Logix always recommends the use of an internal poker, in line with British Standards.

### Can I make the concrete any "greener"?

By replacing some of the Portland cement used in the mix with recycled materials like "ggbs", we can reduce the carbon footprint of the concrete without affecting the performance. Contact us for more details.