

Larkfleet Elevating House



The Larkfleet Group of Companies is building an experimental Elevating House to test the operation and maintenance of the jacking system which will lift the house in the event of flooding. The building will sit on a steel ring beam in place of conventional foundations.

Experiments will run for up to three years from 2018. The house will then be removed and the site returned to agricultural use.

- **Experimental house type:** Three bedroom detached home 8.7m x 6.3m.
- **Experimental house weight:** 65 tonnes, including ring beam.
- **Experimental house structure:** Steel-framed, modular building manufactured off-site and then erected on jackable steel ring beam.
- **Location:** Weston Hills, near Spalding, Lincolnshire.
- **Jacking system:** Eight mechanical jacks driven by shafts from single electric motor and gearbox.
- **Jacking height:** Up to 1.5m above ground level.
- **Jacking speed:** From zero to maximum elevation in less than five minutes.

It is anticipated that houses of this design would be jacked up well ahead of the arrival of flood waters, based on advance warnings from organisations such as the Environment Agency.

Power and utility connections

Power for operating the jacks would be guaranteed by a battery that would be charged and kept topped-up by solar panels. However, this system is regarded as a 'back up'. Because the house would be lifted in advance of flooding, the jacking mechanism would probably be powered from the normal mains electricity supply before this was cut off by flooding.

The battery and solar panels would provide the house with some continuing electricity supply when raised above the ground and the gas, water and sewage would remain connected through flexible hoses. However, it is not envisaged that residents would remain in occupation during floods. Instead, the householders would pack up, lock up and jack up the home before taking refuge in temporary accommodation on higher ground elsewhere.

Protected by UK and international patents.

Images: Bottom left: The normal position of the Elevating House

Bottom right: The Elevating House elevated



The Larkfleet Elevating House is designed to rise on stilts to avoid flood waters. It could enable housebuilding on thousands of sites across the UK which at present cannot be developed because of the risk of flooding.

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