



Leveret Barn and Land

BARN

Leveret barn was built sometime during the last war by the previous occupants of Leveret Croft – Tom Curtis, works manager at Firth Brown, and his son, Jack Curtis. The structure was most unprepossessing. The two-storey construction was a jimcrack timber frame with flaking infill concrete on the ground floor and rusting corrugated iron on the upper walls and roof. The single-storey had been used as a pig sty and was built in poor concrete and the flat roof leaked.

It took us 6-7 years to renovate between 2003-2011. We initially applied for planning permission to demolish and rebuild in 2002 but were refused. Rather than appeal we decided to renovate. We got permission for ancillary use to the house and for all the repairs.

Construction

The first task was to build a retaining wall on the road side of the barn to retain the sloping bank. Leveret Croft is on a spring line and to deal with the ground water we inserted a land drain at the base of the wall and used the corrugated iron from the roof to create a barrier between the existing wall and a new 600mm retaining wall.

The roof had five attractive king-post timber trusses that had come from the Atlas works in Sheffield and the first floor was supported on telegraph poles. We retained all these in the renovation. The concrete of the single story section was so poor that we had to shutter it and pour a new 4" reinforced concrete skin over all the walls and roof. This was a huge expensive task but a way of dealing with the planning issue. The windows on the upper floor have wooden shutters in the form of horizontal cladding.

Key features

- clad in sustainably sourced cedar and roofed in Onduline bituminised sheets
- 6" Kingspan PIR and Actis Tri-Iso in walls and roof; 8" polyurethane slab
- Argon filled double-glazed windows and highly insulated doors
- 3900W PV system using 20x Sunrise 195W panels

Insulation

It was fairly straight forward to insulate the upper floor and roof but the ground floor had to be dry-lined with 4" studs. The insulation throughout was Kingspan PIR boards which I cut accurately to fit tightly between the studs. To deal with cold bridging we wrapped the walls and roof in Actis Tri-iso Super 10 multi-layer sheeting.

Windows and doors

Being so exposed we wanted high performance windows and doors, wood rather than plastic and also to keep the original glazing bar design. We opted for Nordan windows and doors from Norway that could be made to measure and factory painted. These were cheaper, performed better than the Ideal Vinduet we used on the house, but are not as well as ALU-Clad Rationel we used to replace the windows and doors on the front of the house that was exposed to the weather. To provide further shelter we planted a hornbeam hedge supported on stout timber posts and stainless steel cable. This now forms a protective wall through which we cut "windows".

Water supply and sanitation

The water supply comes from the house. We have our own spring and the water is filtered for sediment.

Heating and lighting

We installed 4 kw of solar and the two parts of the barn are each heated by two 1 kw electric convactor heaters. The lighting is either LED or low energy fluorescent.

Performance and what we would do differently

The barn performs well. It is air-tight and needs little heating. With hindsight we should have demolished the single storey and rebuilt in timber frame rather than in concrete. The Onduline sheet was not as durable as expected and we have replaced it with Accord corrugated powder coated steel which is more durable.



LAND

We have 5 acres of land divided by Leveret Lane, our access road, which is also a public footpath. The house on one side with an acre of garden and the Barn on the other with 4 acres. When we bought Leveret Croft in 1996 the land had been heavily grazed year round and was enclosed by dilapidated dry stone walls. My own training was in horticulture but from the start our aim was to develop the land to be wildlife friendly and increase biodiversity. We started work on the land straight away.

We halted the grazing in order to observe and consider how best to use the different areas. We sought advice from the PDNPA and obtained grants for repair of dry stonewalls and fencing. We obtained grants for tree planting and renovation of ponds and appreciated a yearly visit from an ecologist who monitored our progress.

The walls were all rebuilt and on the 4 acres of land there are five ponds, a wildflower meadow, an allotment for vegetables and soft fruit, an orchard of plum damson, bullace and apple and an area of established woodland.

In managing the land we follow the basic principles of "wild gardening" in observing and learning from experience, not using herbicides and pesticides and creating habitats for birds, mammals, insects and amphibians. We have made many bird boxes, which have successfully raised multiple broods, and are attracting swifts. Badgers visit and brown hares live in the garden. Moths and butterflies are plentiful.

House – Shady garden using existing large trees and planting hedges and flowering plants which enjoy shade and provide shelter and nectar for most of the year.

Bill's Field – contrasting geology with moorland and bog habitats adjacent to each other.

Wild Flower Meadow – managed in the traditional way by excluding grazing from April to mid July and controlled grazing in the autumn and sometimes spring depending on the weather.

Orchard – an experiment in growing fruit at altitude. We found that plums are generally the most successful.

Vegetable Garden – a small area next to the orchard and compost bins which is surrounded by rabbit fencing

Woodland – an existing beech "hedge" about 25ft high separated this area from the meadow and we planted young trees to create the woodland which now has it's own ecosystem and rich in birdlife. We keep specimen trees such as oak, cherry, lime and coppice an under story of hazel, field maple, bird cherry. Ash used to flourish but is now succumbint to "ash die back" Primroses, bluebells and snowdrops cover the ground in spring.

Limestone Bank – we renovated an existing wooden barn. The flat area next to the barn had been made by dumping concrete rubble and by adding some soil we created a habitat where lime loving plants were flourished.

Ponds – 5 ponds which we linked together by underground pipes and gravity to a central spring in the meadow.



Overview

Property age: Built about 1940; renovated 2005-2011.

Type: Detached. *Floor area:* 100m² *Cost:* £102.000

Timber frame and concrete, cedar shutters

Energy Use 2019: Electric 2746 kWh

Contacts

Architects: Andrew Yates, [EcoArc](#); *Structural Engineer:* Phil Cooper [CAR Ltd](#)

Carpenter: [Brad Hurst](#) *Builders:* Mark Richard; Geoff Trower

Walls: David Sampson; Paul Bristow. *Fencing:* Allan Froggatt

Plumbing: Mark Coyle [UGS](#); *Painter:* John Gregory

Water system: [Marshall Pumps](#) *Solar:* [Midsummer Energy](#)

Site works and concreting: Andrew Marsden. *Ground works:* Gordon Whittaker

Tarmacing: [Gary Fletcher](#). *Tree work:* TreeFellas; HV TreeCare; Tree Work

Suppliers: *Windows and doors:* [NorDan](#); *Insulation:* [Sheffield Insulation](#) and Enigma Insulation; *Cedar:* [Capricorn Timber](#); *Pitch Pine* Barry Whitehead.

LEVERET CROFT

Stephen Platt and Scharlie Wraight
Leveret Croft
Hathersage
S52 1BR
Tel: 01435 650507
Mobile: 07970 880046
Work: 01225 460473
steve@carltd.com

