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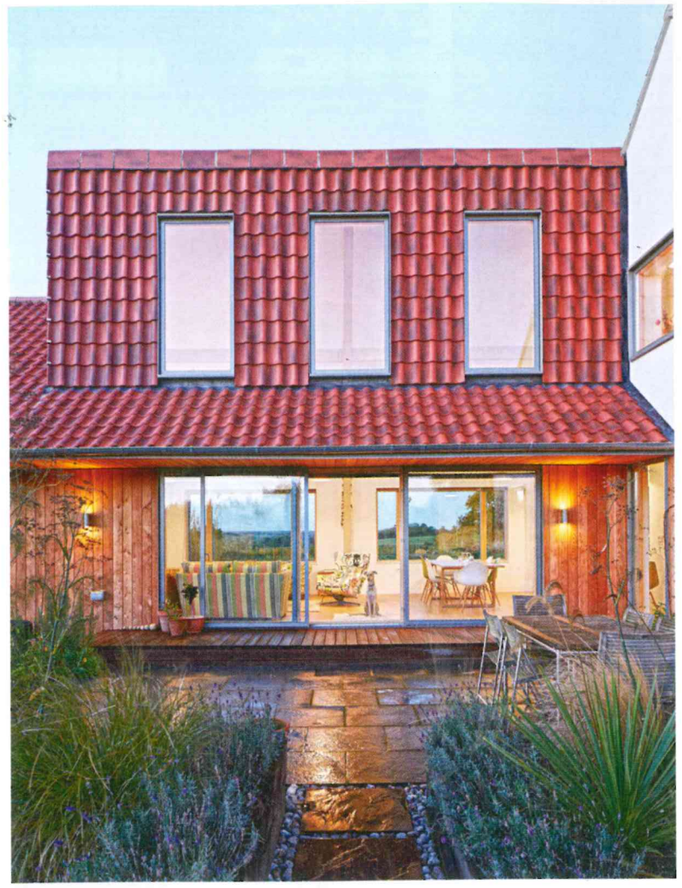
Looking FORWARD

Colin and Sally MacKinnon have built an exciting yet practical eco house overlooking the Waveney Valley in Suffolk.

STORY **DEBBIE JEFFERY** | PHOTOGRAPHY **JOAKIM BOREN**



Colin and Sally MacKinnon had lived in their 16th-century oak-framed house in Suffolk for 30 years and although they loved the character of the property they were far less enamoured with the expensive heating bills and high maintenance costs associated with such an old building.

"I wanted to downsize and build a more practical eco house for the two of us, but needed to convince Sally to leave our lovely old home," explains Colin who, at six foot tall, was constantly banging his head on the beams in the listed property.

"When a falling-down bungalow came up for auction near our house I decided to buy it, because of the amazing views. Hills in Suffolk are unusual and the village plot is situated on a hillside overlooking the Waveney Valley."

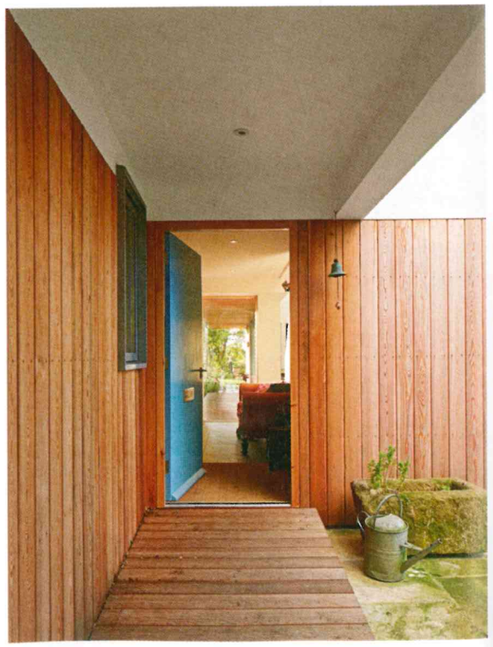
Running along the border between Norfolk and Suffolk, this valley is an unspoilt haven of wildlife, idyllic villages and market towns, and the secluded rural site offers an outstanding outlook.

The quarter acre plot sits in an isolated location and abuts land designated a Special Landscape Area.

Despite its elevated position overlooking the adjacent countryside, the plot is surprisingly secluded and is surrounded by farmland and tall mature trees. An unattractive single-storey bungalow, together with a garage and a small shed, previously occupied the site and were ripe for demolition.

"It was important that the replacement house should blend in with the environment and not look too out of the ordinary, so finding the right architect was vital," says Sally.

The couple chose to work with internationally renowned practice Hudson Architects, whose ethos is to produce beautiful buildings, to ensure quality construction, and explore innovative



IN BRIEF

PROJECT: New timber-frame home in Suffolk
PAID: £295,000 in 2011
SPENT: £355,000
WORTH: £915k+

EXTERIOR

The Eyrie is a new SIPs house on a secluded rural site in Suffolk, built from a carefully chosen palette of traditional materials, and incorporating a wide range of sustainable and renewable energy technologies.

"We were able to create a look reminiscent of a modern Suffolk barn."

design while preserving a strong sense of space. The practice was keen that the replacement building should do justice to its setting and make an improved contribution to the landscape.

At the same time, the design team was conscious that a statement building would be inappropriate for both the location and Sally and Colin's needs. The result is a modest, sensitive, and well-proportioned house that sits comfortably in its surroundings, and offers a pleasing series of gentle twists on contemporary domestic architecture.

"We gave Hudson Architects our brief and they delivered exactly what we wanted and more," says Colin, company director of a tourism company in Africa. "The planners were very considerate when it came to our application, and when a model of the proposed

DOWNSTAIRS
Simple finishes, high-level windows, the exposed Glulam frame and a wood-burning stove imbue the double-height living area with a Scandinavian feel. A cosy reading snug has been created behind a bookcase partition at one end.

UPSTAIRS
The steeply pitched roof creates unusual angles, internal space and volume to first-floor rooms.

"Our electricity, space and water heating cost just £1,000 in the first year."

house was shown to the parish council they loved it. The only aspect they weren't keen on was the idea of a metal roof, so this was changed to new red pantiles, and we're now glad we went with this option."

The basic layout of the house is a 90 degree rotation of the existing building, allowing the main elevation to receive natural light from the south and take advantage of beautiful views to the north. The design takes cues from vernacular Suffolk architecture, particularly with its prominent pitched roof.

Internally, large pitched ceilings provide generous first-floor space without dramatically increasing the overall height of the house while, externally, reducing its impact within the landscape. "Although we were downsizing we definitely didn't want to feel cramped, as we both love plenty of space in a home," says Sally.

Hudson Architects rejected a monotonous roof: in some areas it is folded down to leave vertical elevations, framing large windows offering outstanding views. Elsewhere the pitch is reversed to create a lookout area - or 'eyrie' – over the landscape. The overall effect provides a varied range of interesting elevations and a delightful play of angles from many different viewpoints around the site.

Internally, all of the building envelope is used, with no redundant spaces. The main living areas – dining room, living area and kitchen – are in an open-plan arrangement, using the roof to create height and volume.

Large windows on all sides bring in natural light, enhancing the sense of space. Glazed doors open to a veranda to the south and a terrace to the east, while generous picture windows offer views over the countryside to the north. This part of the house is punctured by the first-storey eyrie at one end, with a cosy library snug beneath.

The more private bedroom and bathroom spaces occupy the other section of the house, alongside an office, hobby room and laundry area. "We wanted a home which our friends and grown-up children would enjoy visiting, as well as a house which would operate for just the two of us," says Sally.

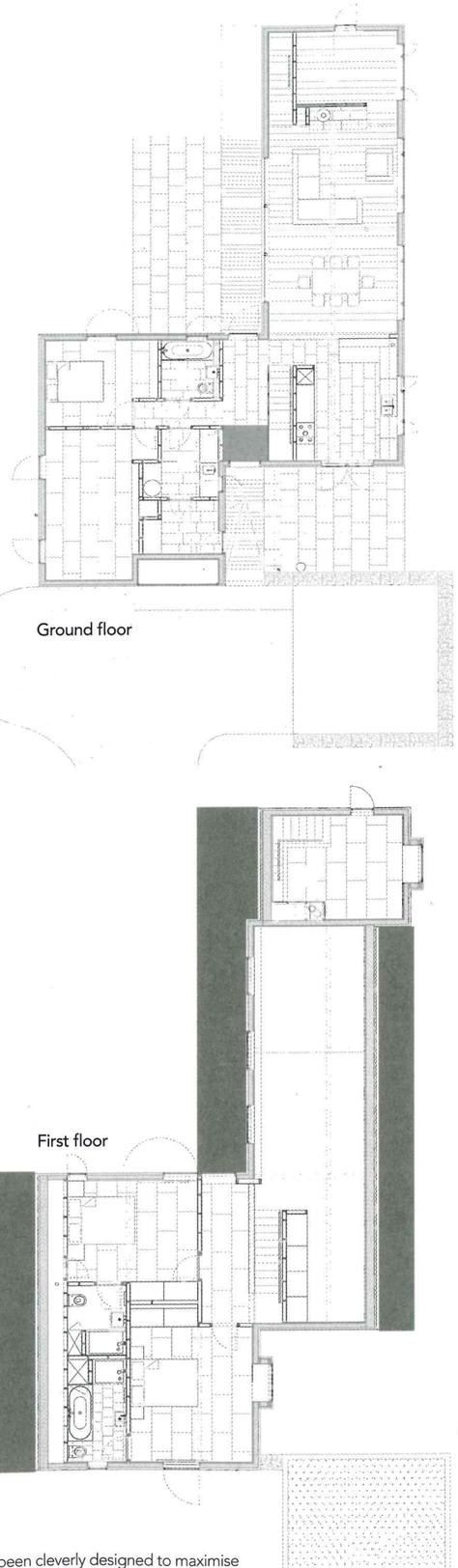
Natural and sustainable materials were used as much as possible during the nine-month building project,

Suppliers

PROJECT
Architect and project management Hudson Architects: hudsonarchitects.co.uk
Builders Robert Norman: robertnormanltd.co.uk

STRUCTURE
Prefabricated Kingspan Tek timber frame Lowfield Timber Frames: lowfieldtimberframes.co.uk
Baumit lime render Limetec: limetechnology.co.uk
Green roof Bauder: bauder.co.uk
Windows Velfac: velfac.co.uk
Neo interlocking clay pantiles Sandtoft Roof Tiles: 01427 871200
Rainwater harvesting system Binder: binder.co.uk
Galvanised steel gabions Fine Mesh Metals: finemeshmetals.co.uk

FIXTURES AND FITTINGS
Kitchen B&Q: diy.com
Engineered timber flooring Barhams: 01638 561978
Photovoltaic and solar thermal installations East Green Energy: eastgreenenergy.co.uk



"Our home is comfortable, cheap to run and easy to clean... We now have more time and money to enjoy life."

which was undertaken by a contractor and overseen by Hudson Architects, who acted as project managers.

A prefabricated timber-frame structure was chosen to minimise material waste and maximise air tightness. Its handsome Glulam timber beams and fixings are exposed, emphasising the height of the main space and allowing the simple structure of the building to be expressed throughout.

"I chose to use structural insulated panels (SIPs) for the whole house, including the roof, with a Glulam frame," explains Colin. "It's worked well and we were able to create a look reminiscent of a modern Suffolk barn."

Externally, a combination of lime render, clay pantiles and larch timber cladding has been used: a range of sustainable materials which reference vernacular Suffolk architecture and, arranged thoughtfully alongside each other, offer visual interest.

On the south elevation, the pantiles have also been used vertically in a playful twist to frame a set of large windows.

A new garage with a sedum roof, constructed from locally sourced Suffolk flint contained in gabion walls, adds further interest. This structure provides shelter to a small terrace outside the kitchen – an outdoor area to relax and enjoy the extensive views.

A number of environmental features ensures the sustainability of the house and its impact on the environment. The highly insulated timber frame helps reduce internal temperature fluctuations, while the east/west orientation and large south-facing windows make the most of natural daylight. Deep overhanging eaves over the veranda, prevent excessive solar gain during the summer, but allow winter sun to penetrate and help warm the house in colder months.

The large south-facing 45 degree roof elevations are well suited for a 2.3kW array of PV cells and solar tubes to provide heating and hot water. Underfloor heating is connected to a heat pump, and a wood-burning stove has been installed to provide additional heat if necessary during the coldest months. As the house remains warm throughout the year this is rarely used and less than £150 of wood fuel is consumed annually.

A rainwater collection system provides water for toilet flushing and the washing machine, with galvanised guttering and a chain in place of standard downpipes – an effective method of directing the water, which Colin had seen while working in Africa. Low-energy lighting is also installed throughout the house.

"All our electricity, space and water heating cost just £1,000 in the first year after we moved in," says Colin. "This was a huge reduction compared to the running costs of our draughty old oak-framed house, and really made the project worthwhile. Our new home is comfortable, cheap to run and easy to clean. All of this means that we now have more time and money to enjoy life."

CLADDING
A combination of lime render, clay pantiles and larch timber cladding has been used.

The floorplan

The two-storey house has been cleverly designed to maximise space. Ground floor living/dining/kitchen areas are open plan, with an en suite bedroom, a study, utility room, pantry and snug also on this level. Upstairs is the master suite, a guest bedroom and the observatory, designed to take in the view.

Colin's TOP TIP
"Choose an architect with vision, who can deliver your brief within the budget. We were extremely lucky to find just such a practice."

EXTERIOR
The overhanging roof provides protection, and pantiles have been hung vertically on some sections of walling.

Q&A

What was the high point?
Realising how quiet and peaceful the house is to live in, and how the large windows make you feel part of the landscape.

...and the low point?
The heat exchanger is probably the only item I'm disappointed with as it's rather noisy and I find it difficult to access for servicing because it wasn't located in the best place.

Your best buy?
The high-level windows, which fill the house with light.

...and the biggest extravagance?
In some ways the renewable technologies were an extravagance, but for us they were an essential part of this house.