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on water

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friendly garden

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Summer 2016

THERE IS NO SINGLE ROUTE to a perfect self-build. Unique solutions are required for each individual, family and location. For some, the answer lies in designs that are so flexible they can be adapted to suit their needs at any stage of their life. Others believe it's best to build the kind of house that is right for the way they want to live now, and that is our focus in this issue.

An example of how uniquely suited a house can be to a couple is the story of artist Max Brosi and his wife Anna Marie, which starts on page 26. They were guided by Walter Segal's self-build principles, their connection to nature and creative leanings. The result is a compact, functional home that has windows positioned to align with the sun, as our ancestors did in Newgrange, and a self-sufficient garden.

Wherever you live, one key to success is making sure your home is designed so you can equally enjoy being indoors or out. It can be a real challenge in Ireland to make that happen so if you're looking for ideas on how to get reacquainted with your patch of green, why not consider building a tree house (check out our hands-on guide on page 72) or start dreaming about that swimming pool or hot tub (on page 86)? For those with furry friends, Fiann Ó Nualláin offers lessons in pet-friendly gardening, which start on page 92.

Longer, drier days also provide the ideal circumstances in which to carry out intrusive renovation work. But this should not be undertaken lightly as poor design and execution can have serious long term effects. If you're thinking of making some renovations, make sure you consult our tips starting page 82 to help you avoid the pitfalls.

And this summer don't forget to check your roof. Maintaining it on a regular basis, no matter how new it is, will save you a lot of heartache. Turn to page 64 for insights on what to do.

To finish on a lighter note, and if you've been inspired by Max Brosi's woodturned creations showcased in his home, then it's time to don the face mask and start learning how to work with a lathe - the masterclass starts on page 118.

Happy building and improving!

Astrid

Astrid Madsen
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Our panel of experts for summer 2016

PAT BARRY

Pat Barry is executive director of the Irish Green Building Council which he co-founded in 2010. He is an architect with over 20 years' experience in Ireland, Europe and South America, holds a masters in environmental design of buildings from University of Cardiff and is a qualified Passive House and DGNB consultant. Irish Green Building Council, 19 Mountjoy Square, Dublin 2, tel. 01 681 5862, www.igbc.ie



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JIMMY LENEHAN

Jimmy Lenehan is a Kilkenny based thatcher who started his training in 1992. His main interest is in historic buildings and as a sideline he lectures in conservation. When not thatching he can be found delving into the murky world of marine archaeology where he works as a commercial diver. Email jimmylenehan01@hotmail.com



PETER O'BRIEN

With over thirty years' experience in carpentry, construction, horticulture and design, Peter founded Plan Eden Garden Design in 1994. He is a fully accredited member, and former chairman, of the Garden and Landscape Designers Association (GLDA). Peter specialises in high quality garden design and construction, and in recent years has been especially involved in designing and building bespoke tree houses and garden structures. www.planeden.ie info@planeden.ie mobile 086 221 5468



FIANN Ó NUALLÁIN

Award winning garden designer, author and broadcaster, Fiann has a background in fine art, sculpture, horticulture, ethnobotany and complementary medicine. He currently is a co-presenter on RTE 1's Dermot's Secret Garden programme and is a regular SelfBuild & Improve Your Home writer. Check out Fiann's blog on www.theholisticgardener.com or send him a tweet @HologicG



DEBBIE ORME

Debbie Orme is a freelance writer and editor, who works across a variety of subjects including business, healthcare, property, pregnancy/parenting and the over 50s. She also ghost writes autobiographies and proofreads for a wide range of publications. Email debbie.orme@talk21.com or call NI mobile 0773 9356915.



HELEN SANDERSON

Interior designer and professional organiser Helen Sanderson is an expert on the design and psychology of space. She is the founder of Ministry of Calm, an interior design company specialising in creating inner calm through mindful design of the home or workplace. Her aim is to create beautiful, healing spaces that help people manage the stresses of modern life. www.ministryofcalm.co.uk



KEVIN TAYLOR

Kevin Taylor BSc (Hons) FIOR, is the National Federation of Roofing Contractors' Technical and Training Manager. www.nfrc.co.uk or contact 020 763 87663 (NI) / 0044 20763 87663 (ROI)



CORALIE VERHEYDEN

Coralie Verheyden is the co-founder of BARAK7, a European furniture brand that offers industrial-style hand-made designer products, many of them one-offs. She's been involved in interior design for six years and has been focusing on the 'industrial look' for the past three. Her first breakthrough was with a home makeover show on Belgian TV called A vendre, à acheter. www.barak7.co.uk



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**Magazines
Ireland**





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The latest happenings and products of special interest to self-builders and home improvers.

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Introducing your new best friend...



All images shown are of the **TOTO Washlet**, exclusive to Soaks Bathrooms.

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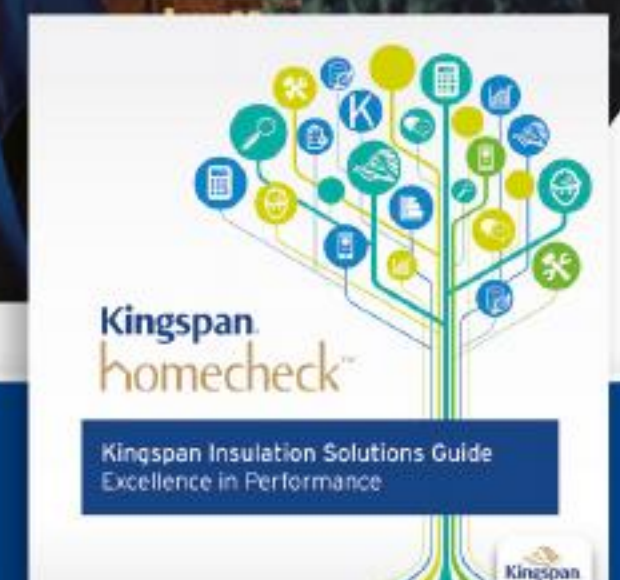


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However once you've moved into your new home or extension, you'll probably start to notice two problems. The main one is the need for specialist fittings to hang up heavy items and the other is the fact that if you knock something off its surface, a dent will appear!

Gyproc has just launched a revolutionary new plasterboard called **Habito** to specifically target these issues. It's installed like standard plasterboard yet offers enhanced performance in fixability, durability and acoustics.

Now you can attach heavy items such as curtain poles and a 40" TV by simply screwing directly into the wall allowing a weight of 15kg to be hung from one 5mm woodscrew. The product's reinforced core is ten times stronger than standard plasterboard which means it can easily withstand the repeated bumps and knocks



that happen day to day.

"All of these attributes [bring us] walls that [provide] so much more - a surface that's strong and stays looking good for longer," added Wayne Murphy, Gyproc Marketing Manager.

For more information about the Gyproc Habito, visit www.habito.ie
Unit 4 Kilcarbery Business Park, Nangor Road, Dublin 22, habito@gyproc.ie,
freephone (ROI) 1800 744480,
freephone (NI) 0845 3990159

Hooked



CHOOSING A COLOUR (let alone a pattern!) for your roller blind fabric is a juggling act; you want something that's adaptable enough to fit in with any style you eventually choose for the room, yet at the same time it must have character.

'Neutral' might seem at first to fit the bill but bear in mind it will only appear so in contrast with the dominant theme – if you change the room's distinguishing

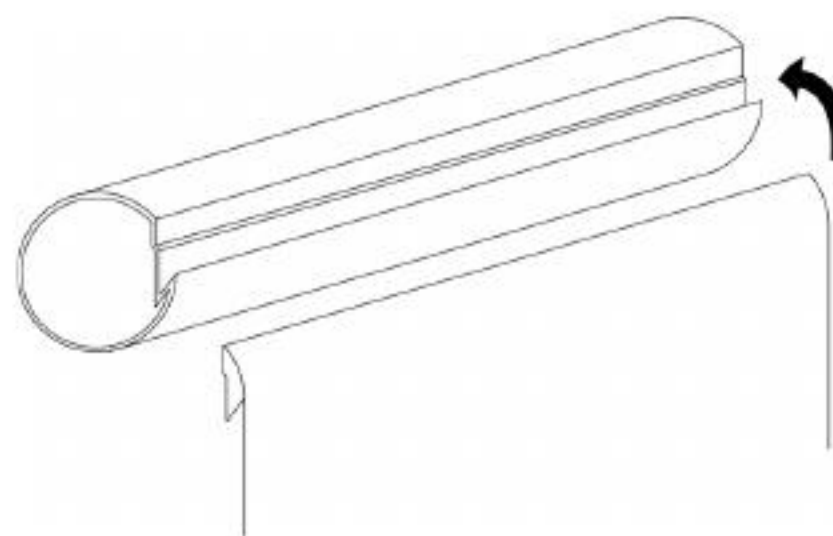
features the 'neutral' colour or style may no longer blend in.

The bottom line is, even if you go with what you believe to be a failsafe solution, an interior design overhaul will invariably have you looking around for another type of fabric. However, having to buy an entirely new unit just to make the blinds

match the décor feels like a waste if the mechanism is still working.

The **Fabric Changer Roller Blind** from **Bloc Blinds**, which recently won Best Product or Service at the British Blinds and Shutter Association (BBSA) Awards, is ideal for when you aren't ready to commit to a particular style and/or don't want to incur the expense of a whole new unit.

With a simple 'hook on, hook off'



action you can swap the fabric as many times as you like; the mechanism that rolls the blind up and down has a hook onto which you can attach any of the blinds available in their range. Pelmet are easy to substitute too as they can be clipped on and off.

For an instant quote based on your window's specifications check out www.blocblinds.co.uk and prepare to get hooked to this simple but clever system!

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OVER THE WEEKEND of 14/15 May architects throughout ROI will be offering one hour consultations to the public in exchange for a donation of €70 to the Simon Communities, a charity that delivers support services to homeless people.

The RIAI Simon Open Door campaign is in its twelfth year and has raised over half a billion euros to date; this year the aim is to reach €100,000 in donations.

Carole Pollard, President of the Royal Institute of Architects Ireland said at the launch: "Evidence has shown that the existing housing delivery model has failed us and that new models must be developed, [including] starter homes becoming appropriately designed and more affordable [...]."

She also pointed out the need for properly resourced Architects' Departments within local authorities to meet "the complex demands of delivering housing in the context of sustainable communities." Bookings are done online via www.simonopendoor.ie

Dermot Bannon at the launch of the 2016 Simon Open Door weekend.



In NI, if you've missed the Jill Todd Trust 'Ask an architect' weekend on 16/17th April 2016 – which saw over 80 architects donate their time to benefit the Centre of excellence for Cancer Research at Belfast City Hospital – then know

there is another option and that is to sign up to the RNLI's 'Architect my house' fundraising campaign which is open all year round and run by Ben Wilson www.wilsonmcmullen.com Tel: 7082 5865

NI heating grants stop

JUST OVER A YEAR AFTER its introduction, the domestic NI Renewable Heat Incentive (RHI) was axed due to budgetary constraints.

As of February 26 the scheme, which provided domestic properties with payments for the use of an eligible renewable heat technology, has no longer been accepting applications.

"It is estimated that around 6% of NI's heating needs are now provided through renewable technologies," said Enterprise, Trade and Investment Minister, Jonathan Bell. "The Executive's target to achieve 4% renewable heat has been exceeded."

To meet RHI commitments for existing installations, significant levels of additional funding will have to be found from within the NI Executive's budget for the next five years to address the current deficit, added the Minister. The non-domestic RHI has also been closed; it had been in operation since November 2012. www.detini.gov.uk

ROI Builders' register postponed to 2018

THE DEPARTMENT OF the Environment, Heritage and Local Government has revealed its plans to make the Construction Industry Register of Ireland (CIRI) statutory have been delayed to 2018 at the earliest.

While it was originally envisioned the mandatory builders' register would be in place by this year, a spokesperson for the Department told *SelfBuild & Improve Your Home* the legislative process hadn't started yet.

Despite the delay, the spokesperson said placing CIRI on a statutory footing remained a priority with legislative proposals due to be presented to the Government in the second quarter of 2016.

"The legislative timetable is a matter for the Oireachtas and typically takes 18 months to two years," added the spokesperson.

CIRI is currently operating on a

voluntary basis and was introduced in the context of building control legislation that was enacted over the past couple of years*.

Once CIRI becomes statutory, it will be mandatory for all builders operating in ROI to register and comply with its requirements, including training.

CIRI is currently administered by the Construction Industry Federation, a representative body for the construction industry. www.ciri.ie

*The updated building control legislation offers self-builders the opportunity to either have their house building project officially supervised and signed off on (a design professional that is on a statutory register files documents on the Department of Environment's building control management system) or choose to self-certify (the 'opt out' option).

For full details and links to documentation, see the Summer 2015 issue of *SelfBuild & Improve Your Home*. Also see www.localgov.ie/en/BCMS

ROI calling NI: prefix with 048 NI calling ROI: prefix with 00353(0)

“

Having experienced renovations throughout my childhood, and living with three siblings, I'm pretty much used to things not being finished... ”



Blood, Sweat and Tears

Anyone who has gone through a self-build as involved as Derek and Lorna Lawther's in Co Down will wonder if it was worth all the hardship. On thing's for sure, the satisfaction of moving in knowing you've done it all yourself is hard to beat - even if everything hasn't gone as planned and the house isn't quite finished...

Lorna was raised in what could perhaps best be described as a constant state of 'renovation flux'; her dad built their family home and as a natural result, he was constantly improving on it. With his brother he also converted their parents' home to make it retirement-friendly. "Having experienced renovations throughout my childhood, and living with three siblings, I'm pretty much used to things not being finished," says Lorna. "I was also keenly aware of the importance of hiring an experienced designer! My dad's never used a professional that provided architectural services and I knew the problems in terms of design that could have been averted had he done so."

"There were issues with positioning, light, inadequate use of space. My heart bled out for my grandparents' cottage, I feel like they destroyed a lovely cottage to replace it with a bungalow!" Derek, meanwhile had been dreaming about building his own house. This was more of a ►



More photographs available at
www.facebook.com/selfbuild





The garage was done first so they could move in while the rest of the build was taking place.

pastime than a serious occupation as he didn't believe the economics would ever stack up to make it happen.

In the beginning...

The story starts in 2002 when newlyweds Derek and Lorna bought what they thought was their home-for-life, blissfully unaware of what their future held.

"A couple of years later we had our first child and at this stage we considered extending the house, but there was no question of moving,"

explains Lorna. "We loved the neighbourhood and the house worked very well for us."

Things only started to change when their neighbour's property was put on the market. "He made a nice profit and we did start to dream," recalls Lorna. "Derek had always been keen to pursue a self-build and all of a sudden it seemed possible."

"Even though we didn't think we'd get as lucky as our neighbour we decided to test the waters and put the house on the market. Within two days we got an offer that was 100% more than the asking price!"

Young and enterprising, the couple rather impulsively chose to sell. "We decided let's do this! The reality of not having anywhere to move to hit us pretty quickly so every evening we went around in the car looking for a site to buy."

"We'd set the boundaries within which we wanted to live, an area within half an hour from work and in the vicinity of where our first house was," adds Lorna.

"We knew this area well, we had contacts and eventually we heard through the grapevine that a farmer was going to put a field on the market." This was in 2006.

"We jumped at it even though it was slightly more expensive than what I had in mind, I did have an idea of the going rate as land was holding its value, not soaring like property was. I think the farmer was motivated to sell quickly because there were just six months left on the Outline Planning Permission."

The perfect fit

"The next morning on my way to work I handed the yellow pages to Derek and asked him to find us ►



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a designer, I wasn't going to repeat the mistakes of the past! He rang half a dozen and the first to ring back was Julian. It was an unbelievable match."

"Some of the other architectural professionals were trying to push us into things we didn't want. In one instance, the designer only had experience with extensions yet wanted to try his hand at self-builds – I didn't want him experimenting on my house!"

Julian's work just spoke to the Lawthers. "It was uncanny how his style espoused ours," says Lorna. "We went to his own house and fell in love with it. It was exactly what we wanted."

"We just got on so well, we gelled. He was a real gentleman, there never was anything pushy about him but he always gave advice when it was needed. We're deeply saddened he's passed away." The template used for the Lawthers' house was Julian's with some changes in scale. "We had very specific room sizes in mind which was in a large part driven by the furniture we had – in a way we designed around them! We spent our wedding



money on really nice pieces that we love, for instance we have a 12ft kitchen table and it simply had to fit.”

“The style of the house also had to match so we went for a sort of modern rustic cottage. Most of the items have a story to tell; the kitchen larder cupboard is second hand as is our bedroom dresser. The fridge was also bought used while the range was refurbished by a friend.”

“The ‘wow’ factor comes from the valuted ceilings, one of Julian’s design features, which makes the rooms feel bigger,” adds Lorna. “At this stage we didn’t realise that from initial concept to completion it would take us five years!”

On the wish list they had a nice hallway, flexible enough so that it could be used as an extra reception area and dining room. They also wanted a sunroom near the kitchen. “Julian advised us to have a door, which we close every winter - it does get cold in there!”

Julian’s experience also shone through when Lorna suggested adding a step to bring you down

into the living room, having liked the sunken look she’d spotted in interior design magazines. “He advised us it would be expensive to do as we’d have to dig it out, we’d also have to re-think the space to make it work. It was a lot of money to be paying for something that may not turn out to be that practical with children running around!”

Julian’s house had wide cottage walls and the Lawthers also wanted to replicate the look. “I love big thick walls and deep set windows,” explains Lorna. “There was some deliberation on how to achieve this; in the end we went with three skins of block, it’s a house and a half! It definitely helps our heating bills stay low as one of the cavities is fully insulated with PIR sheets.”

Their first house was much smaller, Lorna says, but the bills are comparable. They insulated under the floor and added an insulant within the screed too. “We wanted to make sure it would hold the heat as we installed underfloor heating downstairs,” she adds.

And for Lorna, the choice of reclaimed slates ►

Lorna and Derek designed their new home with their furniture in mind.



The vaulted ceiling was the designer's idea to add to the feeling of space.

for the roof negated the possibility of installing solar panels. "At the time we were building we'd heard of many unfortunate stories from friends who had chosen renewable heating systems. One installed a wood pellet boiler but then had to add solar, then a wind turbine. It just put us off the whole thing."

The underfloor heating is on six months of the year and their hot water and heating system is oil fired complemented by the kitchen range in the winter months.

The one thing they would change, she says, is to get a concrete floor installed upstairs. "The mezzanine above the kitchen is now used as playroom and office in winter but as the floor is timber you can hear every noise with the kids running around!"

Which way to turn?

"Initially Derek and I thought of the house positioning and I quickly came to the conclusion that we should let Julian worry about all of that, that's what he spent years training for. I completely trusted his professional opinion and the positioning couldn't be better, both of the house and of the windows which bring in plenty of natural light when we need it."

The original design had even more windows than they eventually decided to incorporate. "To cut down on costs we took out some rooflights in the living room, bringing the number down to four as Julian said it wasn't necessary to have too many

to get the quality of light we were after."

The bedrooms get sunshine in the morning, the sunroom all day, while the evening sun illuminates the kitchen and living room. "We get patches of sun at different times of the day in every room," adds Lorna.

"In terms of planning we were nervous because the clock was ticking. The thing that surprised us when we got the reply were the pages regarding landscaping, the house was no problem at all! There were mostly issues with how far the boundary was, how high the mound should be, so the first thing we did is plant hedgerows - to satisfy the planners and to shield the house from view.

"Julian made us laugh when he commented the application had probably been dealt with by a young planner that was going by the rules," recalls Lorna. "I suppose Julian was matter-of-fact about it because the stipulations were what he would have recommended anyway."

"It's lovely now as our house faces onto the lane, nobody sees it screened as it is by the hedgerows. But from the kitchen you can see cars approaching, which is a feature I like living out in the countryside. The rest of the house opens up to the lawn."

The plot Derek and Lorna bought was one of two, which were located at the end of a field. "Two brothers shared the field and one of them is our neighbour. The boundary outline is not very technical, it consists of a mark on the stones."

Their neighbour finished building his house ►





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before they did and happened to have it facing theirs, but the hedgerows are now mature and they're shielded from each other's view.

Hard patch

Lorna argues self-building should come with a health warning! Every case is so individual and unique it's hard to generalise but it's clear that the experience will take its toll, even if you don't have young children to take care of, no financial or health issues.

"I'd never sugar coat it, it's been really hard work," she confides. "We have friends who went through a similar experience selling their house and they were motivated by our choice to self-build. I sat her down and told her to really think about it, you have to go all-in. It's a life experience, not so sure about character building!"

After they sold their first house and bought the plot, they decided to buy a house to live in while the building works were taking place. "We moved down to the village, thinking we could keep the house on the side and sell it when we moved into our newly built home. We began to really integrate into the community, especially with the children starting to go to school."

But the build process took longer than anticipated and the recession eventually hit. "It came to a point where we had to rent the house we'd bought in the village and move into the

garage, which thankfully we'd built first," says Lorna.

"It was a difficult decision, it wasn't what we'd intended – the garage has got a sum total of two rooms and a bathroom and at that stage we had two young children with another on the way! But one was three years old, the other nine months, and they didn't know any different."

"I actually think they enjoyed it, they did have a lovely playground. But it was tough in winter, we only had a wood burning stove to keep warm and we had to light it every morning, it felt medieval to be praying for there to still be embers in the fire every time you woke up!" Hot water was running on electricity.

They lived in the garage for two and a half years. "That whole period is a bit of a blur! It was mad but we didn't have an alternative, we needed to cover both mortgages. On the positive side we were on site and Derek was happier with being able to be close to us yet work on the house and oversee things better."

Delays were in large part due to health issues. "We had to go back to hospital with the baby and the house project ground to a halt as Derek was the one who was completely driving it," says Lorna. "I couldn't walk so he had to take care of the children. But we've come through it all, all I can say is I wouldn't want to do it again; I have no yearning to tackle another big project like this!" ►

The house espoused a rustic look





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The orientation and careful positioning of windows fill the house with sunlight.



The journey

"Derek oversaw the whole project, pricing and organising everything," expounds Lorna. "We knew of different tradesmen in the area and we got recommendations, Derek knew people too."

"For instance we knew our brickie was very good, he wasn't especially cheap but had a very good reputation, and he went on to recommend others. If we ran into problems or got stuck, Julian would help – for instance he found us our joiner."

"It's funny to remember how green we were at the time! What got us through it were the people we hired, we could trust them. They were all local with a reputation to maintain."

"The brickie for instance helped us in many ways, telling us what stage he was getting to and what he'd need the following week. He was good at keeping us right. As for the foundations we drew

them out with Julian and my dad's friend laid them."

They had to reach stages to draw down the mortgage money, and with Derek working full-time there was no way to progress the house any quicker than they did. "The delays gave us the time to walk around the house and get a really good feel for where everything should go and what finishes to choose."

It also gave them the opportunity to shop around. "I trawled for bargains for everything, the flooring is an example of that. A friend of ours knew of a house being knocked down that had lovely oak floors so we showed up with our trailer and asked them if we could take them and they agreed. We went at it with a crowbar, that's what we now have in the bedrooms, they're big wide wooden boards."

Much of their furniture was found in a salvage yard but so were the rest of the floorboards. "We found reclaimed wood from a convent in Scotland, we sanded every floorboard and as it was tongue and groove it was painstaking work!" The effort really paid off as all of the tiles and other floor finishes came in at less than £2,000.

They did get some of the work costed but realised they'd be better off managing it themselves. "We got prices from builders but we were afraid it would not necessarily be done the way we'd have wanted," adds Lorna.

"We also got the kitchen priced but I hadn't realised how expensive it could be! Most of them came with fancy finishes like dovetail joints which we didn't need. I like freestanding furniture so we went with that and also got some fitted units, from a flatpack company / DIY store. Their design service was great and we got them to help us design and fit our utility room too. In the kitchen we then got a granite countertop fitted for a more luxurious finish."

They also consulted with companies supplying

The upper floors are suspended timber which Lorna says allow sound to travel through to other parts of the house.



lighting and even home automation products. "The sky's the limit when it comes to controlling your home – you can open your curtains on demand from your phone! We didn't go for any of that but did take our time choosing where to put the lights and sockets, our electrician helped us with that."

An area they did spend money on was the bathroom. "There are many freestanding components, such as the vanity and the bath, which were quite expensive but it adds so much character I think it's really worth it. In the grand scheme of things I'd say the cost was reasonable. Although as a result we still have no ensuite!"

All in all, Lorna wouldn't trade this house or its location for any other. "I love living down here, and there's so much freedom for the kids, it's also great having friends over," she says. "You get so used to having the space around you, I can't imagine going back to living in a terraced house!"

"I have been reflecting on things, we're moved in five years now, and I do think we've gained so much as a family. While we benefited and suffered from the boom and bust cycle, we've made the most of what we have and I realise we are very fortunate."

"The fact that it's not fully finished frustrates Derek more than me," adds Lorna. "I think that's because he was driving the project. I don't mind things not being quite done. We're taking it one step at a time!" ■

Astrid Madsen

House size: 3,000 sqft excluding garage

Plot size: 1 acre

Build spec

External wall: 500mm thick, made up of three courses of 100mm blocks with two cavities, to achieve U-value of 0.35W/sqmK or better. Floors insulated with 150mm PIR board.

Warm roof construction: covered with marine plywood and 150mm PIR insulation on top and then breathable roof membrane, laths and reclaimed Bangor Blue slates.

Windows: wooden sash, double glazed, argon filled.



Above: most of the furniture and many of the fixtures/fittings are reclaimed, which adds to the rustic charm.

info The companies listed below provide products & services relating to this article.

Roof

Slates: Danny O'Kane Reclamation Centre, Castlerock, Co L'Derry, tel. 70849215, www.okanereclamationyard.com

Breathable membrane: Fakro, www.fakro.co.uk

Windows and Doors

Classic Joinery, Castlewellan, Co Down, tel. 43719099, www.classicjoineryni.com

Tiles

Arm atile Ltd, Belfast, tel. 90681751, www.armatile.com

Building Supplies

NG Bell and Son Ltd., Newtownards, Co Down, tel. 41758143, www.ngbell.com

Kitchen furniture and reclaimed floorboards

Wilsons Yard, Drom ore, Co Down, tel. 91691304, www.wilsonsyard.com

Kitchen & utility room units

B&Q, www.diy.com

Central vacuum system

Beam, www.beamcentralsystems.com

Insulation

Kingspan Insulation, www.kingspaninsulation.ie

Floor screed

Superscreed from CES Quarry Products, Saintfield, Co Down, tel. 97519494, www.cesquarryproducts.com

Photography

Paul Lindsay at Christopher Hill, 17 Clarence Street, Belfast, BT1 8DY, tel: 90145038 www.scenicireland.com

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Gimme shelter

Woodturner Max Brosi dreamt of building his own abode for most of his life but it wasn't until he met his now-wife Anna Marie that the decision to self-build was made.

As Max points out: "When two like-minded people put their energies together a lot more can be accomplished than going it alone." "Logic came into it," he adds.

"Rather than buy, we thought we'd be much better off building – financially and we also knew we would get the style and quality we wanted." The couple found a site on Anna Marie's dad's farm that they really liked and subsequently bought.

"We started by looking at the work of Walter Segal but his timber post method on concrete pads didn't convince me in our Irish weather, whose main feature up here in Leitrim is wind driven rain! While I really liked the idea of building the house on stilts, I opted for steel reinforced concrete stilts, supporting a galvanised steel girder frame onto which the house is bolted."

Anna Marie's brother, Michael, is an architect and his help and advice on the building regulations as well as on the structure and content of the planning package were invaluable to the pair of self-builders.

Indeed, such a customised design required exceptional attention to detail. "As we were going ▶



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“

We started by looking at the work of Walter Segal but his timber post method on concrete pads didn't convince me in our Irish weather, whose main feature up here in Leitrim is wind driven rain! ”



for something quite unique we made sure to overspecify wherever we could,” says Max. “We felt more confident adding to the construction details to get that extra peace of mind.”

For instance for the suspended timber floor Max opted for 9x2s with herringbone bridging. “This takes most of the bounce out of the floor and gives it great strength and rigidity. I got the tip from an old friend of the family who has spent his lifetime restoring Georgian houses.”

Sun’s axis

Before the planning stage they lived on site in a caravan. “We got to know the wind directions, where the sun moves and this verified our thoughts on the orientation of the house,” says Max.

“We started with sketches on paper and used a CAD package to draw up plans,” he recounts. “The geographic orientation of the design was inspired by the Newgrange principle. The central space is aligned with the centre of Glenade valley; in midsummer the sun sets in the middle of this valley and shines straight through the centre of the

Steel reinforced concrete stilts





house, illuminating the back of the front door.”

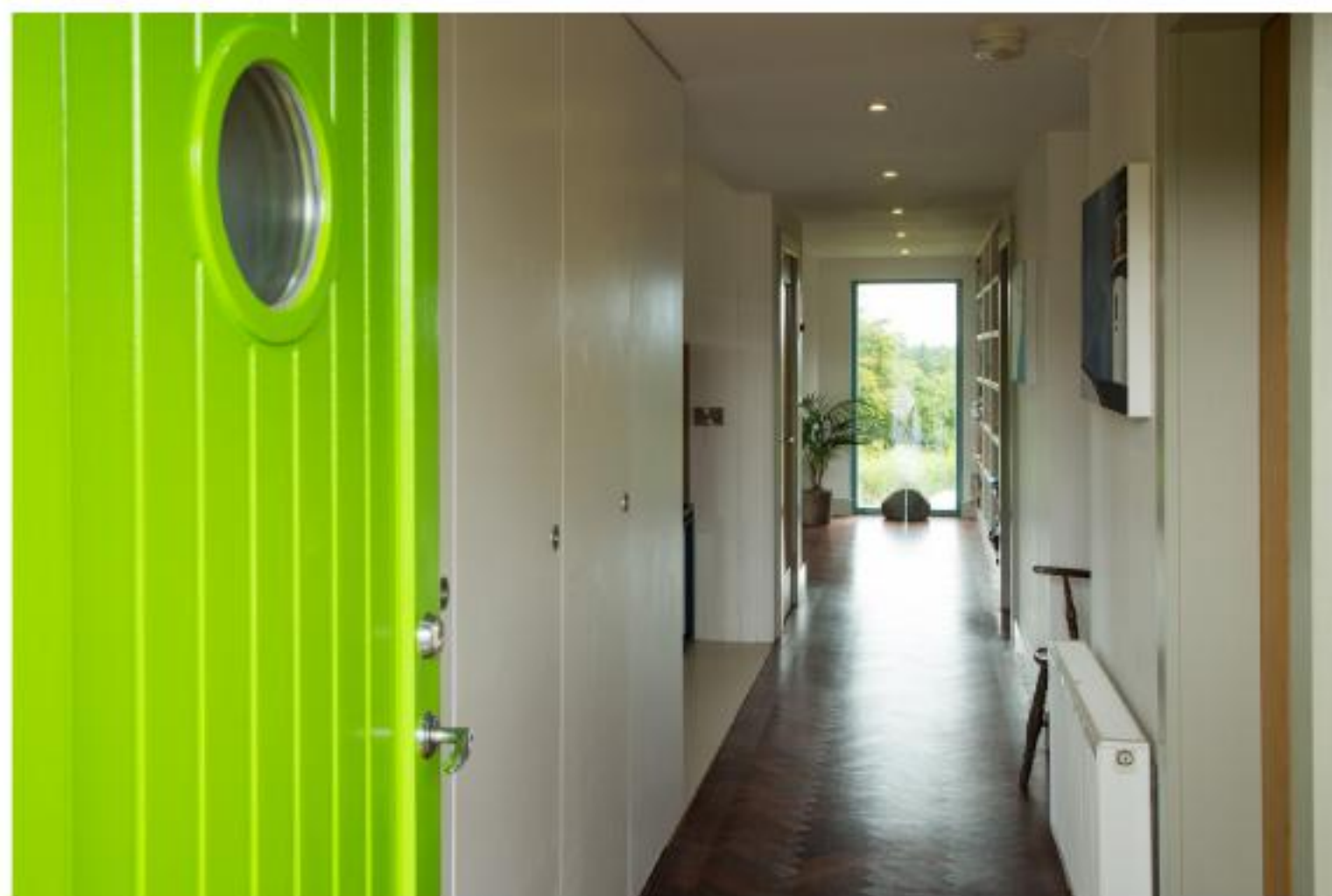
In fact the overall form of the house is “a culmination of design ideas, material considerations, and functional layouts,” says Max. “The majority of the house is open to the sun: the living spaces face south, with the kitchen in the SE to get the morning sun, and the sitting room in the SW for the evening sun and sunset views over the surrounding farmlands.”

“Our bedroom faces NW so there’s no direct light into it but that’s how I like it – I like to feel cocooned. The layout works very well, we have no kids so it’s just us!”

One unusual feature – by Irish standards – is that there is no back door but there are French doors to the south which will eventually lead onto a patio that’s due to be built this summer. “Convention says a house needs a back door, but for us there was no reason for one,” adds Max.

The planning application was approved six years ago and at that time the planners requested some changes to Max and Anna-Marie’s well- ▶

The house is clad in cedar



The design was inspired by the Newgrange principle - in midsummer the sun sets along the house's central axis.

crafted house positioning.

"They wanted more trees to be planted and the home moved closer to the road – we had to give them a detailed explanation of why moving the house wouldn't work, but we were happy to plant more trees," explains Max.

"Our original location was sheltered from views as it was located behind the apex of the hill. Where the planners wanted us to build was lined with trees which would have blocked out the sunlight in the winter time, limiting the passive solar gains. The planners were very supportive and understood what we were trying to achieve, and in



the end removed that condition."

"We were very lucky because planning restrictions were tightening due to inadequate percolation. Thankfully Leitrim County Council specified a septic tank to reed bed and willow bed system, which is lined with geotextile, volcanic stone and is impervious to the surrounding land, and would have been our first choice anyway. Every year or two we have to coppice the willow, which we then replant in the hedgerow."

Hand crafted

Anna Marie and Max were still in the caravan when they started building. "At that stage I'd just finished my teacher training but didn't have a job yet so took a year out to dedicate to building the house."

"I had two friends helping at different stages, one was with me for about half the build, but being a trained furniture maker and lifelong woodworker I did as much as possible myself. The only building stages we subcontracted were the plumbing and electrics."

"In a modern world where we are rapidly losing skill and self-reliance, it's a great feeling to design and build your own shelter, knowing that you are responsible for the success or failure of the project, it's a very 'connected' process."

He's learned from the experience too. "A friend and I spent a month taping and jointing the internal plasterboard wall surfaces. That was a pretty grim month, sanding the plaster off the ceilings between coats. In the end I should have ►

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The living areas are all positioned southwards, to the left of the hallway, and the bedrooms and bathrooms to the right.

got it skimmed. That was one of the few areas I would do differently.”

Max mostly used plasterboard thinking it would be cheaper than his preferred choice of tongue and groove timber slats. “If I were to do it again I’d put more tongue and groove on the walls, we painted it in the bathroom, and part of the sitting room and kitchen and I love it,” he says.

“The plasterboard took five weeks, all in, to install and tape and joint so in terms of cost it

didn’t work out that well, and the tongue and groove looks much better in my opinion. I love the painted white Scandinavian style finish, it provides planes of light and shadow which add texture and interest.”

The style of the house is a very personal and eclectic mix of Japanese, colonial and Scandinavian influences. “We restored and resurfaced an old Edwardian roll top bath and have tongue and groove panelling to match in the





bathroom, with a picture frame window at bath level so we can count sheep from the tub.”

But in some instances, cost considerations drove their decisions. “I considered building the kitchen myself but when I priced it, I realised it would have been more expensive for me to spend the time and money on it, rather than work with the economies of scale that a specialist supplier benefits from. Besides I don’t like fitted cabinet work, I did too much of it when I was younger!”

While there is no utility room, Max and Anna Marie made sure they installed plenty of floor to ceiling cupboards, two of which are used as a pantry, another for the vacuum cleaner and brushes, the rest for kitchen items.

In addition to the panelling, Max says there’s something else he’d add and that’s a mechanical ventilation system. “We installed 8 inches of sheepswool insulation from Wales and made the building airtight with a mind that opening the ▶





Max says the walls being covered in wooden paneling is a convenient and relatively inexpensive option, not to mention aesthetically pleasing!

windows would be enough to provide fresh air," says Max.

"On the southern end there is no problem with condensation, but the bedroom and bathroom that are north facing are showing small patches of mould on the bottom of the reveals even though there's the same amount of heating throughout the house," he explains.

"We have the same problem in the spare bedroom where there's just a trickle vent on one of the windows. Luckily this problem is easy to remedy. This summer we plan to retrofit a mechanical ventilation system and replace the plaster slabs in the reveals."

Connected

"My concept of luxury is pretty basic, and quite close to the old Roman definition: running hot water and plenty of it! On my wish list was a wet room with a large powerful walk in shower, and that was thankfully possible."

Heating and hot water for the whole house is fed off an 18 kW solid fuel (wood and turf) stove. "The copper pipe loop between the hot press and the stove is short, running just 1.5m, to avoid heat losses," points out Max. "We use the immersion for hot water in the summer. We did the maths for solar panels and felt the breakeven point would have been too long, with too few advantages."

"No matter how much you research and plan, you learn through the process, that's the fun part. In retrospect, if I was doing it again I would install a German 'Kachelofen', a type of masonry stove that uses very little fuel and circulates hot flue gasses through a network of ducts to extract the maximum heat energy. These have been used in the alps for centuries. However it's quite expensive to get one installed in Ireland."

What's clear is that Max's connection to his surroundings and his woodturning work have conspired to create a truly unique and embracing ►





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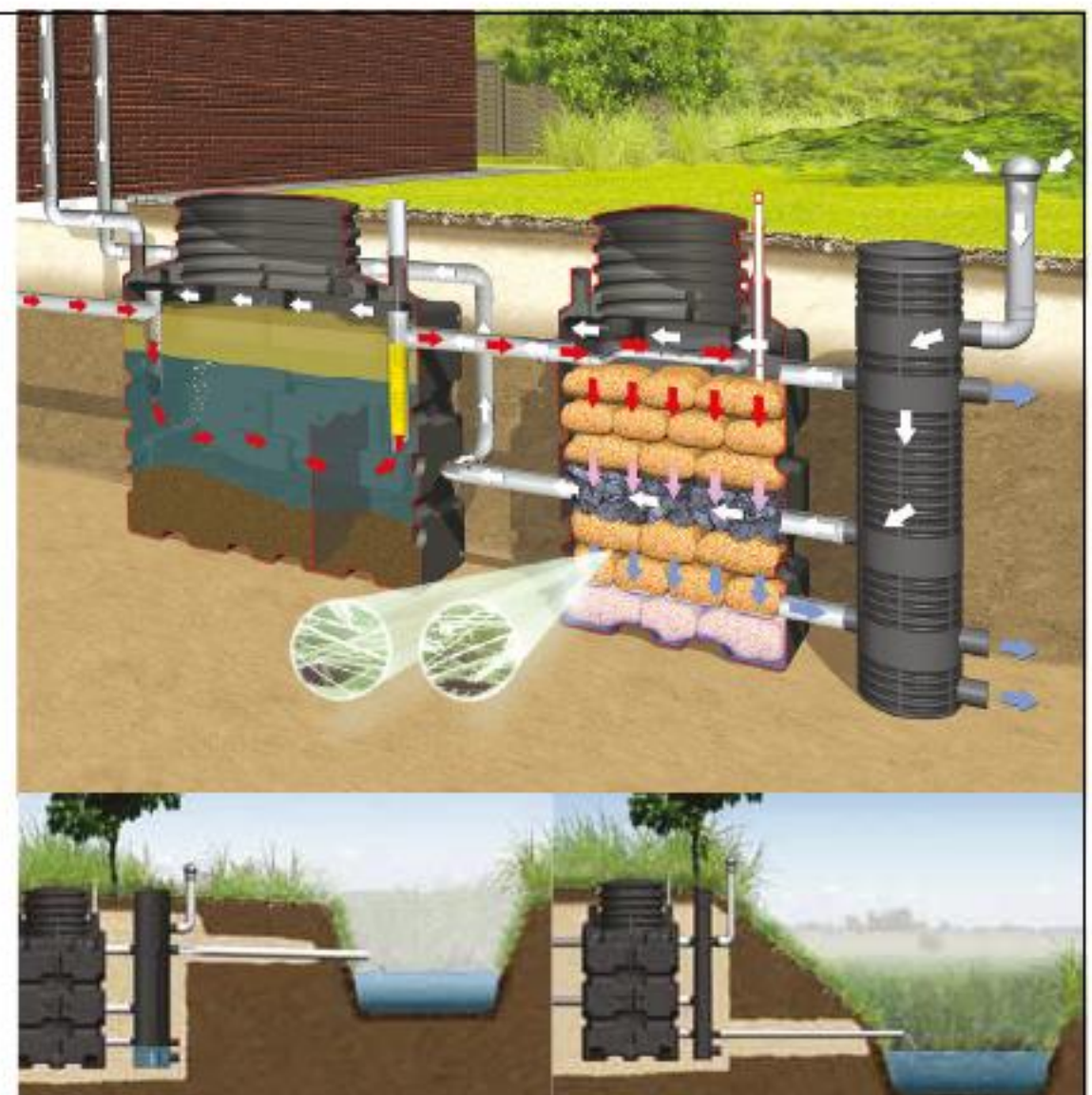
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house. “What I love most is that it’s bright, peaceful, low maintenance and cheap and easy to heat,” he adds.

“After we’d been in the home for a few years we built a veg garden with raised beds. We put in the dry stacked blocks, gravel, a weed-control fabric and then we had to wheelbarrow the weed-free heat-treated soil on top, adding fertilisers – cardboard, seaweed, rotted-in green manure.”

It really pays dividends too. “With the greenhouse we get early potatoes, tomatoes, chillis, salads, and the list goes on. Outdoors Anna Marie grows kale, onions, carrots, parsnips, garlic, sprouts, and fruit bushes. Basically for vegetables we’re self-sufficient,” he adds.

“We have hens for eggs and the chicken house is on stilts too above the septic tank, it doesn’t smell but to the finely tuned nose of a predator, we have foxes around here, the scent of humans is enough

to keep them at bay.” ■

Astrid Madsen

Build spec

Floor build up: suspended floor on galvanised RSJs (8x8), 9x2 floorjoists on wooden base, 8 inches sheepswool insulation. Bathroom marine ply floor, wall concrete sheets, all tanked three times over.

Roof build up: 9x2 herringbone bridging, 8 inches sheepswool insulation, airtightness membrane, 18mm osb, 50mm rigid foam (PUR) insulation, EPDM rubber covering.

Walls build up: Plasterboard, 2 inches sheepswool insulation, airtightness membrane, sheepswool between 6 inch studs, anti racking board, vapour barrier, 2 inch battens, 2 inch counterbattens, cedar cladding.



The chicken coop is located above the septic tank to deter predators.

info The companies listed below provide products & services relating to this article.

Stove

Charnwood Island IIIB
www.charnwood.com

Reed bed septic tank

Alvin Morrow, Ballyshannon, Co Donegal, tel. 071 9858170,
www.alvinmorrow.com

Timber frame

Swedish SODRA timber from Brooks Hanley, Co Sligo,
tel. 071 916 1111, www.brooksgroup.ie

Airtightness products

Panelvent racking boards and Intello airtightness membrane and associated tapes from Ecological Building Systems, Athboy, Co Meath, tel. 046 943 2104,
www.ecologicalbuildingsystems.com

Rubber roof

Carlisle Rubber, www.carlisesyntec.com

Sheepswool insulation

Black Mountain insulation, Wales,
www.blackmountaininsulation.com

Irish cedar cladding

Paul Reynolds Sawmill, Mohill, Co Leitrim, tel. 0876327923

Photography

Steve Rogers Photography
www.steverogersphoto.com

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Small is beautiful

How to live large in your bijou dwelling with clever space planning and transformable furniture.

Bigger is no longer necessarily better when it comes to house buying. In fact, a 'less is more' approach is gaining momentum as people choose to purchase smaller properties, stay put rather than move, and downsize before they get to retirement age.

International trends

Financial and environmental concerns are increasing the demand for smaller dwellings, and as diminishing resources, a growing population and increased urbanisation feed into a housing crisis at a global level, we are seeing the introduction of the concept of micro-apartments that address (in part) the accommodation shortages in cities.

If you thought the newly introduced ROI apartment sizes were small, consider that these microapartments are less than half that, starting at 20sqm! Planning exemptions have been secured to build them.

In terms of design they draw inspiration from yacht interiors and compensate for their reduced size by offering communal areas (outdoor space, gym, etc.).

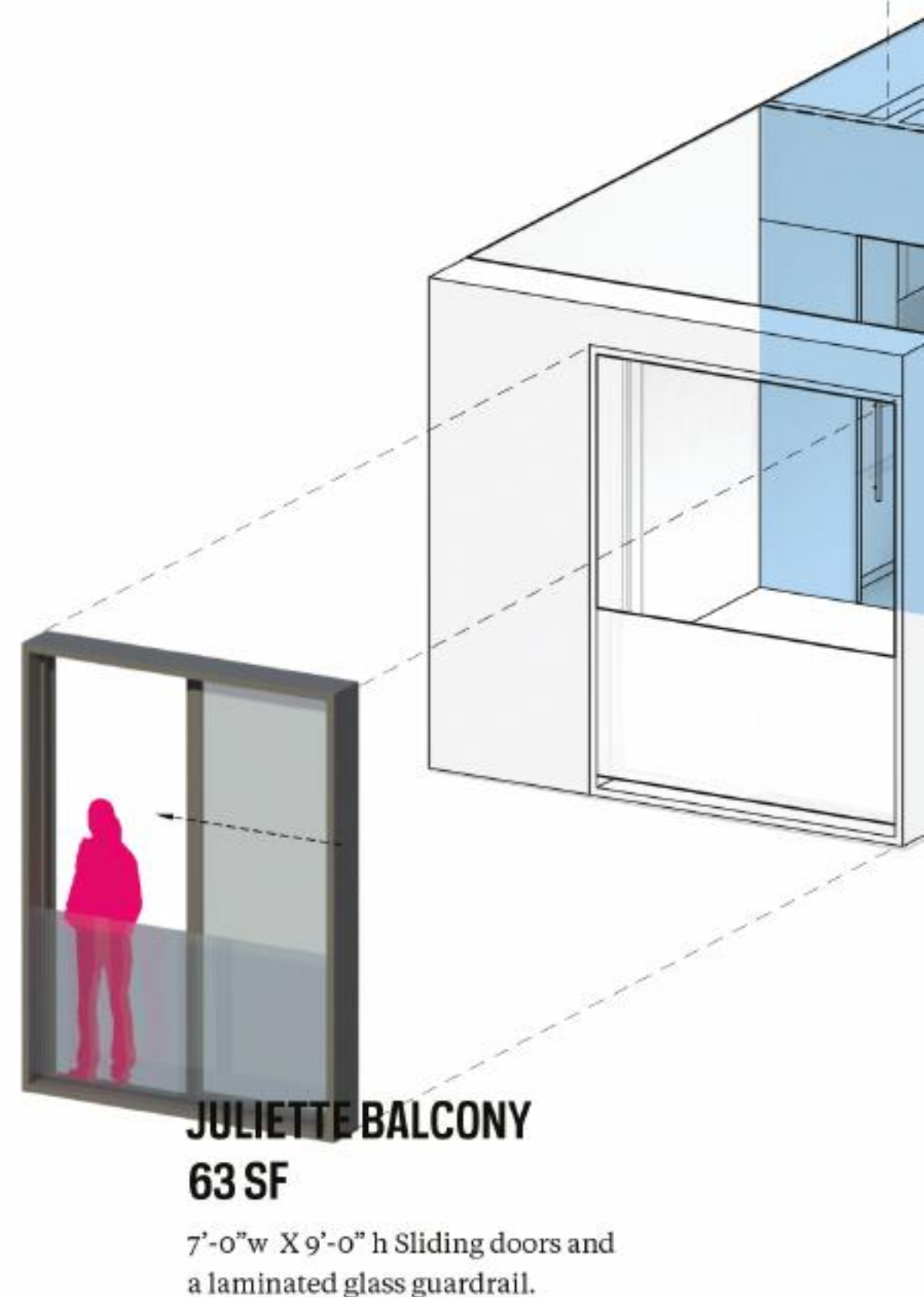
Appealing to students, singles and young professionals looking to enjoy the benefits of city living at affordable prices, these pint sized apartments are increasing in popularity in England and abroad though it remains to be seen whether 'micro' will go big in Ireland.

Equally, small houses have been gaining in popularity since the start of the Tiny House movement in the United States and the more recent showcasing of small structures on the TV design series *Amazing Spaces* and *Grand Designs*. Attractive to a wide age group and demographic, from young couples who don't want a 30-year mortgage to an older generation of homeowners who want to downsize, small houses can offer a simpler way of life for many.

Not only for use as homes, these small structures can be used equally well as a garden office, guest bedroom, workshop, gym or den and combat a common cause of dissatisfaction amongst time-starved, modern-day homeowners – a lack

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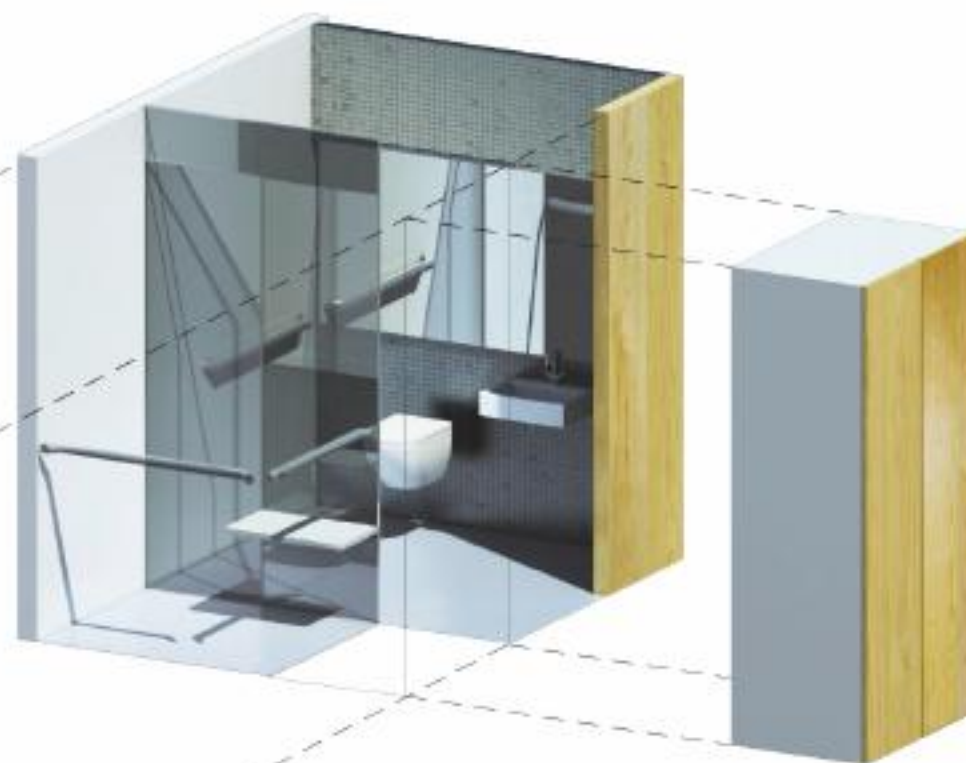
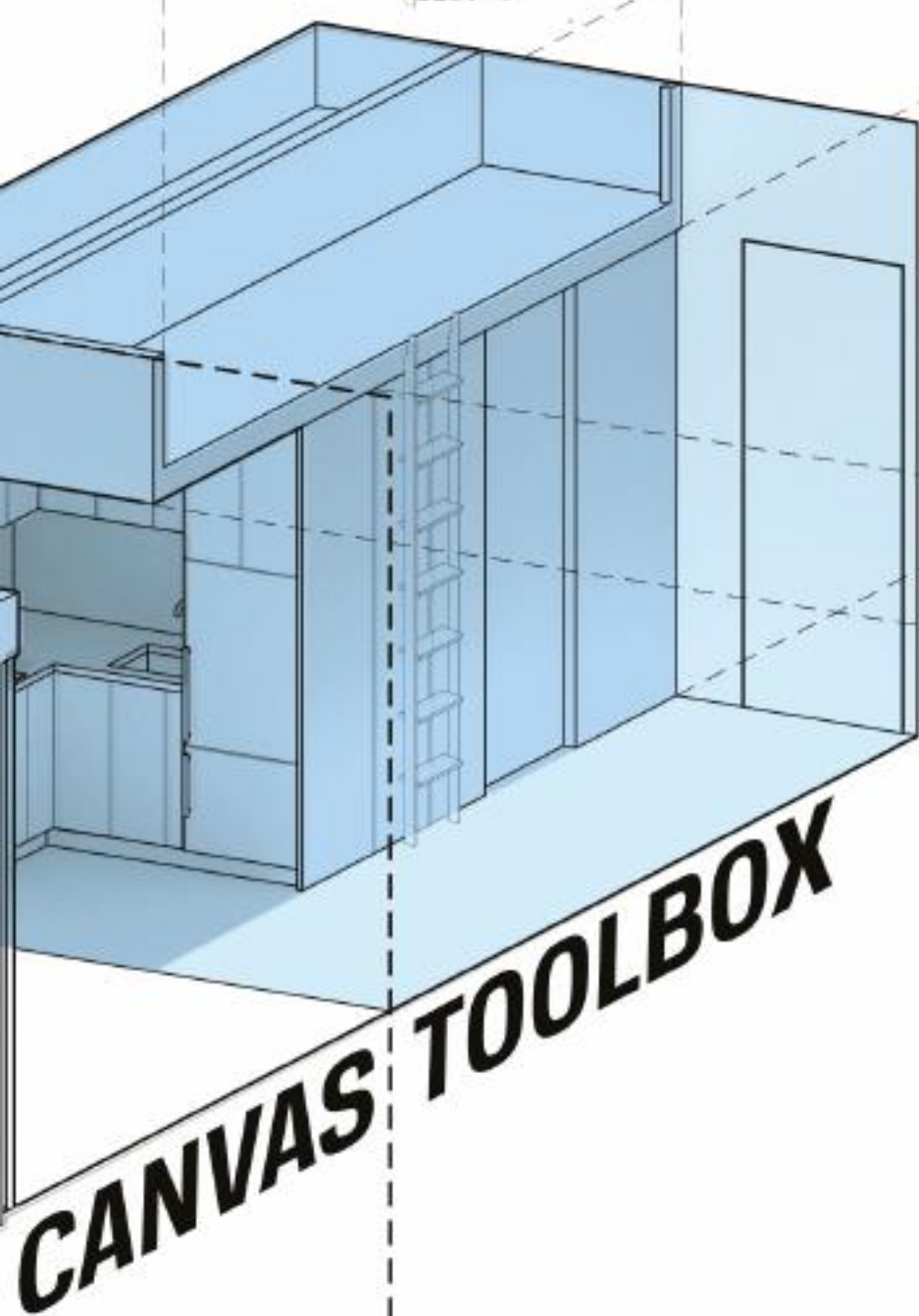
of personal space; a complaint often sparked by a change in circumstances: growing family, relatives and friends coming to stay, a burgeoning home business or just too much stuff!

Minimalist design

An overcrowded home can arise not only from the number of family members but from mismanaged space. Evaluating your square footage, in the context of both your current and future needs,

A New York City micro apartment design

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*including refrigerator

both holistically and on a room by room basis, will inform the design brief and determine your space requirements.

Based on your needs you may consider remodelling and / or extending in which case it would be wise to seek professional advice.

To start with, think of your daily life as a sequence of events: washing, dressing, eating, working, relaxing, sleeping, etc., each making varying demands on space at different times of day.

Indeed, managing living requirements is challenging enough in a large house but when space is limited, rooms have to multi-function. Small house dwellers boast that they can house everything including the kitchen sink within 20sqm - with clever planning and transformable furniture they can!

However, just as the necessity for multi-functionality varies according to individual requirements, certain rooms in a house (by nature of their location) will lend themselves to their ►





proposed use better than others; a ground floor room conversion would better suit the requirements of an elderly person than one at first floor level and the conversion of a roof space (as long as it meets regulatory requirements for habitable space) or a garage (if available) can be suitable for almost any use: self-contained apartment / office / playroom or gym.

Golden rule: natural light It is important to remember that all interiors benefit from natural light and good design will make the most of this invaluable resource. In a small space natural light is an absolute must and the more you have the better the space will feel. To maximise the effect know that any colour or surface that reflects light, such as white or a glass / gloss finish, will make a space appear larger. Equally, using wall hung / floating furniture, in the case of bedside cabinets, for example, and raised furniture or furniture with legs, particularly chairs, sofas and ottomans, will make rooms feel larger.

Ride the tidy tide: declutter A prerequisite of efficient living, especially in small spaces, is letting go of superfluous items. Knowing we only use 20% of what we have 80% of the time, most of us would agree that we can live happy and healthy lives with a lot less than we might at first think. But while small may be beautiful, it is not everyone's choice or inclination. A starting point for many is to carry out a small declutter and adopt the one in, one out rule. You should soon feel the benefits and this may help you get rid of more of the non-essentials.

Go storage mad: look in every nook and cranny To make the most of all available space try to incorporate storage wherever you can; under the stairs, in fireside alcoves and if constructing a non-load bearing / stud wall, think about whether it can house storage, generally anything with thickness has potential.

Another space saving technique that helps use every





inch of the room from floor to ceiling is layering; for instance the sleeping area might include a platform bed with a desk or closet space beneath or a storage space could be created by adding an extra layer near the ceiling or under an elevated floor.

Transformable furniture

Transformable furniture has been around for millennia; a folding chair from the Bronze Age is on exhibit in the National Museum of Denmark. More recent designs (relatively speaking) include the library chair with folding steps (first designed by

www.SelfBuild.ie



Under stairs storage is a clever use of space

Bneatstairs & Attics of Co
Kildare, www.bneatstairs.com

Benjamin Franklin from 1760 -1780), the Murphy Bed or 'in-a-door' bed (invented by the American, William Lawrence Murphy in 1900) and of course the classic drop-leaf / gate leg table dating back to the late 16th century amongst others.

Re-imagined over the years, demand for these designs and space saving furniture of all kinds has increased: transformable, collapsible, fold away, built-in, modular, etc.

Heralded by the recession and ensuing credit crunch consumers now look for products that offer more for less. Furniture designers are finding success with innovative space saving solutions to reduce the footprint that large pieces (such as beds, wardrobes and tables) occupy and providing inventive multifunctional uses for smaller furniture pieces.

Built-in furniture For maximum efficiency and minimum clutter, built-in furniture provides the best space saving solution as it can house anything from beds to pull down tables. With each appliance or piece of furniture fitted behind a panel or door, built-in furniture can be configured to function in different modes, to be hidden or revealed as the need arises. Clever hidden hydraulic mechanisms work effortlessly to ensure that transformations are easy and seamless.

The sofa bed An all-time design classic of multifunctional furniture is the sofa bed; its primary use is a sofa but once opened it turns into somewhere to sleep, making a bed available at short notice. Additionally, by transforming a living room into a bedroom, the sofa bed provides the perfect sleeping accommodation for guests, particularly in one-bedroom apartments.

The fold-up wall bed / Murphy bed As a neat alternative to its in-situ counterpart, the fold-up wall bed / Murphy bed has been quietly making a resurgence in recent years as a growing number of interior projects are installing upscale wall beds that can transform into a sofa, dining table, desk, book

Convertible dining table and chairs concealed in TV unit.

www.gomodern.co.uk

Clever foldable designs are being devised everyday; here the chair/library steps

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shelf or storage unit. Whether you are furnishing a children's room, studio apartment or house, these beds are a great alternative when you want to eliminate the need for a dedicated guest bedroom.

The pull-out bed If you are converting your roof space, consider installing pull out single beds in the awkward and often redundant eaves space, this will provide optional sleeping accommodation for guests without impinging on floor space during the day when the area is used for other purposes. Remember that a structural engineer should always be consulted before carrying out any modifications to your roof structure.

The daybed Most of these consist of sofas that are large and comfortable enough to sleep on, with the option of storage underneath. A variation on the theme is a sofa with pull-out bed camouflaged underneath to look like a drawer.

The futon Based on traditional Japanese bedding (consisting of a combination of padded mattresses and quilts pliable enough to be folded and stored away during the day) the western version based on the Japanese original is usually placed on a configurable frame for dual purpose as a chair or couch.

The gate leg table As the sides of the table can be folded down it's a good answer for small homes that lack the space to set up a long table permanently.

Conveniently, some gate leg tables incorporate drawers in which you can store cutlery, napkins, coasters, placemats etc.

Happily, a number of pull out, pull down, extending, folding and dual-use dining solutions have been designed to suit most spaces. The most ingenious are those that are encased in the wall to provide a completely flush finish or those that parade as an entirely different piece of furniture such as a coffee table or wall mirror.

Extendable tables Small console tables measuring less than half a metre can be extended with modern materials (one manufacturer uses an aluminum telescoping mechanism) to nearly 3m in length, comfortably seating 10 people when required. Coffee tables can be transformed into dining tables in a similar fashion.

Nesting tables Nesting tables are hard-working sets that save floor space when you need it, but can provide additional table surfaces when necessary. These handy arrangements are great to use as side tables, coffee tables, and even nightstands.

Foldable and stackable chairs There is an abundance of foldable and stackable chairs; being easy to store (pile or hang) they are always in demand when unexpected guests arrive! Still in production and on exhibit at the Vitra Museum



in Germany are designs that we have all come to know: the famous Plia folding chair by Giancarlo Piretti (1968) and the Hardoy Chair by Grupo Austal (1930) for example.

Part of the Museum of Modern Art's (MoMA) permanent collection is David Rowlands 40/4 stacking chair which is regarded as one of the most useful – and cheapest – chairs ever made.

Functional seating Collapsible and portable chairs are alternatives to the foldable and stackable. Add wheels and you'll magically transform them into baby buggies and wheelchairs to provide transport (at times indispensable) for people of all ages and stages.

Ottomans Packing big functionality into small spaces, window seats, bench seats and ottomans punch well above their weight when it comes to storage, housing anything from sports equipment to Christmas trees, duvet covers and toys. Doubling up as coffee table, bed, seating or storage, the ottoman is an excellent example of a multi-functional item of furniture. One clever cube design parading as an ottoman houses five seats while another even transforms into a bed!

With the increasing availability and quality of multi-functional furniture addressing the limitations commonly associated with small space living, more people are choosing to have less and cash in on the

environmental and financial benefits. Rethinking our lifestyle post-recession, could it be that we now value freedom over possessions and that less really does mean more? ■

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Concrete chic

The industrial, loft style is popular among interior designers but, being rough around the edges, how can you achieve the look without it seeming like the house isn't quite finished?

What is the 'industrial' look?

Simply put, it's raw and unadorned. In essence the style mixes three basic ingredients: concrete, metal and wood with metal being the key component you can't do without.

All of the constituent parts also need to have been pre-loved, or appear to have been. The wood can't be new: it needs to have a rustic or vintage feel to it. Other commonly used materials include well-worn leather and salvaged clay bricks.

You can buy new but that is the exception, e.g. wallpaper that looks like metal which is very tactile and makes a huge impact when you walk into a room.

The great thing about the industrial style is that it can, and should, be imperfect – the rawer the better! The central idea is functionality, each item has a role to play, and showing how it's made or how it performs that function, in an understated way, is what it's all about.

Some aspects that may not seem to be quite finished can be allowed to show through. This means for instance the ventilation and electrical conduits can be left exposed, walls left with a rough surface and the blockwork showing. And it's perfectly ok to mix designs from different eras, in fact it's all of these imperfections that add interest, warmth and personality to the industrial look.

In terms of colour, light grey is dominant. You will generally have concrete as your floor finish so that sets the tone! But remember to install underfloor heating, you want to have a warm space to walk on to make it cosy. Very common also are carbon grey, and white or off-white which is used to provide contrast and brighten up the space.

How much does it cost?

While single-ticket items can be expensive if you invest in high quality refurbished pieces, the industrial style is actually a cheap interior design alternative.

There are no skirting boards or architraves, no fancy plaster or mouldings/covings, the structural elements are in large part left exposed (no boxing-in) so there's a lot less to spend on second fixes than you would in a traditional build.

However you cannot leave too much exposed; you don't want to overcrowd your senses with absolutely everything being on show. There are a



lot of services running through a house! So while some of the cabling and pipes will have to be chased/hidden, if building new think about which ones to display, e.g. some copper piping, and plan accordingly.

In terms of the fit-out, most items will be second hand which means they'll generally be free or inexpensive. For instance you can use crates for shelving, wood pellets or old floorboards for wall coverings, old shutters for a headboard.

The most valuable thing to invest in is elbow grease! Once you find the perfect piece of wood or metal, you'll probably have to give it a going over before you can put it in your home. In many ways it's as much about the process as it is about the finished product.

My kitchen for instance was bought in kit form, black in colour, and to inject style I added old handles and covered the units with a custom-made riveted metal worktop, which was relatively inexpensive to make and is the centrepiece of that room. I thought the air extractor was ugly so I ►

The industrial style mixes three basic ingredients: concrete, metal and wood, with metal being the one material you can't do without



More photographs available at
www.facebook.com/selfbuild



While concrete floors are preferred make sure you install underfloor heating to add warmth



covered up the hood with wooden crates that cost me just €30!

Where do I start?

Despite the apparent coldness afforded by the concrete and metal, the experience of living in your house should be organic and tactile and the interior design should reflect your personality and tastes. There are many variations of the industrial style and you can choose to go in any direction, the main thing to remember is to have fun with it. It's all about adding old fridge handles to a piece of furniture, grafting on castors to a side table or simply staining it. And don't be afraid of the raw element, it will work to your advantage.

In all cases there should be one key piece of furniture in each room that sets the tone, it has to be the one item your eye is drawn to when you come in. I'd recommend either something completely metal or a wood/metal combo – that's



always a winner. You can then start softening the ambience by layering in the wood.

Remember, as your eye sweeps across the room it needs to find things that provide warmth. Look in every direction – you can hang flower pots from the ceiling, for example, or add a small cosy rug in front of the couch.

The rest of the furniture should provide reminders of the central piece, this could be an old sign or a lamp that has similar colours, materials or continues with a common theme. Letters are popular too, individual metals ones or in the form of eye charts.

What if I want to add colour?

While this type of design does rely heavily on greys (on average in about 50% of the space), you still have plenty of room to play around with colour. Rust from an old sign or really flashy colours that have mellowed over time are both hot favourites at the moment. If you choose to go for a very strong colour, use it sparingly and don't have too many to avoid them clashing.

Some pieces of furniture will go better with certain colours, so the choice will in large part depend on what your centrepiece is in that particular room.

Are there specific things to consider in different rooms?

All of the rooms in your home can achieve a cosy feel with the industrial style although it is true that I prefer to stick with whites and neutral colours in my bedroom, which are complemented by the use of wood and my metal bedside table. Even my sheets abide to the rule - plain khaki, light grey and white are my colours.





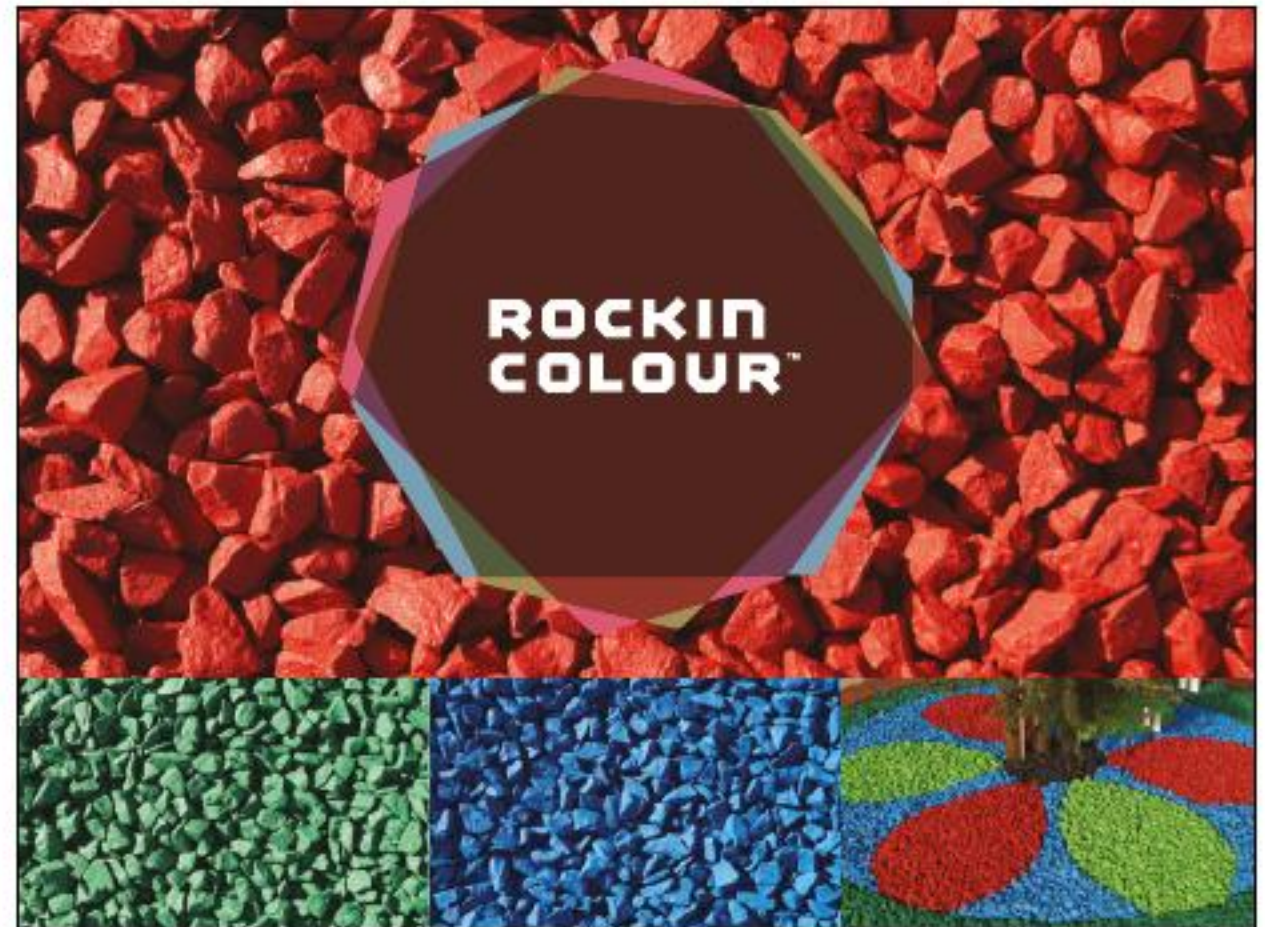
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That said, if it's your inclination to do so you can add some strong notes of colour, even tartan patterns are popular at the moment. But in that case the rest of the items in the room should be neutral - you don't want to have too much going on.

In the office you can allow the electrical cabling to show for instance, and add exposed light bulbs at different heights. In the living or dining rooms consider suspending light pendants at different heights using chains, leaving the cables exposed.

My house doesn't exactly resemble a New York loft, are some houses not suitable for the industrial style?

There are few spaces that couldn't accommodate it. That said in interior design you do need to aim for a harmonious space so your doors, windows, floor, all need to speak to each other. If something doesn't gel, you'll need to change it. More often than not this will simply mean replacing door handles or layering in shades of grey.

For instance when I moved into my apartment it was full of gilded mouldings - I whipped out the spray can and painted them a matt black colour (admittedly after a lot of hard work stripping them down!). I then proceeded to oil and wax the wooden floor to give it some age.

Windows are much trickier to get to blend in and they're expensive to replace. Ideally you'd have a metal or timber frame, but if you do have uPVC consider painting it to match the kind of industrial look you adopted. Otherwise make it seem like they were installed on purpose! Plastic can work as an industrial theme, you could consider adding Vitra



from top left: Coralie's bedroom, wood metal combination on castors, extractor hood covered with apple crates, alphabet chart with leather chair, bedroom with dominant white theme.





chairs for instance or a retro Formica table with metal legs.

What are the pitfalls and how can you avoid them?

In terms of materials, metal and concrete can be quite cold so it's a good idea to counteract that with a warm lighting scheme, avoiding neon or high wattage bulbs. You can find LEDs now that provide that warmth in colour.

Furniture made of these materials can also tend to be bulky and quite heavy-looking so to lighten up the style consider the space as not only the floor area but as a volume. You can soften the rough feel by hanging a decoration from the ceiling, for example, or a suspended light. Breaking the uniformity of the straight lines is important to make the house feel cosy which is where colour can also step in.

To keep the theme going, don't try to cram in too much furniture in one room; clutter just doesn't work with the industrial style.

And generally avoid buying new, even if it's a copy of a vintage piece of advertising. What you want to achieve is that worn, pre-loved feel, so head for the salvage yards and websites selling second-hand goods. It'll be cheaper too! And if you choose to carpet the floor (not usually recommended) make sure it's not patterned and the colour is neutral.

Last but definitely not least, the industrial look

can be as much about stripping down as it is about covering up – you need to get a feel for when it's appropriate to do either of the two. For instance, if you have the budget you could overlay your plastic plumbing pipes with copper or brass to add that extra layer of class. The rule of thumb is to only leave ducting exposed if it's attractive so think raw metals such as zinc or even simple aluminium ducting.

Coralie Verheyden

Interior designer, furniture maker and salvager.
www.barak7.co.uk

Exposed pipework adds a layer of interest.

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This wallpaper is killing me – one of us will have to go!

Oscar Wilde's famous last words from his deathbed in a French hotel over one hundred years ago, are testament to the strong emotions created as a result of decorating our interior walls with coloured and patterned paper.

Fifty years earlier Napoleon Bonaparte suffered, as we now know, arsenic poisoning from the wallpaper on the walls of his prison on St Helena. Scheele's Green, a colouring pigment used in fabrics and wallpapers from around 1770, contained copper arsenite.

In 1893 an Italian biochemist, Gosio, discovered that if wallpaper containing Scheele's Green became damp and then mouldy, the mould converted the copper arsenite into a very poisonous

vapour. It was this vapour that over a period of time gradually poisoned Napoleon and many others like him.

And yet wallpaper was hugely popular. The reason may be that originally it was not just a decorative addition but a vital part of the building fabric. The idea was that, in order to minimise cracking, each layer of wall covering should be softer than the one below it to allow for a degree of movement within the structure.

Following several layers of plaster, each with fewer and smaller cracks, came absorbent, flexible wallpaper masking the remaining hairline cracks.

The expression 'papering over the cracks' is misleading; wallpaper was meant to cover them, move with them and prevent them from showing through – providing of course that the cracks weren't structural!

Here are some basic tools to make your wallpapering project a success by avoiding some common mistakes. Remember, to ensure you get the full life out of yours, keep it away from direct sunlight, humidity, damp or movement in the wall.

Walk the talk: terminology

Run number/dye lot A number printed on the roll and given to each batch printed at the same time. It is important to record this number in case additional wallpaper is required at a later date as it will allow you to ensure colour continuity between rolls.



Relaxing/Soak period The process of folding, without creasing, a recently pasted strip of wallpaper or border with pasted sides together. This allows the paste to soak into the wallpaper backing and prevents the paper from expanding on the wall which can create air bubbles.

Cross seaming/lining Installing the lining paper horizontally and the decorative wallpaper vertically, ensuring that the seams do not fall in the same place and resulting in a more secure adhesion.

Pattern matches Most wallpapers have a pattern repeat. The repeat is the vertical distance between one point on the pattern to the identical point vertically, and it is an integral part of the design. The repeat can range from an inch to as much as the width of the wallpaper or more.

If the wallpaper has a pattern, find out what type of pattern match it has. There are three main types:

Random match Where the pattern always matches, e.g. anaglypta papers and vertical stripes.

Straight across match A pattern whose design matches on adjoining strips. Every strip will be the same at the ceiling line, so some care is needed when cutting the paper from the roll.

Half-drop match Every other strip is the same at the ceiling line and the design elements run diagonally. It takes three strips to repeat the vertical design. If you numbered the strips consecutively, the odd numbered strips (1, 3, 5 and so on) would be identical and the even numbered strips (2, 4, 6, and so on) would match one another. In order to avoid confusion, lightly number (in pencil) on the back of each strip the order in which it is to be hung.

Multiple drop match This takes four or more strips before the vertical design is repeated and should be tackled the same way as the half-drop match above.

Most wallpapers have a pattern repeat which will affect how you hang it.



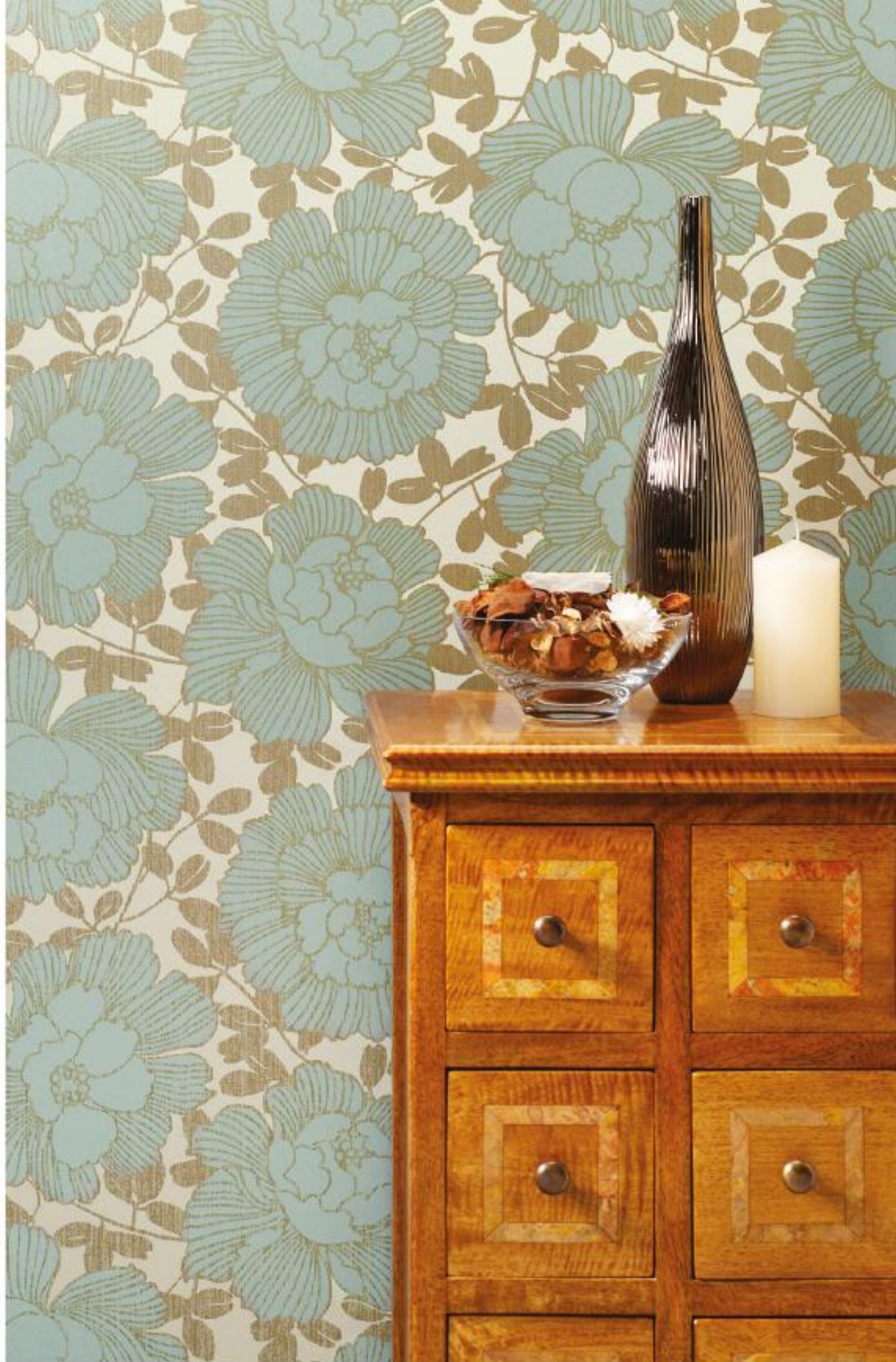
Get the basics right: wall preparation

If you already have wallpaper on the wall it will have to go! Sometimes you can rip it off the wall dry, starting at a corner, and all you will be left with is a small amount of paste residue which you can clean with stripping solution and a sponge.

Vinyl and other similar papers leave a paper backing on the wall. To remove, apply a solution of a little washing up liquid in water. Using a garden spray, brush or sponge, cover the paper and allow it to soak for at least ten minutes, re-wetting if necessary. Scrape off with a flat bladed tool. Soak stubborn pieces again – the more you soak, the easier the job will be. If not proving successful, try a mixture of two parts water to one part white vinegar.

If neither of these is working you may need something stronger, such as an enzyme based additive which will dissolve the old glue much faster. If you do choose this route, ensure that there is plenty of ventilation and perhaps wear a mask as the fumes might irritate your throat. Allow approximately 30 minutes for the glue to dissolve.

Another approach is to score the paper with a specialist tool or razor, but beware of being too



If some of the wallpaper is see-through ensure the substrate can take it, otherwise use lining paper or a primer/sealer.

enthusiastic and damaging the wall below. Scoring allows the solution to penetrate the old glue more effectively. Simply use the edge of the scraper to make a criss cross pattern, thus allowing the solution to work into the paper better.

For particularly stubborn papers, especially painted ones or those that have recently been hung (after all, most of them nowadays are manufactured to be waterproof!), a steam stripper is more than likely to be needed. You can hire these and it will fit in the boot of your car. The steamer consists of a small tank that holds and boils the water circulating in the steaming plate. Press the plate onto the wall forcing steam into the wallpaper, and paper and paste are softened immediately. Now remove the paper as usual with the aid of a scraper. Aggressive steaming can damage walls and, if the surface is old and not properly prepared when first papered, you could find the plaster and other surface coming off as well as the paper.

To finish the task, wash with hot water and a wall washing detergent, or use the wallpaper stripping chemical. This will remove any residual paste. Allow the wall to dry thoroughly and then sand lightly to remove any roughness. Remove the resulting dust by vacuum and your wall should now be ready for its new 'clothes'.

Troubleshooting: learning from mistakes

The major cause of problems with wallpaper is poor surface preparation, imperfections in walls or human error in hanging. Happily, most are easily resolved. (Note that the list below outlines the most common problems, it's not exhaustive of what can go wrong!)

Bubbles These are usually caused by not smoothing out a strip properly, hanging the paper in low temperatures, improper surface preparation



or not allowing strips to fully soak out. This results in thin, elongated bubbles down the length of the paper and happens because the paper was put up too early and is continuing to expand on the wall. Paper should always be liberally pasted and allowed to soak out for the recommended time, normally 4-6 minutes for paper backed papers. The solution is to take a sharp single-edge razor or utility knife and cut a slit in the bubble. Using a glue syringe inject premixed wallpaper adhesive into the slit under the paper making sure that the adhesive is evenly distributed. Wipe gently with a damp sponge.

Seams opening Normally the result of either weak adhesive, poor or insufficient wall surface preparation, excessive heat during the drying period or a combination of these. Correct by lifting the edge of the wallpaper to inject more adhesive and then spread and smooth.

Curling or loose ends A lack of sufficient adhesive or improper wall preparation is usually the culprit. Re-affix using wallpaper paste.

Streaks on wallpaper If streaks appear on your wallpaper, it's usually the result of failing to rinse the paper. Rinse with water or a cleaning solution, but check the manufacturer's instructions.

Ragged edges Caused by a dull blade. Use a fresh blade with every strip to ensure a clean cut.

Shading Shading can vary according to the type of wallpaper used. Some slight variations may be natural in materials such as grasscloth, but, if the effect is very obvious, then reversing each strip by hanging every other strip upside down can minimise the problem. If the shading is due to the colour not being consistent from roll to roll, then the problem is likely to have occurred during printing and the wallpaper should not be hung. Contact the retailer or manufacturer for advice and assistance.

Show through happens when wallpaper is thin enough to be almost transparent, allowing dark images and shadows to show through. Avoid by priming the wall with a pigmented wallcovering primer or sealer. If the wall is in particularly bad shape and you have a semi-transparent wallcovering, apply lining paper underneath. ■

Gillian Corry

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This self-built refurbished home in Co Sligo is a refuge for Dublin-based Derek Treneman



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Mark Tumilty MCIAT

23 years ago Mark designed and built his own home and in the process vowing he'd never extend it, but as the family grew in size he reversed that decision and added an open plan living area with vaulted ceiling....



A family home in need of an extension

Anything unusual

Because of the vaulted ceilings there was a problem with the stability of the building so a steel portal frame was designed by a structural engineer to overcome it. This allowed us to open up all the ceilings to the apex.

Due to the height we decided to double the insulation between the rafters and fit argon filled double glazing units. This area has the most glass

of all our rooms but yet is the best space for heat retention. Other features include powder coated aluminium bi-fold doors, stone cladding and a multi fuel stove. As there are no walls for radiators to be positioned on, we installed under floor heating in the kitchen which is individually zoned.

Favourite design feature

The steel frame allowed flexibility in the design so we decided to create an overhang at the ►





bi-fold doors. This enables us to use the patio area underneath to barbeque in the summer, even when it's raining. The overhang also keeps logs and coal dry for the stove during the winter months. The high glass gable windows create a very bright and open feeling to this area.

Favourite room

This open plan living/kitchen area meets all of my family's needs. In the past we had walls between the kitchen and dining room making it difficult to communicate but now we can cook at the kitchen, dine at the table, chill out at the TV and still be part of the conversation within a sun drenched space!

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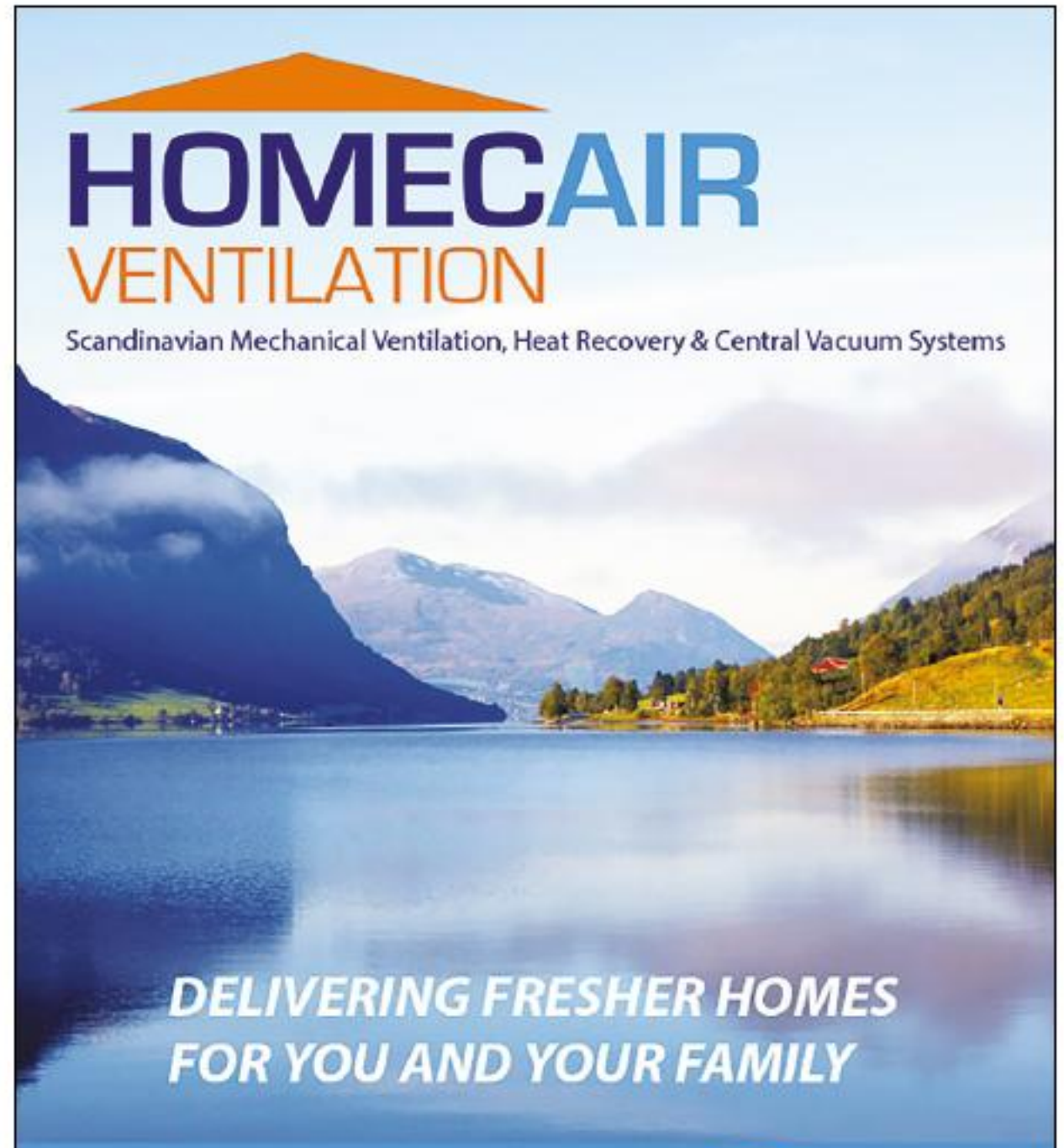
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An insider's guide to roof repairs and re-roofing

Your roof is one of the most important elements of your home in terms of both cost and appearance. Though it is often seen as just a functional covering to keep out the elements, with a little imagination it can be a real design statement too.

The roof is one of the most dominant features of your home, accounting for around 20-30 per cent of the visible exterior of your house, and representing a sizable investment.

Whilst correctly installed roofs will often last decades - and in the case of natural slate, a lifetime - it is often assumed that they require zero maintenance or attention. However, they are constantly in the frontline of weather abuse, so regardless of the age of your roof ongoing maintenance and repairs are vital if you don't want to be left facing large bills for replacement, not to mention possible damage to your interior as a result of leaks.

Spotting roofing problems early can save you a fortune, but how often should you inspect your roof, what should you look for, and when should you call in the specialists?

No matter what kind of roof you have, it pays to have it inspected regularly in order to extend its life and avoid premature repair costs. As John F. Kennedy once famously said: "The best time to repair your roof is when the sun is shining." So, why not add an annual reminder on your calendar to go out and inspect? Ideally, you should do so at least twice a year and especially after any spell of bad weather. However, if it's a while since you last checked then there's no time like the present.

Safety first

Working at a height is dangerous and using a ladder with no one else present, even if you are experienced, is not advisable. What may appear to present itself as a simple, easily accessible repair may turn into an incident with potential for serious injury. Unforeseen dangers taken for granted by a professional, e.g. algae or lichens which have qualities not unlike black ice, can prove an effective and sudden trap. The ladder slipping from beneath you is another danger.

If you are used to handling a ladder and can inspect from gutter level, make sure it is firmly secured at the top and footed at the bottom. Never attempt to climb onto the roof unless it is designed



for regular access and / or has adequate protection against falling.

What to do

If possible, carry out a visual inspection from floor level. Stand back and check your roof, flat or pitched (angled) from the ground periodically. A pair of binoculars are handy but pictures on a digital camera are better simply because you can zoom in on a computer or other device and get a closer look.

Windows that have a view of your roof are an obvious bonus but don't use these as points of access without correct safety equipment being in place at the same time. All in all, to minimise the risks you really should call in the experts. ►

Co Dublin house with roof tiles.

Penrose Roofing
penroseroofingcontractors.com
Photo courtesy of NFRC



Wind-blown damage to top course of slates and pointing

Watch points

- 1 Obtain at least three quotations for your work.** Most of us are unaware of roofing costs and it's important to know that you are not being grossly overcharged. Ensure that the quote or estimate selected is given to you in writing, except possibly for small emergency repairs.
- 2 For a complete new roof, always consider taking out a 10-year insolvency warranty** – the cost is negligible and well worth the peace of mind. Remember that even the best contractors can go out of business whereupon their own guarantees become worthless, so make sure you will be covered.
- 3 Always ask a roofer to take some pictures on his phone to show you anything that needs replacing** – a good roofer will do this automatically.
- 4 Whilst simple repairs can often be accomplished by a man with a ladder, expect the use of a 'tower' or scaffolding for any refurbishment work.**
- 5 Local authority approval is important wherever you live.** If more than 50% of your roof needs refurbishment and you live in NI, you (or the roofing contractor) will need to get Local Authority Building Control (LABC) approval at least 48 hours prior to any work commencing. In ROI the system relies entirely on self-authorisation of roofing work by selected and vetted roofing contractors. An authorised roofer will complete any roof work and issue you and your local authority with the relevant Building Regulation Compliance Certificate on completion of the job.
- 6 A ten-year insurance warranty is automatically offered on domestic work including breach of Building Regulations and contractor insolvency.** It is important that you keep the **Compliance Certificate** for any work in a safe place as you will need it when you come to sell your property. This warranty will give you reassurance should the roofer go out of business and if there are problems with the roof.



Inspect, inspect, inspect: When autumn comes, look for leaves and other debris on the roof and in the gutters, and be sure to inspect it after any storms with heavy winds. Roof tiles, slates or shingles that have broken, slipped out of place, or been blown off are a common occurrence and should be replaced immediately. If not, rainwater can saturate supporting timbers and get into the roof space causing damage. Also check for popped nails that need to be hammered back in place. Metal and vinyl flashing around chimneys, skylights, and attic vents that have separated will need to be resealed with caulk. However, flashing and vent boots that are beginning to rust or deteriorate should be replaced.

Clean the gutters: Clean the gutters, gullies and downspouts in late autumn after the trees have shed their leaves. Check for breaks or gaps in the joints (obvious drips, green staining on the walls or path), and make certain that the brackets holding the gutters against the house are securely attached. Aim to clean your gutters at least every six to 12 months.

Flashings and sealants: Other parts of the roof can cause leaks and damp, including the flashings (usually lead formed to slates or tiles and lapped over by a cap from brickwork e.g. around chimneys, skylights), chimney stack brickwork or masonry and pots. Again, you may be able to spot these problems yourself, but you will usually need a roofer to put them right. Wind and weather can get underneath defective flashing and rip it loose allowing water ingress. Make sure that the sealant or mortar that the flashings are pointed with hasn't dried out or become loose.

Valleys: Usually made of lead, their lifespan is shortened by incorrect fixture to regulated lengths causing splits. Lead just wears out forming holes. Use of sealants and proprietary paints etc. to repair a split or fault in leadwork can only be termed as temporary and replacement is the only permanent solution. All leadwork should be in accordance with recommendations in the current Lead Sheet Association manual.

Check the roof space: The roof space is where you're most likely to spot leaks before they become too serious. Water staining in here may be an early warning sign of a problem with the roof covering, so if you spot some call in a reputable roofer straightaway. If leaks go untreated, your home structure can be damaged too. Constant and unchecked leakage may contribute to the formation of something more serious in the guise of rot or mould.

Mind the trees: Leaning branches can dislodge roofing materials when blown by the wind; falling branches from overhanging trees can damage tiles, and fallen leaves can clog gutter systems. If you have trees growing near your home, then you may need to take steps to have them trimmed back from the roof.

Flat roofs: Check for any cracks or splits around the edges. Also, pay attention to any sagging, for as water builds up, the boards can break under the weight. Damp patches on the ceiling are usually a good indication that the roof may have a tear. Stand back and check your flat roof from the ground periodically. If you spot uneven lumps, repairs may be needed. Never attempt to climb ►

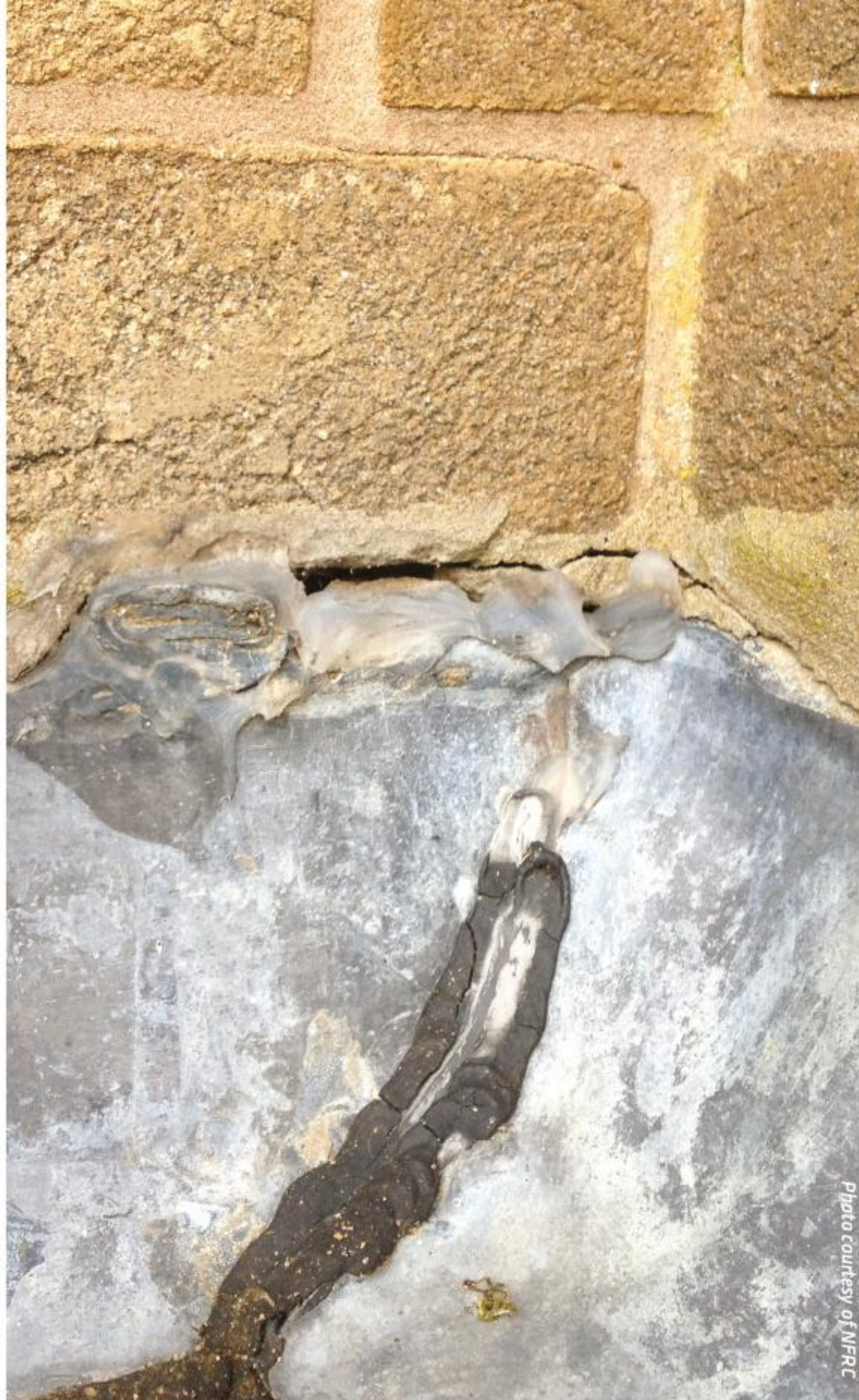


Left: Moss can lead to damage

Below: Mortar pointing cracking to lead cap flashing



Photo courtesy of NFRC



Failure of sealant to lead cap flashing

onto the roof unless it is designed for regular access and has adequate protection against falling. Use a ladder that is tied and footed and look over the parapet or through an overlooking window to see if there are any blisters, laps that are not properly sealed, flashing coming out of the wall or water ponding.

When to call in the experts: If you're an experienced DIYer, the chances are that you may be able to fix small problems on one-storey buildings, such as cleaning out gutters at lower levels to enable water to flow away. Anything else is best left to the experts.

How to find a reputable roofing company: When choosing a roofing contractor you should consider your choice very carefully and it's wise to check them out before employing them. If they are reputable in terms of price, reliability and workmanship, then the potential for problems will be greatly reduced. In NI you should look to choose one that is a member of NFRC - National

Federation of Roofing Contractors - or one that is a UK Government-endorsed TrustMark roofing contractor. This means that the contractor is inspected, has a complaints procedure, can offer warranties and you have the added security that the roofer is insured to complete your roofing work. In ROI you can choose from the official online Construction Industry Register Ireland (CIRI).

If your home is a designated heritage building, your roof may need specialist skills to repair or refurbish it. In NI the NFRC maintains the National Heritage Roofing Contractors' Register which is recognised by all UK Heritage Agencies. In ROI the Irish Georgian Society offers a Traditional Building Skills Register.

Re-roofing? Which roof covering to choose: If you need to re-roof, you will have to decide on a suitable roof covering which could be the same as you currently have or you may want to upgrade or ring the changes. The factors affecting your choice will include the style of your house, your architect, your local planners, and of course, your budget.

Your choice of tiles will also be affected by the pitch and roof structure, so ensure that the rafters can support their weight. Your architect or a structural engineer can work this out, or speak to your tile company. Of course the roof must also comply with Building Regulations and known standards. The pitch of the roof and type of tile used will also affect how many, and in what configuration the tiles must be nailed.

Many outbuildings and garages, and some extensions, have flat roofs. Felt is the most common covering but newer materials such as glass fibre, PVC and rubber are now used.

In fact if you have a flat roof that needs re-roofing you could consider converting it into a terrace (green or not) – if the flat roof is adjacent to a window it should be relatively easily converted into a door. However all of these structural changes, including the terrace's new load-bearing requirement, will require the input of a structural engineer (in order to make the correct calculations and advise on suitable railings/safety features). You may also need planning consent (if when standing on the terraced roof you can oversee your neighbours you will in all likelihood need it – in all cases check with your local authority to make sure the conversion is exempt).

Taking good care of your roof is one of the most important yet most neglected responsibilities of owning a home. According to a survey conducted by consumer advice website Roofapedia, 86 per cent of UK homeowners neglect to periodically inspect their roofs for damage. Just over three per cent of homeowners checked their roof once a month while over 40 per cent admit to never checking it at all. ■

Kevin Taylor
www.nfrc.co.uk

Additional information:
Geoffrey Parkinson FIOR, NFRC Regional manager for NI

Penrose Roofing
penroseroofingcontractors.com



Photo courtesy of NFRC

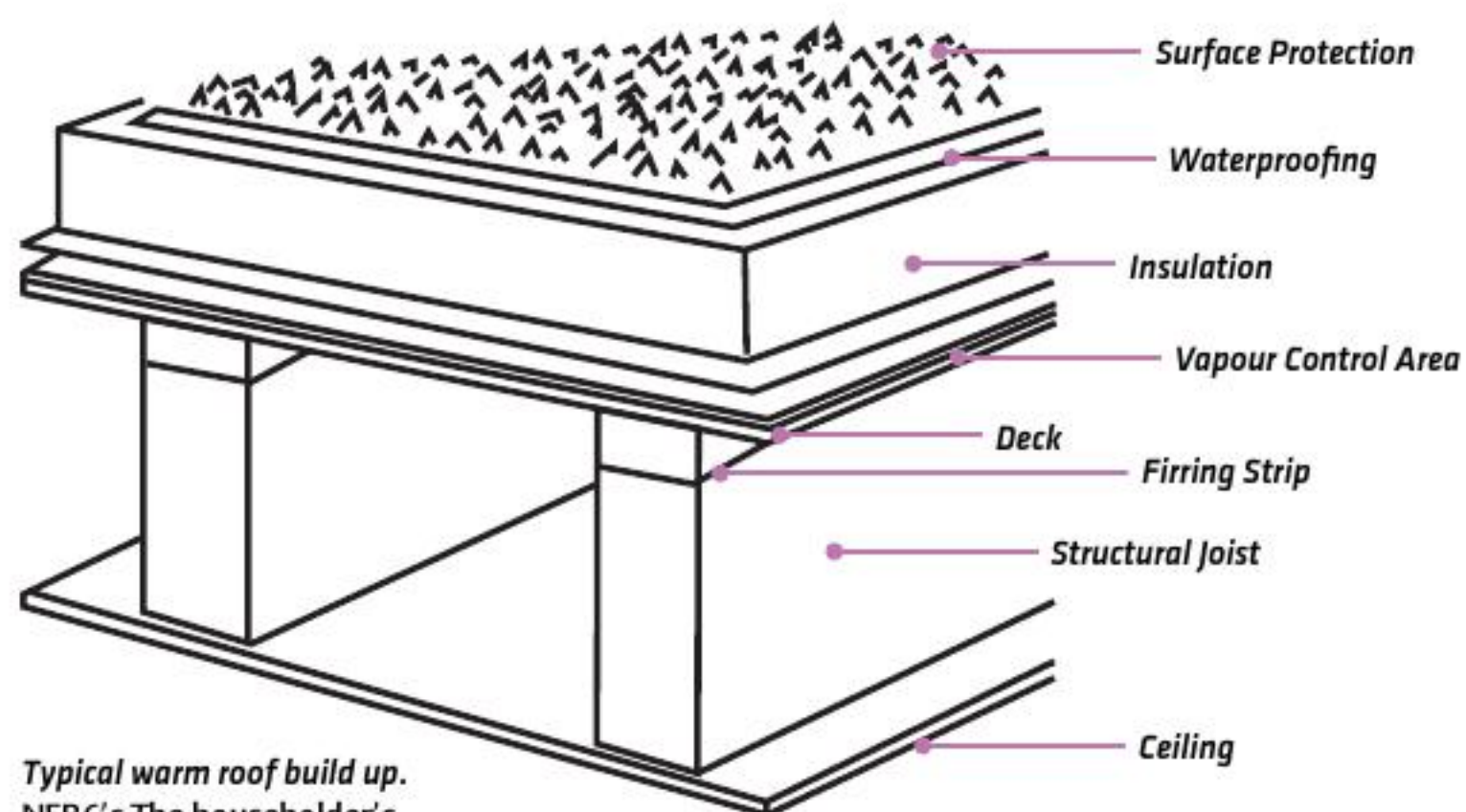
A brief guide to roof types and coverings

Pitched or flat, tile or slate, roofs have a very important role to play in our wet and windy climate!

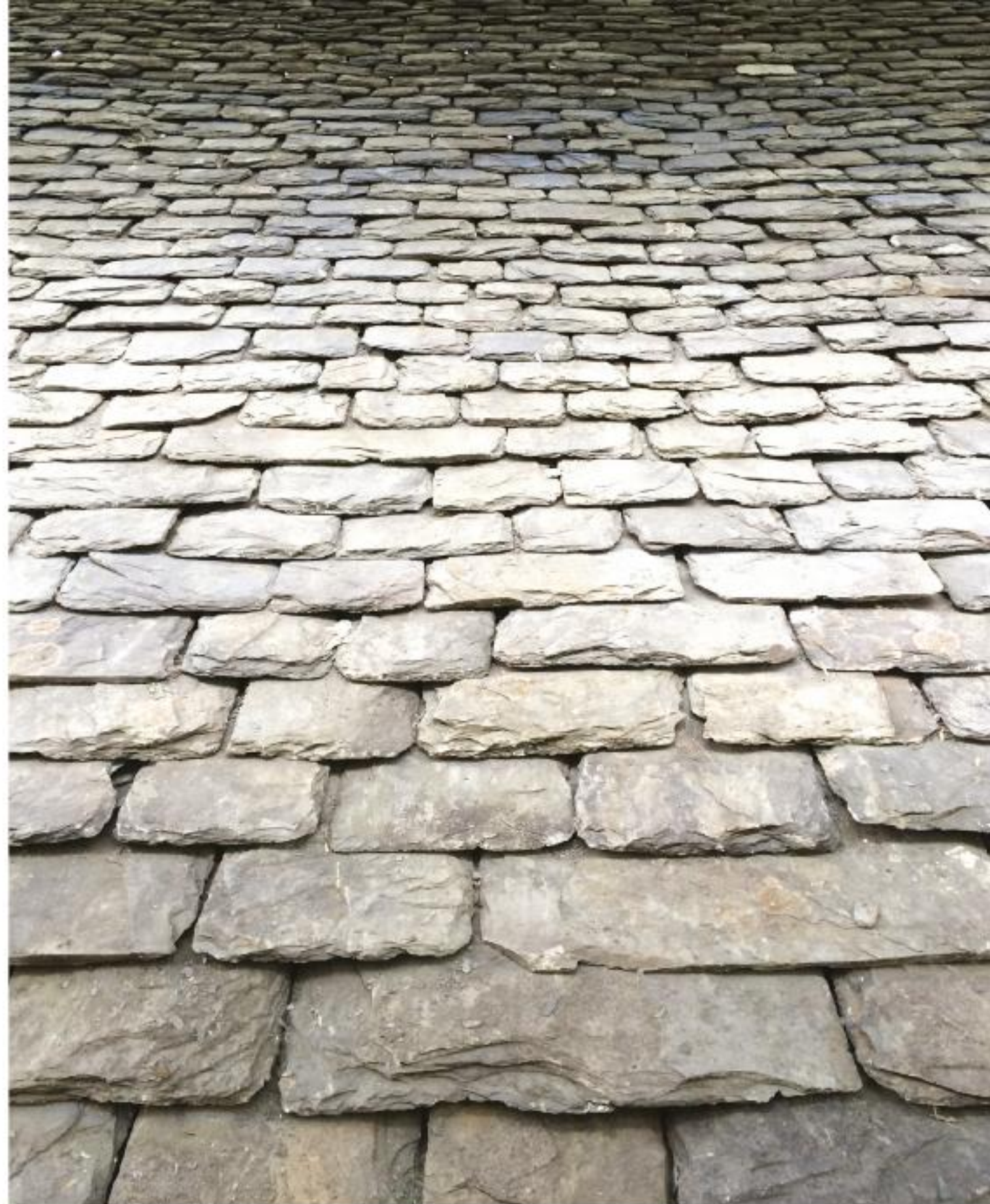
Pitched vs flat roofs

Most Irish homes have pitched (raised and angled) roofs covered in tiles or slate but new build and extension projects are increasingly turning to the flat roof alternative.

A flat roof is generally defined as having a pitch not greater than 10deg to the horizontal. A truly flat roof would not allow rainwater to drain away, so most flat roofs have a fall on them so that rainwater naturally flows to collection points. Built-up RBM (Reinforced Bitumen Membranes) are the most common material for residential flat roofs. Thanks to RBM, leaky roofs that were once expensive and troublesome to maintain are now a thing of the past; today, flat roofs are low-maintenance and can enjoy a trouble-free life expectancy of up to 35-40 years. ►



Typical warm roof build up.
NFRC's The householder's
guide to flat roofing



Above: Natural slate is hard wearing and can last for over 100 years

Thatched cottage, Dunmore East, Co Waterford
Photo: Derek Cullen

Shingles

Tiles

Tiles are man or machine made and commonly formed out of concrete or clay, and depending on the situation or construction, can be expected to last in excess of forty years. Great for curves and intricate details, clay tiles come in a range of colours and shapes, with special tiles for valleys, ridges and gullies. Period builds or renovations can take advantage of impressive detailing such as dramatic ridge tiles/finials, while tile shapes, such as fish tail and bull nose, are used to create interesting patterns.

Concrete tiles have become hugely popular, being competitively priced and offering a vast range. Many models interlock, offering improved waterproofing, secure fixing and shallower roof pitches. The disadvantage of these tiles is that they don't always weather in the same way as clay and can have a shorter life expectancy.

Slate

Natural slate is hard-wearing so can last for over 100 years, but is more expensive and a greater number are needed to allow for overlap. While reclaimed slates can work out cheaper, ensure these have not been sourced from a vernacular building that, in architectural terms, should have retained them (there have been concerns in ROI over homeowners stripping slates off their roofs as a means to generate income).

Slate provides a smart and yet traditional roofing material, usually grey, but also available in colours, from purple to green. Composite versions are often interlocking, reducing the need for overlapping.



Shingles

Asphalt shingles, commonly used in ROI, have a relatively inexpensive upfront cost and are fairly simple to install. They present a long-lasting roofing material, and provide excellent protection against strong winds and heavy rain.

Cedar shingles are an aesthetically pleasing, light weight and naturally sustainable alternative. They're suitable for roof pitches as low as 14deg, easy to handle and cut to shape but are more labour intensive to fit as they require a greater overlap and more fixings. They should also be fireproofed which in turn means that the run off from rain is not suitable for use and if there are overhanging trees the resulting moss build up can reduce their life expectancy, which is otherwise 40+ years for treated shingles (can be extended if regularly cleaned and retreated).

Other roof coverings

Metal is also a roofing option that has been around for centuries. Nowadays there are many more metals available, including aluminium and zinc, which can be laid on relatively shallow pitches, usually on boards or rigid insulation. The fixing and seams vary according to the metal and fixing system used. The fixing methods vary according to the manufacturer and metal used.

Thatch gives a wonderful organic shape which is perfect for curves, and insulates well. It's a traditional and sustainable material that should be encouraged, and fire concerns – which have prevented it appearing on many new builds – can be quite easy to overcome. It requires a steep pitch and has a deep overhang, rarely requiring a gutter.

Green roof covering

In urban environments, green roofs help attract birds and butterflies and provide cleaner air, offsetting our carbon footprint and thus reducing global warming. They can also help to lower the need for air conditioning in the summer, and offer a degree of additional insulation in the winter. The lives of flat roof waterproofing membranes are extended and sound insulation is improved. Not only that, water surface run-off can be reduced thereby helping to minimise flash floods following intense periods of rainfall.

The most common types of green roofs include extensive, intensive and biodiverse. Extensive consist mainly of succulent plants that are highly adapted to our Irish climate and need little or no maintenance.



Intensive usually refers to the grasses often used for recreational amenities, whilst biodiverse feature small pockets of different microclimates, such as a small pond on a large roof, logs and stones for other habitats. Installing a green roof system is completely different to traditional roofing due to the increased loading, which requires a specialist installer that can specify any required strengthening of the original supporting construction.

Dormer issues

A common feature of Irish homes, dormers are generally a part of the original construction or a later addition. They create usable space in the sense that they add headroom and provide an opening for the addition of windows. The most popular type of dormer conversion is a simple flat roof dormer that offers the largest amount of additional

internal space and light. When constructing these, particular attention should be paid to correctly specifying the details for insulation, wind and weather proofing and ensuring that these are followed on site.

Extension issues

If you are looking to extend the main roof of your house to accommodate an extension, it's important that it looks like it is an original part of the house, instead of an afterthought. No matter how well the rest of the design blends and materials match with the house, unless you get the roof right, your addition will look like it's been stuck on. ■

Kevin Taylor & Astrid Madsen
www.nfrc.co.uk

Left: 'intensive' green roof
Organic Roofs
www.organicroofs.co.uk

Right: natural slate
Tegral
www.tegral.com



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The perfect tree hideaway

Building a treehouse requires imagination, enthusiasm and some amount of DIY know-how. While more complex structures need the input of an experienced designer, it's always good to know the rules before you embark on such a project.

Treehouses are among those unique structures that can spark, and feed, the imagination of adults and children alike. For grown ups they often evoke an 'idyllic childhood', real or imagined. They also offer the tantalising prospects of off-grid living, a retreat in a calming environment of dappled sunlight and shade. For children they are truly magical spaces that encourage their sense of adventure and play.

In recent times, treehouses have been used as everything from a traditional play space to a long-term residence, from the office to the hotel or restaurant, from therapy clinic to recording studio.

Planning restrictions

For planning permission, ROI local authority websites should give the relevant requirements (you can ring their planning office if there is no information confirming what they are). For example Dun Laoghaire Rathdown County Council outlines theirs as:

'You can build a shed, (treehouse), etc., as long as... it does not extend beyond the building line of the house and does not exceed 4m in height, (if it has a tiled or slated pitched roof), or 3m (if it has any other roof type); the floor area limitation for exempted development is 25m²; it is not lived in'

Similarly in NI the government planning information website states that:

Planning permission is not required provided:

1. The shed / (treehouse) is used for domestic purposes only.
2. The ground area covered by the shed / building and any other buildings within the boundary of the property, excluding the original house, is not more than half the total area of the property.
3. No part of the shed / building is in front of the principal or side elevation of the original house that faces onto a road.
4. The maximum height of the shed / building is 4m.
5. The maximum eaves height of the shed / building is 2.5m if it is within 2m of the property boundary.
6. No part of the shed / building is within 3.5m of the boundary with a road to the rear of the house.

Of course, in both cases there are further requirements on the location of windows, listed buildings, heritage sites, etc. However, unless you're building a grounded treehouse (on no more than 1m posts) probably the most relevant item with regards to needing planning permission is the height restriction of four metres. Regulations aside, you will of course want to locate the treehouse with consideration of your neighbours' privacy (including overlooking their garden).

In terms of building regulations refer to the Technical Guidance Documents for ROI and Technical Booklets in NI.

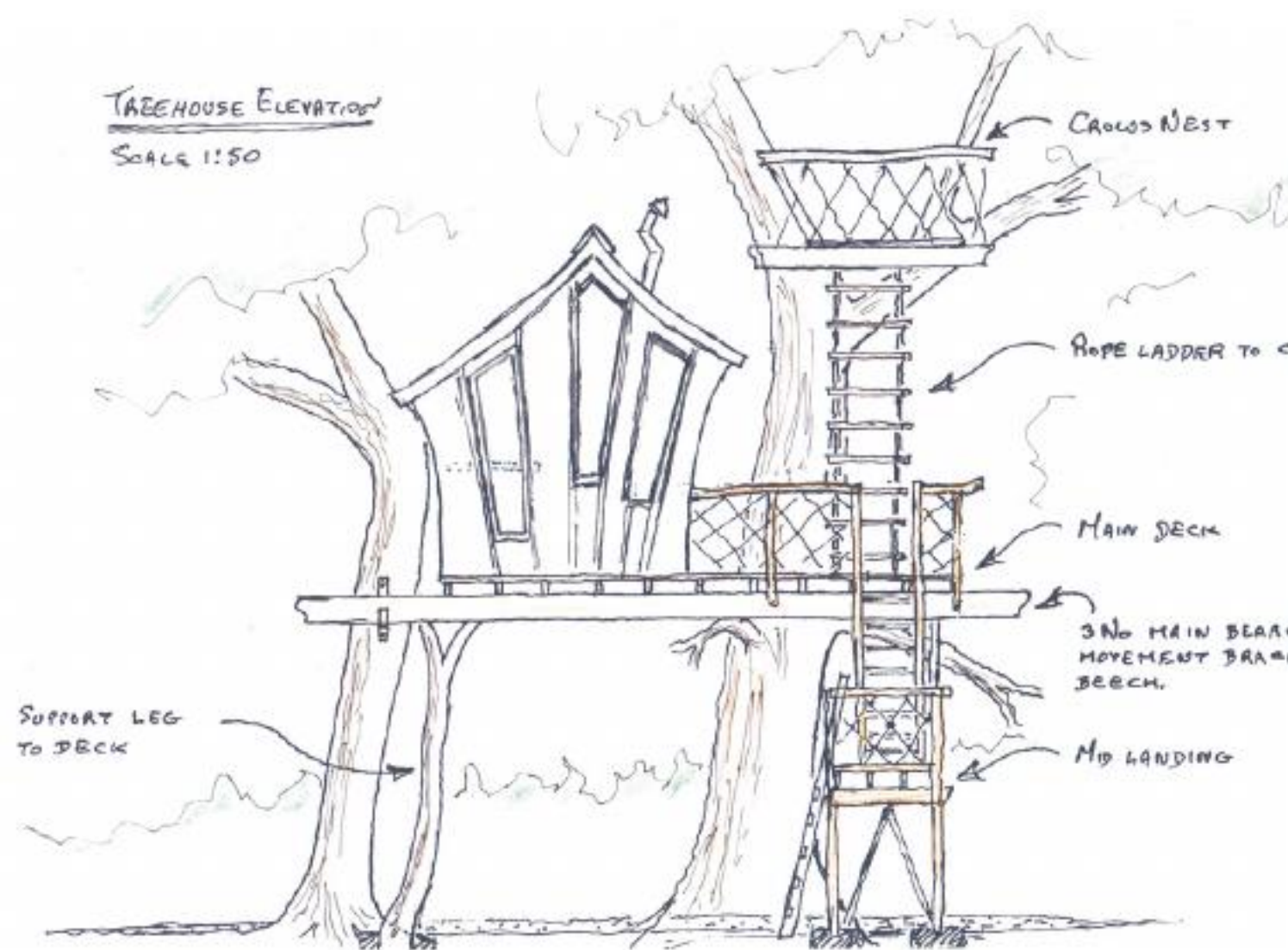
The plan

In all cases you will need to draw up at least a basic design plan of your treehouse, considering firstly any possible locations available to you, and then the three main elements of the structure: platform, access and the building.

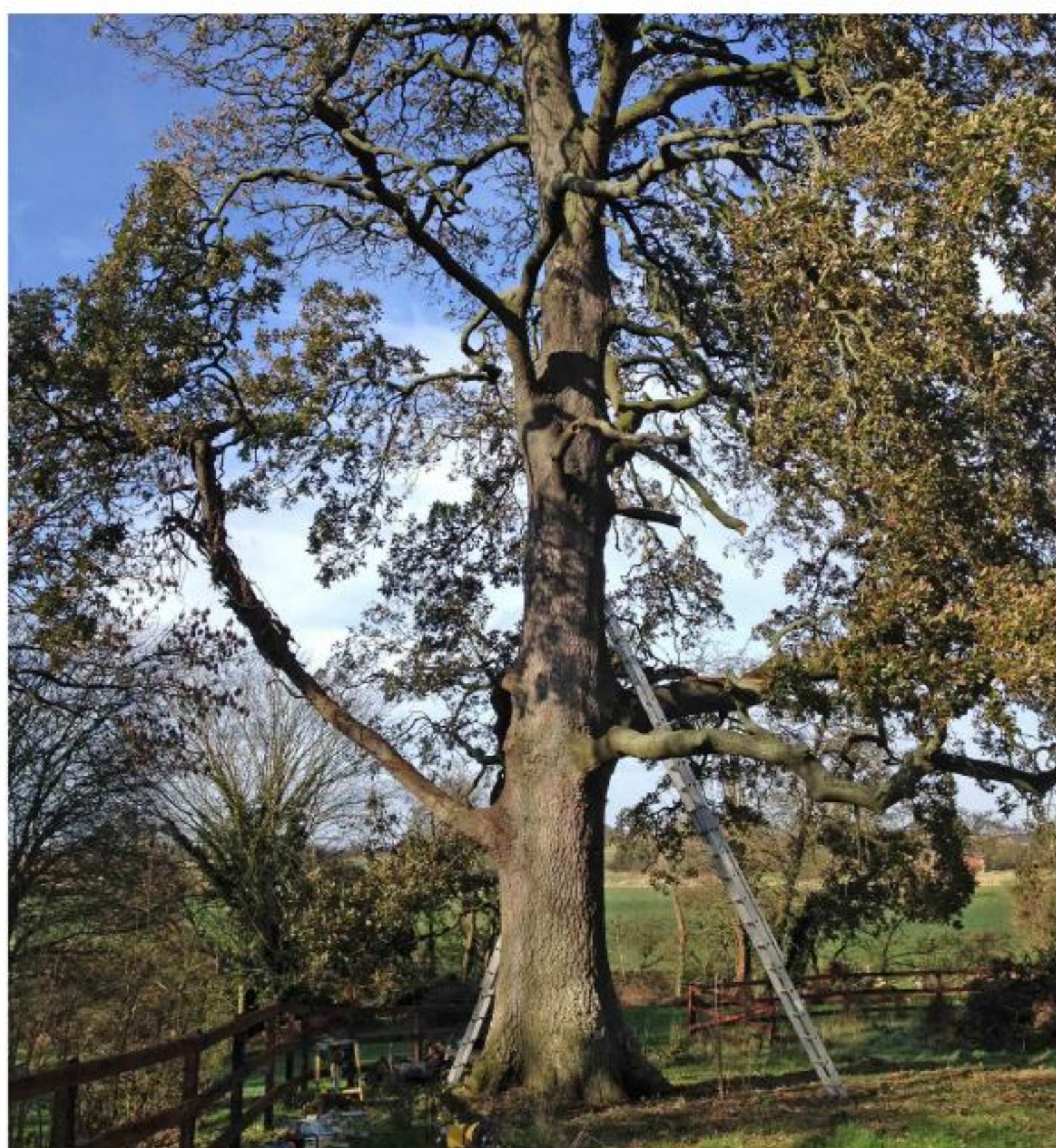
If you have a tree or trees which are suitable and large enough, and are going for a genuine treehouse ►

Dr Seuss project, plans (below) and finished product (right)

Plan Eden www.planeden.ie







you must first carefully consider the location. Should it be in one tree (with or without support posts to the ground) or possibly suspended between two or more trees. While a single tree may at first appear the easiest option, it does tend to lead to the tree trunk and possibly some of the main branches being left to grow through the structure and thus to more complex structural detailing.

The two tree, or tree and posts, options allow you to position the building on a less obstructed platform. In this case you will also need to build in provision for wind movement between the two trees, with sliding brackets on one tree. With regards to security, particularly for children, carefully consider the location of the treehouse, positioning it close to, and visible from, the house. The health of the tree(s) should also be determined at an early stage.

As to the style of the treehouse, literally anything goes. In recent years treehouses have been designed across the world as anything from simple canvas cocoons suspended in a tree in California, to a near invisible mirrored cube in a Swedish treehouse hotel, and everything in between.

So be creative and use your imagination; you will however have to balance that with your budget, time and other resources available to you. Don't take on building a dream children's treehouse that won't be finished until they are in their teens.

Platform and access

Begin your design with the platform, which will, in most cases, be made up of two or more main bearers across which are laid the joists, then finally the decking or flooring material. Any required knee-braces, struts or support posts should be included to create a safe and stable base on which to build your treehouse. Depending on the complexity of the design you may at this stage need to engage a structural engineer to sign off on your specifications. The final decking /flooring material must be cut back sufficiently to allow for growth/ expansion of the tree trunk over time.

The health of the host tree must also be taken into account, with the minimum pruning necessary to facilitate the treehouse, and the support designed with a balance of safety and the minimum of individual fixings through the outer living cambium layer of the tree trunk. This can be done using heavy-gauge coach screws (or lag bolts) along with custom-made galvanised, or better yet, stainless steel brackets. A wide range of proprietary treehouse support fixings available online from the US can be purchased by Irish treehouse builders.

In order to ensure that the overall stability and safety of the structure does not rely on a single component or support member at any point, a fail-safe system should be considered. This involves braided steel wire looped through a point above the treehouse that is attached to the ends of the main bearers.

The house

You can now design your actual 'house', depending on the type of treehouse you want and its ►

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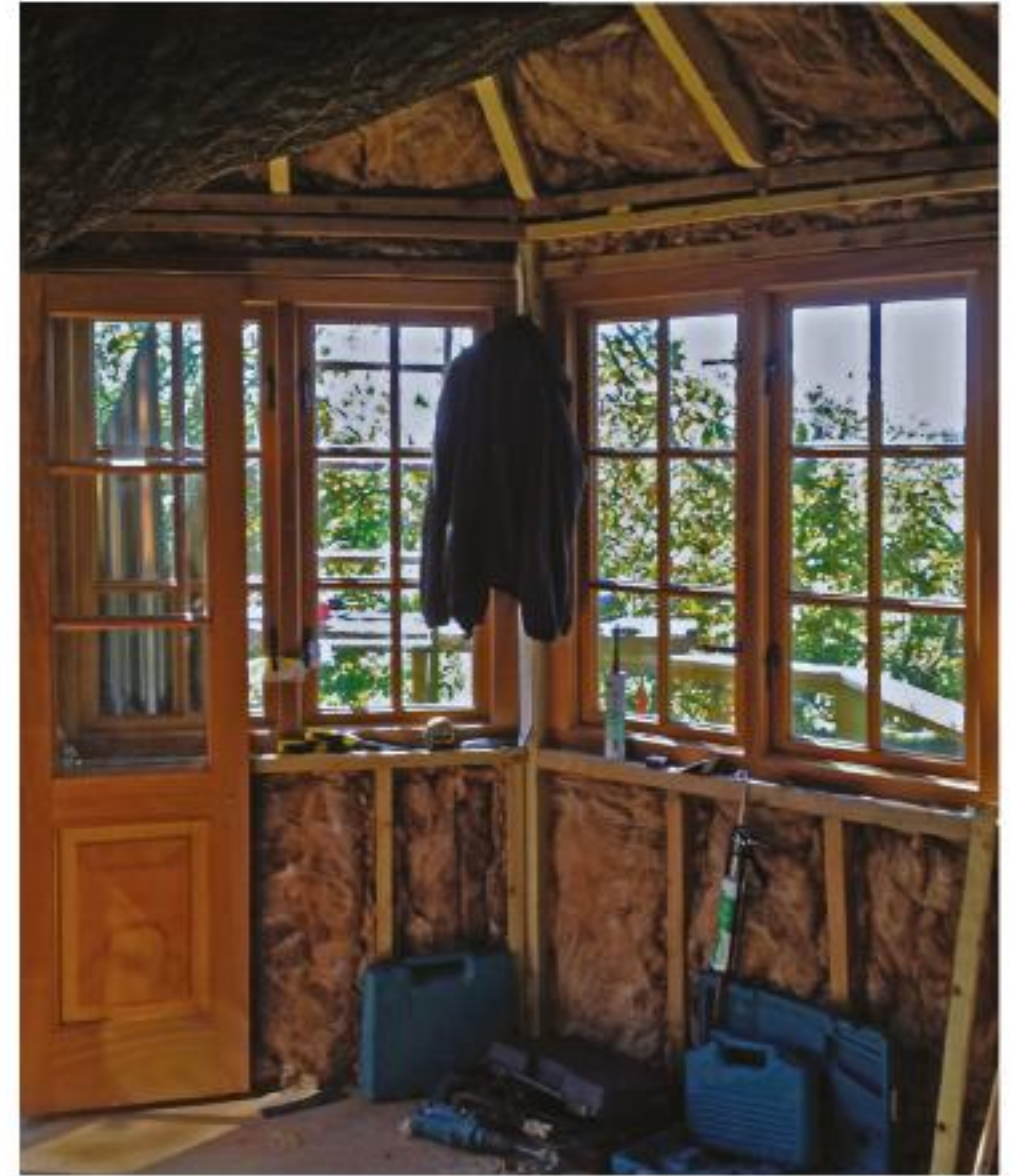
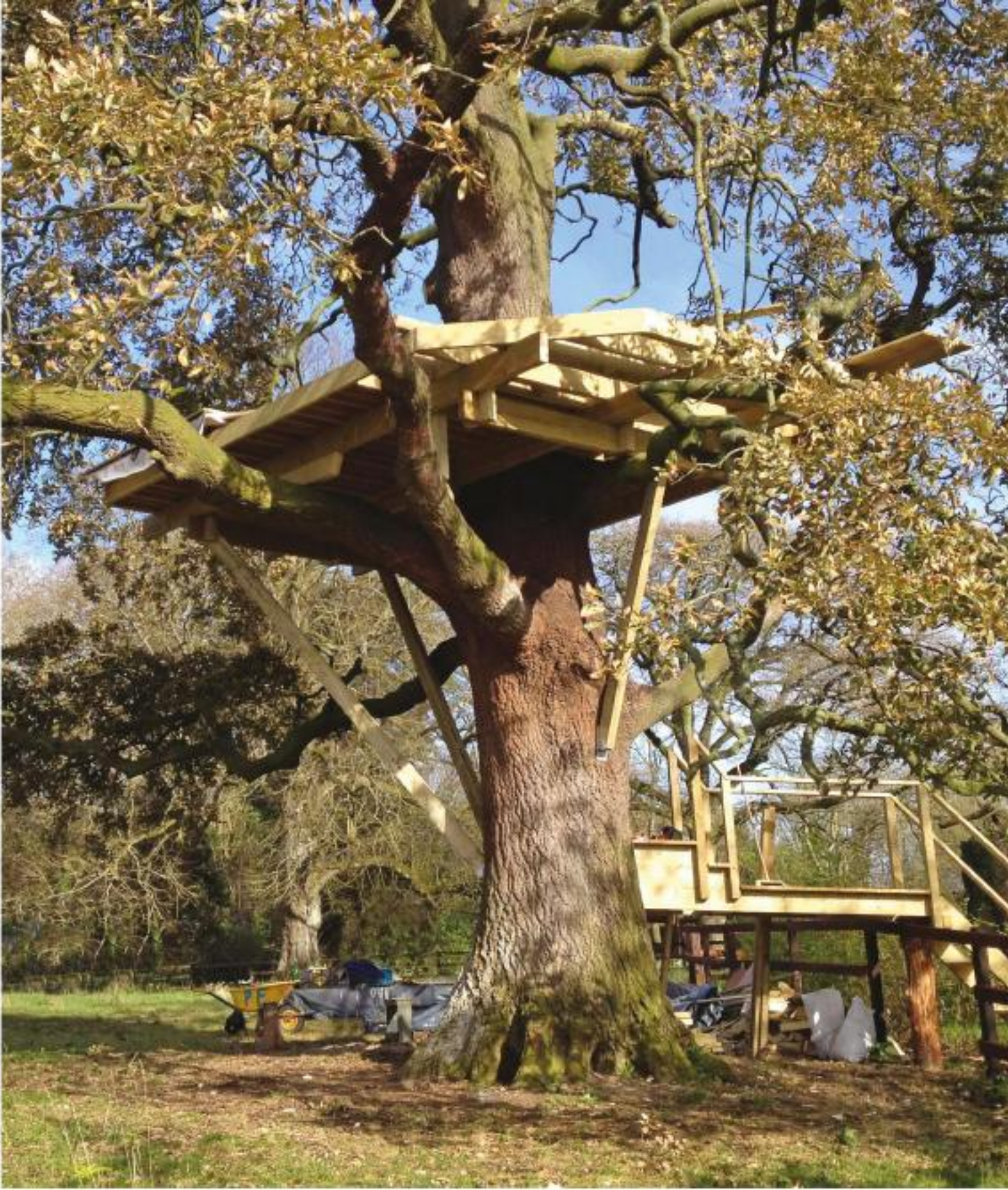
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purpose. Keep in mind the longevity, and possible adaptability of the structure to future uses. For example a children's play house could in time be adapted as a den and study room after a few years and a more adult space after that.

As previously mentioned, the range of materials you can use is practically limitless. With that in mind, but sticking to the more conventional for the present, you need to decide on the level of specification for the build. For example, should the structure be insulated; what standard of joinery do you want (single or double glazed, softwood or hardwood windows and doors); should you include power and light? A good quality slate or cedar shingle roof will protect your structure for many years. At the very least all timbers used in the treehouse, platform and access structure should be pressure treated softwood.

Usually the wall structure would be 100x44mm pressure treated studwork with 100mm rock wool insulation and a breathable membrane externally. The exterior would then be battened and clad in any one of a number of timber finishes, such as horizontal or vertical boarding, ship-lap boards or cedar shingles. The interior finish should be some form of timber sheeting or panels. Never use a plastered finish; it will crack as the structure moves.

Similarly with a pitched roof, the rafters should be a minimum of 150x44mm treated timbers with collar ties (to prevent spreading or even collapse), then add insulation and internal finishes as for the walls. The roof finish could be slate, cedar shingles or corrugated iron sheeting, depending on budget and taste.

Lastly, you should consider access and safety, taking into account who will be using the treehouse. If it's for children keep the platform lower or at least break the climb up into safer, more manageable stages. Access will be via one or more of three basic methods:

A staircase is generally set between 20-40deg from the horizontal, a ship's ladder between 60-75deg with handrails, and a ladder between 75-90deg without handrails.

Rope ladders can also be used but only as a secondary means of access as some children or adults will not be comfortable using them.

If you're lucky enough to have a tree on a sloped site, a bridge from a point on the adjacent slope may be an option.

In an urban situation, where no suitable tree is available and overlooking may be a problem, it can still be possible to work in a structure that can achieve the feel and sense of a treehouse, by raising it off the ground and adding a tree within the structure.

Having designed your treehouse, there are any number of features and accessories you can add on at this stage. These include:

- Crow's nest
- Swings
- Slide
- Zip line
- Hoist (basket and pulley)
- Climbing wall or net
- Trap door and rope ladder
- Water cannon (hose on spindle)

Last but not least it will be important to estimate

the total combined weight of the materials, and potential number of occupants, before you complete your design, in case it needs to be altered; e.g. so as not to overload the support trees, or to check whether additional supports are required. Wind and snow effects will also vary with height, exposure and the profile of the structure. ►



Previous page, left page and below: A one-tree treehouse construction on a mature oak tree, Co Louth

Plan Eden www.planeden.ie





Photo courtesy of Birr Castle Gardens



Photo by Deirdre Bannon



Mud and Wood natural building courses
www.mudandwood.com, photography by Steven Rogers

Clockwise from top: first two photos show the treehouse in Birr Castle Gardens, County Offaly, which is believed to be Ireland's largest, standing 39 feet tall; post and beam tree house in Co Sligo; last two photos show an example of a low level tree house in an urban garden (Co Dublin) with deck wrapped around mature birch designed by Plan Eden.

The build

Once you have your design and planning sorted out, prepare a materials list and get it priced by two or more suppliers and joinery workshops. Be methodical with your build. Write out a work schedule and arrange help as you need it. Prepare your work site. Give yourself a generous amount of un-cluttered space to work in. When you take delivery of your timbers, set up a storage rack of three or four timbers on concrete blocks, sort and neatly stack them (preferably in order of use) and protect from the weather with heavy gauge polythene. Uncovered, unsupported and loose timbers will warp and twist in a matter of days. You now should treat your work area as you would any building site:

- Cordon off with temporary fencing and keep the work area tidy and safe.
- Wear safety boots, hard hat, hi-vis vest and work gloves.
- Never work alone, particularly when above ground.
- Be alert to people below you when working at a height.
- Use a safety harness, looped through the tree canopy, when working at a height.
- Use only cordless or low voltage power tools.

- Where temporary access is needed, use a heavy duty extension ladder tied securely at the top (on the tree).
- Use a well-supported scaffold tower if required.
- Never use a step ladder.

At this stage stand back and look at your tree carefully. Prune out any timbers as previously decided, also remove any dead or damaged branches, particularly from the tree canopy above. You are now ready to build. Start with the platform, providing temporary support as needed until it is complete and the final supports are in place. Next build your stairs or ship's ladder to provide a safer and more comfortable access point to the work platform. As much as possible pre-fabricate your walls at ground level and assemble them in manageable sections.

You will now need several strong helpers on site to lift the panels into place using a rope and pulley system rigged from the tree canopy above. For safety, fit posts and handrails to your deck as soon as possible. Construct the roof and seal around the tree as necessary using metal flashings and a flexible butyl rubber collar. Fit out your windows, doors and interior, installing electrics as and if required. Finish any detailing and fit any accessories as planned.

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Dr Seuss tree house with staircase and rope handrail.

Finally, clean up and re landscape your work area.

Final word

For safety and to get the best from your treehouse, check the structure regularly, particularly after stormy weather. Pay special attention to metal fixings and brackets, also handrails, support posts and timber bracings. Tighten up or replace fixings as required, similarly with structural timbers. Examine the tree canopy above and prune any dead or decaying branches before they become a hazard.

Disclaimer: This article is a guide only and does not purport to replace expert advice; always consult an experienced designer to ensure the structure you build is safe and complies to the relevant regulations. ■

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Getting a retrofit right

Mushrooms growing on walls, attics dripping with condensation – the perils of a retrofit that's been poorly designed or executed are severe. The good news is, it's easy to avoid the heartache by being realistic about the budget, finding the right people to do it, using appropriate materials, and planning it in advance. That's right! There are no shortcuts to a quality job.

Over the coming years it is likely that everyone will be required to carry out a deep energy renovation of their home; upcoming EU directives and international agreements (COP21) are already starting to change national policy. But while it's a good idea to get ahead of the game, it's important to understand what the rules are.

There are some real horror stories emerging from the home energy renovation industry, bizarre ill-fitting insulation, attics dripping with condensation, bad indoor air quality and mould growth on walls. This is mostly due to people and contractors cutting corners, oftentimes because they want to save money but also because they lack knowledge of building physics.

First things first

There is no way around this first point, and that's to get independent advice from a professional. Their key function is to draw up a detailed and independent hygrothermal analysis of the building to determine what should be done and how.

In the calculations a lot of variables have to be considered: exposure to rain, house orientation, structure, etc. Taking into account planning restrictions, this will lead to the selection of the most appropriate insulation choices (where to put it, what type and thickness) for your house, not just the stuff that happens to be left over in the back of the builder's white van!

The resulting strategy to achieve a good energy rating (B3 or better) will also prioritise the order of work. The sequence is vital to get right and if you don't have the money to do it all at once, it allows you to do it in stages.

Making it up as you go along is not a recipe for success, there are just too many things to consider.



Bang for your buck

When hiring a designer or retrofit contractor ask an independent professional for recommendations. Don't just rely on word of mouth from neighbours; they may be lovely fellows who do a perfect decoration and painting job and don't leave a mess, but there is no point in having a beautiful finish if your walls and roof are rotting behind it.

Credentials In the case of a designer check that they are on a statutory register, part of a professional body and that they have completed courses/training in this area of expertise. Ask for references and visit homes they've overseen work on.

In the case of an installer, check if they are on a recognised contractors' list. For NI this could be registration on the BBA installers' list, the Cavity Insulation Guarantee Agency or the UK's National Insulation Association. Some will also have the UK government endorsed Trustmark which is intended



How much will it **cost?**

For a typical 120sqm/1,300sqft semi-detached house, a retrofit to B3 standards might cost in the range of €20,000 to €25,000/around £20,000, much more for a larger detached house. A deep retrofit to A3 or better is looking at a minimum spend of €45,000/£35,000. This might include external insulation (which will cost in the region of €18,000/£12,500), new windows, some airtightness, attic insulation, a ventilation system and a new heating system.

to signal competence and adherence to standards.

In ROI you should only use the Sustainable Energy Authority of Ireland (SEAI) approved contractors' list or check they're an approved installer with the NSAI. Some contractors are directly associated to insulation manufacturers, being trained on a regular basis on their systems. In case something goes wrong the benefit to the homeowner is that adequate recourse can generally be found. This linkage with specific manufacturers is a current requirement of all members of the National Insulation Association of Ireland.

Reference material Check that the guidance they are using is up-to-date and specific to Irish conditions. In ROI there is a National Code of Practice for retrofit published by the National Standards Authority of Ireland (SR54) which sets out the science and good practice for retrofit. The Building Research Establishment (BRE) and the Sustainable Traditional Building Alliance (STBA) ►

also provide excellent reference material for both designers and contractors.

Training Ensure everyone working on the job is trained. It's important that the workmen who are actually doing the work understand what they're doing and why, not just their bosses.

Covered Designers, contractors and installers must have up-to-date insurance and be tax compliant.

If you can't get this information or a straight answer to all of this, start backing away. The energy renovation industry is new and there is still a huge level of ignorance so you need to make sure you hire someone who understands the pitfalls of retrofit and how to avoid them.

Ventilation

An important aspect to be aware of is that once you start adding insulation, you change the physical properties of the home. We produce a lot of moisture by breathing, cooking, showering, and drying clothes, all of which needs to be properly managed.



Do you qualify for a **FREE** insulation upgrade?

Don't forget, in ROI under the SEAI's Better Energy Warmer Homes scheme you are entitled to free insulation upgrades if the house you own was built before 2006 and you receive fuel allowance (the case of many Old Age Pensioners) or one of the following: jobseeker's allowance for over six months with children under 7 years of age, family or one parent income supplement. In NI you can qualify for the Affordable Warmth Grant grant if your income is below £20,000/yr and you have been identified by the Housing Executive as at risk of fuel poverty.

For example older structures partly relied on draughts from the windows and chimneys to provide fresh air. Once you start replacing older leakier windows with modern triple glazed units and sealing these up to the wall you are creating a need for ventilation to come from somewhere else.

Another common example is one where you add insulation to your roofspace floor – in that case the area will become much colder because it will be getting less heat from the house. But some moisture will still get up there, and it will condense into water to drop back onto the insulation.

Without increasing ventilation within the roof this moisture will build up over time and eventually, your roof timbers will rot.

It is a requirement of an SEAI grant in ROI to increase roof ventilation when undertaking this type of work but unfortunately many contractors are telling homeowner not to bother. They will be long gone before you notice the problem.

It is vital that you also increase the level of ventilation in the house as a whole once you start insulating and making it more airtight. A properly designed ventilation system will guarantee good indoor air quality – you and your home need fresh air to stay healthy.

There are many different systems so you don't need to go top of the range to get the required effect even when a forced/mechanised ventilation system is required.

The deed is done...

So what to do if something goes wrong? If you have used an approved installer you can go back to them as they should not want to risk losing their accreditation, and if they can't fix it they should have the insurance to do so but that's if they accept wrongdoing.

Sometimes it may just be a localised issue that can be easily rectified. Condensation in roof spaces can be remedied by unblocking eaves ventilation which is often filled during installation and adding slate or ridge vents to provide cross ventilation. Air leakage from the living space into the roof space may also need to be minimised – this can include making sure any openings made in the ceiling are sealed up (and made safe if electrical).

There was an instance where homeowners complained of condensation throughout the house which surprised everyone as there was a proper demand controlled humidity activated ventilation system installed. The investigation showed that they had placed a heavy suitcase in the roof space on top of the flexible extract duct from the bathroom so it had ceased to work. The solution in this case was easy: move the suitcase! This is not uncommon with ventilation systems, people forget that they need to be kept running.

Sometimes an energy upgrade has been carried out and ventilation has not even been considered so it is hardly surprising when condensation occurs. The solution to this is to install a ventilation system. Other issues such as bad workmanship or using the wrong materials may be a bit more difficult to resolve. This is where it is best to go back to an experienced professional who can help work out the best course of action for the particular problem.



Costs can quickly add up if this is the case. While external insulation could readily set you back €10,000/£8,000 to rectify, it will probably be dearer to have to correct internal wall insulation due to the associated refurbishment and/or structural costs.

For example, floor joists can become compromised as a result of poor internal wall insulation. In a bathroom the cost of replacing poorly fitted insulation could result in having to get a new one. You may also need to move out while the remedial work is taking place, which you wouldn't in the case of an external wall refit. And the list goes on. A stitch in time... ■

Pat Barry and Astrid Madsen

Irish Green Building Council, www.igbc.ie

Additional information:

Liam O'Gorman of the NIAI www.niai.ie, Niall Crosson of Ecological Building Systems www.ecologicalbuildingsystems.ie, Paul Kenny CEO of the Tipperary Energy Agency which supports homeowners who wish to complete a deep retrofit of their home with renewable heating and mechanical ventilation. 10 homes were upgraded in 2015 to A2/A3 standard and a further 25-30 for 2016 are likely. See www.superhomes.ie

Read up and watch videos that explain concepts such as thermal bridging, interstitial condensation, together with case studies and stories on www.qualibuild.ie

Installers ROI: <https://hes.seai.ie/GrantProcess/ContractorSearch.aspx>, www.nsai.ie/Insulation.aspx, www.niai.info

Installers NI: www.bbacerts.co.uk/installer-approval/#search, www.nia-uk.org, https://ciga.co.uk/installer_region/northern-ireland/

Also see www.energysavingstrust.org.uk and www.bre.co.uk

Planning Responsible Retrofit of Traditional Buildings from the Sustainable Traditional Buildings Alliance www.stbauk.org

Grants: ROI www.seai.ie, NI www.doeni.gov.uk



Condensation readily leads to mould growth.

An example where the external insulation blocks the ventilation to the roof space. The insulation is not continuous as it stops below the eaves. The insulation should have been continued right up to meet the insulation in the roof space. There will be a thermal bridge in the gap. Photo courtesy of NSAI.

The windows should have been moved out to the line of the insulation as there will now be a thermal bridge around the window. The windows should be properly sealed to the walls, with air tightness tapes - not expandable foam or other sealants. Photo courtesy of NSAI.



info The companies listed below provide products & services relating to this article.

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Indoor pools are more expensive to build but provide year-round enjoyment

Aqua-Blue Designs & David Hallam Ltd. Photo courtesy of SPATA.

Splashing Out

When building your dream home you're likely to include some form of water therapy, be it a rainfall shower or a luxurious bath. But why not consider a swimming pool, hot tub or something in between to make the most of the healing qualities of water?

Water buoyancy relieves pressure on joints and muscles, which is partly why baths are so relaxing. Going a step further is to consider installing a hot tub or swimming pool, but before you take the plunge get acquainted with some basic facts about design and construction, as well as the type and degree of maintenance involved.

Remember, before making your final decision, take advice from an experienced and independent contractor or designer. When researching specialist designers, make sure they can undertake the tasks that they are being required to do and always ask for references. If possible, go and visit their projects to see at first-hand the quality of their work and to get feedback from the client on how well their

installation went.

In all cases be clear about what's included in the price and get full details on warranty, insurance and delivery, including availability of spare parts, and compare like with like. There are trade associations such as SPATA and BISHTA which provide seals of quality approval (see details at the end of this article).

Swimming pools

The first consideration will be whether you go for an indoor or outdoor pool. While an indoor pool can cost twice as much as an outdoor one, in large part due to the need to essentially build an extension to your house, in Ireland you will only realistically get about half a year's worth of enjoyment out of an outdoor pool, from May to October. That said,

you can extend the season by building an enclosure around it and heating the water.

A big drawback to an indoor pool is the very fact that it doesn't benefit from being out in the open; to get the best of both worlds you could consider installing a retractable roof mechanism (this is possible for outdoor pool enclosures too).

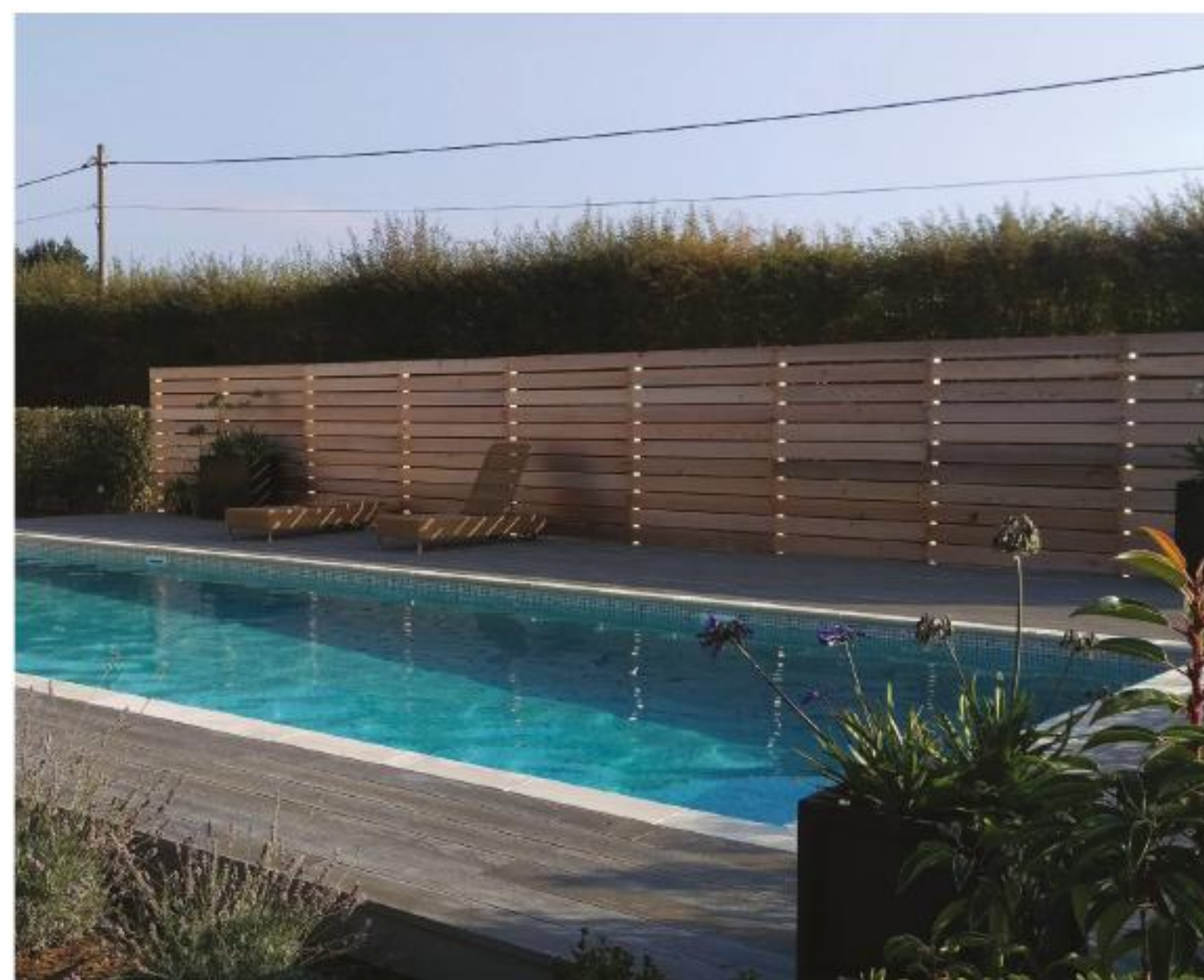
Other points to note include the fact that the surface area needed to construct an indoor pool is greater because you have to take into account space for a plant room to house the heating, ventilation and filtration systems, somewhere to walk / lounge around the pool and also changing room and toilet facilities.

An indoor pool complete with new building, or adding a swimming pool to an existing room, will take up to six months to complete. You can buy pools that are manufactured and installed as a single component, so if you have an existing room, you will need to demolish one entire exterior wall for the pool to be installed in the building.

Typical pool sizes are 8m x 4m and 10m x 5m, and if you use the budget options, such as wall-mounted dehumidifiers, built-in insulation instead of heating, and a DIY kit, you could probably get your pool cost to £60,000/€70,000, including the pool building. Building an outdoor pool costs upwards of £29,000/€35,000, this also depends on the design and extras you add.

Outdoor pools can take from a few weeks to a few months to complete, depending on the size, the options you choose to heat it with, and the state of the ground in which you are either installing or constructing it in. If you are installing a pool in summer and can't wait to use it, an outdoor pool is therefore your quickest option. Outdoor pools may provide more social activity because you have the entire surrounding garden space where you can entertain.

Whether your pool is indoor or outdoor make sure it benefits from maximum exposure to sunlight, avoiding trees and other foliage which could overshadow the pool or shed leaves and other debris into it. Also don't build the pool too far from your house - a lengthy cross-garden trek can detract from the experience. It's also handy to be able to use a downstairs shower room in the house for changing,



thus saving on the cost of one outside. Considering how quickly children grow up, in terms of size pool manufacturers advise going for the largest possible option within your budget and practical requirements. If the pool is more for exercise then you could go for a smaller pool with a counter current.

Types

Sprayed concrete Wet concrete is sprayed onto a preformed cage of reinforced steel. This is quite a quick method and has the advantage that the concrete can be pumped over a distance should the site access be restricted. It has the longest life expectancy and is especially suited to an indoor pool.

Shuttered concrete After pouring a floor slab, the pool walls are poured between retaining panels or shuttering, providing a good base for the internal finish. Used for rectangles and simple shapes, it requires less specialised plant and equipment than sprayed concrete. ►

Top: outdoor pool with large step area for small children and countercurrent jets at the far side (Tanby Pools); above: outdoor liner pool (www.newdawnpools.co.uk); left: pool and paving were built above ground level on concrete casing leaving ample room underground for pump, filtration and changing area (www.xlpools.com)

Photographs courtesy of SPATA



Above ground pool in area with high water table where an in-ground pool installation wasn't possible.

www.sprucepools.co.uk
Photo courtesy of SPATA

Reinforced blockwork Suitable for smaller, rectangular pools where the depth does not exceed two metres, the pool walls are made from hollow concrete blocks which are then filled with steel reinforcing rods and poured concrete.

Unreinforced blockwork Best for small pools with a depth not exceeding one metre. The pool is finished with a waterproof pvc liner. It's not possible to tile pools with a pvc liner as the structure must remain flexible to accommodate minor structural movement and changes to the water table level. Liner pools are, though, very quick to construct – about three to four weeks in total – and the liner should last for seven to ten years.

Prefabricated ceramic / GRP (Glass Reinforced Plastic) Modular pools Because this pool type is prefabricated, it simply requires a space to be excavated, into which it is then placed and secured. With 95% of the work carried out in the factory, there are savings on time and money in construction and fitting as well as quality control. The one piece, seam-free pool is fitted with all the equipment (skimmers, drains, jets, inlet, underwater light etc.) you specify prior to delivery. You can select the features you want – ledges, steps, shallow areas – for less cost than with concrete and it's all very quick to install. The whole process of craning into position

Basement pool with blue mosaics.

www.jetformservices.co.uk
Photo courtesy of SPATA



onto the crushed gravel base, then back filled with more crushed gravel whilst the pool is filled with water and pipework connections made, takes about one week.

Above ground pools While generally cheaper than in ground pools these are not to be confused with the basic, low cost 'splasher' pools. High quality above ground pools are available in a range of shapes and sizes and often suit smaller gardens. Modular in construction they can be put up and taken apart if you move house or the season's changed. A rigid steel support is set in place and, with all parts pre-assembled, no adhesive bonding or bands are needed. Often supplied complete with their own filtration system, good quality above ground pools provide a choice of optional extras such as access ladders, covers and counter current swim systems to create a bigger feel to a smaller pool.

Finishes

A hard concrete shell will generally be clad with tiles / mosaics or other proprietary finishes, including plaster. Around the pool you will also often find anti-slip tiles or polypropylene cord carpeting - at the end of the summer just roll it up and store until you're ready for action again! However note that a thorough cleaning regime will be needed for any matting, especially when you next use it after being stored, to avoid the build-up of bacteria from any dirt or debris on it.

Taking cover

In our climate, adding a cover or enclosure over your pool is a sensible option. If you do decide on an open pool, you may want to consider enclosing it in the future, and you should bear this in mind when positioning it in your garden.

Heat retaining covers should be used where possible; however, irregularly shaped pools can sometimes make this difficult, so always check what cover is possible when choosing a pool shape design. Covers can also reduce surface debris (such as insects and leaves).

They range from ones that float on the surface of the water to ones that are stretched across from one side of the pool surround to the other. They can be mechanised or manually rolled out. Also available is a bubble sheet that is laid directly on the water.

All of the above covers have heat retaining qualities, however, unlike the first couple of examples, the last one has no safety feature at all. Therefore, if buying a cover, be sure to check any safety features that may be available to add a layer of safety for small children and/or pets. Consider how easy it is to manoeuvre and in the design of your pool/hot tub area don't forget about storage for the cover when it is not on the equipment.

Enclosures

Air inflated dome This is the simplest option, a giant pvc 'bubble' inflated by air drawn in from outside. Accessed by either a zip or air lock door (to keep heat in), if the outside air is really cold, the air inside can be heated too. The dome can be put up at the start and finish of the summer if you prefer open air bathing, or used all year round.

Telescopic enclosures These offer more variations than the dome because they are built in sections that can be removed without taking down the whole structure which can be either permanent or mobile. Made of polycarbonate panels on an aluminium frame, side walls slide up or roof panels roll back.

Log cabins/timber frame The appeal of wood is hard to beat, especially when it combines other features such as a high standard of insulation (resulting in minimal condensation), as well as acoustic insulation. They are quick to construct, may not require planning permission (you should check this), and finally will last for years if built using preservative treated timber, and the interior kept well ventilated.

Hot water

The cost of heating the water is directly related to both its surface area/volume, whether the pool is inside or out, the quality of the covering placed on it when not in use and the efficiency of the heating system. Most of the heat lost from the pool will be through evaporation (70%) so fitting an impervious membrane cover is essential. Heat lost through the surrounding earth represents about 20% (insulated lining is available to reduce this).

Free heat from solar panels or a heat pump system certainly reduces running costs but the capital expenditure may take some time to recoup. Using your domestic heating system, especially if the pool is not too large, may be less of a strain on your budget but the system needs to be large enough to accommodate this additional requirement.

Moisture control

Know that if the pool or hot tub is indoors, a mechanised ventilation system will be required to deal with the humidity. Make sure a detailed study of your particular requirements is done by a specialist engineer to specify the correct units and their size. As with your heating system, you may be able to use the extraction system that was installed in your house but you will need to check with your engineer.

Hot tubs

If you prefer to own something smaller, consider a small body of heated water, otherwise known as a hot tub (and also sometimes referred to as a spa). There are additional health benefits to using a hot tub; heat causes blood vessels to dilate and increase circulation, massages from the jets loosen tight muscles and stimulate the release of endorphins, which are natural stress reducers, and the list goes on. But note that it is not advisable for pregnant women or people with medical conditions that may be aggravated to use a hot tub without taking medical advice.

There are different types of hot tubs available, some are fitted with massaging water jets for a hydrotherapeutic effect while others are even big enough to exercise in (counter current jets allow you to swim) and there may be areas for rowing, running, etc.) and these are often called swim spas or exercise spas. However their water temperature tends to be much lower than that of a typical hot tub.

Despite our weather these are mostly used outdoors, but in sheltered areas (e.g. gazebo) for protection from the elements and from prying eyes.

Early models from the 1970s were mostly wooden, nowadays one-piece acrylic hot tubs are dominant. Not only are they less expensive to manufacture, they're also easier to install and more energy efficient. As their name suggests, they are made from a mould with seat shapes, each one of which is often equipped with one or more water jets for different parts of the body. The water flow may be aerated for additional effect and some or all of the jets may also automatically move or rotate, creating a sense of being massaged.

How it's made

The shell is made in one of two ways. At the more expensive end are acrylic shells which have a longer life. They are made by placing a sheet of acrylic over a mould and applying heat from an overhead heater to create the form. The second method results in a polythene shell when an aluminium mould is filled with polythene powder, the mould is heated and spun in a large oven which melts the plastic.



The next stage is to add insulation to reduce running costs (the operating temperature of hot tubs is often between 35 to 40 degC) so adjusting the temperature within this range will potentially help to retain as much heat as possible and also save money! When purchasing, make sure to check the time it takes to reach this temperature.

Covers reduce losses through evaporation, which like pools account for about 70% of the total heat loss. Standard covers are tapered and 50 to 75 mm (2 to 3 inch) thick but you can get 75 to 100mm (3 to 4 inches) ones too. A bubble cover lying on top of the water and underneath the main insulating cover is particularly effective. Prices generally start around €4,000 to €5,000/£3,500 to £4,500. ►

The operating temperature of a hot tub is 35 to 40degC

Oasis Leisure
www.oasisleisure.com

Location, location

Hot tubs are heavy – the smaller models generally weigh 300kg and hold 1,000 litres (1 cubic metre of water) which is the equivalent of a tonne. Add to that the weight of the bodies and you need somewhere strong enough to support it all. Find your ideal spot and consider whether the model will fit and what supports are available. If you're building a new house and especially if you are locating the hot tub indoors, make sure this weight is factored into your structural calculations.

Also make sure it will be easy to service; ask your installer where the technician will require access in case a component fails and make provisions for this. Then you need to consider the electrical requirements; for energy efficient models you will need a 16 amp cable but larger installations require a heavier cable carrying 30-50amps from the meter, both of which should be fitted with an RCD (residual current device) and only be installed by a qualified contractor. It is your responsibility to have these in place prior to installation which usually takes between four and six hours.

To reduce energy costs consider the amount of time it takes to filter all of the water and whether the motor's waste heat is used to warm up the water. Also look for models that use low-amperage filtration pumps.

Locate your hot tub so that it will be easy to service.

Photo courtesy of SPATA



Functionalities

Coloured lighting, integrated sound systems (made with marine grade components to cope with the moisture), and flat panel TVs are now all widely available. Models with remote controls allow you to both adjust the water temperature and operate a music system.

Water is delivered to the jets under pressure; cluster jets deliver a very strong, pinpoint massage, smaller spinning jets release a swift and powerful vortex of water, and multi-port air injectors are bubble machines that fill the spa with millions of little air balls that bubble and burst, adding a visible and audible sensation to the water.

Within the tub are water jets which deliver water drawn from it out through the filters and pumps and return it through the jets.

There may also be air jets operated by a blower. As the external air is released, the water temperature is inclined to fall slightly. You may therefore need a larger heating unit and allow time for the water to return to temperature. Hot air warmers are also available.

Last but definitely not least, make sure that before you buy you carry out a 'wet test'. Learn what the jets feel like, how they work, which ones come as standard and which are extra. More jets aren't always better; rather check to see they're well positioned for you. Also make sure the seats are comfortable/ergonomic.

Maintenance

The trick with pool maintenance is to do 'little but often' with perhaps only 10-20 minutes per day

with an additional 20-30 minutes each week in the summer. This includes clearing the pool from debris, checking filters and adding chemicals when necessary after having checked pH, ensuring that any safety devices are properly removed from the pool (when it is in use) and then properly returned to the pool when not in use. Off-season, a properly prepared pool may only need a monthly check.

Hot tubs also require daily maintenance when in use. Bacteria love damp, warm areas and despite filtration, one bacterium, mycobacterium avium, has a particular liking for hot tubs that are not cleaned thoroughly.

pH Keeping the water crystal clear as well as the calcium hardness (the potential cause of severe problems with the water chemistry, which may cause metal parts of the plumbing to corrode) within acceptable margins depends upon the pH. A test kit will be supplied with your hot tub/pool and you should ideally check the water every day to see if you need to treat it.

Refresh Pool manufacturers say that as long as you keep the water chemistry right you will only need to empty the contents for major repair work. Hot tubs will however require the water to be changed regularly, check with your installer as to what this entails.

Filters Hot tubs and pools have in-built water management systems designed to destroy bacteria, viruses, mould and mildew, while simultaneously oxidising dirt, contaminants and body oils. Chlorine is a chemical added in the form of tablets in the filtration system to kill bacteria, while ozonisation, ionisation and saltwater bromine systems are add-

ons that neutralise contaminants. You will need to remove debris such as leaves and dirt manually and check the filters at least once a week.

While not necessarily the most environmental option, considering the amount of water, energy and chemicals required to use your swimming pool or hot tub, adding one to your family life will add fun, relaxation and if located indoors, year-round therapeutic enjoyment. ■

Debbie Orme, Gillian Corry and Astrid Madsen.

Additional Information: SPATA (the Swimming Pool and Allied Trades Association) www.spata.co.uk or phone 01264 356210 and BISHTA (the British and Irish Spa and Hot Tub Association) www.bishta.co.uk or phone 01264 356211.

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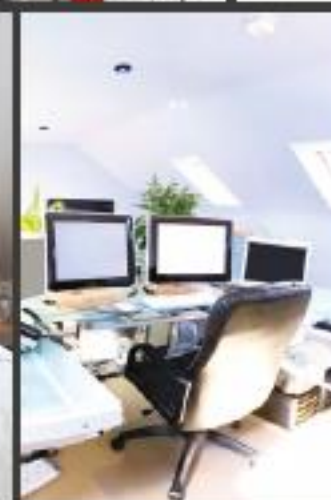
The trick with maintenance is to do little but often.



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Creating a pet friendly garden

There is a misconception that pets and gardens are not compatible, you have to choose one over the other. The good news for animal lovers is that you can create or remodel your garden into a purpose-built outdoor haven for any type of household companion.

And no, you do not need to build a prison yard! Pets and plants are not mutually exclusive, in fact the garden, as a space to play and escape the indoor environment, is likely to improve your pet's physical and mental health. I am talking about a habitat you can enjoy as much as your cat or dog. Banish thoughts of wall-to-wall power-washable slabs with a kennel or cat box at the far end!

You can as easily start from scratch as you can tweak your existing garden to make it more appealing and safe for your pets. In the process of making a garden tolerant of pet activity you can plan it so that it maintains both an appreciable aesthetic and ease of maintenance to suit your needs.

Whatever your starting point you can have a wonderful space to share your companionship. Later on I will look at the plants to avoid – those harmful to pets – but like any garden make up or makeover the structure and layout is the key to success.

Design for behaviour and species

Renewing or starting anew, there are just a few simple things to bear in mind. The first is that some elements of the design can be tailored to suit the type of pet you have.

Cats and dogs display different behaviour patterns; for example ornamental grasses will let cats explore their environment in hunter mentality – something as essential to a feline's wellbeing as

Clockwise from top: A fun pet-friendly garden design, hardy shrubs and grasses can take the punishment of pets and establish quickly - they also allow cats to explore their environment in hunter mentality, Viola tricolour is safe for pets and has an uncanny resemblance to a cat's face!





A cat box with green roof surrounded by mass planting.



Knowing that dogs love to dig, it's best to shield off all food crops

* There are mineral rich stones you can buy to sit in their drinking water which helps to prevent this.

deep sleep. When it comes to the canine, a shorter lawn or flag paving will allow rolling and running space for playful dogs.

The sex of your pet is also a consideration in elements of your garden design; female dogs tend to urinate in lawns (think discolouration)* while leg-cocking boy dogs will go against shrubs and border plants as well as containers and let's face it, anything vertical.

For cats there is no harm in providing an outdoor litter box especially if you have gravel paths or stone mulches. The waste issue is resolved with training, as you would employ for indoor situations.

The boundary of your garden is also important. If you have a dog then a solid fence is best. Hedges and trellis rows offer too many opportunities for dogs to probe and dig under or break through. In terms of height 1.2 metres is enough for smaller dogs, you could go to 2m for more agile, athletic or bigger dogs.

Cats, meanwhile, are undaunted by fences and will get over the top of anything. It is in their nature to wander and return. But if there are enough exploration opportunities within the garden, they will content themselves there more often. A simple thick tree stake or a judiciously placed fencing post will provide cats with their very own outdoor scratching post.

Dogs love to dig and it may be a case of leaving them a digging patch, hidden by some shrubs or tall ornamental grasses. Trees are worthwhile to invest in, the shade they provide for summer lounging is of great benefit to dogs and also excellent as a climbing space for cats.

Select a tree that does not drop fruit as dogs will munch away and be oblivious to stones (choking hazard) or toxic pips. Cats are often vilified for the quantity of garden birds that they kill, so again a



non-berry bearing tree is best and also a considered avoidance of bird feeders will lessen the gruesome gifts they bring back to your kitchen after a day playing outside, and will keep local populations of robins and tits safe.

Store-bought bird food is not the healthiest for foraging pets, so this restriction of wildlife attractors applies to dogs too. Likewise ponds and pond water are not the best source of hydration on a hot day. Pets can drown too so take precautions if you want a pond or already have one.

It is true that informal gardens lend themselves best to sharing with pets; a structured design can easily be undermined by a romping pet that will scratch, dig and generally disturb a carefully crafted border. Equally true is that cats and dogs tend to beeline across all sorts of diagonals, so formal pathways are often ignored.

When it comes to paths, the cleanest and best options are bricks, pavers or concrete. Gravel will be flicked everywhere by dogs and litter-boxed by cats. Mulched paths will turn into a mess in no time and cats could mistake it for a giant litter.

Some mulches can even cause harm; many organic ones have spores and bacteria that are allergenic to pets. Cocoa bean mulch is a by-product of chocolate production and like chocolate, if ingested by dogs it can trigger vomiting, diarrhea and muscle tremors. In extreme cases it can cause the heart rate to increase, hyperactivity and even fatal seizures.

So if you want to stop weeds with mulches, consider instead mass planting or laying down a weed membrane. That said, bare soil is an invitation to dig and while the membrane will keep the weeds down it can also be inviting for dogs to tear at.

Safe planting

Mass planting is therefore my favoured solution, also because of the aesthetics. Plus it will help you steer your pet around the garden. Low growing hedges or shrubs will create corridors, and with the addition of softer planting you can offer alternative navigation options.

Hardier shrubs and grasses can take the punishment of pets and establish quickly. In terms of toxicity most grasses are no problem at all to pets unless the blades are razor sharp so apart from pampas you could develop a prairie planting style by including *Stipa arundinacea*, *Stipa gigantea*, *Stipa tenuissima*, *Festuca Intense Blue*, *Calamagrostis* spp., and the list goes on.

Perennials may need protection until established; the more mature the plant the better it can withstand abuse. Some perennials are tougher than others and the *Nepeta* species which cats go wild for - so much so that its common name is catnip - will withstand hours and days of cats rolling about in it.

The issue is that its fragrance will attract other neighbourhood cats as it may in fact be the feline equivalent of a recreation drug. So you may opt to put it on the naughty list!

Safe bedding for your pet includes *Viola tricolour*, which can have an uncanny resemblance to a cat's face, and *Alyssum*. For the border *Acanthus*, *Heuchera*, *Aquilegias*, *Campanulas*, *Lavender* and *Achillea* are all great fillers, the latter two are even used as herbal veterinary medicine.

It is a nice idea to green roof the pet house; this will not only add a quirky aesthetic to an otherwise utilitarian structure, it will also provide a pit stop for pollinators. If you like that thought you could opt for *Calendula*, *Echeveria* spp., *Fragaria vesca*, ►

Plants to avoid include clockwise from top left: chrysanthemum, lily of the valley, rhododendron and azalea.

Bulbs, from daffodils (pictured) to gladiolus, are dangerous to pets if ingested so consider avoiding them, planting them deeply or keeping them in wall mounted containers.



Sedum spp. and Sempervivum spp.

Most but not all herbs are safe for pets – and just like humans how sensitive they are to their effects will vary. There is a growing trend towards holistic pet care so we will soon know more about which plants to grow for that purpose – for now it's commonly considered to be safe to cultivate Chamomile, Chervil, Coriander, Hyssop, Lavender, Lemon Balm, the range of mints, Parsley, Rosemary, Sage and Thyme. Cat mint is optional.

If you are worried about your dog chewing every plant in the garden there is a trick you can turn to; adding more bran to his/her diet seems to deter vegetation cravings. Sometimes dogs will eat grass or certain weeds when constipated or with upset stomach – that is natural intuitive medicine.

Munching on your peony or rose is not. That's mischief and you will have to garden train your dog as much as you can. Nibbling is less of an issue with cats – scent marking is the main problem and not so easy to train out of. What may help is to give the cat ownership of the territory with an outdoor box and scratching post, hopefully that will lessen their need to mark everything.

Plants and practices to avoid

Plants that cause irritation or are toxic upon ingestion are the ones to watch out for. The rule to follow is when in doubt – do without.

Foxgloves affect the heart of humans and of most animals but when it specifically comes to cats and dogs the presence and ingestion of rhododendrons and azalea, oleander and lily of the valley can be the cause of cardiac trauma.

Azaleas and rhododendrons have quite toxic leaves, sheep and horses that mistakenly browse the foliage develop loss of coordination and leg paralysis sometimes leading to coma and death. Dogs and cats don't usually care much for these plants and usually avoid them, but so should you.

While Lily plants including the Easter lily, Tiger lily and even the Day lily can trigger acute kidney failure in cats, it is not just ingestion of a bulb but contact with the pollen that can be severe. Lilies are not great for dogs either but dogs need to consume high quantities of the plant to be harmed. Cats need only a little.

Generally speaking garden bulbs, from daffodils to gladiolus, are not good but it is ingestion of the actual bulb that is the problem so if planted deeply or up in wall mounted containers then the issue may not arise.

Tuberous plants like begonia fall into the same hazard category as do cyclamen.

Other plants to avoid would be carnations and chrysanthemums which can both trigger pet dermatitis. The aroma, let alone the consumption of tomato plants can trigger hyper-salivation in both cats and dogs – which in summer can cause serious stress to the pet or worse, completely dehydrate.

In fact it is best to shield off any food crops if you are a home grower. Potatoes can cause digestive upset and onions can trigger changes in red blood cells known as Heinz body anaemia.

On a daily basis being pet-safe means practicing organic gardening; avoid harm by

steering clear of fertilisers, insecticides, weed killers and other garden chemicals. Apart from ingestion there can be chemical sensitivity to the respiratory tract, eyes, skin and fur. Think it through, you may try to hide snail bait out of the reach of the dog or cat but most snail and slug pellets contains metaldehyde which can kill birds who feed on the poisoned snail and can thus also intoxicate your pet if they chew the felled avian.

The backbone of organic gardening is to feed the soil and not the plant so well rotted manure and homemade compost are essential features. Manure is not a problem but there is an issue with compost heaps in the form of spore allergies and numerous toxic particles such as moldy food scraps and items like coffee grains and tea bags, which are beneficial to the heap but detrimental to the pet.

Heaps need air flow to work properly and are generally surrounded by pallets or lats so simply add some chicken wire to make it pet safe. A lot of it is common sense but you have to spend a few moments in the garden with a pen and paper and make a snag list. The first aim is to avoid the dog getting out (and the fox getting in), the second is to look at it from the point of view of your pet and list all of the potential dangers.

You'll quickly find a way to put together a garden where pets can be themselves and be safe while still having attractive foliage and flowers in each season for you to enjoy - once the snags are fixed, the bad plants removed and the good ones planted, then there is a garden you both can enjoy! ■

Fiann Ó Nualláin
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Additional information: Kerry Parkhill BVMS
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A solid fence is best for dogs; since cats will climb anything, giving them enough exploration opportunities is the best way to keep them in the garden.



Fiann and his niece Miah at Bloom in the Park

The sea beckons

Showing signs of age after just 25 years, this home nestling in a Co Clare housing estate was the last place Niall and Sinead O'Connell expected to find their holiday retreat. But the views and location were too good to pass up in an area where houses are hard to find...

When London expats Niall and Sinead decided they wanted to buy a holiday home in Ireland, they started looking around Cork, where Sinead has family. "We didn't find an area we particularly fell in love with in Cork and Kerry was too far for us to go to, so we set our sights elsewhere," recounts Sinead.

"My first job was in the Shannon Industrial Estate and during that time I lived in Limerick for 18 months, spending all my weekends in Clare. I have very fond memories of that period so when we expanded our search we trotted up to the west coast. When we got there both Niall and I realised this was where we wanted to look. This was definitely the place – bingo!"

Clare calling

The most scenic spots are along the coast but finding a holiday home in the area with unhindered views wasn't easy. By definition an Area of Outstanding Beauty is unspoilt; due to planning restrictions the natural landscape has very few houses dotted on it apart from the odd vernacular cottage or farm steading.

But thankfully for Niall and Sinead, in this instance they found a housing estate that had been built for holidaymakers.

"We were ideally looking for a stand-alone cottage with sea views but there was little or no stock of that kind available," says Niall. "Even though initially we would not have considered buying on an estate, we had searched for over a year but couldn't find anything to match all of our criteria."

"What clinched it for us was the view, which is truly amazing. Our architect also assured us that we could extend its size within standard permitted development rights [under 40sqm exemption rule], having gotten written confirmation from the council. On that basis we were happy to proceed," ►



More photographs available at
www.facebook.com/selfbuild







The extension consists of the open plan living, dining and kitchen area

he adds.

The house was weathered on the outside and inside it needed a facelift too. "It was built in the late 1980s and strain from the elements was visible," says Sinead. "So we went with external insulation which gave it good protection and a new render, and inside we wanted to make the most of the views with an extension."

Their architect came up with most of the ideas for the shape and internal configuration. In terms of the brief they wanted the seaside cottage feel first, with reflections of yellow gorse as seen in the spring and other elemental colours from the landscape so blues, greens, yellow and white mix in every room.

"What I absolutely didn't want was any of the twee associated to coastal properties, replete with seagull and starfish motifs!," quips Sinead. "The landscape is quite wild and elemental and I wanted that to be reflected in the interior. Our aim was to complement the view, which is the dominating feature of the house. The living area with its expanse of floor to ceiling glass reinforces this." Sinead would describe the décor as a mix of Nantucket washed-up beach house and Isle of Sky crofter's cottage. "We have white washed floorboards and exposed flagstones, cosy tartan patterns and a deep blue feature wall."

Submersed

"Thanks to the extension having been designed as a slightly angled shape, it doesn't feel like a box but instead pulls you into the landscape, which is exactly what we wanted," adds Sinead. "The vaulted ceiling works really well to accentuate the

tilt, we're delighted with the result."

The original attic was large enough to allow the extension to carry through a vaulted ceiling, and the new living room was built into the original eaves. The mezzanine acts as an overflow bedroom.

"You immediately leave the estate feel when you walk into the house," she says. "I especially love the hallway, for the size of the house it's much bigger than you would expect. In many ways it's an extravagant use of space but I love the warm welcoming reception it affords. It immediately makes you feel you are in a much larger, airier property than the one we originally purchased."

"Both my husband and I know the value of storage and we absolutely insisted on large floor to ceiling hall cupboards. Making them handle-less was important – less fuss, less distraction to the eye, a lot calmer."

The rest of the house carries on the restful and neutral theme. "The bedrooms and bathrooms are smallish but I'm really happy with how they turned out. We installed fitted units throughout – for instance the bathroom cabinets were made to my specification – which give a very calm, understated finish to the rooms and continue the theme established in the large hallway."

Shades from the same paint manufacturer were used throughout which she says was helpful in setting tone.

The design floods the living space with natural light but Sinead and Niall also like atmospheric lighting hence the industrial style hanging pendants. "I did want there to be a certain wow factor when you walked into the living room in particular and I think we have to some degree ►







achieved that. The vaulted ceiling combined with the huge expanse of glass certainly helps!"

"I'm not sure the lighting is finished though, our architect had suggested spots but I didn't want chrome, I find copper warmer, I like the battered retro style, pared down."

The space was slightly reorganised to accommodate the new open plan kitchen/living area with the original kitchen downstairs converted into a bathroom. Part of the new kitchen is located in the old footprint of the house and thanks to the same wooden flooring running throughout, the extension feels part of the original structure.

"I love the blue feature wall in the living room which is bold and dramatic, and the kitchen works beautifully and is lovely to look at with its shades of grey. Also the depth of the worktops adds character, it's of a generous size. We have recessed units to accommodate bar stools and the top is a composite that has a Carrera marble look, complete with integrated sink."

The original master bathroom was enlarged ►

Counterclockwise from above: the bedroom floors were whitewashed, Liscannor stone with underfloor heating and copper lights, feature blue wall, mezzanine that acts as overflow bedroom



Feature roll top bath with subway tiles

by encroaching on the airing cupboard and two of the bedrooms were left untouched. “The utility area was moved to underneath the stairs which was a really clever use of space by our architect.”

In fact for Sinead the design process very much had to do with making sure the house would function as a holiday retreat – ample entertaining and kitchen space along with plenty of hot water and instant heating.

The glitch came towards the end of the build. “It only became evident when the house was nearly finished that we had to upgrade to a triphase electricity cable, which delayed things a bit as we had to get the network operator to install it.”

“This was necessary because all of the heating and hot water is electrical, there were no other options available to us, and we insisted on installing a double boiler to ensure we’d have enough hot water for when the golfers/walkers come home – we can be up to six staying in the house and we all need to shower in a short space of time.”

“The original cottages were not built to run expanded heating and hot water systems, hence the need for the heavy duty cable. We eventually got what we wanted, and we even have everything running on an app so we can control the system remotely and turn the heating on 24 hours in advance of arriving for example.”

The upgraded boiler was also necessary because they now have an extra room (living room) to heat with underfloor heating. “I’m very happy that I insisted on it,” confides Sinead. “An unheated stone floor is horribly cold on bare feet but ours is lovely and warm and consequently very tactile.”

“The stone is local and cut from a quarry less than 10 miles away, it always gets a wonderful response from guests. That was one of my ideas and I really like it,” she adds.

Long distance relationship

“My husband loves a good project and was interested in every aspect of it but he couldn’t physically be there or put the hours in so I was the main person on the ground. For a good few months I tried to be there at least fortnightly for a day or two and in the last month I was probably there every week,” expounds Sinead.



Their architect Darragh was the driving force, getting the project off the ground and supervising it. "He put together a shortlist of builders and interviewed them with me, and provided drawings and specs for tenders," says Sinead. "He dipped in and out but was down regularly to check on the technical specs and building work and also handled the large orders for items such as the glazing."

"We were very fortunate in our choice of builder, he put a good team of guys on site, which was very ably run and I found everyone very easy to deal with, intelligent and responsive. In parallel with Darragh I began the project management of the interior fit out; I knew from previous experience how to manage a timeline and negotiate with suppliers and once the builders could see that I had an idea of how to get things done they were great to work with."

The time everyone had to draw in a deep breath was when they finished the vaulted ceiling. "We added strips of wood to give the impression of beams being there and we went through various versions of the finish," recounts Sinead.

"The builder's patience was tested when we had to do it all over again! The question had to do with plastering between the batons, at first the aim was not to have them stand proud and to do this he had to work on his back. When he was finished, I thought you couldn't see them enough so he had to take it all down," she adds. "The look we achieved was worth the effort, and I think he'd agree!"

Her advice is to plan for everything. "The devil is always in the detail. Work hard with your architect on the design and remember it's your house and you are going to be living/spending time in it so make lists of things that matter to you. Be prepared to sometimes compromise but equally if you feel very strongly about something then stand your ground and make your builder/architect work for your best interests."

"Design-wise it does help to have an overall idea of the look you are trying to achieve, it makes selecting materials easier," she adds. "And I think at times it does pay to spend a little more for better quality and other times good quality is available at great prices if you shop around. So be a canny consumer!"

Being away more often than not, you might expect the garden design to have been left to one side, but Sinead's eye on the view motivated her to tackle it early on. "While the landscaping is a work in progress – we just planted drifts of spring bulbs and masses of local hardy plants – we simply had to get rid of the horrible old rotten wood plot dividers! We replaced them with a very nice low dry stone wall topped with Liscannor stone and put some great outdoor lighting which is particularly effective in highlighting it."

Worlds apart

"This was my fourth design project and it's very different from my other homes, although previous experience certainly helped," says Sinead who constantly flicks through magazines and visits design stores for inspiration.

"I've been around the block design wise a few times and got stuck into this project quickly. Considering we had a limited space it didn't take long to work out the interior design specifics." Their London home is very urban and restrained in comparison, she says. "There we went with neutral calm colours, pale grey walls, chalky whites, plenty of warm wood. In the bathroom I chose a very large bath but it's actually too big for practical use – I get a drowning feeling in there, there's paddling space! So for the holiday house in Ireland I wasn't disappointed that the bathroom wouldn't be able to accommodate large items." Sinead 'splashed out' going for a roll top bath and ordering it in from England. "We used local ►

As the house needed new render, the couple took the opportunity to add external insulation.



The garden was landscaped with local stone and native hardy plants.



products where we could and bought from Irish manufacturers where possible, for instance our kitchen and all our cabinetry was made in Co Clare,” she says.

“But in a rural area choice can be quite limited, you’re mostly dealing with catalogues when you’re browsing for things to buy at the higher end and it nearly always has to be ordered in.” The bath came primed and they painted it on site. “It’s the bath I’ve always wanted. It’s a feature point but I don’t think it looks too luxurious.”

“The plain white metro tiles reinforce the somewhat Spartan but chic look I wanted to achieve. And they were relatively inexpensive, allowing me to spend more on the bath and good quality hardware, which I think are very important to invest in.”

Sinead’s strategy extended to the kitchen. “The tap was a big splurge relative to the cost of the kitchen but I think if you can, go out on a limb on one or two things and try to find less expensive options for the other items.”

The London project consisted of a big refurbishment that took a year. “This was four

years ago, and the works included the basement, and overall it was an unmitigated disaster! We had a very tough time dealing with the builders so there was a bit of trepidation going into this build.”

But despite some work that had to be redone, their Irish experience went really well. “A very harmonious atmosphere reigned on site, it was a relief to see the London disaster was behind us!” As might be expected a big difference between spending time in this Irish cottage and living in London is the fact that Niall and Sinead now have close and very friendly neighbours. “It was a bit of a novelty for us,” says Sinead. “Both of our immediate neighbours are from Chicago, which is a funny coincidence because we have close friends who live there too. It’s just a dream to holiday down here, getting along with our neighbours so well and having carved out such a cosy little sanctuary for ourselves. It’s our home away from home!” ■

Astrid Madsen

info The companies listed below provide products & services relating to this article.

Architect

Darragh Lynch, Malahide, Co. Dublin, tel. 01 8168964, www.darraghlynch.com

Builder

Declan Casey, Coast to Coast insulation, Ennis, Co Clare, tel. 065 689 5060, email dcaseyeng@gmail.com

Kitchen and other carpentry

Burke & Egan, Miltown Malbay, Co Clare, tel. 065 708 4877, www.burkeandegan.ie

Bathrooms

PJ Matthews, Ballysimon, Co Limerick, tel. (ROI only) 1890 989 866, www.pjmatthews.ie

Curtains and Blinds

Interior Dreams, Limerick, tel. 061 315 799

Kitchen worktop

Silestone, www.silestone.com

Windows

Munster Joinery, Ballydesmond, Co Cork, tel. 064 775115, www.munsterjoinery.ie

Paint

Farrow & Ball, www.farrow-ball.com; rolltop bath:

Churlish Green, kitchen units: Manor House Grey, living room: Stiffkey Blue

Colourtrend for external paint, www.colourtrend.ie

Photographer

Paul Dorrell Photography
www.pauldorrellphotography.com

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Growing pains

When Peter and Rhea Marshall of Co Antrim bought their house they did so with a view to extending, as their family was expanding. Nurturing the design process was their first priority...

Converting a 1950s semi-detached house into an open plan, modern living space is no small feat but Peter and Rhea were clear about what they wanted, and about their limitations too so they got the ball rolling by looking for an architectural consultant.

"We were complete novices," confides Peter. "All of the rooms were quite small and the kitchen was disconnected from the rest of the house. I also

needed an office."

"It wasn't clear to us how to reorganise the space, we just knew it wasn't working for us. We had an idea of the functionalities but weren't sure about the layout." Adding a new bathroom was also high on the wish list, as was introducing a light-filled living area, probably in the form of an extension.

"We didn't know how to extend or even in which direction," he adds. "We did put together



More photographs available at
www.facebook.com/selfbuild



some initial sketches to see how much space we might gain, and took these to several architectural practices.”

They approached different designers on the basis of recommendations and asked them about the process and the costs involved.

“In the grand scheme of things and from an artistic point of view it was important for us to improve the aesthetics. This was originally a square of a house and we wanted a brighter and a more organic space,” adds Peter.

“We gave our architect our budget and he came back with sketches. To counterbalance the angular, box-like shape of the house, he introduced a lot of curves in key places and a long glazed opening extending into the garden.”

“The addition of a deck draws the eyes outside, and that’s a feature I really enjoy now.”

Three-year gestation period

The design process took much longer than the Marshalls expected. “We went through two or three iterations of the design, for instance the new ►





NORTH WEST ELEVATION



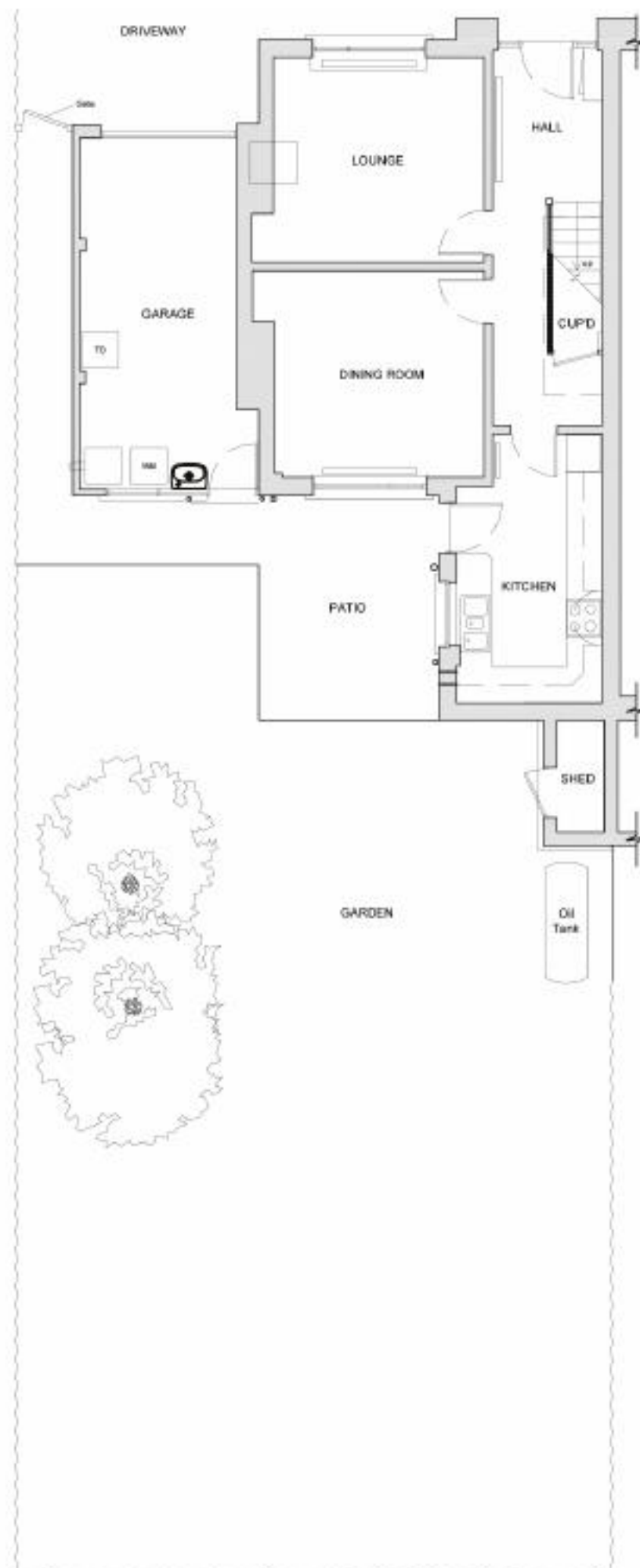
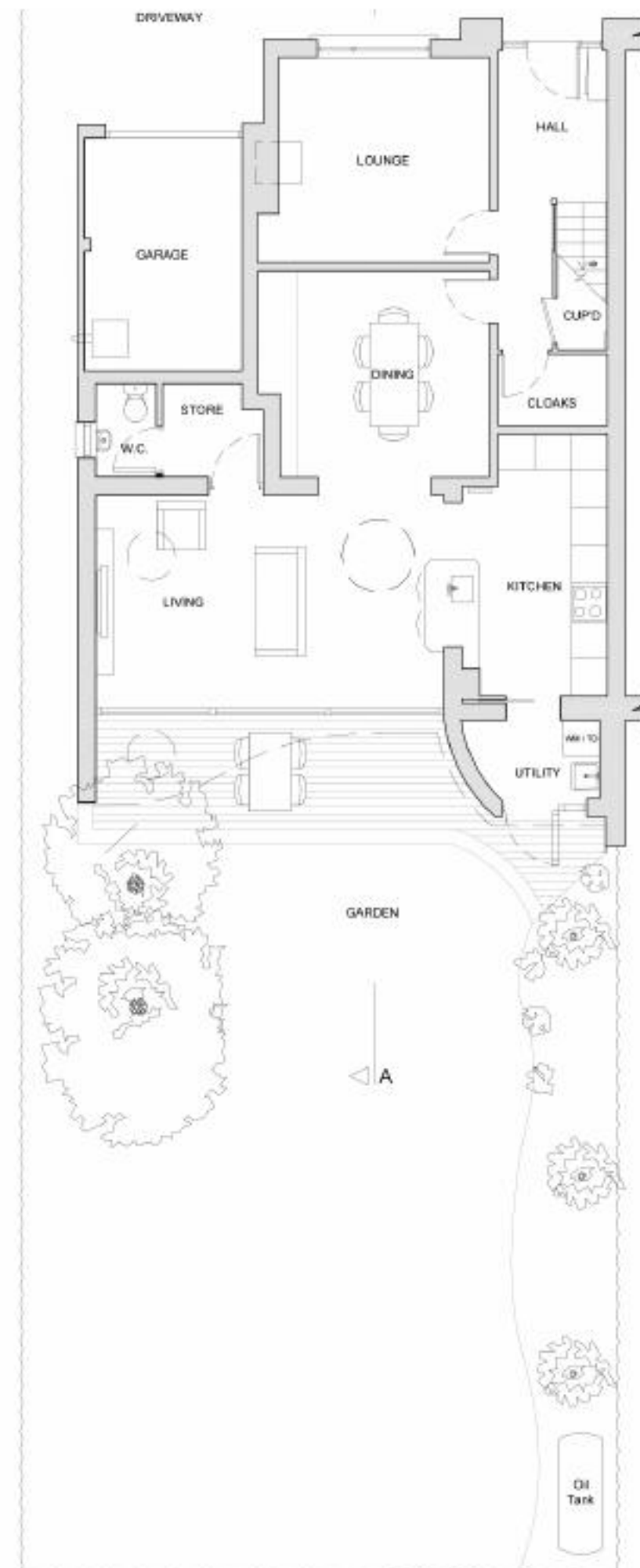
SOUTH WEST ELEVATION



SECTION A-A



SECTION B-B


GROUND FLOOR PLAN
BEFORE EXTENSION & ALTERATIONS

GROUND FLOOR PLAN
AFTER EXTENSION & ALTERATIONS

utility room originally didn't have a window and we insisted on getting natural light in there, we also decided to add a shower to the downstairs wc," explains Peter.

"At this stage we felt like we had plenty of time, we were happy to spend it getting it right. We already really liked the house and the area we were in and since we knew we wanted to spend the rest of our days here we decided to invest in the design phase."

In total, the couple spent three years planning it all. "By the end of it we were getting quite impatient to get started," remembers Peter. The build started in December 2012 and took six months to complete. "We were much longer designing it than building it."

An element that took a while to get right was the mechanical and electrical (M&E) engineering. "When we looked at how to heat the extension, we decided to use the existing boiler as it had enough capacity. But the question was how to heat a large open plan area with a glass wall."

The engineer advised Peter and Rhea that using radiators alone wouldn't reduce the cold spots

caused by the glazing and wouldn't heat the space evenly.

"Since we wanted to create a comfortable space to live in year-round, we looked at complementing the radiators with either underfloor heating or trench heaters recessed in the floor in front of the windows," says Peter.

"We wanted the space to heat up quickly in the mornings so we went with fan assisted trench heating, which has the fastest response time."

"We also took time figuring out how to light the extension and where to put the sockets – the M&E engineer was kept busy!" Despite these efforts, some elements couldn't be foreseen. "There were a few snags, for example the LED light fittings were buzzing so we got those fixed."

Not having done anything like this before they were keen to follow a predictable process, especially considering some aspects of the design were quite ambitious. "We were outside our comfort zone, and we were aware various things could go wrong," adds Peter.

"At this stage we decided to keep our architect on board to get us through the build; he'd already ►







The open plan kitchen and living area was a top priority



secured planning permission and sorted out the tenders for us. He covered all aspects,” adds Peter. The long planning stage allowed them to give builders very detailed tender drawings, which made selecting the right one easier.

While the couple managed to live in the house during the works, there were some drawbacks. “We had to clean the dust off the countertops before we started to prepare food – it’s quite an invasive operation building an extension! – but we knew it was short term so it worked out.”

Once-in-a-lifetime

“It’s a once in a lifetime experience, so we went

high end on the finishes where we could,” says Peter.

“For instance, when we got to the fixtures and fittings, we decided to fit a wooden floor – it’s hard wearing but warmer than tiles or concrete. We also chose aluminium frames for the windows because we like how it looks, and for the low maintenance aspect. These elements added to the cost.”

The windows are in fact the main feature of the extension, drawing the eye out to the garden. However Peter says that due to the big ‘picture window’ effect they were after, they had to go with a sliding system.

“Not that many options were available to us; due to the size, span and height of the windows we were told we should go for sliding doors instead of folding ones,” explains Peter.

“For people considering this option I’d recommend they look at the product installed in a few houses, to determine how effective the sliding system is,” he advises.

“Our windows were done in three sections, which meant each section was at its maximum size and I now realise that the overall weight makes them not glide as well as they should. We’ve also noticed that the windows can be a bit draughty.” As the back of the house is south facing there is a risk of overheating in the summer but this was factored into the design.

“The curve maximises the amount of light hitting the room in the morning,” says Peter. “The overhang limits the impact of the sun in the latter part of the day preventing overheating from happening in the summer. We also did some future-proofing so that we can install mechanical ventilation at a later stage if we feel the need for it, ►







The extension opens up to the garden.

but haven't yet."

Neither Peter nor Rhea plan to do anything on this scale again but theirs is a growing family with growing needs. Even though they love where they live, you never know, a self-build might even be on the cards...

Astrid Madsen

House size: 157 sqm/ 1690 sqft

Plot size: 367 sqm/ 3950 sqft

Build spec

Floor: 85mm screed on 150mm PIR insulation board on damp proof membrane on 100mm concrete floor slab. Floor finish to living and dining areas: engineered timber floor boards. Floor finish to kitchen, utility room and shower room: large format ceramic floor tiles.

U-value: 0.12 W/sqm K

White curved wall: Cavity wall comprising 100mm dense concrete block inner and outer

leaves and 100mm wide cavity filled with 100mm flexible full-fill cavity insulation. External finish: 18mm proprietary textured external render finish. Internal finish: 15mm plaster.

U-value: 0.30 W/sqm K

Brick faced wall: Cavity wall comprising 100mm clay brick outer leaf, 100mm dense concrete block inner leaf and 100mm cavity partially filled with 60mm PIR insulation board. Internal finish: Plaster. U-value: 0.24 W/sqm K

Roof: Reinforced polymeric roof membrane on polyester fleece on 100mm PIR insulation board on vapour membrane on 18mm thick plywood sheet on tapered timber firrings on timber joists. Underside of ceiling joists dry-lined with 12.5mm plasterboard and skimmed with 2mm gypsum plaster. U-value: 0.22 W/sqm K

Doors and circular roof light: Double glazed, argon filled, low e inner pane, polyester powder coated aluminium frames. Glazing centre-pane U-value 1.10 W/sqm K

info

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Architect

Alastair Macnab Architects, Belfast, tel. 9065 7160, www.am-arch.co.uk

Structural engineer

RGS Structural Engineering, Belfast, tel. 9048 2262

Mechanical and Electrical Engineer

Bennett Robertson Design, Belfast, tel. 9076 0050, www.bennettrobertsondesign.co.uk

Builder

Mountainview Construction Ltd, Belfast

Kitchen

L D Units Ltd, Carrickfergus, tel. 9336 9297, www.ldunits.co.uk

Photography

Paul Megahey Photography, tel. 07973 376 465, www.paulmegaheyphotography.com

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This is a low carbon home with an external wall U-Value of 0.13, built in Newcastle, Co. Down. The external facade has been finished in Cedar Cladding.



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A rewarding and therapeutic hobby

Woodturning masterclass

Working wood with a lathe is not only surprisingly easy to learn, it's addictive too!

Woodturning is an immensely rewarding hobby that can be enjoyed by people of all skills and ages – those struggling to cut a straight line with a saw can turn exceptional pieces to gallery standard in no time.

Speaking from experience, I can tell you that watching a piece of timber destined for the fire being turned into a beautiful fruit bowl is relaxing, rewarding and believe it or not, very therapeutic.

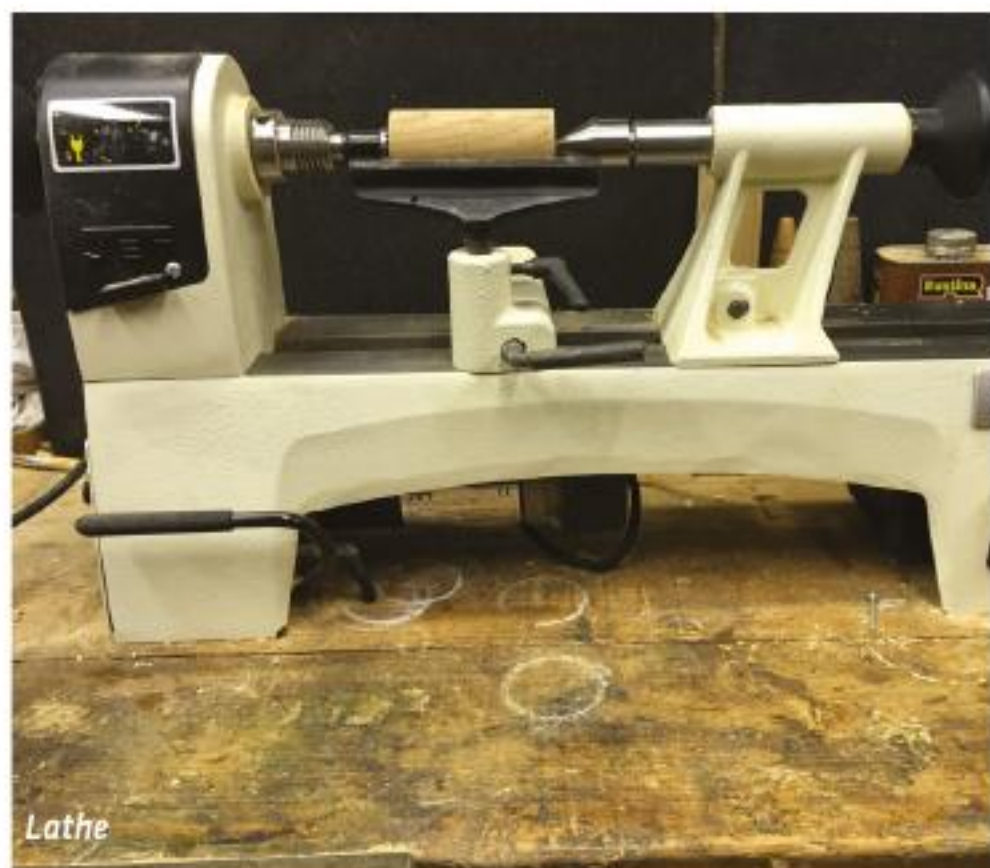
What is woodturning? It involves placing a piece of timber onto a machine called a lathe which rotates or turns the timber towards the user. Specialised woodturning tools are held against the rotating timber to cut it into shape. It's as simple as that!

Here's what you need to know to get set up, decipher the terminology and start on a nice simple project for use in your garden this summer.

Woodturning equipment

The lathe, a set of woodturning tools, a sharpening system and safety equipment will complete your starter kit.

The woodturning lathe can vary in size, power, weight and operation. Buying new, you could pay anywhere from €250/£195 to €10,000/£7,820 depending on the functionalities and brand you choose. For the average DIYer looking to start this hobby I would recommend a machine at the lower end of this scale to hone your skills.



Lathe

Woodturning chisels are specifically designed for woodturning. There are hundreds of chisels on the market that all do different and specific jobs but a beginner will only need four or five. You can always add more to your collection as you advance and delve into more sophisticated turnings. A good beginner's set will set you back between €100-€150/£80-£120.

Keeping your tools sharp is an extremely important aspect of woodturning. A sharp tool will slice through the timber easily and leave a smooth surface behind. It is essential to perfect your 'sharpening skills' and keep your turning tools in top condition to produce the best work.

There are several ways to do this; there are slow grinders, water cooled sharpening systems and even a system that uses abrasive paper similar to sandpaper to produce a sharp edge.

As a beginner, my advice would be to choose something that isn't complicated to set up and that will do the job quickly.



Sharpening tool

The next and most important part of your kit is the safety equipment. A face shield is required as it covers your whole face as opposed to just your eyes; it should preferably have a chin guard. This is important in case big pieces spin off the timber, a rare occurrence but it is possible. A dust mask is essential for sanding the finished piece, especially for timber that may contain hazardous dust such as teak or mahogany although fine dust of any kind can be harmful to your lungs.



Face guard and pack of masks

Parts of the lathe

The lathe is made up of four main parts. The headstock is the engine room of the lathe, where the motor is housed. This is where you will control the speed, which you will need to change according to what you are turning.

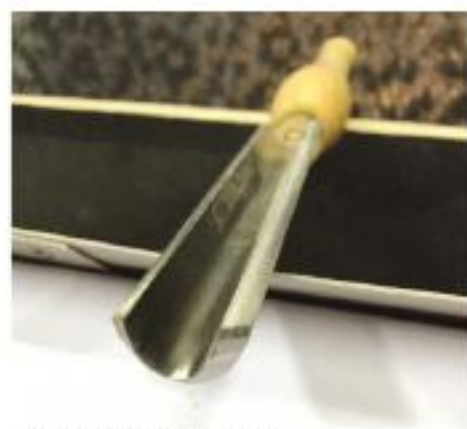


Motor to regulate speed

The general rule is that the bigger the item the slower the speed. An egg cup for example can be turned at a high speed whereas a bowl needs to be carved more slowly.

Depending on the type of machine you are using the speed will be controlled in one of two ways. In a manual 'belt and pulley' system you will have to open the machine (after switching off the motor) and loosen the belt to move it from one pulley to the other. This can be time consuming but depending on what you are turning you mightn't need to change belts too often.

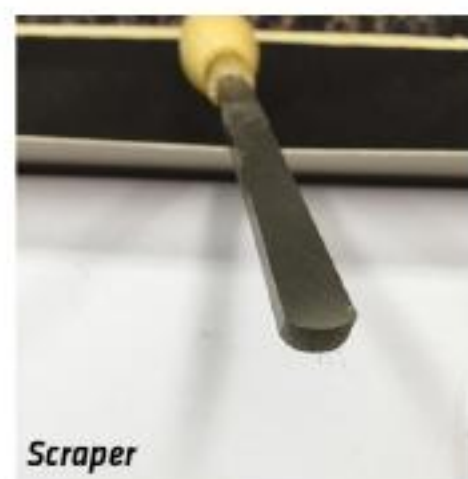
With an electronic system you simply turn a knob on the control panel to regulate the speed. ►



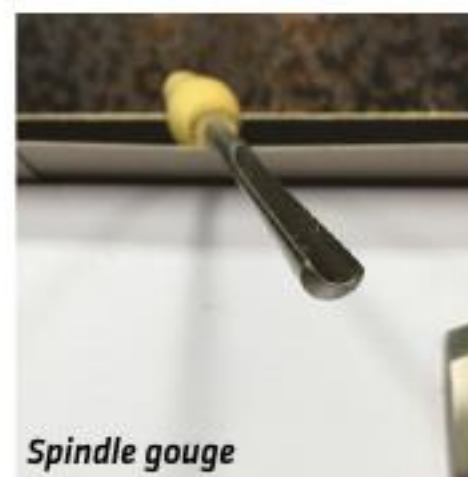
Roughing gouge



Parting tool



Scraper



Spindle gouge



Bowl gouge

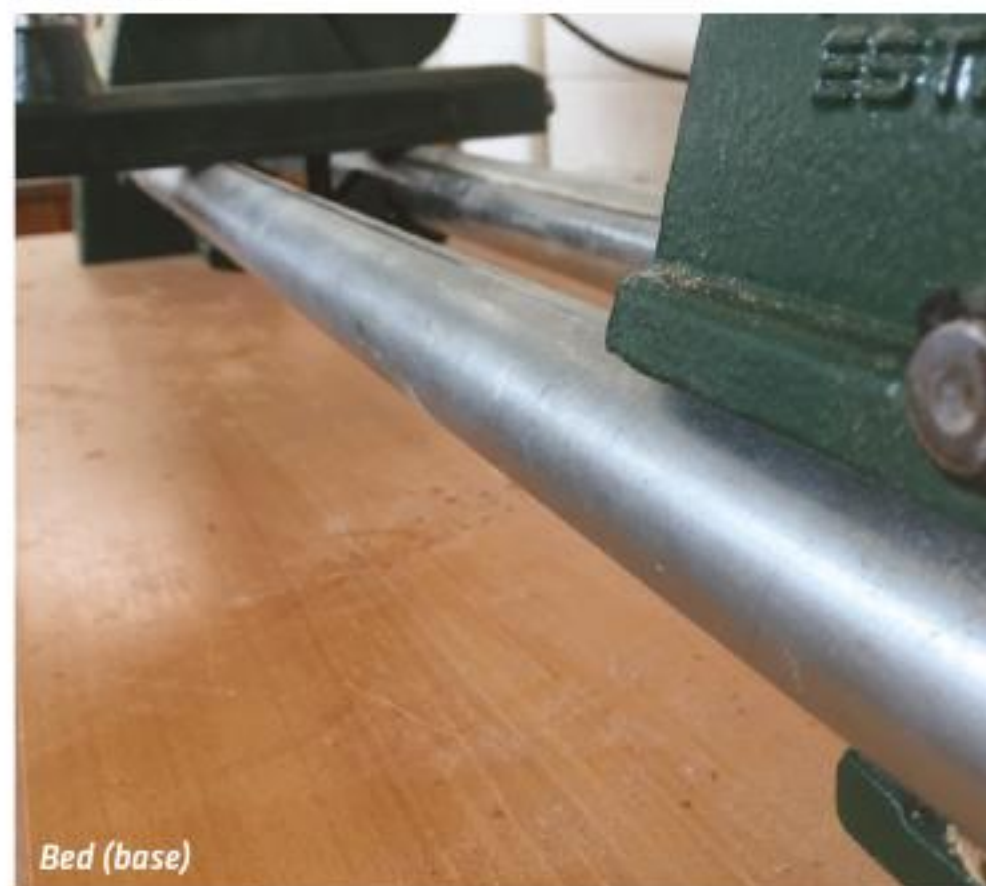
Much easier than manual but obviously you pay for the privilege.

The tailstock is at the opposite end of the headstock and is used to clamp the workpiece. The tailstock is fitted with a revolving centre whereas the headstock is fitted with a drive centre for driving the piece.



Tailstock

Both the headstock and tailstock slide along the bed. The bed is the base of the lathe and can be either steel tubes or cast iron rails. The more expensive models will be of heavy cast iron that adds to the overall weight of the lathe and reduces vibration.



Bed (base)

The last piece of the machine is the tool rest. As the name suggests, this is where the turning tools are laid as they are held against the workpiece as it turns.



Tool rest

Turning tools

As mentioned above, the sky is the limit when it comes to turning tools but all you will need to get started are the following:

Roughing gouge: A U-shaped chisel with plenty of steel to combat vibration, this is the workhorse of the turning tools. It is the first chisel you would use to rough a square blank (cut a square piece of timber) into a cylinder, quickly and efficiently. It is however NOT to be used for bowl turning as it isn't designed for this process and using it for this purpose can lead to accidents.

Parting tool: A diamond shaped tool that is extremely versatile. Used for cutting grooves, parting the timber away and creating coves.

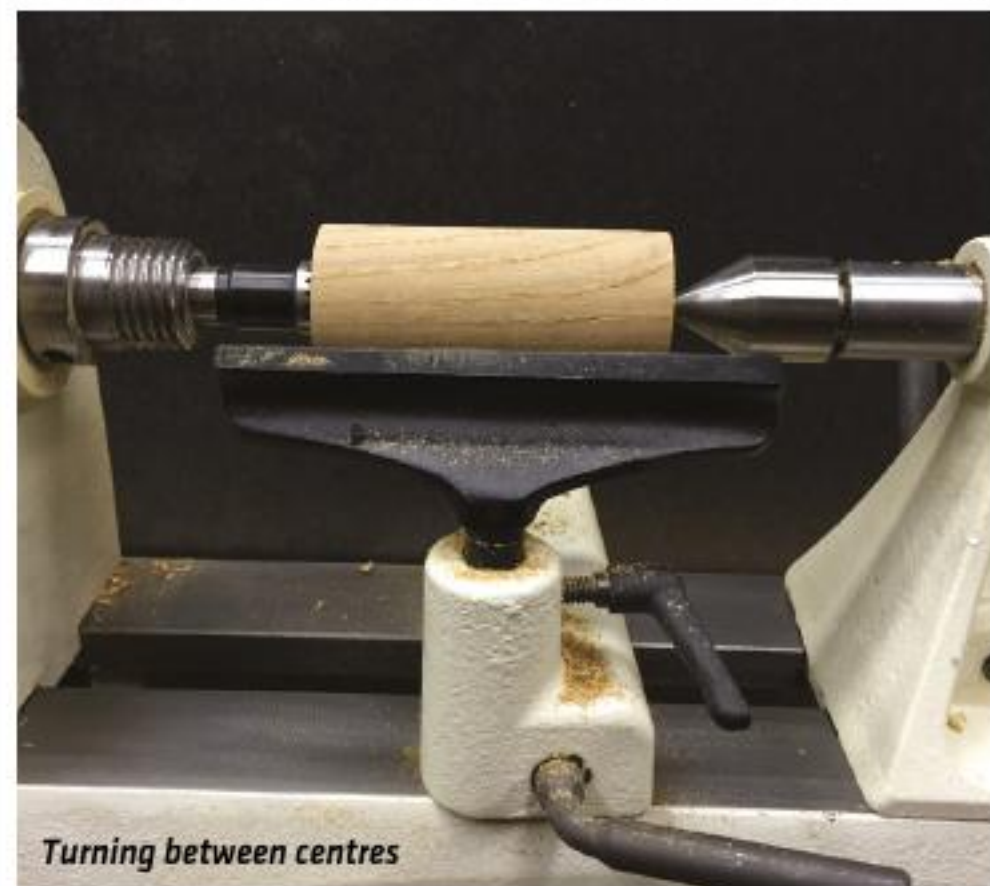
Scraper: Used for smoothing or scraping the bottom of bowls.

Spindle gouge: An extremely versatile tool and can be used for rounding stock, cutting hollows or cutting beads and coves.

Bowl gouge: Having been designed for turning bowls, this heavy-weight chisel can overhang the tool rest without snapping.

Process

There are two methods; turning between centres, also known as spindle turning, and faceplate turning. Turning between centres is where the timber blank is held between two points – the drive centre in the headstock which is the one that turns,



Turning between centres

and the revolving centre in the tailstock which acts as a support. Projects that fall into this category are lamps, candle stick holders and stool legs.

Faceplate turning involves a timber blank being



Faceplate turning

attached to a faceplate or chuck and fixed only to the headstock. The tailstock is not used in this case, allowing you to hollow out bowls, make platters and discs, etc.

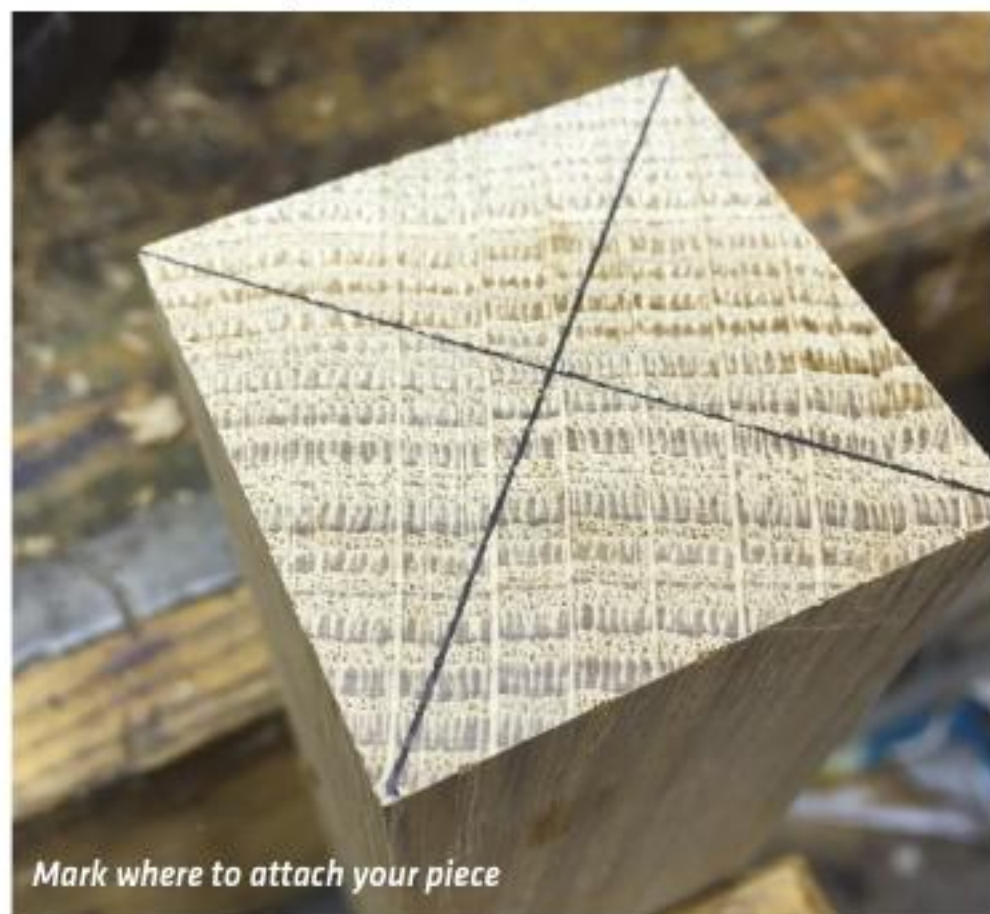
For the purpose of this article I am going to concentrate on turning between the centres, the reason being that I feel the scope of what can be produced is far greater than that of faceplate turning, it's also easier and safer for a beginner to learn.

Garden dibber project

The project to demonstrate this approach is a garden dibber for sowing bulbs and seeds. You push it into the ground at the desired depth, as marked on the dibber, and when taken back out you are left with a perfect hole to insert your bulbs.



To make the dibber you need to select your timber. The piece you choose can be branch material from your garden, for instance from an



Mark where to attach your piece

apple tree or a waste piece of timber that is 40mm x 40mm (1.5" x 1.5"). The beauty of woodturning is that you can use recycled materials from old furniture or small logs in your firewood pile.

When you choose your blank, you must mount it onto the lathe between the centres. The blank has to be centred on both ends so if you're using a square, cross the diagonals to pinpoint where to attach it to the drive centre. Then move the tailstock along the bed to attach the opposite centre. Tighten the tailstock and rotate the hand wheel until the blank is secured tightly.

To set the tool rest, move it as close to the blank as possible without it touching and set the height to approximately half the thickness of the piece. Give the timber blank a free spin with your hand to make sure it doesn't strike the tool rest at any point.

With the piece secure and the tool rest set, it's now time to talk about safety before turning. The main watch points are: no loose clothing, long hair should be tied back, use your protective gear, and



Other examples of what can be done using a lathe.

work at a reduced lathe speed. By following these simple procedures you will enjoy your turning without injury or any nasty surprises.

The first tool you are going to use is the roughing gouge. As the name suggests, it roughs the timber down to a cylindrical shape. Switch the lathe on and rest the tool against the tool rest. Slowly move the chisel towards the spinning timber until it touches the piece. Move the gouge along the tool rest removing the outermost edges of the timber. Keep repeating this until the object has turned cylindrical. Only take away small amounts at a time, this will help you get a feel for the process. You will begin to see the timber edge getting smaller and disappearing. Use callipers (measuring device made of two steel legs hinged together) or a steel ruler to turn the cylinder down to approximately 40mm. For safety, always switch off the lathe before taking measurements.

The dibber is tapered at the top to allow easy insertion into the ground. To create the taper you have to focus on removing timber at one end and slowly working your way up the piece. Turn the tool rest to the angle of taper you require to help keep the chisel in the desired position; I find that turning my body to that angle also helps. ►



Piece of timber secured between headstock and tailstock.

When the taper is complete, it is now time to mark the depths along it. These are indentations which will indicate how far you are pushing the dibber into the ground for a variety of different bulbs and seeds. The indentations are made using the parting tool.

Firstly, use a steel rule and a pencil to mark



Placing the tool rest in position

where they go. Then hold the parting tool against the tool rest and move it towards the timber. Lift the handle of the parting tool and create your various grooves. You don't have to cut too far into the timber, just enough to create a visible line.

Up from the taper you need to provide a comfortable handle. Don't be afraid to experiment



Moving the gauge along the tool rest.



Calipers

here with the various tools. I used the roughing gouge in a sweeping motion to provide a hollow that fits comfortably in your hand. Feel free to use your spindle gouge to create some nice details. Remember it's all for fun so enjoy trying out all the different tools. Just be safe!

When you are happy with your dibber, it is time to finish it. To begin, we must sand it down to make it smooth using various grades of sandpaper (remember to put your dust mask on). Slow the machine down and remove the tool rest. Start with



Tapering the top of the dibber

a rough sandpaper such as 120 grit and hold the paper under the rotating piece until most of the tool marks are removed. Always sand underneath the piece as opposed to above it for safety reasons. Some teachers advise against turning on the machine, no matter how low the speed, to sand the piece.



Indentations with parting tool

Move the paper from side to side to prevent friction burns. Move down to a higher grit such as 240 grit and then 400 grit. You'll be surprised at how smooth the piece will be after this treatment!

The final job is to apply a finish and this can also be done on the lathe. As this piece is going to be encountering damp conditions, an oiled finish is appropriate. Using Danish oil or similar, apply the oil with the lathe stationary, using kitchen roll (it will tear apart if caught up in the drives or chuck instead of getting stuck). Gives the oil time to penetrate into the wood.

Remove the piece from the lathe when finished and saw off the ends. Sand these smooth and apply oil to them. Your dibber is now ready for action!

This is a simple project to get you used to the workings of the lathe and tools. There are so many resources out there for the woodturning enthusiast, between the internet, books and monthly



Sanding from below and from side to side



Use kitchen roll to apply the oil

magazines you need never be short of inspiration. It is also a great idea to get involved in your local woodturning group where likeminded individuals meet up to discuss, demonstrate and also compete. It is at these meetings where you will learn the most. So what are you waiting for? Go make some shavings! ■

Ciaran Hegarty

All photographs in the body of the article are courtesy of Ciaran Hegarty.

Note:

Before embarking on a woodturning project, consider enrolling in a beginner's course to get to grips with safety, proper use of tools and to help you generally develop your skills; look out for studios or schools which run evening courses during term times.

Additional Information

Ambrose & Brid O'Halloran, O'Halloran Woodturning, Claregalway, Co Galway, tel. 091 798 225, www.cregboy.com
Robert O'Connor, Gorey, Co Wexford, mobile 0872684488, www.thewoodturningstudio.ie
Glenn Lucas, Bagenalstown, Co Carlow, tel. 059 972 7070, www.glennlucaswoodturning.com

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Some houses can be put up in sections.
IMFS - floatingstructures.com

All at sea

These are no ordinary houseboats, they're the real thing.



It's no wonder we've moved away from the term 'global warming' and have instead come to embrace 'climate change' as a better way of describing what's going on with the weather.

The former implies heat and sunshine, maybe even a coconut tree on O'Connell Street or vines instead of apple orchards in Armagh!

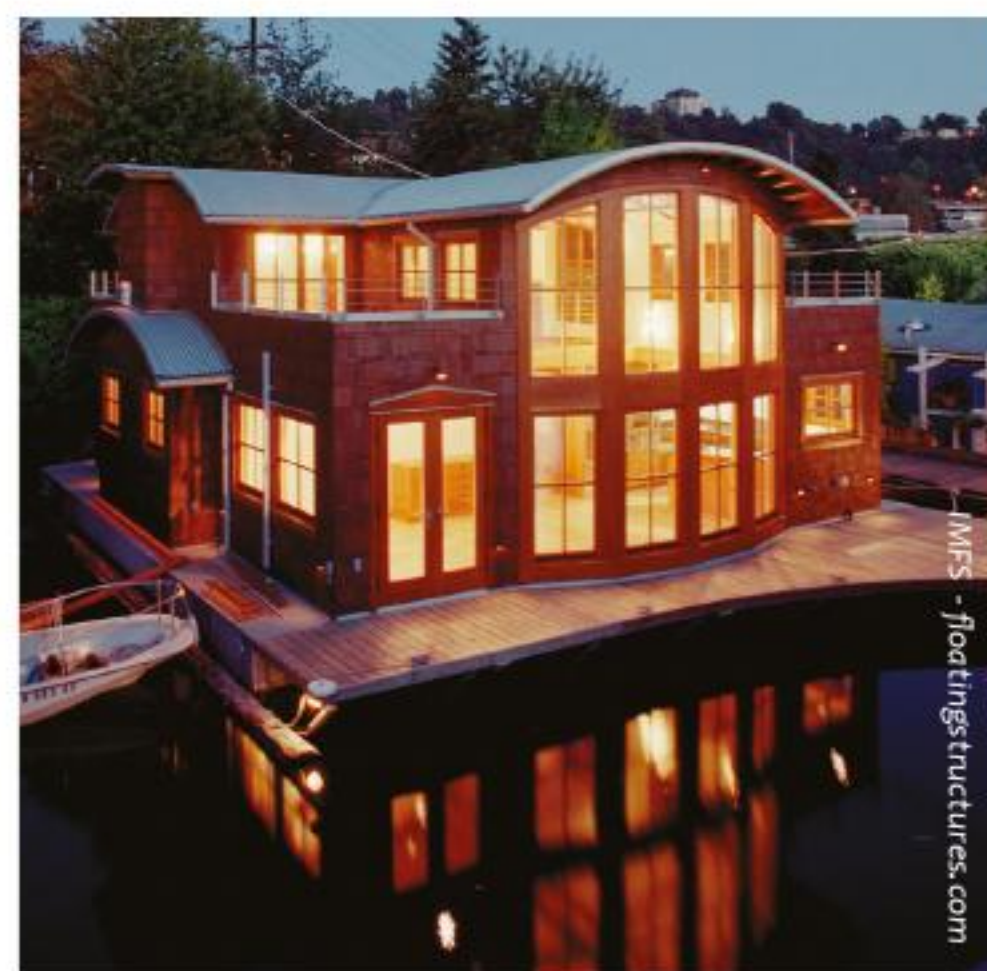
The latter is much more to the point: we're getting more of what we don't want, which in Ireland means heavier rainfall and increased frequency of flash floods.

How are we coping with this new reality? In the case of housing most of the climate change measures introduced to date have focused on prevention rather than dealing with the effects, but that strategy seems to be shifting.

NI and ROI have 'adaptation' strategies in place, which they've recently made statutory. Hopefully that should mean more resources spent on a line of defence. We may need it as it seems, according to the ROI Environmental Protection Agency, we won't be meeting our climate mitigation targets for 2020. But what if, instead of fighting the water, we embraced it?

Rising sea levels putting cities at risk

While there hasn't been much work done on living



IMFS - floatingstructures.com

on water in Ireland, bar the occasional houseboat, other coastal countries have been exploring how to build homes on water and in areas that are, or will be, prone to flooding.

This movement has in most quarters been dubbed 'aquatecture' and goes one step further than the houseboat in that real homes are built – the difference is just that they float on water.

Other buildings and even entire communities are now also starting to spring out of water. Some argue these structures should be mobile and be

Some of the houses are moved in one piece.
IMFS - floatingstructures.com



repositioned as the community's, or even city's, requirements change.

Not surprisingly the Netherlands has in large part been driving this trend due to necessity, with their cities having been built below water level, relying on engineered defences to keep floods at bay. Floating structures have also been mooted as a solution for those countries which have built high density housing on riverbanks and other flood prone areas.

How to float your house

The main difference between a grounded house and a floating one is obvious – the foundations. While both types are generally made of the same material – concrete – the waterborne version is of a specialised waterproof mix, with steel reinforcement, and shaped as a casing that contains rigid insulation to allow water to enter and give the house buoyancy.

Instead of concrete, other floating house manufacturers use high-tech composite materials that are commonly found in aerospace and civil engineering applications, as well as in luxury yachts.

On water, the overall weight of the house is critical, as anyone standing in a boat will have noticed! Calculations are therefore also made to take into account appliances and other heavy items in the home, and oftentimes ballasts tanks are incorporated in the four corners of the structure so as to be able to add/remove them in case a side is floating a bit too high or low.

As a result, these houses are not kits: each one has specific design and engineering requirements. But it is possible to self-build by buying the foundations only and building your own house on top.

Canadian company International Marine Floating Systems (IMFS) offers this option and they say clients can then either build their house in the IMFS yard by renting out space or build the house on water directly. It takes IMFS four to six months to build, off-site, the turnkey houses they sell.

And in case you're wondering, services are easily connected to the houses so you can get all of the modern conveniences a regular home has to offer. ■

Astrid Madsen



Above and left: In this example in Holland, a 30-year warranty is given on the composite floating structure.

Balance d'Eau
www.balancedeau.nl

The fabric build-up is the same as for an ordinary house
IMFS - floatingstructures.com



The Mindful Home

The secrets to making your home a place of harmony, beauty, wisdom and true happiness.

As someone who's promoted a mindful approach to the home for many years, I'm delighted to see this book published. Like the authors, I strongly believe the spaces we inhabit can either support our growth or hold us back.

So it's fantastic the way this guide encourages people to make their homes more nurturing through considered design and being conscious of the space around them. Starting with an introduction to the philosophy behind creating a mindful home, the book moves on to look at how being aware of the way we experience spaces through the five senses can help to create more beauty and harmony.

Next comes a helpful, more detailed



appraisal of how this can be applied to different applications (leisure, social, storage, outdoors, etc.). Finally, it looks at ways of making the home a healthier, more sustainable place. Throughout are simple mindfulness exercises to help the reader put some of the theory into practice.

But while the authors provide a great introduction to the subject I would have welcomed a little more depth in places, for

example when looking at factors that can prevent people from making the changes they need in their environment.

In my work as a declutter coach and designer of mindful spaces, I often find deeper psychological factors at play. People can struggle to let go of things that

have associations with regrets and painful memories, or find they resist changing a space they created with an ex, for instance.

I'm convinced that space and mindset are inextricably linked, and that working with people to deal with the psychological and practical sides together can prevent clutter from coming back and help release emotional baggage.

I therefore heartily recommend this lovely book to anyone who wants to start learning more about making their home a calmer and happier place. Hopefully it will also encourage other interior design books to further address the psychology of the home and its relationship with the mind.

Helen Sanderson

Interior designer & founder of the Ministry of Calm
helensanderson@ministryofcalm.co.uk

The Mindful Home by Dr Craig and Deirdre Hassed, Exisle Publishing, www.exislepublishing.co.uk, 224 pages, 229 x 184mm, ISBN 9781921966811, colour photographs, hardback, £19.95

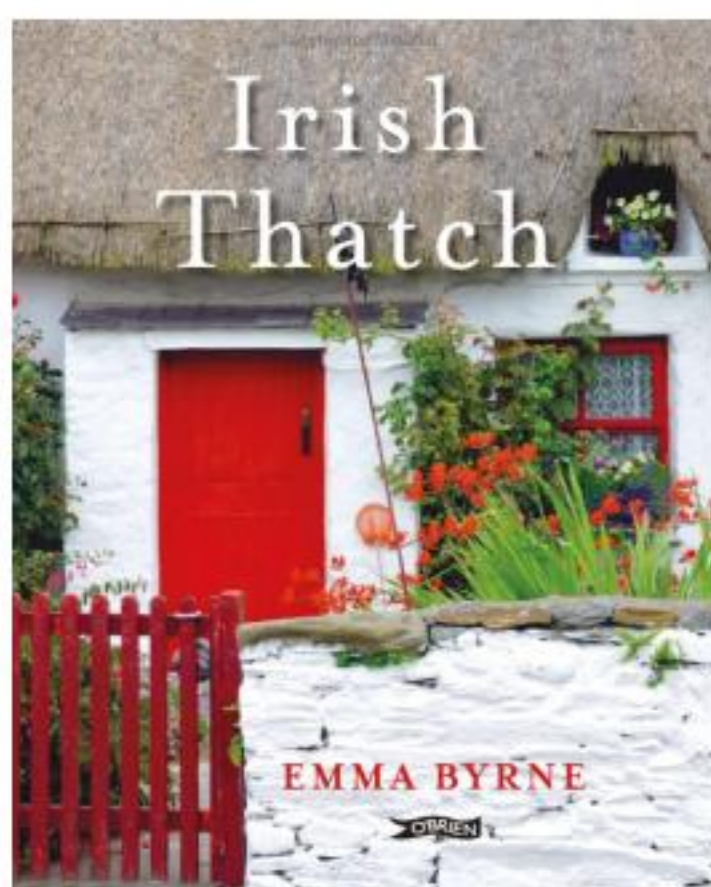
between the covers

Irish Thatch

As a thatcher, it was with a degree of trepidation that I picked up Emma Byrne's book *Irish Thatch*. But any misgivings I had were soon banished when I started browsing through its wonderfully presented pages. It was clear to me that this was a labour of love as the author included the good, the bad and everything in between, with some buildings in a serious state of dilapidation with roofs falling in and rotted thatch exposing the timber substructure.

Knowing the remoteness of some of the thatched homes photographed, I'm sure if there was an Irish thatched cottage on the moon she would have found a way to feature it!

Even though the book is light on text and the emphasis is on the photographed



buildings, I found the introductory chapters well put together and informative.

The section on thatch through the ages is very interesting and if nothing else it highlights the wonderful job that is being done in the Irish National Heritage Park in Wexford (well worth a visit).

However, wearing my pedantic hat, I would suggest that the thatching straw N 59 is in fact not of a heritage

variety but was developed / bred in the recent past and released as a hardy non-lodging winter wheaten straw in 1959. But the Square Head Master does represent a heritage variety as it was bred in the 1800s from a much older wheat strain.

I would also argue that thatching is a learned craft rather than an art, but either

way the chapter on The Art of Thatching is well presented and it pleased me to see that it was primarily focused on straw thatching as, unfortunately, most thatchers now work with reed and the skill of thatching in straw is being lost.

The second half of the book is a whistle stop tour of the four provinces, with page after page of beautifully presented photographs which will be of great interest to anyone interested in our vernacular built heritage. This will equally make the book a welcome addition to any coffee table.

All in all, this compilation is a celebration of a form of building that has survived from ancient times and adds greatly to the small number of books on the humble Irish thatch.

Jimmy Lenehan
Master thatcher

Irish Thatch by Emma Byrne, O'Brien Press, www.obrien.ie, colour photographs, 250x216mm, ISBN 9781847176929, 192 pages, hardback, €24.99

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Light up!

Like death and taxes, the loss of eyesight is pretty much a given. But there is hope!

As our eyes age, less light gets to the retina to stimulate the nerves. To reduce eye strain and escape the effects of seasonal affective disorder (SAD) you should therefore consider adding more illumination, and of the right kind.

Irish lighting manufacturer Solus says that to keep your vision clearer for longer, no matter your age, each room should have a balance of functional and decorative choices, the key is to have controls to vary the light. Their specific tips are to:

- Avoid glare. This includes installing general lighting fixtures that are well-shielded and turning on a few table lamps when watching TV to reduce the contrast between the bright screen and darkened room.



- Use diffused lighting to minimise shadows.
- Have light you can direct, such as a pivoting or adjustable head on a task lamp. Designs with a reflector (inside the head) are even more effective for focusing the light where you need it.

- Provide for light level adjustments (via dimmers) so they can match the lighting levels to the tasks at hand. Dimmers are ideal in the bathroom to add a bit of illumination to navigate during the night, and to make it easier to get up on dark mornings without blinding glare.

- Select compact fluorescent lights (CFLs) and LED bulbs with warm tones (look for 2700-3000K on the box) and a high colour rendering index of 90 or more.

Most lighting guidelines are drafted with a 30-year-old in mind so be sure to experiment to see what type of lighting feels best for your particular eyesight. Other tips include reading large print books and getting regular eye tests (including retinal) to catch problems early.

When alarms and CCTV don't work

Research from Fairco, an Irish manufacturer of burglar-proof window and door systems, shows that even with alarms and CCTV, burglars can enter your house in nine seconds flat!

According to the company's MD Jim Toal, who has advised security authorities on burglary prevention over the past decade, this is partly due to the availability of electronic alarm signal jammers that can be bought for as little as €40 and that are operational on a 30m radius.

Some burglars are even ready to let the alarm ring, as it is often ignored, while CCTV is easily circumvented by wearing hoodies, making later identification impossible.

For Toal, the days of opportunistic burglaries are gone as houses are profiled in advance of the planned break-ins. In an urban area he says typical targets consist of elderly people who may regularly go to mass or the shops and leave the house unattended, houses that are surrounded by hedges or may have large vehicles parked outside to block the view from the street.

Other burglaristic trends, according to Toal, include using walkie talkies at strategic points including the local Garda station, giving the intruders a two-minute warning of any interruption, 'spider burglaries' whereby criminals use spikes to climb your wall and access upstairs windows which don't tend to be alarmed, and even the use of battering rams to enter the home and steal the car keys. On the high tech end drones are being used to check yard contents, e.g. for high-value machinery.

Floodgates

If you have been a victim of flood damage, it could happen again, so we thought we'd bring you this list of tips from www.appliancesdirect.co.uk regarding prevention and cure:

1. Assess the flood risk to your home

Check if your home and local area is at risk of flooding by contacting your local authority. However, be cautious as flood risks are calculated using historical data and future weather and flooding may be worse than previous records.

2. Conduct a building health check

Assessing the external condition of the building will highlight any shortcomings. Simple measures such as a sealable airbrick and toilet bung can prevent immediate flooding following a surge in water levels.

3. Create a flood plan

Everyone in the house should be aware of where stop taps and kill switches are for utilities such as water, gas and electricity, and also have an emergency checklist to refer to in case of flooding, including making sure all electrical items are turned off and well away from rising water.

4. Prepare a temporary living plan

After flooding, a building may be unsafe to return to for days and even weeks. Ask friends and family if they would be able to accommodate you for a short period of time.

5. Getting back to normal

Once you can return home take pictures and make a list to support your insurance claim (don't forget to check if you qualify for clean up assistance). If you don't have insurance, a qualified contractor can be employed to assess the safety of utilities. Extract moisture from the building with a dehumidifier but be aware it's a process that can take months.

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Mo' flo'

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Carryduff Building Supplies have been



producing blocks and concrete products for years, but until recently did not have the facility to store liquid screed. That's all changed now that they've opened their new concrete batching plant which also allows them to manufacture and produce larger volumes of ready mix concrete, blocks and other concrete products. The company started out in 1983 trading as Farm Feeds & Supplies and quickly

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