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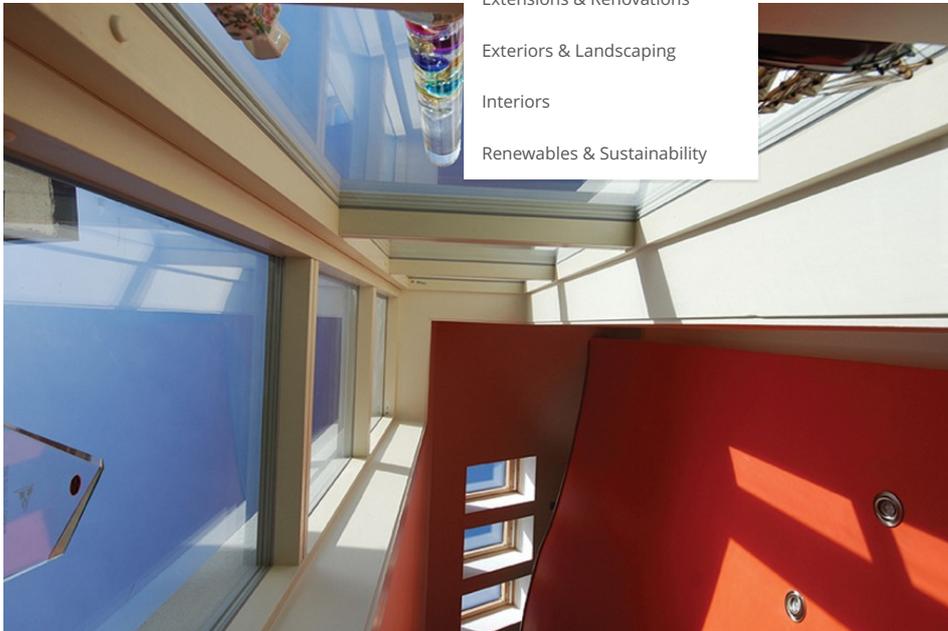
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From the Ground up

Posted on August 8, 2011 by Astrid Madsen in Case Studies

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If you're going to do something only once, then you might as well do it right. For retired electrical engineer Joe Neary and his wife Mary, this meant knocking down the 1950s family home they bought 30 years ago and rebuilding it from scratch. Their aim? A sun-filled, low maintenance dwelling suited to their current and future needs.

Design and planning

The Nearys were ready to adopt a whole new hassle-free lifestyle and in order to achieve it, they hired an architect. "The first step involved making the most of the building's relatively small footprint," says Joe. "We wanted to maximise the surface area of the house, which the architect was able to double, and add a lot of light. We wanted a low maintenance home that was adapted to the needs of people with reduced mobility, all the while making sure it would achieve an A2 Building Energy Rating!"

The house was designed to be 'low energy' rather than 'passive' due to its orientation, as only the gable faces south. "We adopted a split level, three and a half storey, design which culminates in an attic with panoramic views across County Dublin. We built the home with lots of insulation, complete with a continuous airtight membrane - we didn't put any downlights on the roof in the attic to make sure we wouldn't compromise it. The architect maximised the amount of sunlight thanks to the glazing on the roof over the stairwell, and a three storey lightwell over the main kitchen/living room area. We have electrically operated rooflights, which I'm very fond of, not only for light but for the connection it gives us to the outside and to fresh air."

"It's all very open plan," adds Joe, "so you can hear everything that's going on in the attic/office and in the kitchen/living

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room. That said, the bedrooms and the basement are cut off from the rest of the house, to provide a bit of privacy, and we can retreat to those spaces when we feel like it. Most of the time though, it's just my wife and I so it doesn't make much difference; it's only when the grandchildren are around that you'll notice a bit of noise!" The house lived up to expectations when Joe's daughter recently visited from Australia. "Now that the house has four bedrooms, the family can peacefully coexist for prolonged holidays! The garden also acts as a very useful outdoor space where we can have breakfast or be left alone if need be, especially on a sunny day." The garden is of course also low maintenance, with hard surfaces able to accommodate a large table and chairs. The plants are lined up against the boundary walls in raised beds, which allows for easy access. It seems every detail has been thought out well in advance.

"We convinced the planners that the 1950s house had to be demolished due to ongoing structural issues, which we later discovered were due to filled ground. Planning was initially refused, which delayed us for about six months, but demolition finally started in July 2009, which in and of itself was an interesting process!" says Joe.

"It took an entire month to take the house down brick by brick. This was because we had to segregate the waste so it could be disposed of properly, but we were also concerned about the neighbours and the impact our build would have on them - not only the noise but also making sure that we wouldn't affect the structural integrity of their buildings. We had to excavate a lot of rock to build the basement so we had to make sure we were doing it right. The builder originally proposed a plan that our structural engineer said lacked detail so we had him supply a more rigorous solution, and he did. In the end we had to build a temporary structure to prop up the adjoining buildings and we also put in vibration monitors to make sure all was going as planned. It was quite an operation!"

Peace of mind

"We wanted the best systems we could afford," says Joe, "and we wanted to make sure our home would be ready for anything that might arise in the future. For instance, while we knew the rainwater harvesting system wouldn't ever pay for itself (unless the soon-to-be-introduced meter charges are exorbitant) I didn't want to be without water, ever! It proved to be a wise decision during the water shortages experienced in Dublin in December 2010. Unlike our neighbours, we could flush our toilets! You can't put a price on comfort and peace of mind. The rainwater tank was originally planned to be put in the house but instead I got it to be buried in the garden - it takes quite a bit of space. Plus, we needed the room indoors: since the house is at the top of a hill we can experience water pressure problems so we increased the capacity of the water tanks in the attic to make sure that wouldn't be a problem in the future."

They also installed a heat recovery ventilation system. "We get fresh air all year round, even with the windows closed, so no worries about damp building up in our basement, or anywhere else for that matter! And it allowed us to build a cupboard in the utility room where we can dry our clothes. We also invested in LEDs (don't remind me of the price!) because regularly replacing 10 downlights isn't what I would consider much fun! I also put in a sound system all around the house so I can listen to my radio programme wherever I go. I really enjoy that. It's a lifestyle I'm well getting used to!"

The windows, meanwhile, were specified to be triple glazed, primarily because they're energy efficient but also because they will last a lifetime. "They only cost about 10% more than the double glazed option we were given so we felt it was well worth that bit extra. We also opted for the aluminium clad frame, which requires little attention. For us 'low maintenance' also meant putting in a work surface in the kitchen that was both non porous and easy to wipe down. We opted for a composite worktop, it's 90% quartz and 10% epoxy resin (glue). As for the island in the kitchen, the architect and I had a hard time convincing the kitchen designer to leave it without any appliances or sink. It came to a point where I had to draw a sketch to show him we could incorporate the sink and the hob against the wall. Sometimes you just have to fight your corner!"

In fact the only compromise they made in the design was to let go of their initial plans to install an elevator. "The architect said he couldn't make it fit. We were, after all, working with a tight site. Instead, we'll just convert the ground floor garage, which is now used as a workshop, and the front room into a bedroom and lounge when the need arises. There's also a wetroom downstairs so if we can't climb the stairs anymore, we'll still have a place to live just as comfortably as we do now."

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About Astrid Madsen

Astrid Madsen is the editor of SelfBuild & Improve Your Home magazine. She previously held the same role in an Irish trade publication, before that she worked at the National Standards Authority of Ireland. She graduated with a BA in Urban Studies from Columbia University in New York and holds an MBA from the Instituto de Estudios Bursatiles in Madrid. France of origin, she now lives in Portarlington, County Laois, where she's taken on the task of renovating a listed building! Email astrid.madsen@selfbuild.ie

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