



providing a sympathetic floor layout within. The original building benefits in many ways: A new main entrance was created at the joint between the extension and the original house, leading visitors into the new heart of the home. Here, an open planned layout comprises a sunroom, family room, games room, zones for homework and family gathering. The living room and bedrooms are also accessible from this area, while a new master bedroom is provided on the cantilever above.

The central area is flooded with light from the skylights, which orientate towards the sun in a south westerly direction. From the north end of the property, the main form of the extension feels like a single storey with the roof falling below the eaves level of the original house. It's only at the south west corner, do you appreciate the views from the master bedroom which project out toward the distant hills.

While copper is a super conductor of heat, it was the architect's general specifications for heating, windows and insulation that really propelled this property to new comfort levels. Solar panels and a wood pellet boiler provide space heating and hot water, while all walls and roofing were highly insulated for heat retention. Small aluminium window frames with A-rated glazing encourage solar gain while also preventing heat loss – a novelty in many older properties!

As this was quite a unique and specialist project, there were so many considerations for the tradesmen working on it. Every joint and junction between the copper and other materials had to be assessed thoroughly. The builder, carpenter, glazer, plasterer etc met regularly with the copper supplier to ensure all measurements and construction details were exact. When you are investing €65k on copper, there was no room for error! ■

BUDGET OVER 250K

Extension to 20th Century Cottage, Westport

Floor Area: Before - 150m² / After - 230m²

Timescale: 3 years

Architect: MacGabhann Architects, (0)74 912 9440, (028) 9000 1085,
www.macgabhannarchitects.ie

This property was originally built in the early 20th century as a three-bedroom School Master's cottage. It had undergone some alteration and extension in the 1950's and 60's, but this was carried out badly and detracted from the character of the building. The current owners wanted to update the property, so it not only met with current living standards, but retained an element of distinction.

Their brief comprised the following:

1. Create a footprint of c.230m² to accommodate living space for two parents, two children and a grandmother (the original footprint, excluding 1950s/60s alterations was 80m²);
2. Living spaces must have plenty of natural light;
3. Build an energy-efficient extension so our energy costs can be reduced;
4. Retain the mature garden.

It was decided to position the new extension at the rear of the property, which faces south west – this would maximise solar gain and

fulfil the client's brief for plenty of natural light in the new space. This location was also the least disruptive to the original structure, existing landscape and front facade – something which is very important when adding a new structure to old walls.

Perhaps the most distinctive element of this project was its construction material, copper, which at the time, had not been used in this way anywhere else in Ireland. It is very flexible and works equally well for vertical walls, roofs and soffits, while the size and format of the shingle suited the scale of the extension, with its relatively small surface areas, twists and folds. Copper's ability to survive the worst conditions and to remain waterproof without rusting also make it an excellent cladding material. A block render would not have had the same appeal and could easily have absorbed the extension into the original building – something the family did not want to do. Ironically, this Bronze Age material creates a sleek, modern look that architecturally enhances the property by

Above: The new extension provides an open planned flexible living space on the ground floor and a master suite on the cantilever



Copper is being used more and more in cutting edge designs around the world as new ways of folding it mean less stress and more flexibility in terms of thickness, shape and design. Apart from being easier to work with than other metals, it's also fire and pollution resistant and is great for sound-proofing and heat retention!