Housing as homes: the inside story
Sergison Bates • Mark Walker • Robert Barnes • Shed KM
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Bernard Tschumi at Marne-la-Vallee
Technology: glazing YRM's Bristol airport terminal
Product: Roofs & roofing, CAD & IT

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and controlled. It floods the spacious bedroom corridor from above and filters softly into the bathrooms through a strip of polycarbonate above the kitchen. The suite of four bedrooms is simply organised, with the access space acting as an additional room to counter the compactness of the individual bedrooms. There is a clear, unlaboured quality to the details and the off-the-shelf technology is deliberately underplayed – for example, the underfloor heating that makes possible the open plan and extensive glazing.

The glazed frontage of the house that wraps around the corners is composed entirely of full-height opening frames. It forms a ribbon of moveable glass that both reflects the landscape externally and acts as a huge lens through which to view the garden and wider landscape. This strip – its direct simplicity recalling the Alison and Peter Smithson’s Upper Lawn House – is at the heart of the design, liberating the enclosure to react to the seasons and activity of the house by dissolving the boundary between inside and outside. It allows the sequence of spaces and life of the house to extend into the garden – a simple device that renews the sense of living in the landscape.

This is a building that is rewarding in its simplicity and potential. The openness creates a freedom that questions the containment of the traditional house. Mark Walker has created an affordable house where modern living can be combined with the pleasure of the ever-changing landscape.

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Above: The roof consists of western red cedar shingles on 25x50mm battens on 12x38mm counter battens, felt, 12-ply on softwood trusses, 150mm insulation and foil-backed plasterboard. The walls comprise 125x20mm planked cedar boards on 25x30mm vertical battens, waterproof membrane on 10-ply with 145x47mm studs at 600mm centres, 150mm insulation and foil-backed plasterboard. Internal linings comprise 10mm birch-faced ply and woodslat blinds, and horizontal sliding wood-framed glass doors. The floor comprises 10mm slate tiles bedded in adhesive on 125mm concrete slab with underfloor heating, 50mm rigid insulation, and waterproof membrane on blinding.

Selected subcontractors and suppliers
Underfloor heating: Invisible Heating Systems; woodburning stove: Scan of Denmark; blinds: Chris Craft/Stevens (Scotland); cedar shingles: Loft Ship; kitchen: Sidley’s (Perth); patio doors: Allan Brothers; slate floor/walls: Kirkstone; woodstain: Sikkens; bath: Ideal Standard.
At home in the country: the Walker house

Mark Walker has built a house for his family that suggests a new model for rural housing. Critique by Paul Clarke. Photos: Simon Jauncey.

Relatively unnoticed amidst farm sheds and bungalows in the undulating agricultural landscape of Perthshire is the Cedar House by Mark Walker. Its modest, neutral appearance does not disclose the dimensions of the space inside. There is no nostalgia for the pastoral dream but rather a desire to engage with contemporary living in the rural landscape.

It is easy to imagine this house in other contexts. Le Corbusier maintained that he carried the project for his mother's house around in his pocket looking for sites; similarly this house is open to both the specifics of place and differing generic situations. Constructed as a low-budget, lightweight, timber-frame house, it inventively delivers a large volume beyond even the aspirations of many loft apartments. It achieves this by the strategic use of a deceptively simple plan and an extruded single-storey structure.

The perimeter of the house is wrapped in a simple palette of materials - square-cut cedar cladding, shingle roof, render and dark-stained window frames. Like the adjacent avenue of sycamores, the skin of the house fuses into the landscape, absorbing the weathering processes of the natural cycles and seasons.

Perhaps the strongest characteristic of the external form of the building is the conjunction of two elements - the envelope of natural cedar and the low dark-stained openable frontage to the garden. The contrast is strong, like the exposure of dark clay under a ploughed field.

In the north wall, a large glass entrance door offers us an unexpected framed snapshot of the interior of the house. On entering we glimpse ourselves reflected in the mirrored store, as we cross the threshold of the house and cast our shadow cast from the large rooflight above.

The wide entrance slot offers the first sense of the cruciform plan. The route is extended outside by extending the floor surface into the garden - an immediate invitation to connect inside and outside. The large open-plan living space, placed counter to the entrance axis, opens the full length of the house. Gone are the cross walls of the traditional house, which so often limit any flexibility of use. At the
Mark Walker writes:

The measure of the project was predicated in the mundane but universal requirements of any building project, namely to build within cost. Worth mentioning in this case, since "to build" means "to gain permission to build" in a planning environment mostly hostile to architectural innovation, and "within cost" meant to stay within restraints imposed by the decision to investigate a viable spatial prototype that was as cheap as the average equivalent new build house.

The strategies that gained enthusiastic planning officer support are twofold. Firstly, a formal connection is made to the agricultural and light industrial barns and sheds that litter the countryside, thereby producing a contextual fit with existing rural environments. Through their honesty, economy of effort and lack of pretension these shelters display a natural beauty and harmony with their context. Secondly, with its relatively minimal external envelope, predominantly south-facing glass and solid floor with high thermal mass, the design is compliant with the climate and therefore satisfies contemporary building obligations.

The triangular site is on the side of a gentle slope running south to the river Almond, hidden in the valley below. The house is placed along the north-east side of the half-acre (0.2ha) plot, which originally contained a group of self-sown yew trees. The majority of these have been felled to enable light and sun to reach the house, with the trunks laid down along the site as mulch to create a plateau for the house and garden. The line created along the edge of the lawn defines the boundary of the domesticated landscape and reveals the undulations of the borrowed landscape beyond.

In plan the building is separated into two, with the lower and darker north-east side containing the cellular bedrooms and access hall and the higher and lighter side given over to the day spaces, which can be opened and physically connected along the complete length southwest into the garden. The site is treated as a triangular "room" in the landscape, defined along its three sides by a beech hedge (just planted and not yet substantial), an inhabited wall (the house) and a colonnade of ancient yew trees lining the adjacent track. The spatial boundaries of the house are thus extended through the glazed wall onto the orthogonal slate and gravel surfaces, manicured lawn, animals in the fields, undulating horizon beyond and sky. Facing south west in Scotland, the expanses of sky is seldom dormant and shows the weather to come, as well as magnificent sunsets. The external surfaces of gravel and slate form a zone which doubles the width of the internal volume and will be further defined in time by the planting of coloured grasses and bamboo.

Externally the extruded form of the house has minimal overhangs and embellishments. The galvanised gutters and downpipes are robust enough to take a leaning ladder and provide protection to the ventilation slots to both roof and wall constructions. Two identical flush polycarbonate rooflights admit sun deep into the house, one through a "snored" into the bedroom corridor and the other into the full-height entrance hall.

The western red cedar cladding is adjusted in size, orientation and finish according to location. For the roof, treated cedar shingles are laid at gauges dependent on pitch. For the day spaces, 125mm boards are smooth-planed, laid horizontally and stained ebony black, giving the feeling of joinery rather than carpentry. For the gable ends the boards are rough sawn, untreated, and laid vertically as board on board. Tendenly the cedar shingles dramatically change from dark to light depending on whether wet or dry, thereby fluctuating in their associations between the different wall surfaces.

The in-situ concrete floor is gently warmed by embedded water pipes and covered with slate tiles (laid in brick pattern) or oak strip. A solar contribution is captured by the mass of the solid concrete floors. Overheating is controlled by opening any of the 11 sliding doors around the perimeter as necessary.

Although a simple extrusion, the house volume is rooted by the transverse axis, which penetrates through the central dividing wall and cellular accommodation to accept an entrance from the north-east, marked by a porch that offers further protection. This transverse axis reveals the asymmetric section of roof slopes and is flanked on one side by a translucent wall, backlit to show the shadows of the timber stick construction.

Interrupting the spatial continuity of the day room is a solid box containing the bathrooms. This divides the space into two volumes, large and small. A home office has been made in the smaller volume and a sitting and dining area made around a freestanding wood-burning stove in the larger. The flank wall to the bathrooms is mirrored, adding complexity to the space.
centre of the house the ceiling lifts to expose the slope of the roof, opening the ‘box’ – like the lid of the white piano – to reveal the full volume of the frame.

The east wall of the entrance space is clad in translucent polycarbonate, with lights embedded in its double skin. As if through a mist, we glimpse something of the construction – the standard trusses and stud walling – as well as the presence of the bedrooms beyond. As in a modernist painting, we see beyond the limits of the picture to the texture of the construction. Traces of abstraction and surrealism begin to appear amidst the domestic realm. This wall can be switched on and off to illuminate the living space at night, revealing the extruded section of the house as an X-ray and acting as a lantern for the main space.

The emphasis is on the open-plan space, which becomes a continuous field for activity: eating, cooking, sitting, working and viewing. The kitchen and the home office are defined by the projection of the bathroom suites, which provides enclosure and definition while still extending the perceived limits of the whole space. The kitchen is pushed forward towards the outside glazed wall, allowing cooking and eating on the edge of the garden. The floor of Brazilian slate – rich in texture like a geological cut – defines the surface of the cross plan. Its rusting strata pigments connect to the warmth of the plywood wall panels and blinds, as well as the colours and textures of the landscape outside.

Throughout, light is carefully managed...