

The Road to Hart Street

Most architects have an ambition to build a house for themselves; unfortunately, not many get the chance. I was lucky. Alerted by a friend to an already subdivided garden in Hart Street in the eastern Edinburgh New Town, I wrote to the owner. That email initiated a ten year adventure with planning permission achieved in 2007 but just as we plunged into a recession so construction was delayed with the house eventually completed by Easter 2015.

Before discovering the site I had progressed quite far with the design of a new house for myself in Bakehouse Close off the Canongate but the land sale fell through. However, instead of that project, a client commissioned during the 1990's two mews houses on Calton Hill built for renting out and these became sequentially my home as my client's tenant. Thus I had the highly unusual experience of "test driving" two of my own designs; trying out ideas as well as designing in some detail. Many themes in these previous three projects were developed into the Hart Street design.

All four projects squeeze significant amounts of accommodation onto very restricted sites and all increase the feeling of space through the use of complex sections and occasionally tricks with mirrors. The mews houses were restricted by a 5 x 8m footprint and their existing sectional envelope. Hart Street is a little bigger with an 11 x 6 meter footprint developed with four stories and nine levels and containing three bedrooms, three shower rooms, a living/dining/kitchen area at varying levels, study, reception hall, basement plant and storage, garage, utility room and roof terrace. "A Rubik's cube" was how the Australian architect Glenn Murcutt who lodged in the house for the RSA 2015 Metzstein Discourse described it.

All four projects responded to their highly particular historic contexts, not least at Hart Street where the site straddles the unresolved junction of two contiguous estates which each developed in the 1820's simultaneously but seemingly without much coordination. The unique circumstances of this piece of New Town mis-planning became the springboard for the entire design. The adjacent tenement gable end should never have been exposed nor should it have been extended upwards in the 1960's and the new house deliberately responds by building high to becoming a "book-end" to it; it both hides the gable and attempts to conclude the façade. The triangular form of the bookend encloses the maximum volume yet preserves light angles from the adjacent basement apartment on Forth Street. It also makes a south-facing roof.

The front façade continues the stonework pattern of the street façade concluding with the idea of "an inhabited ruin." Even when a building is completely new this is a theme which frequently reoccurs in our architecture when building in historic places. The "new" architecture is layered with contemporary materials of glass block, steel, burnt timber and lead used in a tectonic way contrasting with the solidity of what might be a pre-existent ashlar stonework "ruin" to either side. Within the ashlar is a pattern of tiny windows (which sit amongst the shelves of a giant staircase-bookcase inside) and these play on the ashlar stone construction with corner windows reminiscent of coin-stones, but in the negative. As with the adjacent tenements, the ashlar turns to rubble at the rear where the whole elevation becomes a much freer composition.

The Dutch architect, Aldo Van Eyck once said that a house should be both a bird's nest and a cave; an extrovert place in summer and a retreat in winter, or, if you like, day-time activities contrasting with night time. With the hugely varying hours of daylight at Edinburgh's latitude this is particularly relevant and that essentially psychological idea also chimes with the requirements of energy conservation. Closing shutters is a traditional New Town device developed at Hart St in unexpected ways. The south facing monopitch roof consists of photovoltaic cells and substantial glazing. Underneath this are two giant mechanised hinged insulated shutters, one in the living space and one in the master bedroom. These allow the glass to generate heat for the house when open but prevent it radiating heat when closed. They also change the section quite radically moving from the vertical

to the horizontal and creating spatial variations which illustrate Van Eyck's dictum. All the major windows to the house have insulated shutters which slide or pivot.

Other energy innovations are a computerised internal air circulation system which takes warm air from the top of the house to the basement to counteract the stack effect and expels it via a gravel rock store to produce a delayed heat source for evening use. The main heating source for the house is a 150 metres deep ground source borehole connecting to a heat exchanger which feeds under-floor heating. Rainwater which follows a course of pools and waterfalls on the roof terrace finds its way to grey-water storage tanks in the basement and is then used to flush toilets and supply a sprinkler system. In winter, heat is extracted from the flue of a log burning stove to pre-heat hot water.

Peter Smithson once said to his students "you will be very lucky if you have a single original idea in your life!" No architect is immune from the work of those who have gone before and at Hart Street I freely confess to a number of architectural influences at work. Not least of course is the work of the Venetian Carlo Scarpa, an architect I have studied intensely, and the roof terrace is a homage to the garden of the Querini Stampalia in Venice using the same exposed aggregate walls and sourcing tiles from Scarpa's original manufacturer in Venice. Internally, the Venetian "stucco lucido" coloured plasterwork is used extensively. The Sir John Soane Museum is a great influence with mirrors creating a number of spatial illusions. Equally present is a fascination with Chareau's Maison de Verre in Paris with the crafting of many of the steel elements, the exposure of the steel structure and a love of moving parts. Frank Lloyd Wright's many contemporary fireplace inglenooks, particularly in his Usonian Houses is the inspiration behind the fireplace composition and Reitveld's Schroder house makes an appearance in a "disappearing corner" stone panel opening in the master bedroom, designed to be the same proportions as his famous corner window. Even though there is limited site area the house chooses to adopt a "thick-walled" aesthetic, perimeter walls containing narrow staircases and cupboards in the spirit of mediaeval Scots architecture. An unpredictable and non-repetitive vertical circulation route also might have come from the same source although, while designing the house, a chance visit to the Muller House in Prague by Adolf Loos confirmed the strategy in my mind. There, a vertical route through the main spaces develops upwards in a completely unexpected way.

The design was recommended refusal by Edinburgh City Council Planning Department but Councillors voted to reject this advice and allowed construction to go ahead. Since its completion the Architect's Journal have named it their "House of the Year 2015", it has won a Saltire Award for the best new house in Scotland and has won a Civic Trust National Award. It is currently shortlisted for an RIBA National Award and Edinburgh Architectural Association's "Building of the Year" Award. By contrast, the RIAS decided that it was "not worth visiting" when shortlisting for their annual awards in 2015.

Designing for yourself is not easy. My friend Murray Grigor remarked that "my indecision is final!" Now aged 60, I won't be designing another so the danger is that one tries to get every idea one has seen or had into one small project. I freely admit that the house is perhaps "over-designed;" it certainly is not intended to be an exemplar and definitely not a prototype. It has been an enjoyable vehicle to develop a lifetime's themes and now it gives me great pleasure to both live there and to hear the remarks of the many visitors it has hosted over the last year or so. Much of the credit for the project's realisation must go to Gareth Jones in my office who took all my sketches and drew every one of the hundreds of construction drawings. My thanks must also go to Inscape Joinery the contractor; the quality of their workmanship is much admired by everyone who visits.

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