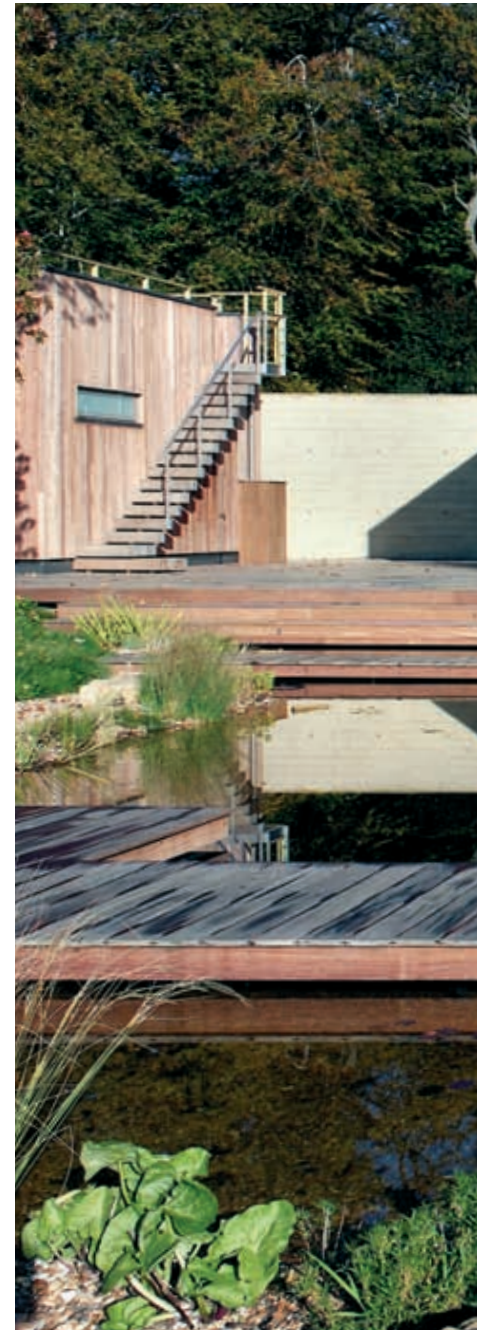
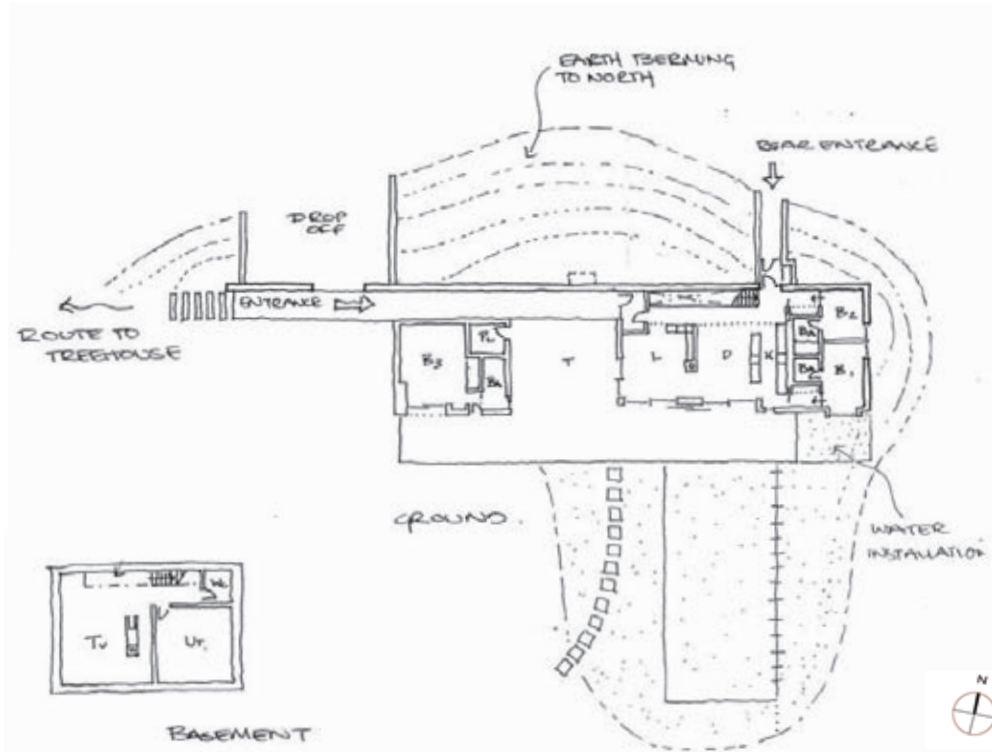


Martin Pearce visits a house that takes its cues from both the ecologies and opportunities of its site in the New Forest. Photos: Nigel Rigden.

## Grounded technology: Perring Architecture & Design



Perhaps the greatest difficulty faced by twenty-first century architects is that of choice. Confronted by an ever-expanding range of competing technological possibilities, we agonise over making the wrong choice, missing opportunities or overlooking alternatives. Today, freedom of choice is accompanied a peculiar sense of paranoia as architectural possibility seems directly proportional to design anxiety. To design is to decide, but upon what can we base our decisions? A belief in future technology or perhaps a trust in past know-how?

At first sight the New Forest house by Perring Architecture & Design (PAD) appears anything but backward looking. The building, differing radically from the tiny timber cottage it replaces, is organised along a board-



marked concrete wall, with two pristine south-facing timber boxes surveying the forested valley below. To the north, an earth berm is banked up against the wall making the house all but invisible on approach. Some storage and accommodation is below ground, driven by the planning requirement of like-for-like above ground area replacement of buildings in this national park. There is a feeling of the brute materiality of Ando but the building owes more to the clarity of composition seen in Utzon's wall houses.

This rigorous planning enables a carefully choreographed movement through the house. This is conceived as a sequences of framed views which alternate intimacy and enclosure with awe instilled by views of barren heathland.

Much of the English picturesque landscape tradition underlies PAD's thinking here, in a design strategy which at its core seeks to reveal what the ancients termed the *genius loci* or spirit of place. For Vitruvius, who affords us unique insight to the classical mind, a *genius locus* was in no way mystical but rather of clear pragmatic import. For PAD, as with Vitruvius, architecture begins with the site. The practical significance of thoroughly understanding the orientation, topography, and ecology of a particular place show how a building might metaphorically grow out of, or in this case into, its landscape.

The previous cottage had little impact in the landscape; however the domestic detritus that often accompanies human habitation, and is subject to

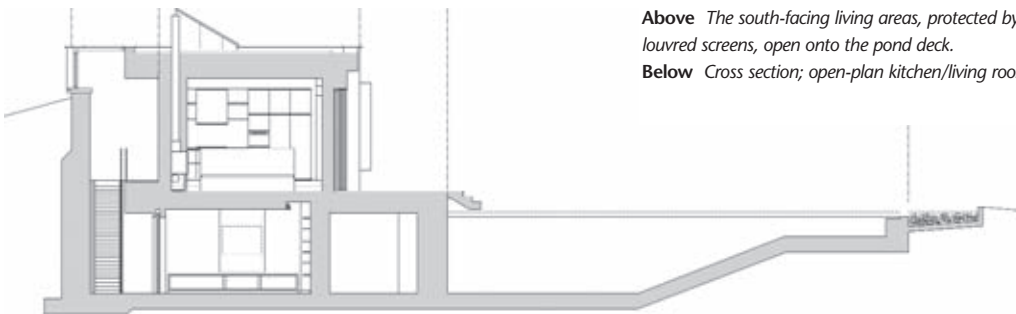
**Above** The swimming pond, which requires no chemical cleaners and little maintenance, comprises a 'regeneration area' with selected plant species, and a swimming area.

**Left** Rear (north) entrance and main (west) entrance.



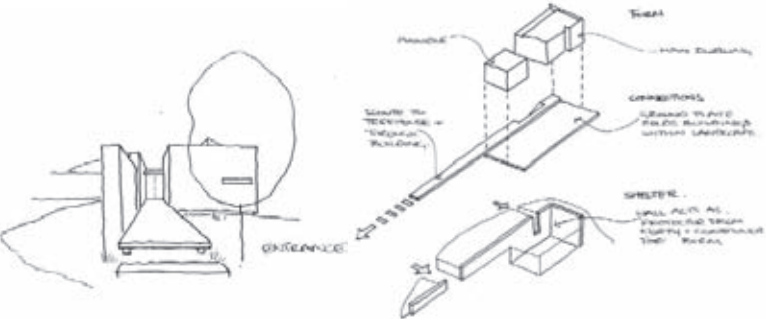
**Above** The south-facing living areas, protected by louvered screens, open onto the pond deck.

**Below** Cross section; open-plan kitchen/living room.



little control, did not. Enclaves of imported plant species and a suburban gardening mentality make for a stark contrast with natural woodland as too many precious landscapes are blighted by the curse of the rhododendron. In contrast PAD has integrated the forest with the design and landscape: a new ha-ha keeps wild deer and ponies at bay, while a careful choice of native plants surround a swimming pond that evokes childhood memories of splashing in forest streams on hot summer days. These are design choices guided by, and at one with the place.

The extensive use of concrete in the building might seem far from sympathetic to this environment. Much has been debated about the use of concrete in buildings which purport ecological credentials. Can concrete ever be seen as a sustainable material? In this hackneyed argument of material choice we can become so absorbed as to miss the point. It is not simply the choice of material but rather how it is used. The cross section through the building reveals the key use of a long concrete wall as a driving concept for the design. South-facing rooms with sliding brise soleil screens are set along this spine





**Below** The thermal storage unit is linked to roof-mounted solar thermal panels and a ground source heat pump. The store supplies domestic hot water and the underfloor heating. Biomass heating provides as a secondary heat source to the main living spaces. The plant room also accommodates an MVHR (heat recovery) unit which extracts warm air from bathrooms and the kitchen, mixes it with fresh air and re-circulates it to the bedrooms.



**Above** A full-height concrete wall acts as a thermal store.

wall of linear circulation above which opening glazed rooflights make for a strategy enabling passive gains and natural cross ventilation and cooling. Operated by the building user these devices not only afford thermal comfort, but also the psychological feeling of being in control of one's environment. You feel cooler through the act of opening the windows or drawing the screens, even if the actual temperature does not drop. In contrast the current dogma of the Passivhaus approach, premised on passive solar design, super-insulation and airtightness often works against the user's intuition. In particular the requirement for a sealed, airtight environment with allied heat recovery system and ventilation systems is often defeated by the user's wish to open a window in order to feel cooler.

PAD's concerns are with the psychology of human comfort as much as more quantifiable needs for heat, light and sound. The requirement for the home

to provide a safe protected environment is demonstrated most in the use of an earth berm which, coupled with an unusually thick green roof, allows for the rooting of indigenous forest species, part of the lineage of earth-sheltered structures that date back 5000 years to Skara Brae in the Orkneys. The earth affords thermal mass and reduces the area of exposed external wall, helping maintain a steady indoor temperature by working as a heat sink and providing thermal lag against climatic fluctuations. However the corollary to this pragmatism is that the house feels both very private and very safe, a refuge from the 24/7 world immersed in technology of communication.

So there seems much to learn from PAD's approach. Certainly that any technical solution must in some way be considered provisional, not absolute, and that we should not allow a faith in scientific certainty to outweigh our most deep-rooted psycho-

logical need and instincts.

For PAD the clarity of an architectural idea is imperative, and a simple concept rigorously carried through into every part of the design is enormously powerful. However such an idea need not be overpowering when, as here, it can generate rich contrasting experiences that delight and intrigue. Above all the house reinforces the timeless importance of a profound understanding of site and an attitude that allows choices to be guided by the unique and particular nature of a location. If anything, PAD's New Forest house offers reassurance that, faced with seemingly infinite choice in our own time, architecture needs to be grounded in the timeless verities of the past and the needs of the human psyche. Today more than ever, we need to look backwards and inwards in order to go forwards.

*Martin Pearce is an architect and principal lecturer at the University of Portsmouth school of architecture.*

**Credits**  
 Architect: Perring Architecture & Design; design team: Wendy Perring, Darren Bray; structural engineer: Andrew Warring Associates; services engineer: EDP; main contractor: HA&DB Kitchin; concrete consultant: David Bennett; groundworks, fair-faced concrete: Farncombe Construction; mechanical installation: Ashwell; electrical installation: Designer Electrical; concrete repairs: White & Reid; windows: Velfac; aluminum doors: Fineline; rooflights: Glazing Vision; lpe cladding: Wood Trend; flat roof: Bauder; joinery: SB Joinery; pool: Anglo Aquarium; ironmongery: Harbrine; kitchen worktops: Mass Concrete; cedar shingles: John Brash; shower trays: Bette; meadow turf: Garden Leave; underfloor heating: Warmafloor; concrete plugs: Max Frank; tanking: Grace Construction; foul water treatment plant: Bio Bubble; heating, GSHP: Parker Heating; bronze sculpture: Simon Percival.