

I N D I V I D U A L H O M E S

HOMEBUILDING

& RENOVATING

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CONTEM

Mention the words 'contemporary style' and most people recoil in horror at a vision of 'Space: 1999'-style plastic orange pods. But, as Clive Fewins finds out, today's architects and designers are taking the hard edge off the future and creating a world filled with light, texture and colour.

Even if you haven't been inside any, most of you will have seen magazine photos of 'futuristic' houses built from glass and steel. They have clean lines, low pitched or flat roofs and are designed to emphasise the horizontal. Inside, spaces seem to float into one another, emphasising the feel and the mood of the building rather than the individual rooms. Many of these buildings are designed and built by architects who live and work in them and use them as showcases for their ideas. Even if you are never able to afford a one-off home of this sort, what ideas in them are practical and might be of use to the self-builder?

Architect Anthony Hudson, of the London-based Hudson-Featherstone Partnership, designed Baggy House, on the North Devon coast near Croyde which was joint winner of the Sunday Times 1995 Building of the Year Award and was featured in IH H&R in March 1996. From the outside it is sculptural; designed to reflect the rocky landscape. It is an icon of the Contemporary School and incorporates many features that are both



▲ Architect Tim Rendle built this four-storey, wedge-shaped house at the end of a Victorian terrace over a period of fifteen years. He was able to move in after the first five.



PORRARY

HOUSE STYLE

Baggy House, by Anthony Hudson of Hudson-Featherstone Partnership, uses simple white render and Eternit Roof Slates to emphasise the building's external form and help it work with the landscape.

throwbacks to the 1930s (like the plain interior walls, a mixture of curves and angularity) and refer to marine architecture with gunwale-style balustrading.

Like many other avant-garde house designers Anthony believes in the 'trickle down' effect of some of the ideas incorporated in 'one off' advanced contemporary houses. "The buoyant self-build market is driving a lot of people's interest in the sort of one-off features that make houses like Baggy House interesting and fun to live in," he said.

The Characteristics: Modern architects try and achieve originality which does not hark back to previous styles. This does not preclude references to buildings of other ages, but essentially, it is a style that has an integrity of its own. Below are some pointers in the direction of this style from Anthony Hudson's 'wish list'.

Roofs: Towards the top of the list must be the use of monopitches and flat roofs. "A pitched roof determines the geometry of a house and gives design flexibility," Anthony said. His views are echoed in houses such as that of architect Michael Winter, whose own eco-friendly house in Kent (supported by timber columns on individual concrete pads) snakes through a wooded site. Winter's home won The Daily Telegraph Homebuilding & Renovating Awards 1996 and was featured in IH H&R in October 1996. His house has a roof with two pitches. The northern pitch of 22.5°, is raised slightly above the southern, where the pitch is 17.5°. This allows a small clerestorey which lets in sunlight.



▲ Architect Michael Axford built his contemporary home around the central pool which is used as a dynamic element to reflect light into the house day and night (when the pool is illuminated).



◀ Clean, white walls, minimal accessories and sweeps of clear glass make the interior of this converted garage by Mark Guard Architects (tel: 0171 380 1199) a cool, restful yet dynamic space.

Double-Height Spaces: These allow internal space and clean lines to be emphasised. A double-height space at some stage of the building can achieve a dramatic effect," said Michael. "They are particularly effective in an open-plan living area."

Courtyards: Another contemporary architect, David Hadfield, is also fond of small courtyards to link sections of a building. Some use courtyards to maximum effect for clients who do a lot of entertaining to give the owners the opportunity to interact with their families and guests but also to have a private space of their own without making it too obvious. This is described as 'defensible space'. A good example is a house Anthony is building in a village near Cambridge. Single storey on a flat plot, the house is built around a series of small courtyards. The roofs are a series of opposing monopitches covered with grey concrete slates. 15% of the roof area is glass. The walls are brick and rendered blockwork. "There are three small courtyards – a main bedroom court, an entrance court and a garden court – which give the occupants enormous flexibility to move around inside the house," said David.

The Eco Approach: Most of the architects who build in this way like to use environmentally-friendly materials and incorporate as many low energy features as possible.

Michael Winter's house has no conventional heating but makes use of passive solar gain through a large expanse of triple-glazed low-E glass panels on the upper floor – the main living floor – and has high levels of insulation. A heat pump, attached to a mechanical ventilation system, together with a heat exchanger, recycles the solar energy as well as heat from household activities such as cooking and washing, and blows it back into the house. Water is heated by Thermomax solar panels with an electric immersion heater

providing backup on cloudy days. The copper roof collects rainwater which is conveyed to a large storage tank and used for washing and bathing. Drinking water still comes from the mains, but eventually the Winters hope to process the water from the roof for drinking.

Water features largely in the ecologically-advanced new house in Bath by David Hadfield. There are nine ponds in courts and open spaces that surround the building which is really a series of linked units built of concrete block and clad with local reclaimed stone. The ponds act as water collectors. From them a calculated amount of water is pumped to the lightweight low-maintenance planted roof to meet its irrigation needs. The roof, planted with a mixture of water-retentive succulents, means the house meets the planning needs of being a low-impact building in a sensitive site. It also acts as an insulator to the rest of the house, though this effect is reduced by its intrinsic wetness. Planted roofs are very much favoured. "People are very reluctant to innovate with our domestic building in this country," said David Hadfield. "This sort of roof is quite common in continental Europe."

Glass & Timber: Copious use of glass is another item on the 'wish list'. The entire walls on the south and south-west elevations of a single storey house, built by David Hadfield, are of glass. This house was the family home for 10 years and the testing ground for many of his ideas. "Glass amounts to 50% of the exterior of the building. The double-glazed units, together with the douglas fir frames, came to £25,000," he said. However, the rest of the house was very inexpensive to build, largely because David used cheap materials that he adapted to suit his needs and because he carried out much of the building work himself.

Architects also favour glass and timber frame. Michael Winter has opted for a

laminated timber-frame (known as a 'glulam') system in his house in Kent. The advantage of glulam is that it is strong and stable and has an attractive visual appearance.

In Bath, David Hadfield knew that the previous building on the site of his home was an old dairy, which made good use of the surrounding trees to keep the building cool. In his new building he took this low-tech idea a stage further by creating a roof overhang. In summer this helps counter the effects of the sun streaming through the glass walls. In winter the overhang is designed to keep the sun's heat in the house.



Picture courtesy of John Edward Linden

Form: As you would expect from architects who design individual homes which use modern materials and have up-to-date ideas about internal space, exterior form is also very important. They try to create 'site specific' exterior shapes which relate to both the interior and to the landscape. Baggy House, with its echoes of the rugged Cornwall coastline is a good example of this.

Form and relationship to site is something that every self-builder should think about, before even purchasing a site, if they wish to create something that is considered to be a piece of architecture in addition to an attractive home.

In a village near Cambridge, architect Jonathan Ellis-Miller has designed a long, low steel-framed house with one wall almost entirely of glass that reflects the flat countryside of the fens it is set in.

Michael Axford's house, on flat land beside the Severn estuary near Bristol, mirrors the landscape in its single-storey construction. But in addition, the semi-circular curved glass roof of the rectangular entrance hall and picture gallery echoes the roofs of the dutch barns seen in the surrounding landscape.

Influences: Contemporary houses are usually created to suit the specific lifestyle of the occupants. "Designing from the inside out", is Anthony Hudson's phrase for this.

Another way of achieving 'form' in a contemporary house is to take an idea with historical or local precedent and adapt it to the surroundings. The courtyard, for example, comes straight from Renaissance Italy into cathedral cloisters and college quadrangles all over Europe. Courtyards are ideal for creating private outdoor spaces in an urban setting.

Most architects specialising in the contemporary style like double-height spaces at some point in the building – a galleried landing crossing the entrance hall is another favoured device. In his house near Bristol, Michael Axford has successfully recreated the feel of a light, open-plan house on the French Riviera where the sun streams in and you cool your feet on the clay or marble flooring.

Fitted Interiors: Excessive fussiness can inhibit the enjoyment of this form. Architect Michael Axford has kept his house clear of clutter by creating large banks of discreet, white-fronted cupboards which blend into the rest of the building. Apart from beds the furniture is limited to two sofas, a dining table and chairs. The dining table and chairs move from room to room depending on where Michael and his wife Julie choose to eat.

As in other avant-garde contemporary houses the building makes skillful use of floor levels to incorporate sunken seating areas with sofas built into the structure. "The house has a sculptural, 3-D element and a transparency created through the use of glass and plain white walls. Too much furniture would disrupt the views through the building and would prevent us from enjoying the spaces we have created," Mr Axford said.

Doors & Spaces: The Axfords' house has very few internal doors and exemplifies the concept of 'walk-through' buildings. Michael's attitude towards reducing the number of



▲ This ultra-modern kitchen from Anderson & Lembke (tel: 01252 844040) is stylish yet practical, making use of traditional materials (wood and steel) in a contemporary style.

◀ Michael Winter's Boundary House makes the most of its open-plan design. It has no conventional heating, but makes use of passive solar gain through the triple-glazed windows.

doors in the house and, therefore, making the building less compartmentalised, is typical of the genre, which in general does not like corridors or other means of getting from one room to another. Internal doors, therefore, may be (sometimes necessary) nuisances, but external doors are of some importance.

Integrated Space: The reaction against pre-ordained spaces in these contemporary houses means that the conventional bedroom is out of favour. Michael Axford describes bedrooms as, "largely dead space, left unused for the rest of the day." He believes we should try to integrate bedrooms into the daytime living space.

The Axford's own bedroom is open plan – the bed is situated on a plinth. There are no curtains or blinds to block the view of the pool through the double-glazed panels of Pilkington E-glass. "The pool is used for swimming and as a dynamic element, to focus light into a static box," he explained. The glass reflects the sunlight back into the house, which is white inside and has white clay floor tiles.

At night, when the glass is black, the pool reflects light through the glass walls by means of the underwater lighting round the sides. "The illuminated water – the tiled sides of the pool are blue – has the effect on the house of a daytime-blue sky at night," said Mr Axford. Almost all the rooms contained within the three solid single-storey external walls look onto it. The rooms that look out of the house do so through windows of "arrow slit" size. Blinds are used to prevent people from seeing through them to the inside.

Pre-Fabrication: The idea of prefabricated 'plug-in pods' – kitchens, bathrooms and WCs built in factories – is favoured by Anthony Hudson, although he has not yet incorporated this concept in any of his houses.

One advantage is that it should be possible to arrange for the kitchen and WC 'pods' to share one soil vent pipe and, therefore, reduce the cost of groundworks. In theory, therefore, they could be bought in and replaced from time to time – or even returned to the factory for refurbishment.

The idea of prefabrication has been taken several steps farther by the London-based architectural practice Future Systems. Some of their designs are factory-built shells of steel – often oval or elliptical in shape – that are assembled on-site then finished from within.



◀ Glass blocks, used for internal walls, are favoured by contemporary architects and designers. They allow light to shimmer through while retaining privacy. Contact Luxcrete 0181 304 9505.

Pale wood floors are ▶ also on the 'wish list'. This one is from Junkers tel: 01376 534705 for a brochure.

▼ The bedroom of Mark Guard Architects garage conversion for a private client in London exemplifies the minimal look. The sliding doors are kept open, the bed-head is concrete and conceals a walk-in shower. The stairs are simply laid with lino.

Materials: As one would expect, very modern houses experiment with the most modern materials. The latest in glass technology can be found in most of these houses, as can a fair smattering of steel – although architect Tim Rendle insists that the most elegant windows still come framed in timber.

The timber used tends to be softwood. Laminated beams – especially in visible sections of the house frame – are favoured by some of the timber frame exponents.

Natural materials such as stone flags and terracotta are favoured for the floors.

Of the man-made materials, concrete tends to be used in only non-visible areas. The exceptions to this are stair treads (occasionally) and architectural masonry based on concrete, many of which are selected for internal use nowadays because of their ribbed effect.

An externally-applied insulating "overcoat"



Photo courtesy of John Edward Linden

of expanded polystyrene or high density mineral wool board is often used on the outside of concrete block walls.

Reclaimed building materials are rarely seen in these contemporary houses.

Heating: This style of house tries, as far as possible, to be eco-friendly. Extensive use of glass, massive wall insulation, orientation and passive solar gain are just some of the



intense, try to bring as much light as possible into contemporary homes on dull British days.

A good example is Michael Axford's house in Somerset. It takes its light more from the pool than the sky. The water in the pool, constantly and gently moving, creates a dynamic effect, flickering reflections, shadows and shapes through the glass walls onto the plain white internal walls.

Apart from the picture gallery there is very little colour in the house. The plain white walls are typical of the genre – particularly in houses where there is abundant light – as they allow the walls to take on the different colours of the light and to make a play of sunlight and shadows.

Architects who design and build houses in the contemporary style don't favour surface coatings apart from those that are eco-friendly – usually water-based. Plain surfaces, which require little maintenance are favoured.

Glass blocks, used internally to act as room dividers or to delineate space, are considered a good way to make the most of the light in the house. Michael Winter said, "When light shines through glass, it sparkles even on dull days."

Very low voltage, recessed tungsten spotlights are often favoured. Floor lighting is also seen in some of these houses.

Architects of the contemporary school tend to prefer blinds to curtains in their houses. At the house which architect Tim Rendle built in London, vertical louvre blinds are used to emphasise the verticality of the windows. The blinds are extremely functional. "They are ideal for big spaces," he says, "provide night-time cosiness and daytime privacy. Vertical louvre blinds will do all of this and are highly adjustable. We've also never needed to dust them in 10 years. Brilliant!"

Other designers find blinds more architectural as they can project a shadow onto a floor surface. "They are more part of the building," said Michael Winter. In Scandinavia and Germany blinds are sometimes used externally to trap the heat in winter and keep out the sun in summer.

Flooring: Many of these houses are built around courtyards or with courtyards as an integral part of the design. This 'inside-outside' philosophy is important for several reasons. It is an influence these architects have brought back with them from visits to Mediterranean and North African countries and, of course, one drawn from Roman villas.

Adapted to the UK, this philosophy

ecological aspects favoured on a 'pick and mix' basis. Of the mechanical forms of heating, sophisticated zoned underfloor heating is favoured. Eco-houses like that of Michael Winter have no conventional heating.

Windows, Light & Colour: Clever use of light is tremendously important to modern houses. Many of the architects, influenced by holidays abroad where the light is more

Useful Contacts

Michael Axford, Architect: 01275 375071

David Winter, Architect: 01892 539709

Tim Rendle, Architect: 0171 736 9744

David Hadfield, Architect: 01249 714229

Hudson Featherstone Partnership, Architects:
0171 490 5656

Association for Environment-Conscious
Building: 01559 370908

Ecological Design Association: 01453 765575

EXTERIOR WALLING AND CLADDING

Glued Laminate Timber Association:
01494 565180

Beco Wallform Lightweight Block Construction
System: 01652 651641

Shackerley (Holdings) Group Ltd (Glass Wall
Blocks): 01257 273114

Truss Joist Macmillan: 01527 854853

Dryvit Insulation Cladding Systems:
01827 262222

HELICAL AND SPIRAL STAIRCASES

Cambridge Structures: 01954 267677

Cottage Craft Spirals: 01663 750716

UNDERFLOOR HEATING

Rehau: 01989 7626000

Rettig: 01299 250700

Supa Warm: 019046 832984

Conservation Engineering: 01359 268340

De-Vi Electroheat: 01359 242400

Wirso: 01293 548512

D K Heating: 0181 861 2844

Nu-Heat: 01395 578482

IPPEC Heating & Plumbing: 0121 622 4333

HEAT RECOVERY & VENTILATION SYSTEMS

Villavent: 01993 778481

West Vent: 01432 278801

Hampton: 01635 569933

ROOFING

Planted and Welded Felt Roofs: Erisco Bauder:
01473 257671

demands a great deal of glass. It also requires – for some rooms – flooring on the same level outside as inside.

For maximum light gain and use of light for effect it also requires a light coloured floor. Wooden floors, if used, tend to be light in colour. Stone and tiles are often preferred, because of their light-reflective qualities.

Costs: In 1992/3 Michael Axford built a three-bedroom 3,500 sq. ft. house with many advanced design features, on a plot of just under an acre, for £48 per sq. ft. He is now



◀ Contemporary design doesn't mean complete austerity. This remarkable Positano basin from Vola's Rapsel Range (tel: 01525 841155) will enliven your bathroom with a splash of colour and fun.

▼ C P Hart (tel: 0171 902 1000) produce this Starck bathroom, designed by contemporary style guru Philippe Starck. The suite is inspired by freshness and uses simple forms for a modern feel.



completing a house that will cost £58 per sq. ft.

How does he keep the price down? "In both houses I have used blockwork and render in a very simple way over large areas," he said. There are no fussy details, no second fix joinery, no skirtings, no architraves and the windows lack detailing." He used cheap synthetic slate roofing and kept the price of the very large, glazed area down by buying a system designed for industrial use. He also used cheap lighting – basically, cheap (£5 a time) sunken low voltage spotlights.

In London, Tim Rendle built his four storey wedge-shaped brick house at the end of a Victorian terrace over 15 years. He was able to move in after the first five. "It is certainly better to build upwards than sideways if you wish to get something up and then do the work gradually on a budget," he says. However, he conceded that if your house is one-storey and built around courtyards you can progress "one courtyard at a time" and still probably live on the site.

Tim managed to keep costs down by designing the house so that it could be added to over the years. It is now both his home and workplace. Living areas are upstairs and his office beneath. The garage and service areas are in the below-ground space. He reckons that the walls and the roof only cost a quarter of the total build price. Central heating, insulation, the clay tile flooring and fitting out

the bathroom and kitchen all followed over a period of several years.

Among the materials he used were:

- The cheapest reject bricks, i.e. "roughs".
- Concrete industrial lintels, cantilevered out of the internal wall, as stairs.
- Cheap shuttering ply for much of the internal wooden fitting, notably the central kitchen 'pod' on the second floor, which is enclosed behind giant folding doors of shuttering ply.
- Industrial fin pipe heating. "It is cheap and adaptable and, being a wet system, can be fitted later. You can get different diameters and different fin spacings."
- Woodwool slabs for floors and ceilings. Tim describes this material as "looking like shredded wheat." However, he says it has a very rich texture and very high acoustic absorbency.

"I'd rather have no mortgage and a slow building," said Tim. "I changed several aspects of the design as I went along. Somehow I always feel you achieve something greater on what I call a steady-steady budget. My advice to self-builders who wish to do something exciting on a budget is look for cheap things that have character: they often last longer than expensive materials."

Tim did not use any reclaimed materials in his Fulham house. In Bath, David Hadfield did. "The reclaimed pantiles I used on the roof of my first house cost a fraction of what they

Useful Contacts

IRONMONGERY, BALUSTRADING AND ARCHITECTURAL FITTINGS

Arnolds and Oakley: 01989 567946

Courtyard Accessories: 01564 741744

Any Old Iron: 01622 685336

Hewi: 01634 377688

Allgood: 0171 387 9951

Samuel Heath: 0121 772 2303

LIGHTING

Ambience Lighting: 01270 764815

Leax: 0181 964 2254

Lutron: 0171 702 0657

Green Island: 01872 262228

STONE & TERRACOTTA FLOORING

Terracotta Direct: 01284 388002

Thorverton Stone: 01392 860596

Natural Choice: 01481 64164

Stone Federation of Great Britain: 0171 580 5588

Stone Age: 0171 385 7954

Stonell: 01892 833500

Fired Earth: 01295 812088

Alistair Mackintosh: 0121 784 6800

Sussex Terracotta: 01444 241236

Natural Earth Flooring: 01799 524321

WINDOW SYSTEMS

Fairmitre Windows and Joinery: 01295 268441

Design Windows: 0117 960 5717

Velfac: 01223 426606

The Swedish Window Co: 01787 223931

Swedhouse: 01483 284004

Croxfords: 01484 850892

Reddiseals: 01905 795432

INTERIOR CONCRETE FEATURE WALLS

Forticrete: 0151 521 3545

SINKS & BATHS

Armitage Shanks: 01543 490253

Ideal Standard: 01482 346461

Shires: 01274 521199

Vola UK: 01525 841155

C P Hart: 0171 902 1000

would have done if I had bought them new," he said. His other advice is to be what he calls 'opportunistic' about resources. He urges self-builders to have a flexible attitude towards the materials they choose. "Stick within the planning brief, but do not be too prescriptive about the materials you use," he said. "Know your materials and be adaptable in the way you buy and use them. It also pays to do a fair bit of the work yourself." ■