

# The 10 Characteristics

Panel members respond

- **Context** – Louise Goodison – Architect & Heritage Consultant
- **Identity** – Justin Nicholls – Architect
- **Built form** – Gillian Horn – Architect
- **Movement** – Clare San Martin – Masterplanning Consultant
- **Nature** – Neha Tayal – Urbanist / Architect / Planner
- **Public spaces** – Chris Churchman – Landscape Architect / Director
- **Uses** – Andrew Beharrell – Senior Partner at Pollard Thomas Edwards
- **Homes and buildings** – Sarah Featherstone – co-Director of Featherstone Young architects
- **Resources** – Barny Evans – WSP – Sustainable Places, Energy and Waste
- **Lifespan** – Richard Hawkes – Architect / Director of Hawkes Architecture Ltd

We asked 10 panel members to respond to one of the characteristics within the National Design Guide. The brief was loose and they were asked to explore, champion, challenge or expand on the key themes, or to analyse a scheme through the lens of the characteristic.

This is what they came up with...

# Context

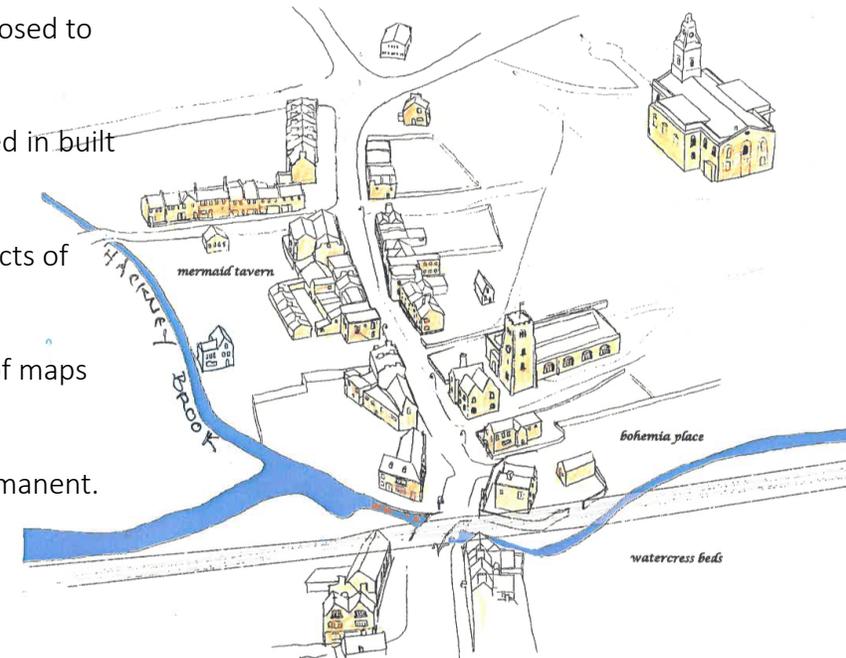
## Enhances the surroundings

Louise Goodison RIBA  
Architect, Heritage Consultant

The success of a building development is reflected through its connection and reciprocity to a larger picture.

Seven themes emerge around the core idea of **connectivity**:

- C** **Context.** Building development is part of a contextual tapestry of themes and narrative. Success relies on how well the threads of time, landscape and place are woven into the emerging fabric. Sympathetic or Reactive?
- O** **Outlook.** The outlook beyond the defining red line has as great an influence on the development as the space and place within.
- N** **Nature.** The human animal needs to build with nature just as birds and animals are genetically predisposed to create nests and dens.
- N** **Nurture.** Our relationship with fellow humans through community, family and as individuals is reflected in built form. Economic and Social patterns can be read through design and architecture of the moment.
- E** **Environment.** The landscape, eco system, the seasonal and daily cycles, weather and climate; all aspects of the environment have an intrinsic influence on how we develop our places of dwelling and ritual.
- C** **Continuity.** Disruption and change can be mitigated through strands of continuity to create a system of maps and wayfinding.
- T** **Transience.** Buildings are part of a constant programme of change and rearrangement. Nothing is permanent. Their transient state is part of an ongoing process of decay, renewal and entropy.



# Identity

## Attractive and distinctive

**Justin Nicholls**

BSc(Arch), MA(RCA), RIBA, ARB, FSA  
Architect, Fathom Architects

Architecture is one of the few design disciplines which is still geographically fixed. It therefore has an important role in creating unique places and giving people a sense of belonging. The following examples explore how creative interpretations of project briefs can help create a strong identity.



The Pod, White City Place Fathom

### **From Broadcast to Podcast**

The distinctive identity of this mobile podcasting studio is achieved through use, form and façade. Its use and design draws attention to the site's BBC broadcasting heritage, taking its inspiration from loudspeakers and the movement of sound, creating a focal point to the new development.

### **Church or high street?**

Christ Church Woking needs to extend its Grade II listed premises. The Church's contemporary culture comes from its urban congregation and high street location. This gives rise to a distinct brief including café, bookshop, creche and conference facilities, fused with traditional church operations. Its distinct architecture is the expression of these unusually combined uses:

- The ground floor façade, like shopfronts, is physically and visually open and welcoming.
- The mono-pitched roofs mediate between the urban setting whilst being deferential to the Grade II church.
- The terracotta façade is true to contemporary construction methods whilst relating to the mass, materiality and colour of the existing listed brickwork.

It's attractiveness is a reflection of local people's needs which is expressed in its openness, harmony of uses, scale, form and materiality.



Christ Church Woking Fathom



Rowley Lane Sports Club Fathom

### **Creating a 'shed' for the Greenbelt**

To deliver a funding compliant sports centre, the standard layout is broken down to enable the building's mass to sit comfortably in the site. Timber and aluminium cladding tie it to the landscape. These key moves create an attractive building, identifiable with sport and human in scale, whilst being sensitive to context.

# Built form

## A coherent pattern of development

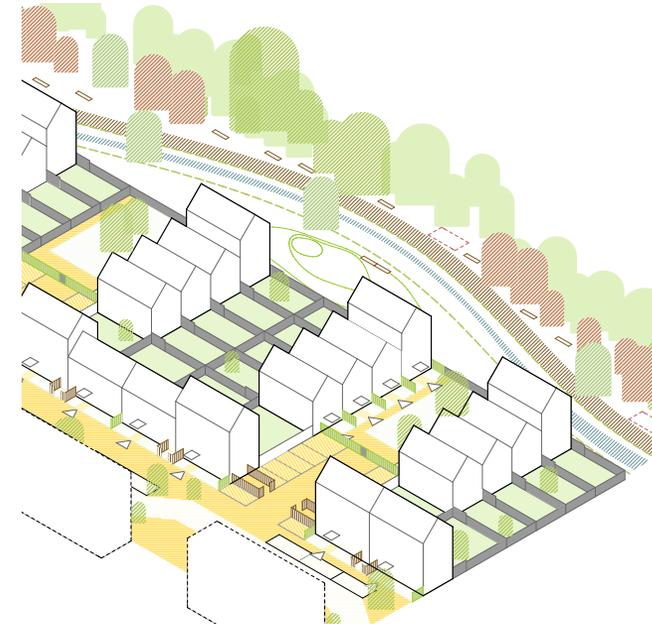
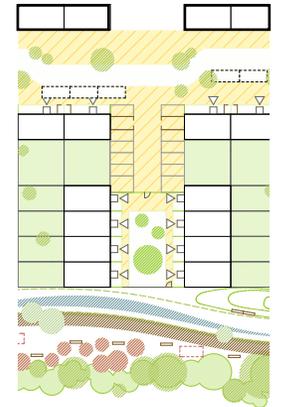
The characteristic of Built Form is well described in the NDG, raising the importance of density and compactness, legibility and destinations. Here I would like to highlight the importance of a positive relationship between the private and the public in successful places, and the role of architecture to enable connection.

There is a propensity, in modern society, to want to shut out the world outside the sanctuary of the home and retreat behind rigid, unforgiving barriers. But this urge to disconnect, that feeds off and into a state of collective anxiety, must be resisted in the design of new homes if we are to build thriving communities.

### isolation breeds alienation

### interaction breeds belonging

Transitions are important; the thoughtful design of mediating spaces is key to social inclusion. The gap between the street and the front door of a home is often referred to as 'defensible space' (coined by Oscar Newman in his titular book of 1972 on crime prevention through urban design), on the basis that it is a zone of protection for the householder from the eyes, ears and reach of the passer-by. Understandable wishes, and ground floor bedrooms in particular should never be designed in such vulnerable positions. But I advocate calling this zone a 'sociable space' to remind us of the positive, connective qualities it has beyond the need for security. Designed right this is the place where social interaction can happen, putting the bins out, tidying the plants, lingering before entering the home. Wider than a bed of prickly mahonia bushes behind a metal railing but not so big that it becomes walled off from public view, this place of transition is key for building a vital sense of belonging and community.



### 'Courtyard Clusters'

*an example of designing for sociable space is this courtyard cluster arrangement in Penoyre & Prasad's design for northwest Bicester Ecotown. A protected shared garden lies directly outside the front doors of the housing cluster, with parking and bins located separately, adjacent. The extent of garden space is flexible and can grow with any decrease in car use.*

# Movement

Accessible and easy to move around



Health benefits of Walkable Communities

Image courtesy of Fred London

## Masterplanning

**The key to a good movement plan is a good masterplan - think walkable communities**

- Settlement size and density must support the viability of public transport and local facilities.
- Cluster mixed uses in centres a maximum 10-minute walk from homes.
- Connect with adjacent communities and offer a choice of sustainable movement routes.
- Make healthy active travel (walking and cycling) the most attractive option for local journeys.

*Recommended reading: Wellbeing Through Urban Design – Healthy Placemaking by Fred London*

*RIBA Publishing*

## Placemaking

**Adopt a holistic placemaking approach to street design**

- Make streets inclusive, welcoming, child-friendly places.
- Consider the visually impaired and users of pushchairs, wheelchairs and mobility scooters.
- Control and slow vehicle speeds with integral design features.
- Integrate nature, particularly street trees, and sustainable drainage features.
- Ensure streets reflect place identity.

*Good design precedent: Marmalade Lane, Cambridge by Mole Architects*

<https://www.molearchitects.co.uk/projects/housing/k1-cambridge-co-housing/>

## Futureproofing

**Think like a millennial - don't create dinosaur places based on private car travel**

- Design parking to enable conversion to other uses in future, when fewer private cars will be used.
- Minimise space needed for parking by promoting car clubs and Mobility as a Service.
- Provide electric car charging bays and bike hire stations and consider implications of driverless cars.
- Co-design the movement network with residents and future maintenance and service providers.

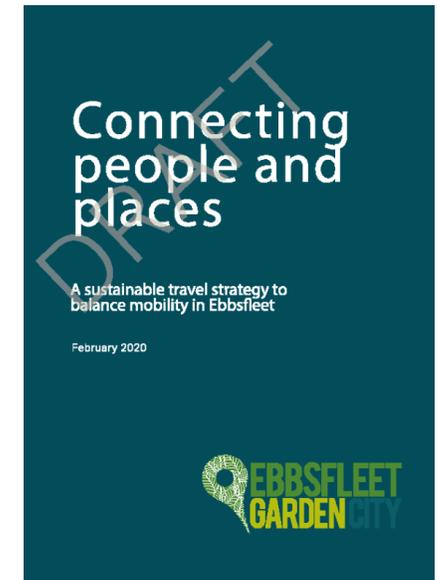
*Forward planning precedent: Ebbsfleet Garden City –Draft Sustainable Travel Strategy*

<https://www.designforebbsfleet-sustainabletravel.org/>

Clare San Martin RIBA  
Masterplanning Consultant JTP



Marmalade Lane: Mole Architects,  
Photographer: David Butler



# Nature

## Enhanced and optimised

Nature was a major influence in structuring the North West Cambridge masterplan and the concepts were implemented via a Design Code which was accompanied by a Biodiversity Strategy. Following principles were encapsulated, and mitigation measures introduced:

- the development of landscape must be cognizance of the areas of ecological value existing on-site and the enhancements indicated within the Biodiversity Strategy.
- retain and protect the most valuable ecological features, by incorporating them into the indicative layout and parameter plans, including areas of woodland, species-rich hedgerows and orchards.
- improve the biodiversity value of the local area in line with BAP targets, produced by the Cambridgeshire and Peterborough Biodiversity Partnership.
- protect and enhance habitats and species present at the development site.
- encourage variety across the development in accordance with the different character areas to establish a sense of place and identity.
- maintain and enhance existing mature trees and woodland cover within the site as a priority. Native tree and planting species are preferred across the development as a whole.
- non-natives are acceptable within the central areas of the built development such as the courtyards, streets and squares and where an alternative native specie is not suitable.
- the structure of tree planting should provide interest throughout the seasons, especially during the winter months, also based on:
  - Ecological value
  - Habitat potential and variety
  - Visual and seasonal appeal
  - Contribution to Species Rich Hedgerows and wildlife corridors
  - Diversity of planting layers
  - Of local provenience.



Open space strategy included large open spaces, urban park, sports pitches, play areas and green corridors that served as sustainable urban drainage channels as well.



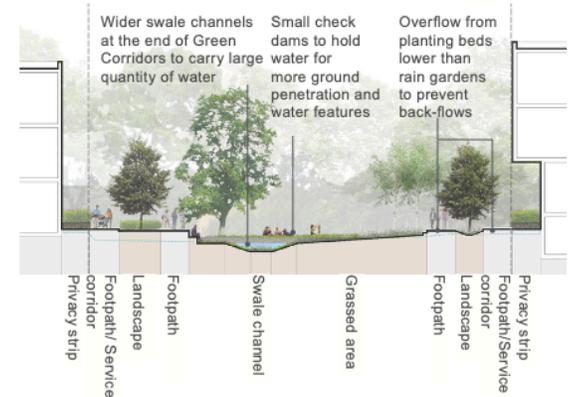
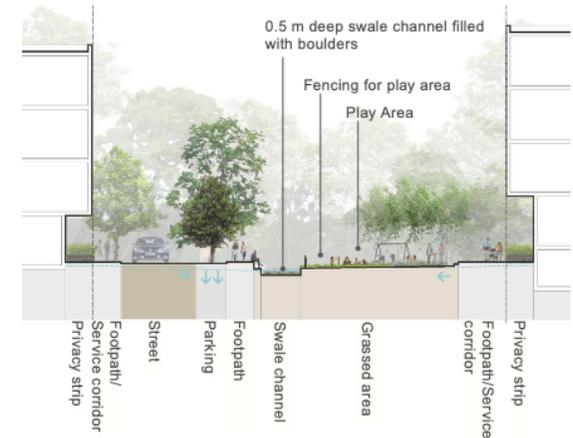
Western Edge Parkland serves as a major primary open land for ecology, biodiversity, walking and takes care of site drainage as part of water management strategy



Illustrated above are a number of vegetation categories which are indicative in forming part of the Biodiversity Strategy and ecological enhancements for the site. These will need to be refined in consultation with local authority ecology officers and include but are not limited to: Native wet woodland, Native dry woodland, Wet meadows, Dry meadows, Species rich grassland, Woodland edge planting, Woodland understorey, Species rich hedgerows, Traditional Orchards



Guidance was provided for location and type of specie habitats.



Typical section of 30m SuDS Corridor  
Tree species used within SuDS / rain gardens are to be salt tolerant to accommodate any surface water runoff which may vary in salinity.



Phase 1 of the project is complete. Careful briefing and review processes enabled reinforcement of masterplan ideas and design code principles. Green infrastructure was incorporated within all blocks and streets within the development as per the guidelines.

# Public spaces

## Safe, social and inclusive

Chris Churchman

Landscape Architect, Director of Churchman Thornhill Finch

### Only 8% of the UK is occupied by buildings!

That small percentage of our land area generates most climate change issues. While the remaining 92% is not the primary cause of climate change effects, it is likely to be the source of most, if not all, solutions to the pressing problem of climate change. The National Design Guide is planned to have a life of at least 10 years, a decade in which climate change issues are likely to move centre stage. **The primary driver therefore must be to maximise the potential of greening.**

The entire population of the UK do not live in urban areas, a significant proportion of us live in suburban or rural areas. We don't carry out our lives entirely in the city or the countryside, all of us experience a range of environments on a regular basis for accommodation, work or play, **public realm is just as much a National Park or a Heritage Coastline as a Plaza, Square or Street.**

Common design principles that apply to all built environments of all heights and densities:

- Realise the true inherited value of existing **green assets**, particularly trees and hedges.
- Strengthen existing frameworks through establishment of **new green infrastructure**.
- **Do not disturb soils**, the stored carbon in the ground is 4 times that of all the worlds plants.
- **Minimise green spaces incursion**. Where development on green space takes place, use the land efficiently and wisely, there should be no 2 storey developments in rural areas, this is a wasteful sacrifice of natural resources.
- Accept that additional visual impact may be a necessary consequence of **saving green space**.
- Do not slavishly follow traditional residential typologies, suburban layouts are predicated on more relaxed concepts about land use.
- Recognise the value of **private amenity in urban areas**, self isolation in a city apartment means no access to public green space. All dwellings should be able to enjoy a micro garden.
- **Design for all users**, all ages, all levels of physical ability, timber seats with backs and arms.
- Maximise the full benefits of green infrastructure including **carbon capture, urban heat island mitigation and enhancement of air quality**.
- Provide **well lit spaces**, for much of the year they are only seen in the dark.



**National Park** Lake District



**Shared Space** Arnos Grove  
Churchman Thornhill Finch



**Park** University of Birmingham  
Churchman Thornhill Finch  
Lighting Design Spiers+Major.



**Square** Woolwich Square  
Gustafson Portman + Bowman



**Riverside** Thames Path  
Churchman Thornhill Finch

# Uses

## Mixed and integrated

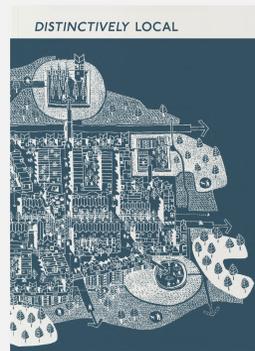
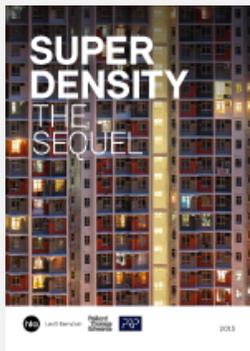
**Andrew Beharrell**

Senior Partner

Pollard Thomas Edwards

Further reading:

*(click on the image to read the publication)*



### The Scene

Waltham Forest, London

This project shows how the decline of our high streets can be reversed by the imaginative integration of leisure space (including a cinema, restaurants and bars) with new homes above, revitalising the local area and bringing 24-hour life to a vacant retail site. 121 apartments surround a shared roof-garden.

Top tips:

- Provide active retail or leisure frontages to public streets, minimising visible service yards and utilities
- Create an attractive journey for residents from street to home via a tranquil shared podium garden
- Locate homes around perimeter and not above large-span community or leisure spaces

### Tidemill Academy & Deptford Lounge

Lewisham, London

A new civic heart, priming the regeneration of Deptford town centre, this project is also a model of co-location, combining: a primary academy, district library, community centre, artists' studios, affordable homes and a market square.

Top tips:

- Plan for flexible access and secure zones for a range of shared use scenarios
- Consider management arrangements from early design stage
- Engage with multiple stakeholders to iron out conflicts and agree a shared vision

*(click on the image to read more about the project)*



Client: Hill / © Hill



Client: London Borough of Lewisham / © Robert Greshoff

# Homes & buildings

*Functional, healthy and sustainable*

The Homes and Buildings section serves as a good summary of the principal factors that should be considered in the spatial design of homes. It is particularly welcome to see emphasis given on the relationship between the internal living spaces and the surrounding public realm which is often neglected. If I was to expand on this section, I would like to highlight the impact that design at a house scale can have on the larger overall sustainability of a project. The life of this document will span a key decade in the world's fight against the climate emergency and although the Nature, Resources and Lifespan sections are there, it would be good to be more forceful on the way design can support the required change in lifestyles already underway. With most local authorities declaring climate emergency and a large number of practices in our profession signing up to Architects Declare, now is the time to push for change.

The following headings or themes are suggested:

---

## **Environmental Factors in Building Design**

There is mention of environmental factors in the design of spaces in the Homes and Buildings section, but they feel a little under played given their importance to wellbeing and energy use. Site and building orientation, particularly with reference to solar track, is perhaps the first thing we consider at concept design stage - particularly orientation of principal living areas. The paybacks from getting this simple analysis right at the start flow all the way through the project and include both reducing energy use and greatly enhancing the comfort and enjoyment of the spaces by the end user. It is also an essential step to achieve a zero carbon or passive house design which will become increasingly mainstream in the next decade.

---

## **Flexible Home-working Spaces**

There is no particular mention of live-work or other areas that might facilitate the increasing trend to work from home - which can reduce unnecessary travel and have positive lifestyle influences. These do not have to be separate rooms or indeed particularly large spaces - they could simply be part of hallway or landing areas around circulation as long as they are well designed. Such spaces are often looked upon by developers as wasted space better given over to principal rooms, but being more generous with circulation areas provides these very useful flexible spaces that often enjoy better light or views, for example a first floor stair landing.

---

## **Re-Use**

In the light of climate change, re-purposing existing buildings should always be considered over demolition and rebuild, an issue currently championed by the AJ RetroFirst campaign. Both the environmental and social advantages are huge and with the recent bad press associated with ill-designed permitted developments, it makes it all the more important to highlight and give good practice guidance in spatial design to both new and existing buildings, particularly when currently some design standards are not applied to the conversion of existing buildings for domestic use.



Flexible home-working space to suit changing lifestyle and travel reduction.  
*Design: Featherstone Young. Photography: James Brittain*

# Resources

## Efficient and resilient

Considering resources it is important to think which are limited and which we are not. Normally on development it is common to consider:

- Materials – Timber, steel, concrete, waste
- Energy – efficiency, generation and management
- Water – Usage, collection and management

There is a wider sense which we should explore around the most productive use of space, which is the primary resource. This is addressed elsewhere.

There will be an optimum compromise around what should be achieved on-site and what is sought from off-site, such as water, energy, (and facilities, uses); doing everything on-site is not the goal Seek this level.

All developments should be resilient. This is often characterised as the ability to cope with climate change, which is important, but there is a wider sense of how a development is able to adapt to demographic and technological change. These are changing rapidly and are often overlooked.

Finally, remember we are building a place for people, their ability to be productive and live well should not be compromised by our design decisions.

### Common principles:

- The site as a resource – How can we best use it, considering its location and type?
- Be efficient – How can we reasonably minimise material use, waste, energy and water demand?
- Can we collect or generate resources on the site?
- Be low or “zero carbon” ....
- ...but, recognise that self-sufficiency is not the aim; the site is part of a wider system
- Think of the site as a living organism that needs to be balanced all the time in its use of resources – When we use energy is as important as the amount
- Design for tomorrow – The climate, yes, but how are households changing? Shopping? Transport? Socialising? Working?
- Enable the place can evolve physically and in its governance



# Lifespan Made to last



The Victorian terraced house.  
My first house.

An infinitely adaptable tool for living,  
built in time when people and buildings  
didn't consume much energy.  
The house wore a T-shirt.

The inhabitants wore the jumpers.

My first house was a very typical Edwardian terraced affair; stock brick, single bay, sash windows, scullery and outdoor flushing privy.

Central heating was installed at some point, as were double glazed windows. The roof is now stuffed full of insulation. These continue to be incredibly functional tools for living and they remain highly desirable. Their resilience comes out of their infinite capacity to adapt to different lifestyles and cultures.

These are great buildings.

Much like the English language, the success of these buildings is in their ability and willingness to embrace change and stay relevant.

The embodied energy expended in building those houses was an inspired investment yet we often focus on "energy efficiency" in an operational sense and label these houses "bad" or "inefficient".

I like to think that when those houses were first built they would have easily passed what we now call "Zero carbon". They had no central heating. You'd have worn different clothes depending on the seasons. Maybe huddled up in front of a small coal fire burning in the cozy front room.

Open plan wouldn't have worked at all! These buildings simply didn't use much energy.

Today we regard the weather as something that happens outside.

Ponder that statement for a moment and you'll realize how much cultural change is embedded in your instinctive response. We now pump energy in our buildings to keep the weather out. We no longer put jumpers on ourselves. We expect, nay dictate, that buildings wear the clothes and provide the comfort our clothes are capable of providing. The culture has changed.

Energy is a precious resource. We recognize this yet the clothes we ask our buildings to wear are often woefully inadequate for the climate and culture we live in today. Our houses need thicker jumpers !

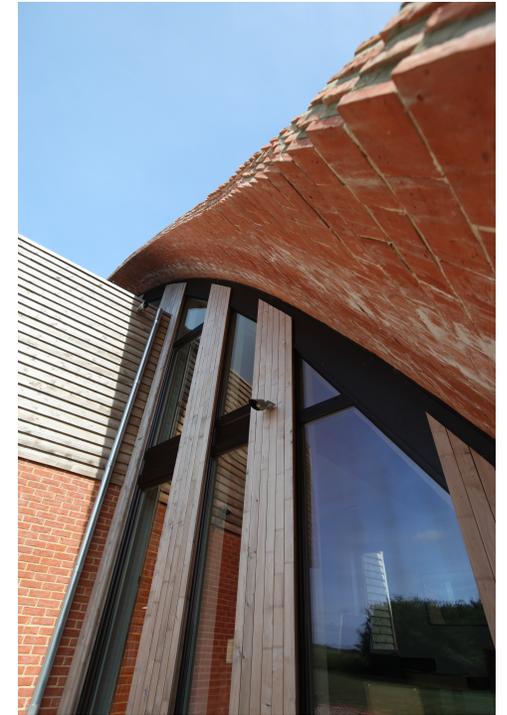
When I built my own house in 2008 there were no Passive Houses in England. I didn't follow these and numerous other environmental design considerations just to be different. I did it because buildings are a long term investment; financially but in energy too.

In a culture obsessed with consumption we need to ensure the energy we spend on and in buildings is carefully and wisely invested.

Buildings need to be joyful, adaptable, wear the right clothes and not cost the Earth.

**Richard Hawkes**  
**Architect**  
**Director of Hawkes Architecture Ltd.**

An architectural practice specializing in the design of paragraph 79 exceptional new dwellings in the countryside.



Crossway Passive House by Hawkes Architecture  
My current and future house.

A contemporary house designed to harness the sun's energy and provide a robust, adaptable, comfortable and sustainable family home.

The house wears the jumper.