

landARK™ THE OFF GRID CABIN

title

client Zedfactory

value N/A

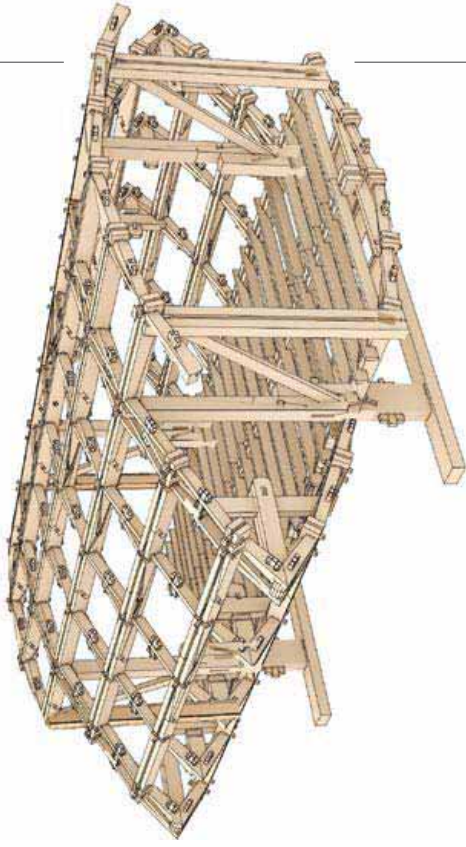
dates 2009

landARK™ - the ZEDfactory 60k zero carbon off grid home kit for individuals

sunlight for most of the year, or mid winter wind .

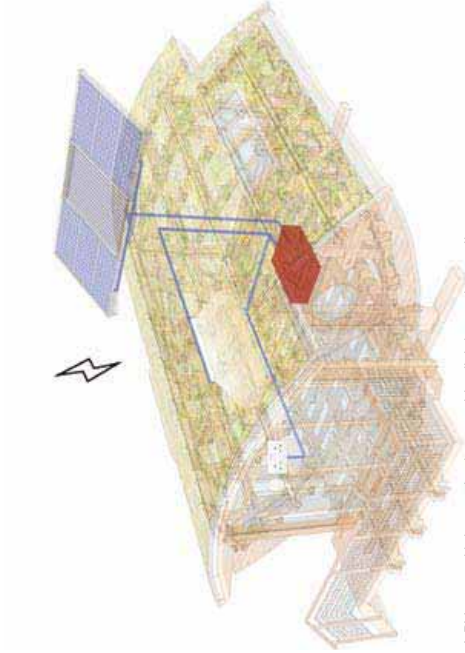
- If you have a scrap of land, maybe a backgarden, a hillside, a coppice clearing, or maybe even a corner of somebody's car park, and you have a spare few weeks holiday, or some good friends.
 - and you want an aspirational interior with space to relax.
 - you need affordable, comfortable accommodation that works well as a home or an office or sleeps up to 8 people as a shorter stay cabin.
 - which is cosy in winter and cool in summer made from healthy natural materials such as FSC timber.
 - which perches on the land without needing expensive foundations or concrete.
 - running off logs in winter or using the summer sun to provide a hot shower with the lights and radio powered from
- which doesn't need a connection to the drains or the meter unless you do
 - which includes water tanks with options to connect to a standpipe
 - and blends into the landscape with weatherboarding and a sedum roof
 - and which will last many generations if it is loved



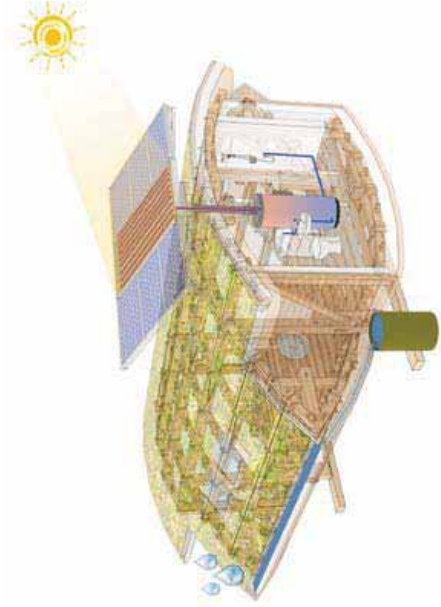


Using traditional / medieval timber joining the frame comes in small man handleable pieces, which can be delivered on pallettes. The main structure is held together using a locking wedge system which holds together the arch components into sections and even the

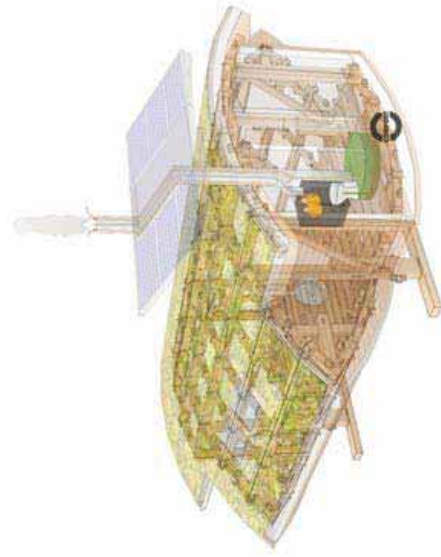
purfins. This allows the manufacture of a free standing timber structure without any metal components.



A PV array with battery backup provides lighting and a small power source to run a radio.



Solar thermal provides hotwater backed up by the range.



The composting toilet is vented through the range flue.

title Knutton Village Farm

client Knutton Village Farm

value £650k

The design was conceived as a series of vaulted barns to provide a flexible space to meet the needs of a wide and changing range of end user groups. The building is of a contemporary design which responds more directly to the surrounding rural landscape than to the local vernacular.

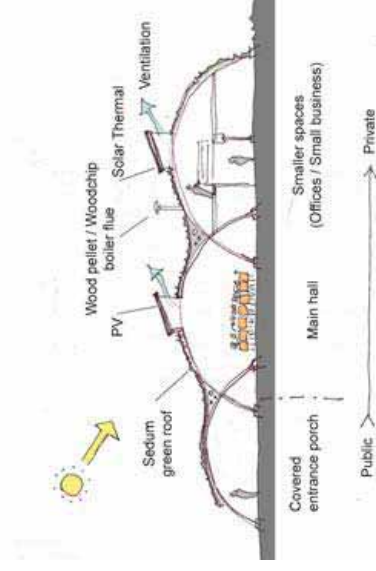
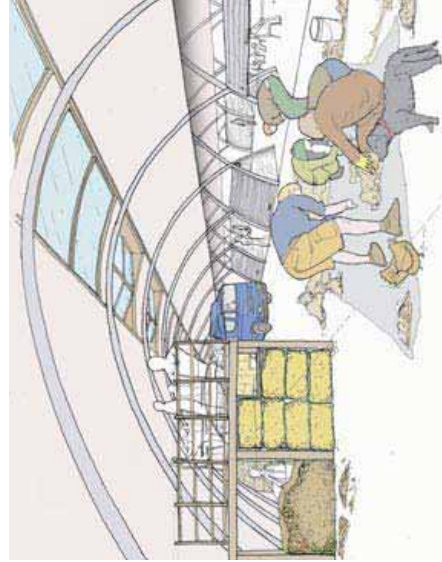
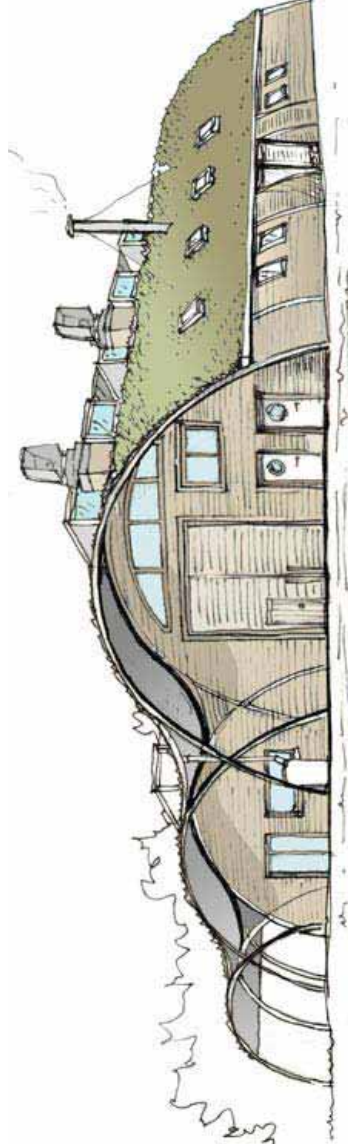
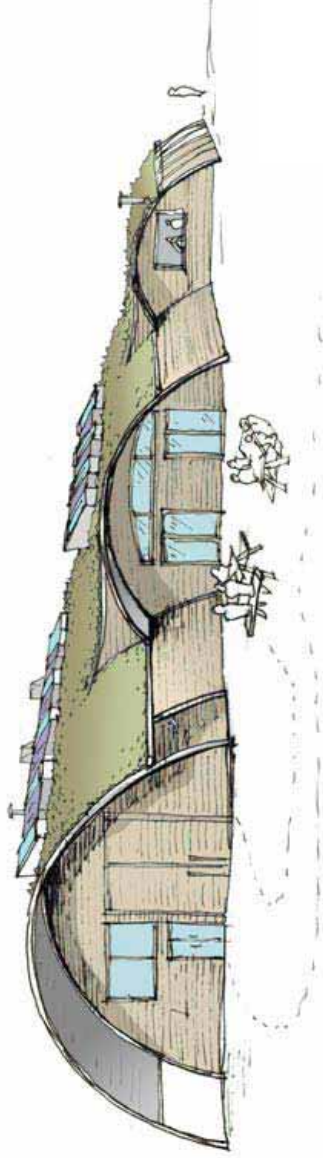
The three vaulted barns increase in size in a northerly direction. The smallest of the vaults provides kitchen, bathroom and storage facilities. The middle vault houses the café and shop with some space potential for exhibition space or local information. The largest of the vaults houses the main toilet block including shower facilities, boiler room, training spaces and office space on the upper level mezzanine. The main open spaces are left deliberately open to provide maximum flexibility for a wide range of training courses, workshops, community events and other local activities aimed at larger groups.

It was intended that the functions of the building and its services were also expressed in the design. This is partly out of an aesthetic of architectural honesty, but also the intention to demonstrate and celebrate the technologies and strategies

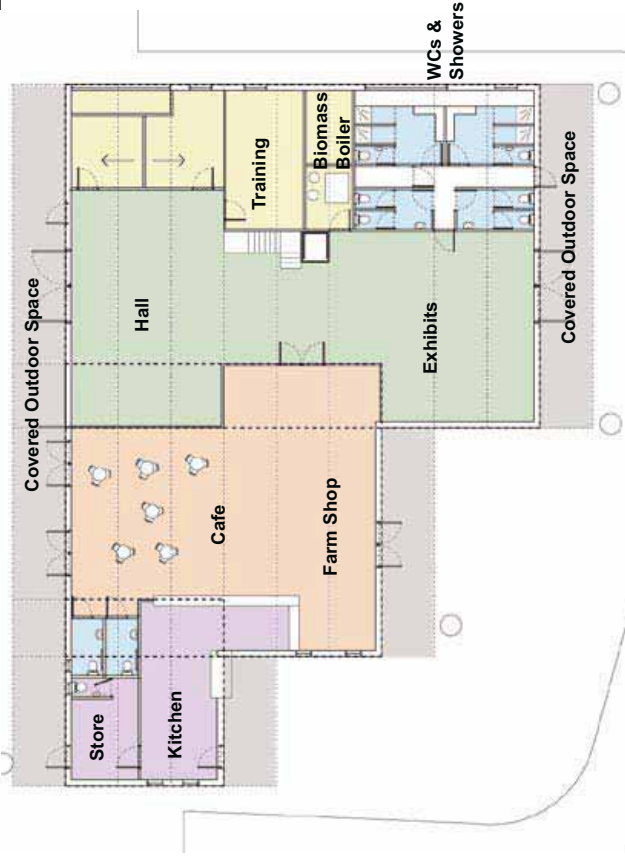
that reduce the environmental impacts of the built environment.

Although the primary structure is a curved steel frame, external materials have been selected to give the building a natural and organic feel. At ground level the building is clad in local timber weatherboarding. The rooftop is a cost effective standing seam metal roof with a green sedum mat topping.

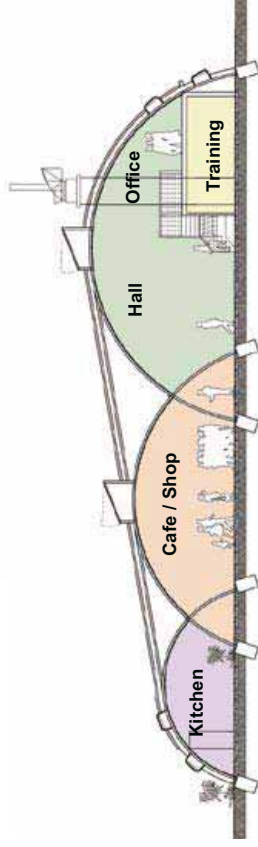
Standing seam offers other benefits in that microgeneration equipment is easily attached with scope for expansion.



Floor Plan - 1:200



Cross Section - 1:200



title Dove Lane Tower

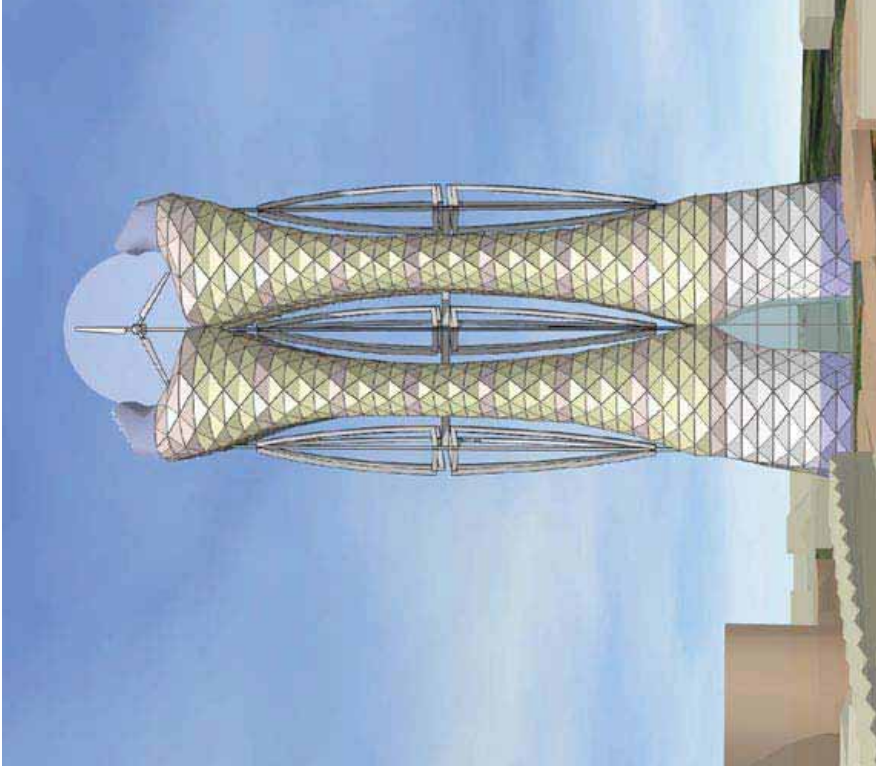
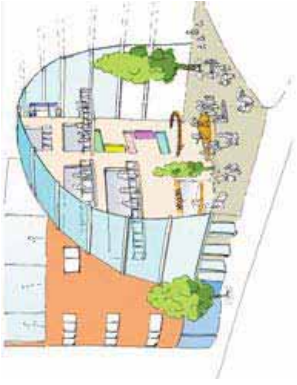
client

value £90m

The tower of hope

- stroll beside the canal
- wander up the ramp over Dove Lane
- watch the woodchips slide into the glass vault
- sunbathe on a park bench within the hanging gardens
- sit and have a cup of tea in the rooftop cafe
- look out over old Bristol and be optimistic
- long distance views of the channel and harbour
- some flats shutters twitch shut as the afternoon advances
- browse in the community art gallery
- leave the kids in the creche
- sign up for yoga
- book an evening meal in the organic cafe
- lean over into the atrium
- watch the buskers for a while
- descend to the performance space
- watch the conference delegates flow in and out of the hotel reception
- catch the turbine blades furling through the glass roof
- love the sun warming the timber beams as it filters through the photovoltaics
- the reclaimed bricks are now warm, catching the last of the day
- the atrium bar is now filling up with workers
- the LEDs start to twinkle in the fading light
- time to catch a pool car before the rush
- perhaps the future could be fun after all
- and the city waits for your answer





Clockwise from left: 3 blade wind focus towers - Atrium and garden sketches - Darrieus wind focus tower - entrance



title
ZED2

client
Nottingham University Ningbo Campus, China

value
N/A

dates
August 2008

ZEDsquared - the most important urban best practice demonstration in the world

The first international example of a replicable zero carbon / zero waste urban block

Embracing the placemaking agenda whilst achieving a plot ratio of 1.5 but still including parks, full size football pitch, schools, markets and workspace.

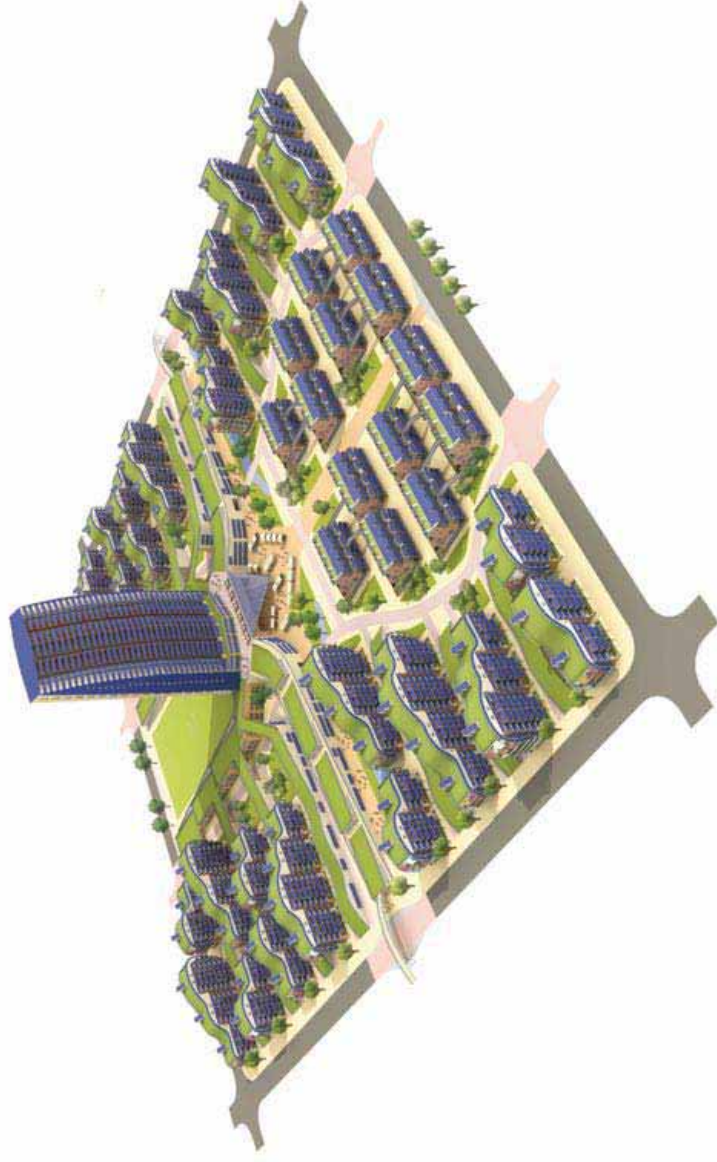
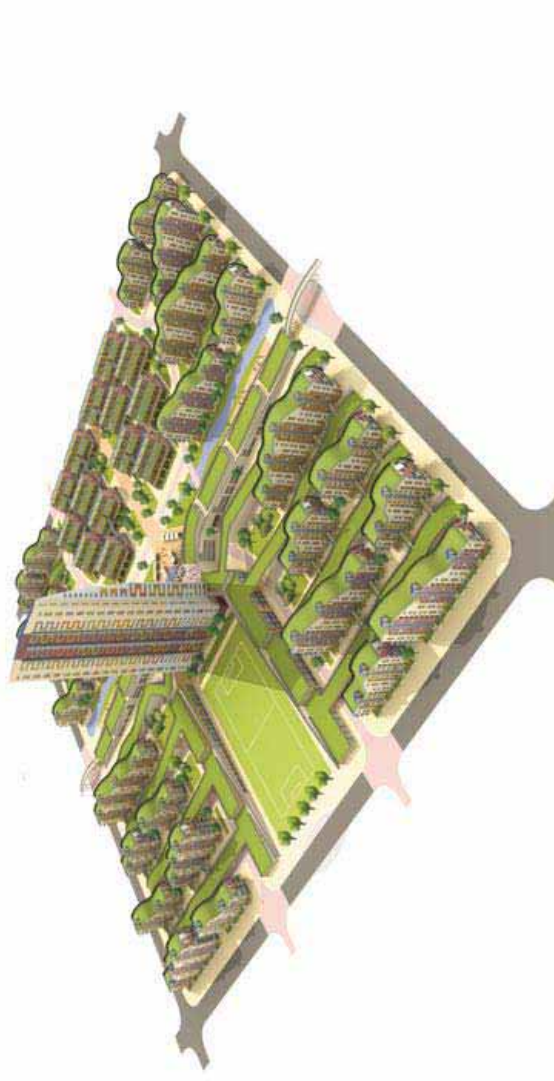
The idea is to show how a typical city block can generate its own energy needs at the same time as achieving reasonable density and achieving a higher quality of both private and public amenity than a conventional development approach.

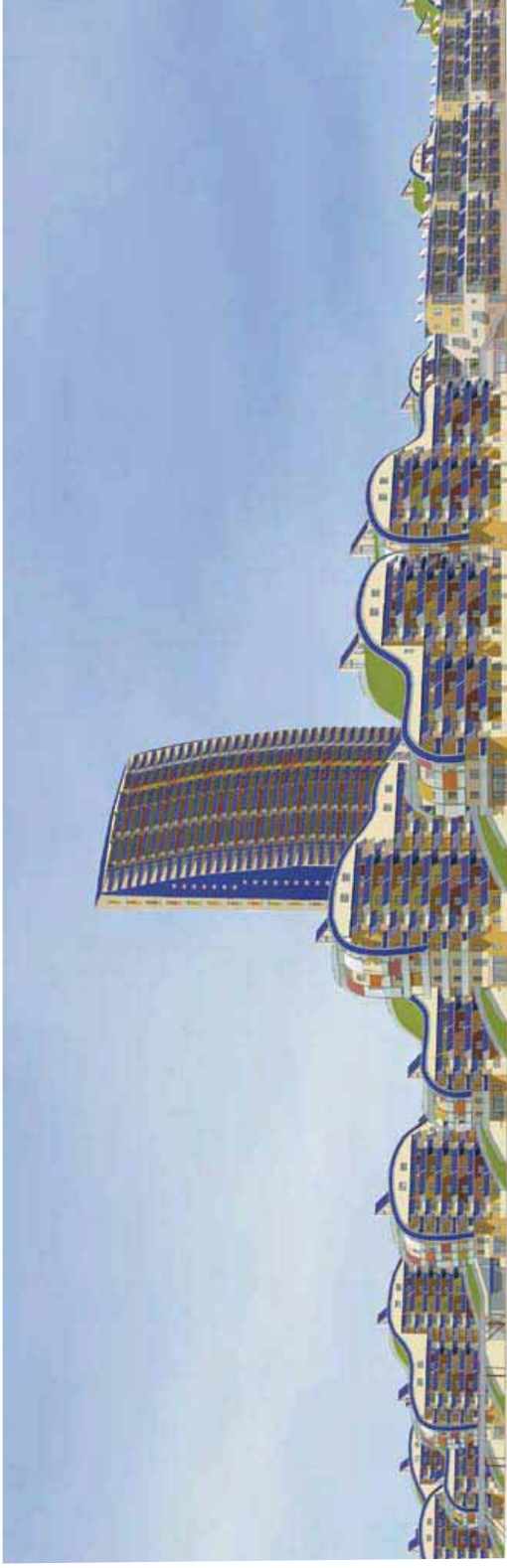
An innovative funding strategy using the ZEDfactory energy mortgage concept enables residents to meet the capital cost of durable solar microgeneration and heating and cooling systems, using the household cash previously spent on escalating fuel bills to service a 25 year loan.

The masterplan provides each home with good solar access and correctly orientated solar panel mounting surfaces complete with building integrated wireways and fixing rails. This allows the developer to build out the passive building fabric and utilities connections without having to fund expensive up front centralised electric and heat distribution infrastructure.

Most low or zero carbon urban developments all over the world use unreliable biomass combined heat and power plants using extensive biomass feedstock sourced from outside the site boundaries. Many parts of the world are now short of biomass, and growing urban populations are exerting pressure on agricultural production increasing the conflict between energy and food crops. There are also no examples of reliable small scale (0.25 to 5 MW) biomass plants suitable for urban integration with reasonable electric to heat outputs.

A central pedestrian prioritised square provides the focus for converging homezone streets. A with a large glass / glass photovoltaic canopy built into a high density 35 storey tower plinth





Clockwise from top of opposite page: ZED² North - ZED² South elevation - ZED² West elevation - ZED²



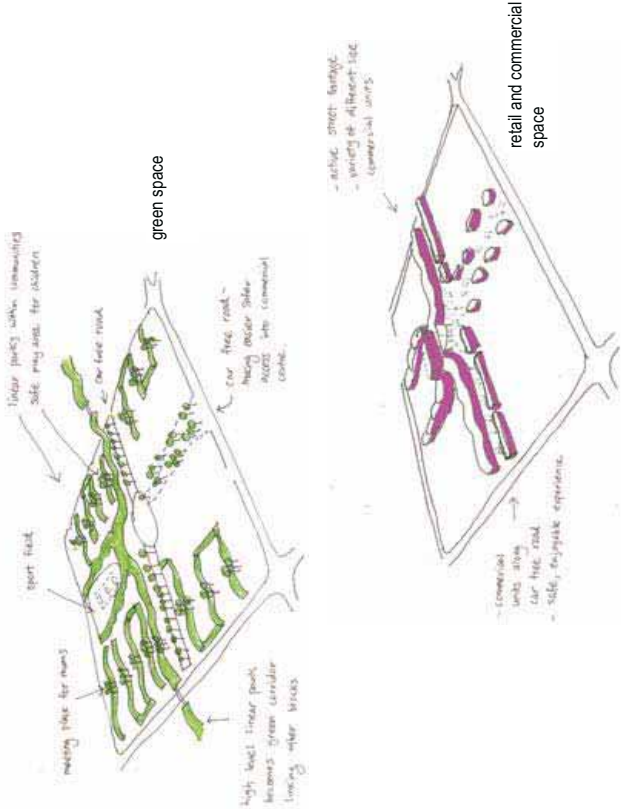
providing a shaded external community focus with small shops, bars and food stores.

Open air lifts and a generous stair allow the public a panoramic view of the Zed urban quarter from a roof terrace served by a family restaurant with seasonal open air dining.

Above the diners, 28 storeys of high density solar apartments maximise the number of homes within easy walking distance of the centralised community facilities, with the shadow cast over the playing field for the majority of the summer.

Cascading roof terraces planted with lawn, shrubs and small trees provide undulating linear parks that descend to the pitch to the north and become pedestrian paths bridging over busy perimeter traffic, and encouraging children to play outdoors safely.

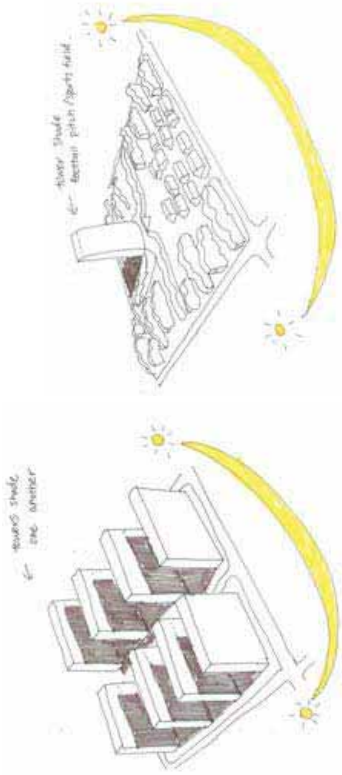
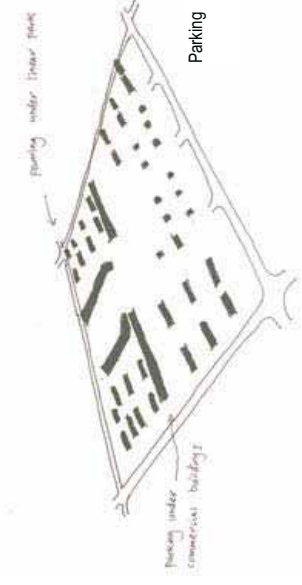
A tree lined pedestrian promenade joins the central square to the sheltered bus stop, with the gable ends of lower rise family blocks housing small businesses and shops to provide a vital and active street frontage.



Although a high value plot ratio can be achieved on a discreet plot of land when combining different functions it can be seen to have a lower value on a city wide scale due to the space requirements for power generation, green space, retail, and commercial space.

The ZED² plot combines all these functions and can be shown to have an equivalent plot ratio when mixed use functions contained within the block are taken into account.

ZED²



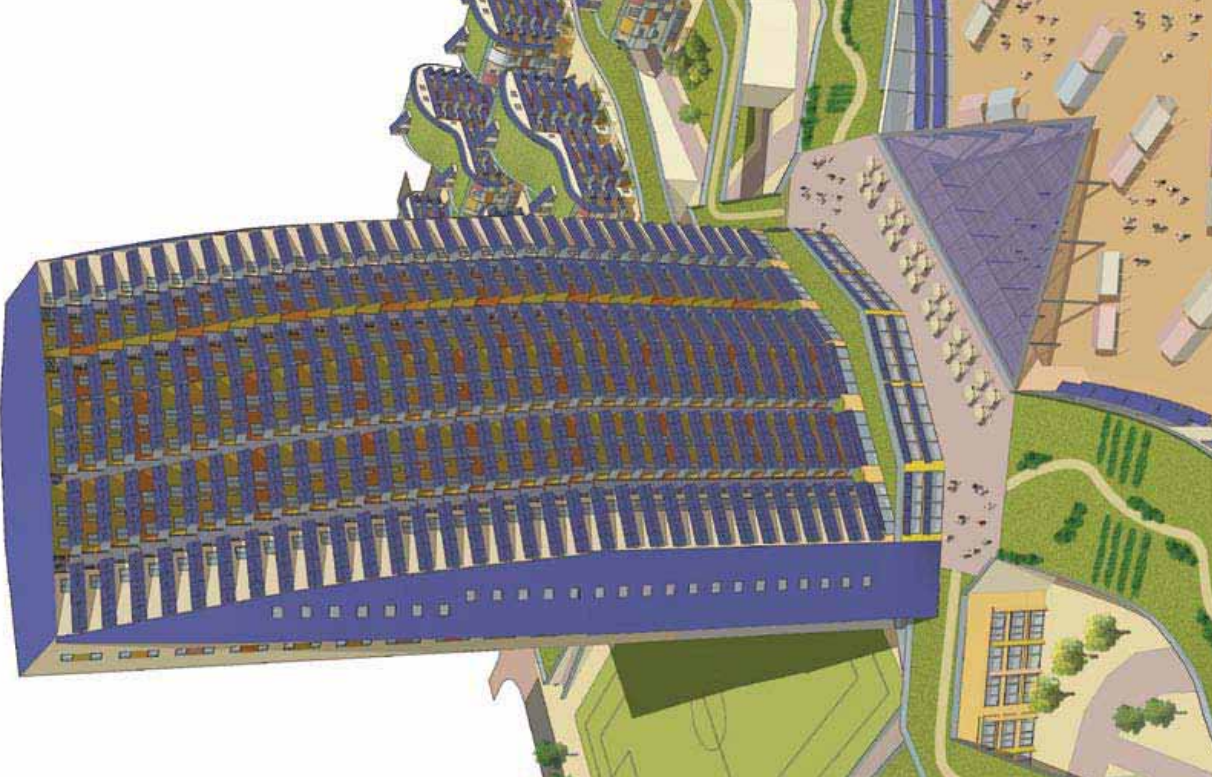
Based on the well proven mixed use Bed Zed urban blocks, this district is destined to become the artists quarter, the fine urban grain encouraging micro business initiatives.

Larger undulating blocks of flats around the edge of the urban block provide a varied roofscape - punctuated by intimate mews streets tucked in below the linear public landscape, again housing live / work units with some covered parking and workshops.

The zed squared urban block tries to show how a step change reduction in carbon footprint can be achieved at the same time as genuinely increasing the quality of life in mixed use urban extensions.



ZED² comprises of 3 building typologies A residential tower block on a retail unit plinth, a solar apartment block and a solar urban block.



title Leicester Abbey Park Road
Solar Urban Blocks

client Metropolitan Housing Trust

value £15m

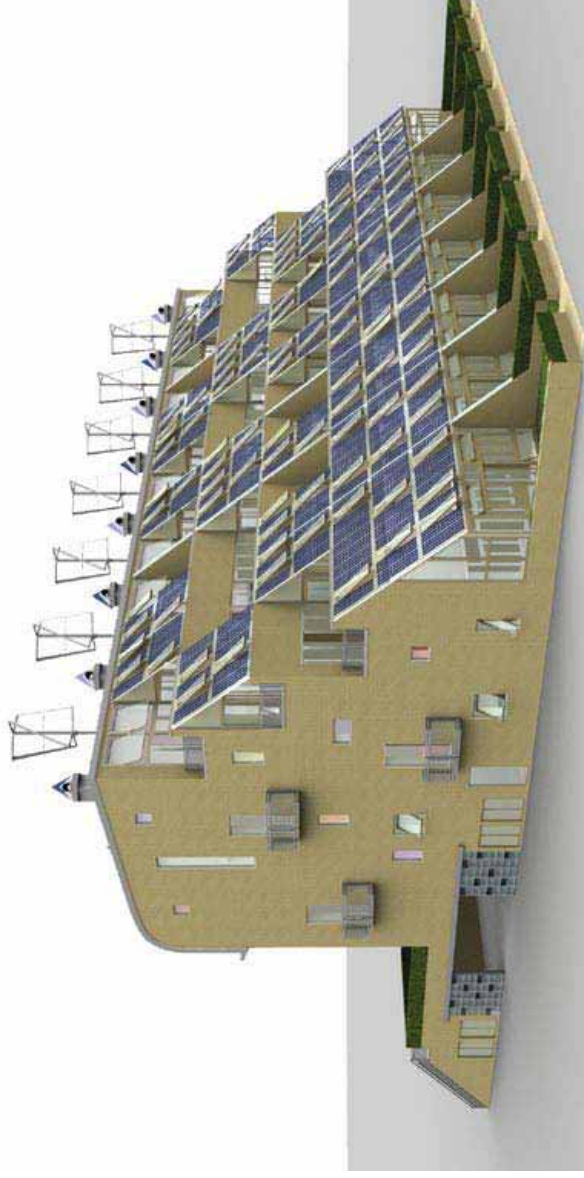
dates On site Jan 2006

The latest government Energy White Paper proposes a 60% reduction in national CO2 emissions from mid-1990 levels by 2050.

heating, photovoltaic electric generation, domestic scale micro wind turbines, passive solar gain, thermally massive passive cooling technologies, and wind driven ventilation with heat recovery.

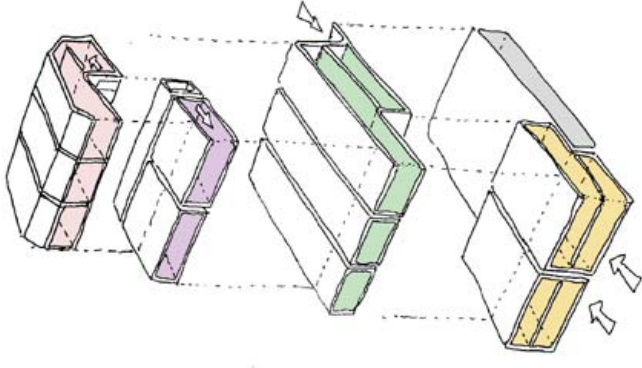
The redevelopment of the old Leicester bus garage site will set new standards for affordable homes by meeting this target on completion of the final phase. This assumes that the project is successful in attracting appropriate grant funding for some of the building integrated photovoltaics. Even if this is not the case, the building design facilitates the future on-site installation of low-carbon power generation technologies, as they become commercially viable. This is expected to be within the next 8 to 10 years.

The masterplan allows future upgrades to site-wide biomass combined heat and power, or fuel cell generation systems.



Above: Solar urban block. **Below:** Canal side elevation.





Clockwise from left:

- View from South
- Sketch of separate dwellings in each block
- Cutaway of single unit
- West view showing parking

Every home has a south-facing living room



title Tongshan Masterplan

client Future House Real Estate Company

value NA

dates 2008

Tongshan is a commuter suburb serving XuZhou a city in North East China.

The masterplan has been developed to utilise the natural topography of the site and optimise the potential to harvest renewable energies.

The gentle slope across the site has been used to channel and pool rainwater run off to provide both amenity and a supply of non potable water. This landscaped drainage also provides visual amenity and promotes biodiversity across the site.

Buildings have been orientated to promote the free flow of prevailing winds through the development combined with the added cooling effect of the pooled water to prevent the urban heat island effect.

Solar orientation of all buildings will provide sufficient PV mounting space to meet annual electricity requirements.

Streets between buildings have been raised to provide car parking with linear

parks above ,again providing amenity for residents whilst hiding the visual pollution of parked vehicles.

A 'high street' has been created with residential blocks over 2 storeys of retail leading to a central plaza with communal facilities.

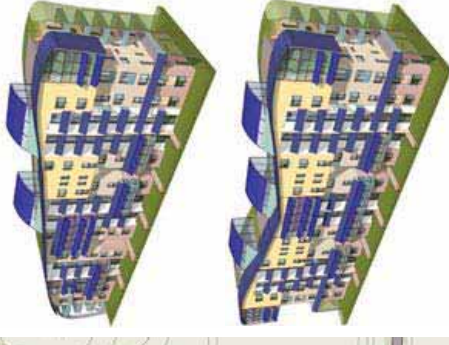
The development comprises 4 typologies 2 multi storey apartment blocks and 2 villa types.

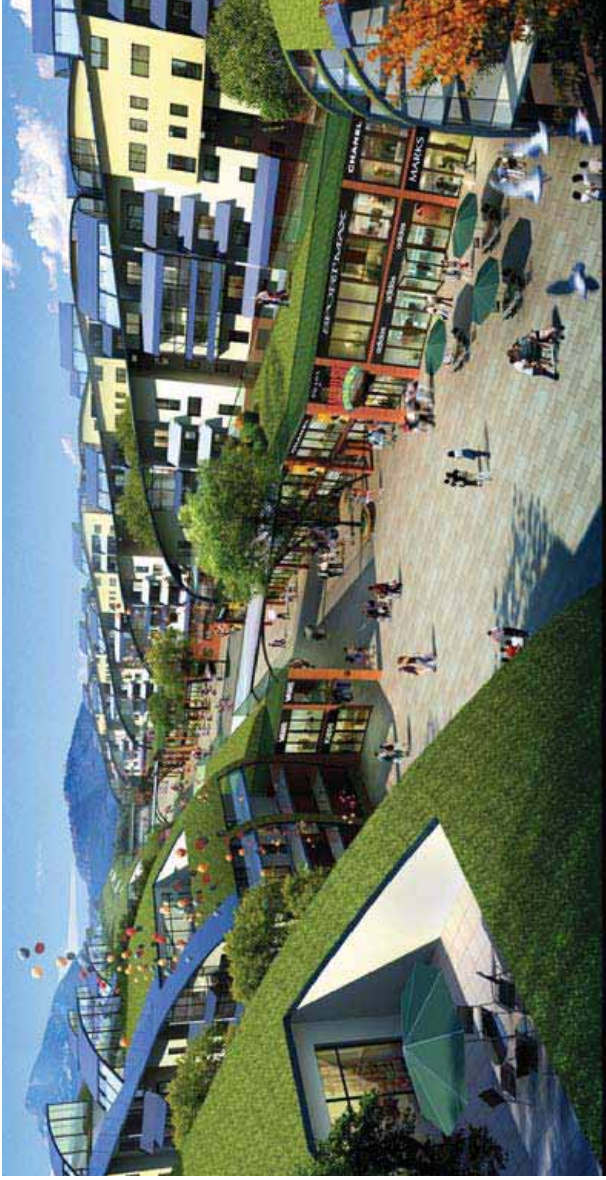
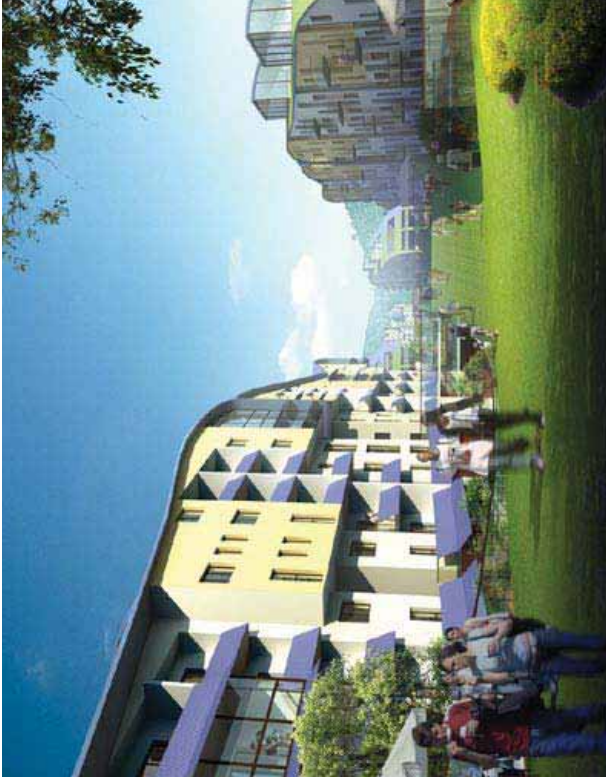
All of the apartment blocks are well serviced by public transport links and villas have easy access to the perimeter roads preventing traffic build up within the development.

A centralised biomass boiler running on rice husk and heat main provides top up hotwater and minimal space heating during winter months.



Clockwise from above: Masterplan - apartment type 1 - apartment type 2 - Fan house villa -





Clockwise from above: Linear parks with parking underneath - Residential of retail high street - High street opens into broad communal plaza.



title SkyZED

client ZEDfactory

value NA

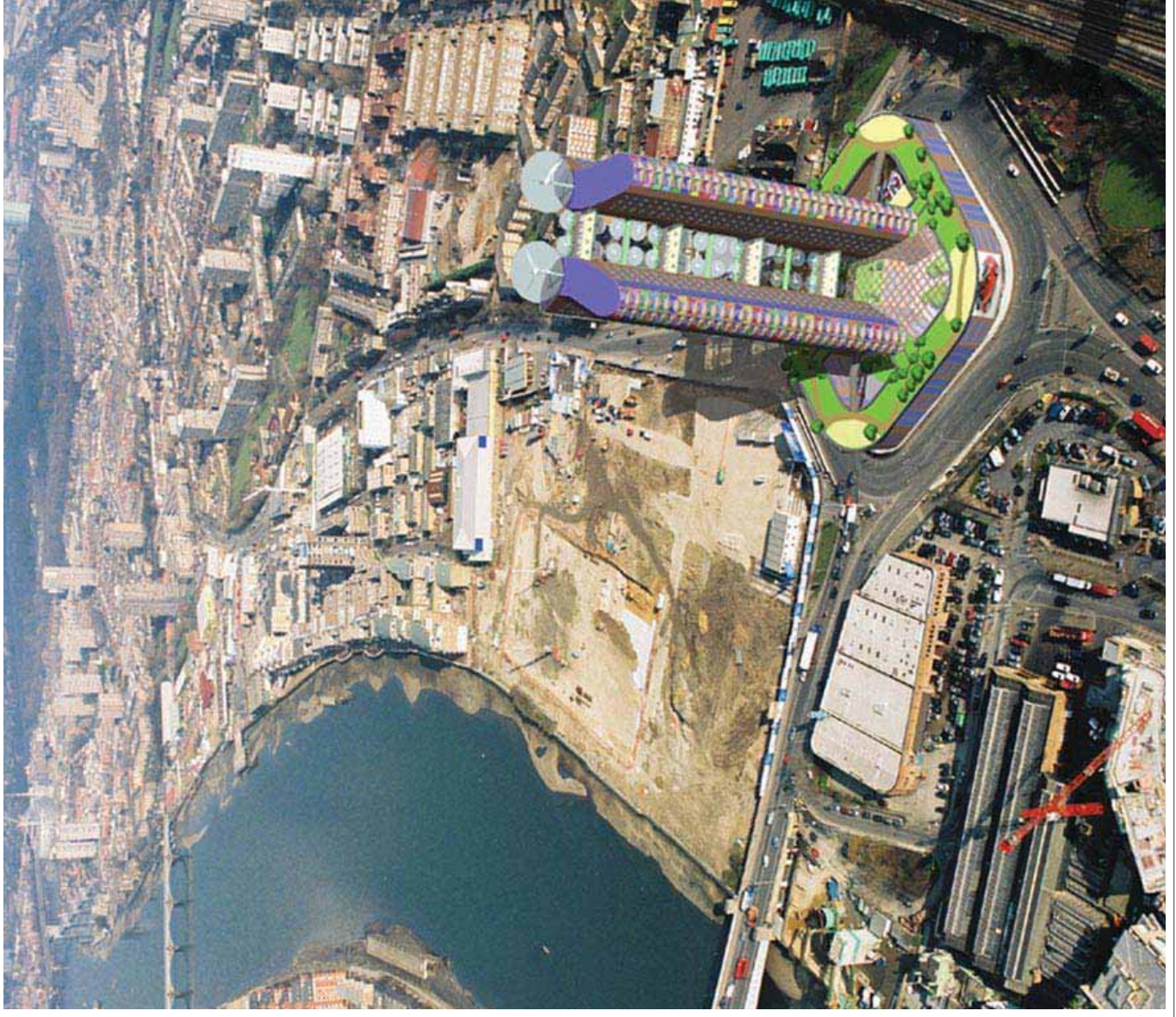
dates NA

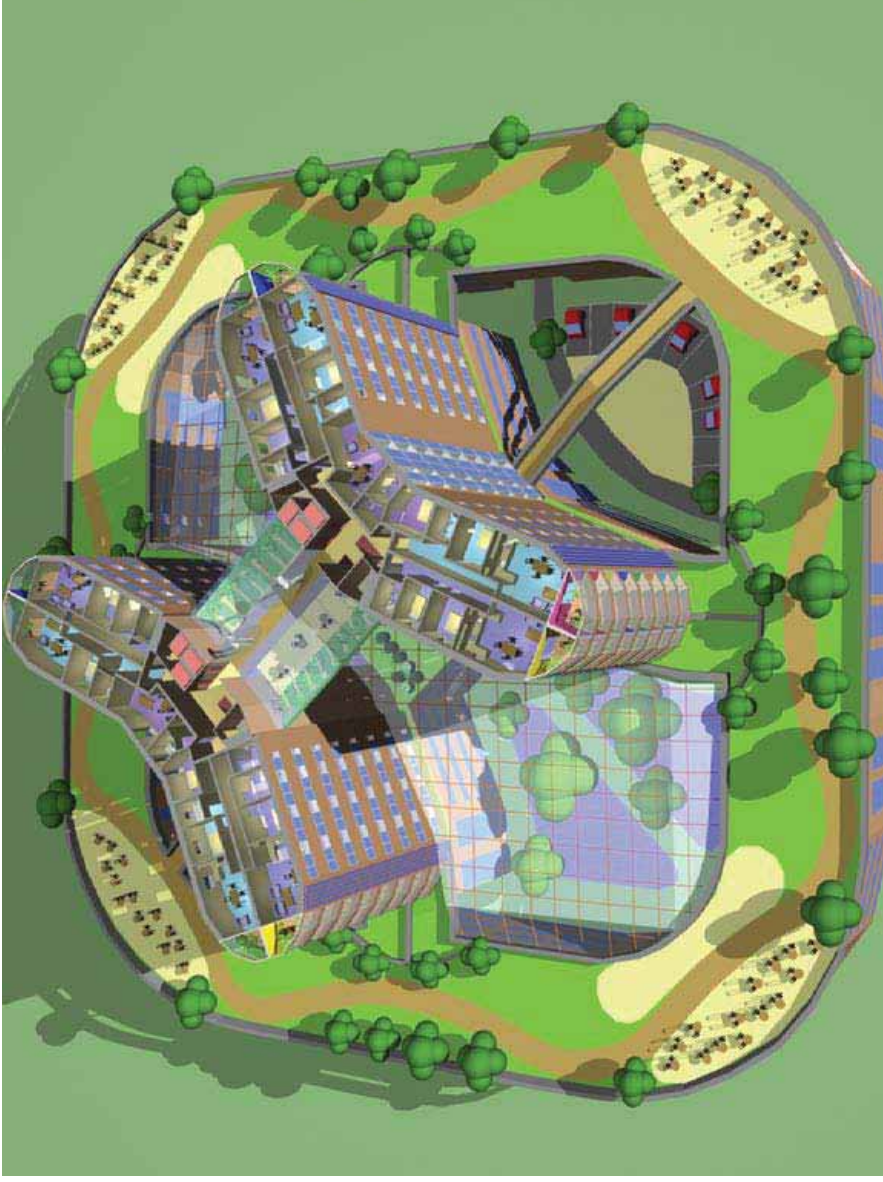
A new approach to affordable housing for the new millennium

Most social housing providers in the worlds larger cities have no option but to build high to maximise density given the limited availability and high cost of new sites in the inner cities for affordable homes. This situation is particularly true in the South East where there is a desperate housing shortage. There is an acute need for affordable key worker housing as well as homes for first time buyers.

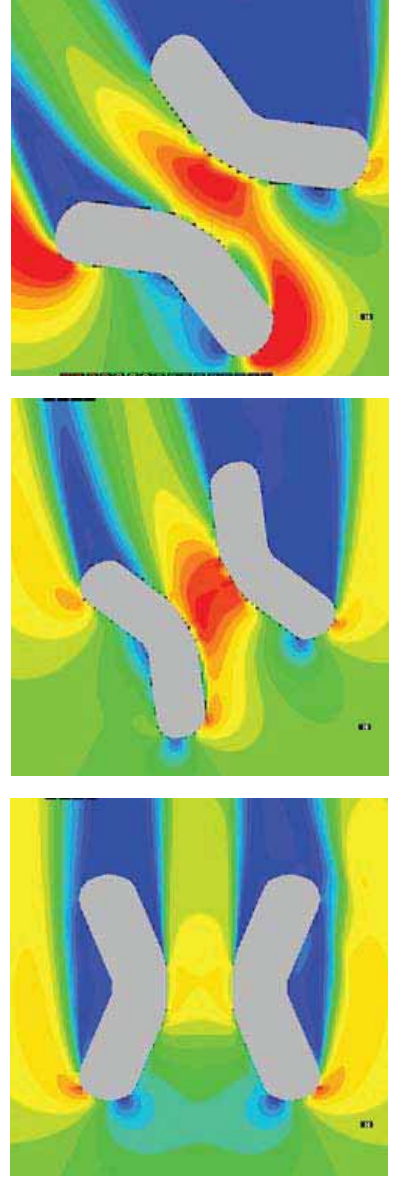
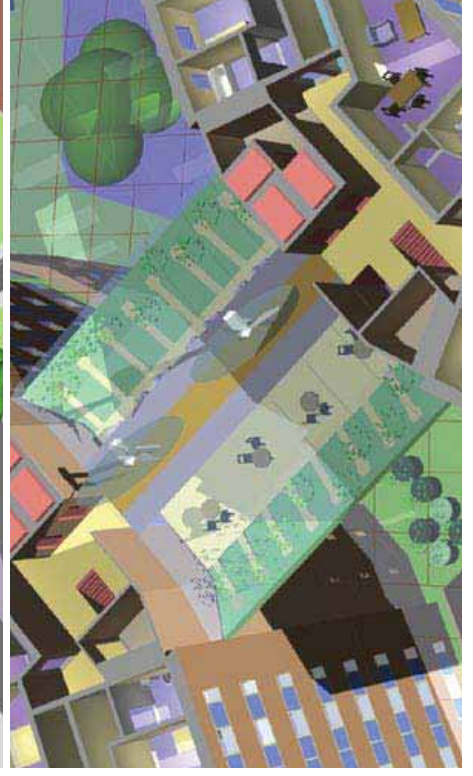
We are concerned that many conventional residential schemes achieve high densities with amenity for the private quota and a reduced standard for the affordable housing. This sets up an exclusive neighbourhood. Further, traditional development generally has a negative environmental impact , so we propose a mixed use high density community that actually generates its own energy on site, and incorporates most of the green strategies implemented at the award winning BedZED scheme in south London.

Through a combination of Wind turbines, and Photovoltaic cells mounted on the roof and building profile, the tower generates all of its own electricity over a year, and can be heated by a modest wood pellet boiler. The tower will be built from materials sourced locally with low embodied energy - using reclaimed sources whenever possible. Each tower petal contains a mixture of one and two bed flats with good views and daylight to all rooms. There is an option for a larger family unit tower. A seasonably openable glazed balcony opens out onto most living rooms on the leading edge of each petal, where wind velocities are slowest, and privacy greatest. All windows are triple glazed, set in walls with 300 mm of insulation, providing both excellent thermal and acoustic protection against both winter heat loss and traffic noise. Every nine floors all petals are joined with a link floor, a greenhouse space with keyhole gardens and communal sitting area





Clockwise from above: Atrium community space providing year round public space - microgeneration - link floors - CFD analysis on optimum wind flow between towers.



title
Velocity

client
Competition

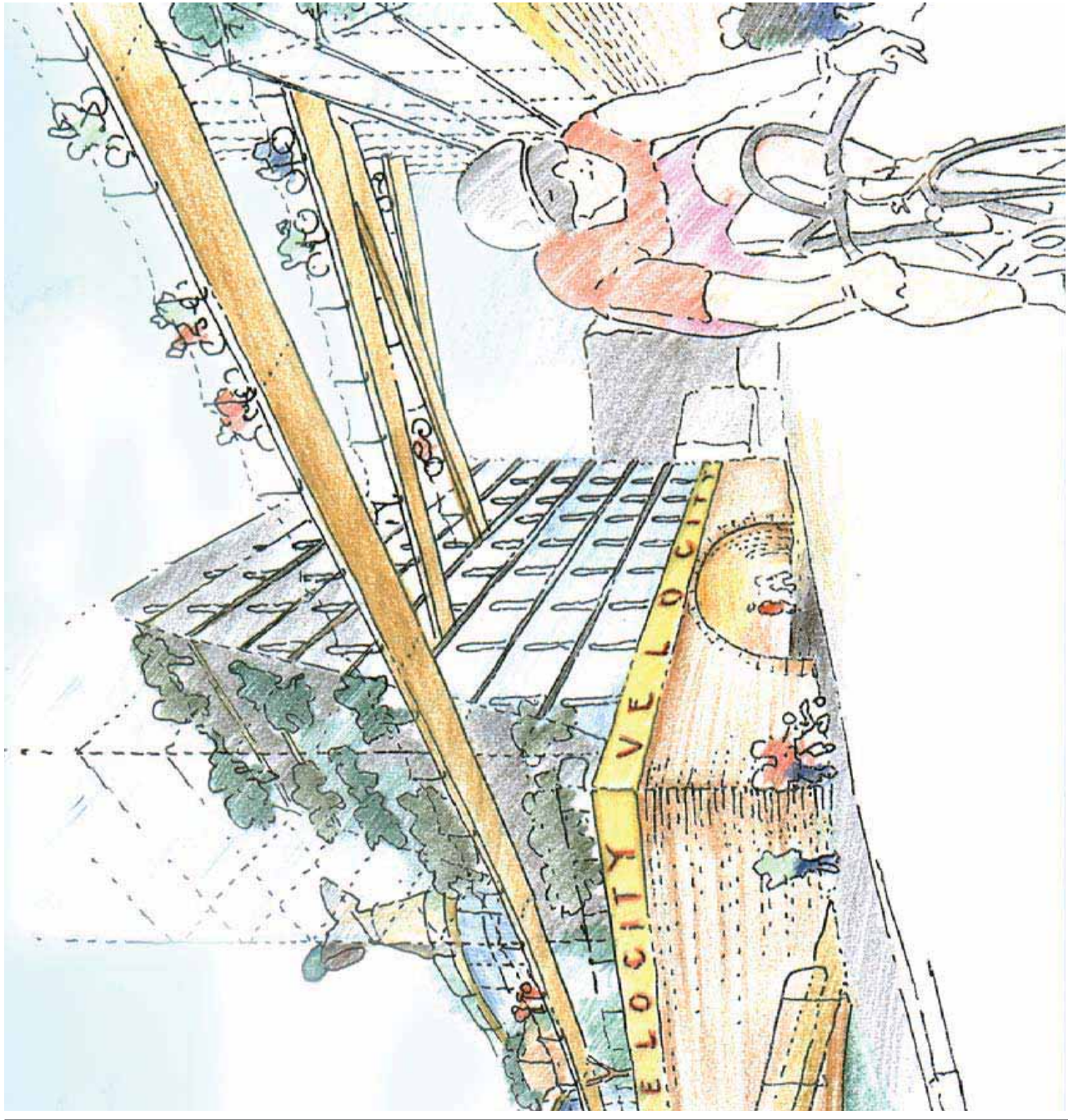
value
NA

dates
NA

Velocity - life in a solar urban village

Sunny cold morning - woke up early enough to catch breakfast in the trackbar before work -watched the windvents twitch as they catch the breeze - freewheeling down the hillside - amazing view over the city - watched the first training riders shoot down the hairpins - colourful shapes half glued, half sliding down the rubber sports track - for once no traffic on the cycle highway to Bishopsgate - why do solicitors always ride full suspension - I can hardly wait to pick up my new recumbent from the vault works - I still envy Sue lying in bed - watching butterflies in the sunspace - breakfast on the roof garden and a stroll to the studio under the hill - the nursery is sunny and the children can play on the grass - perhaps we shouldn't worry so much - looking forward to the weekend - my teams' reached the semi final of the Peabody cup - the veterans might win - must book an Espace for Sundays trip - car pool seems to work well - lift goes straight to the car vaults and the electric Smart Cars have free parking in Westminster - these things are totally silent, zero emissions - running off solar electricity - it's a crime to drive anything else - even the heating and power is run off chip fat collected locally - our fuel

bills are so cheap, I think I can increase the mortgage - the vaults are starting to make Camden market look tired - the space seems affordable enough to encourage experimental goods - and the workspace under the hill is now occupied by anyone from city dealers to graphics studios - managed to book help looking after the kids tonight - visiting some friends in the skyflats - its exciting watching the wind turbines - its fun just going home - weary commuters chat on the bikelifit - before freewheeling down the suspension bridge and back to No 56 Hill Place.



title Nottingham Jubilee Campus

client Nottingham University

value NA

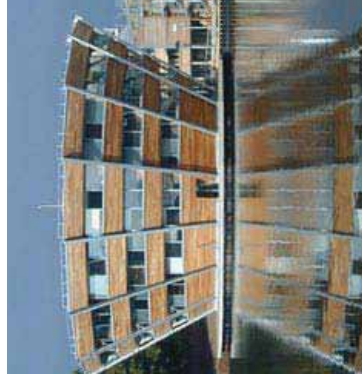
dates Completed

Bill Dunster was responsible for designing this competition-winning scheme while at Michael Hopkins and Partners. He saw the project through all phases of design and construction.

(Awarded the **RIBA sustainability prize 2002**)



Clockwise from above: Atrium - exterior view of campus - Model of site - Library building



title SchoolZED

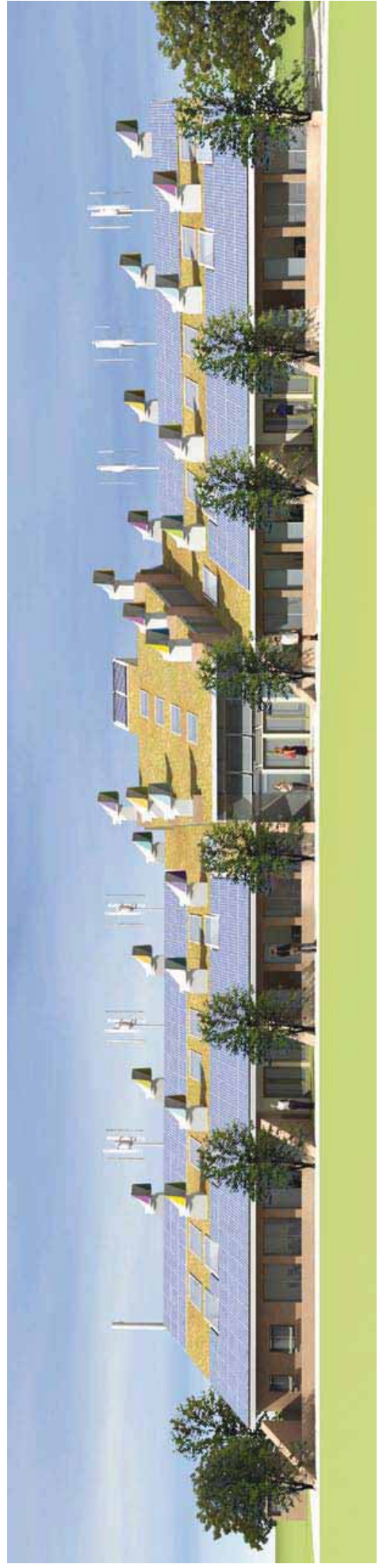
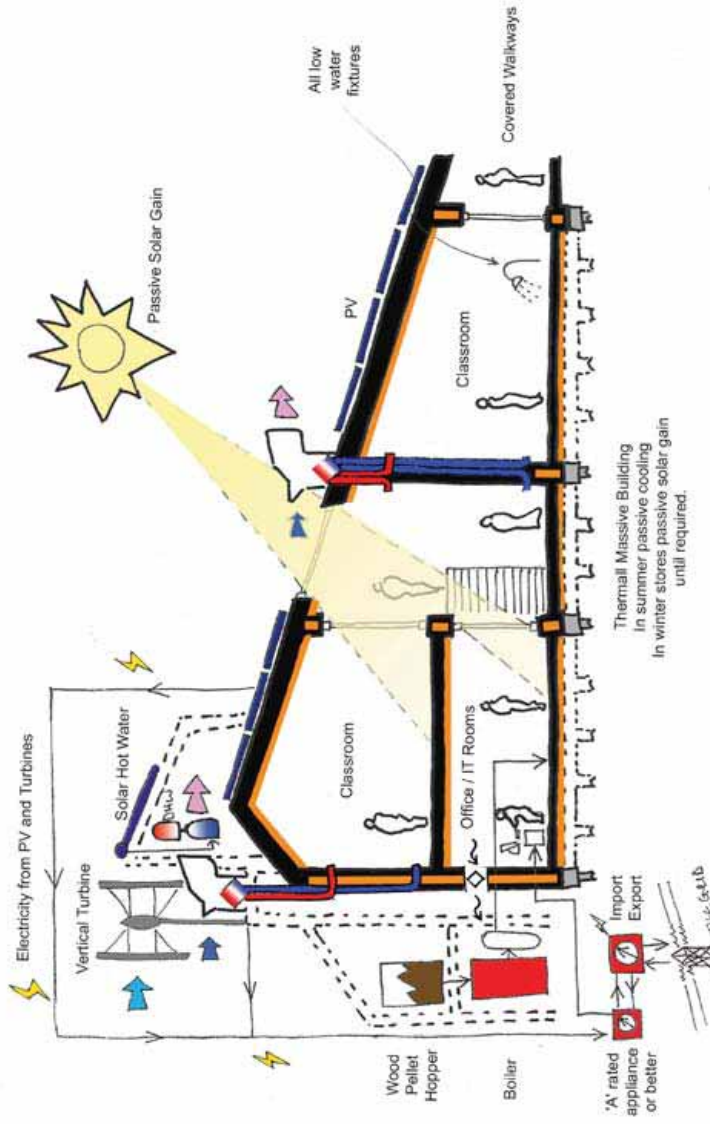
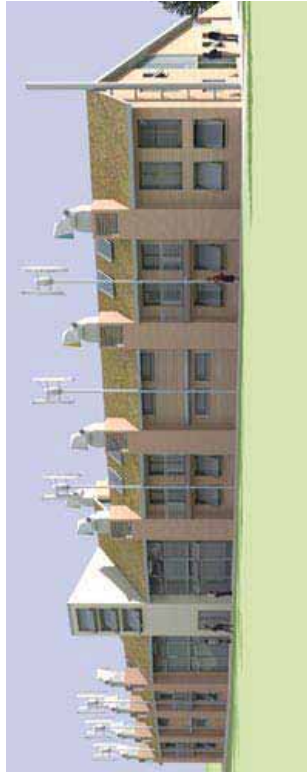
client R & D

value NA

dates NA

The ZED building physics model and associated supply chain is the lowest cost route to procuring zero carbon schools and university accommodation. The passive superinsulated building fabric with heat recovery ventilation has worked well for seven years at BedZED, and the latest developments in building integrated renewable energy microgeneration - mean that smaller sites can achieve carbon neutrality without requiring additional power purchased from outside the site boundaries. This demonstrates the effectiveness of zero fossil energy development to students on a daily basis - supplementing academic curriculums using the classroom enclosure and wider school environment. A very simple central corridor layout maximises circulation efficiency, and allows a variety of single and double height accommodation. Large central halls can be easily added for assembly, reception or sports facilities - and the concept can easily adapt to most urban, suburban and rural sites.





title
Gallions Reach

client
Metropolitan Housing Trust

value
NA

dates
NA

A proposal to transform a hostile island site surrounded by dual carriageways beside the City Airport into a zero carbon Zedquarter. The same turbine that had run for four months without objections on central London's Southbank cultural quarter in Christmas 05, now forms the southernmost anchor to the site. A photovoltaic clad wedge shaped accommodation block rises to the east, whilst a new village square connects to the adjacent Docklands Light Railway. A south facing residential tower rises from the square, with a café, electric and vegetable oil car pool and community facilities embedded in its base. An undulating central communal garden joins the southern square to the existing northern woodland copse, with a terrace of family homes and back gardens contributing to the wide range of different sized homes. A central shop stocking the produce from a local ZEF [zero fossil energy farm] enables residents to lead a wholistic zero carbon lifestyle if they choose.

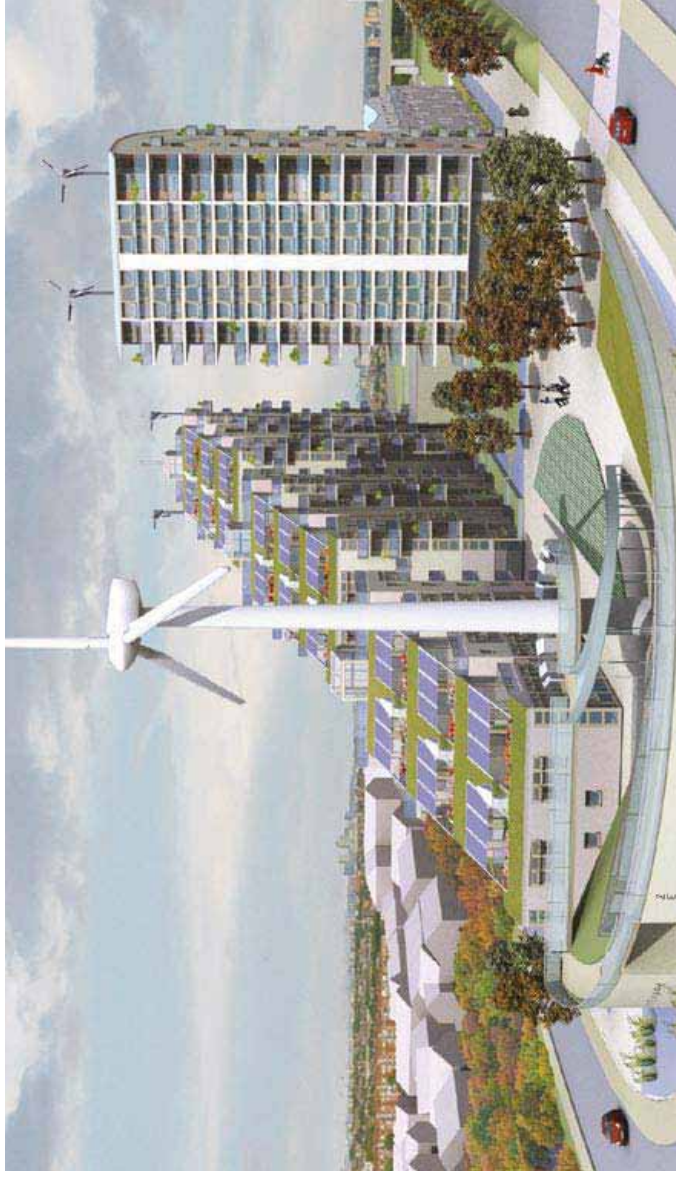
Each homeowner with southern aspect has the opportunity to purchase an energy mortgage and eliminate their electricity bills for life. Even without the biomass chp - the total renewable energy generated on site approached

20 % of total annual electric demand. A small biomass powered combined heat and power plant completes the zero carbon technologies, with the woodchip consumption kept well below the national personal biomass quota of 500 kg/person / year for this density of 181 homes / ha. A communal glasshouse for growing flowers and herbs out of season - sits above the power plant on the northernmost edge of the site.

The building form, massing and aesthetic has carefully evolved to maximise the amenity and energy benefits from the sun, wind and diffuse daylight falling across the site, whilst minimising its reliance on scarce national biomass reserves. Summer overheating and zero winter space heating have been achieved with superinsulation, high mass, and heat recovery ventilation. Every home has a generous outdoor balcony or terrace, and the urban heat island has been minimised by a mixture of sedum roofs, roof gardens and generous space for large mature plane trees

The first Carbon Negative building in the world replaces - Extra power generation

Although the extra large and small wind



and photovoltaic microgeneration are not required to achieve zero carbon status, they can be funded by residents or sponsoring companies wishing to offset other personal carbon intensive lifestyle or work related carbon footprints. This produces valuable local microgeneration using building integrated renewable energy systems, and offsets both the embodied CO2 in the original construction, and the future CO2 that will be invested in maintenance and replacement cycles for some of the building fabric. This fits neatly into future GLA / govt initiatives for personal tradeable domestic carbon quotas. Even if every large scale green grid renewable concept was realised nationally - there would only be enough communal green grid energy available nationally to meet 30 % of current demand, and all of this will be required by our stock of existing buildings. This design shows how new urban regeneration can have a negative carbon footprint without stealing more than its fair share of limited national biomass reserves.



title West End Milton Keynes

client Metropolitan Housing trust

value NA

dates NA

This scheme celebrates the rigorous Masterplan grid of Central Milton Keynes. The perimeter blocks facing the road are sheer sided with stone skins, eroded at pavement level to allow for the colonnade and retail activities, and indented at higher levels to provide the recessed balconies for the residential. Towers pierce the smooth skin as glazed crevices, with the corner further eaten away to persuade visitors to enter the inner courtyard square.

These polite, permanent and somewhat inscrutable blocks rise towards the corner of the site, signalling the gateway to the new CMK 'Green Quarter'. A specially designed vertical axis with spherical blade configuration spins in the lightest wind- special LEDs on its vane creating an image of the earth generated from real time satellite images. The LED's are dynamically tuned into the 'green quarters' electrical consumption changing colour from green to red via orange as the communities power consumption exceeds it's allocated allowance.

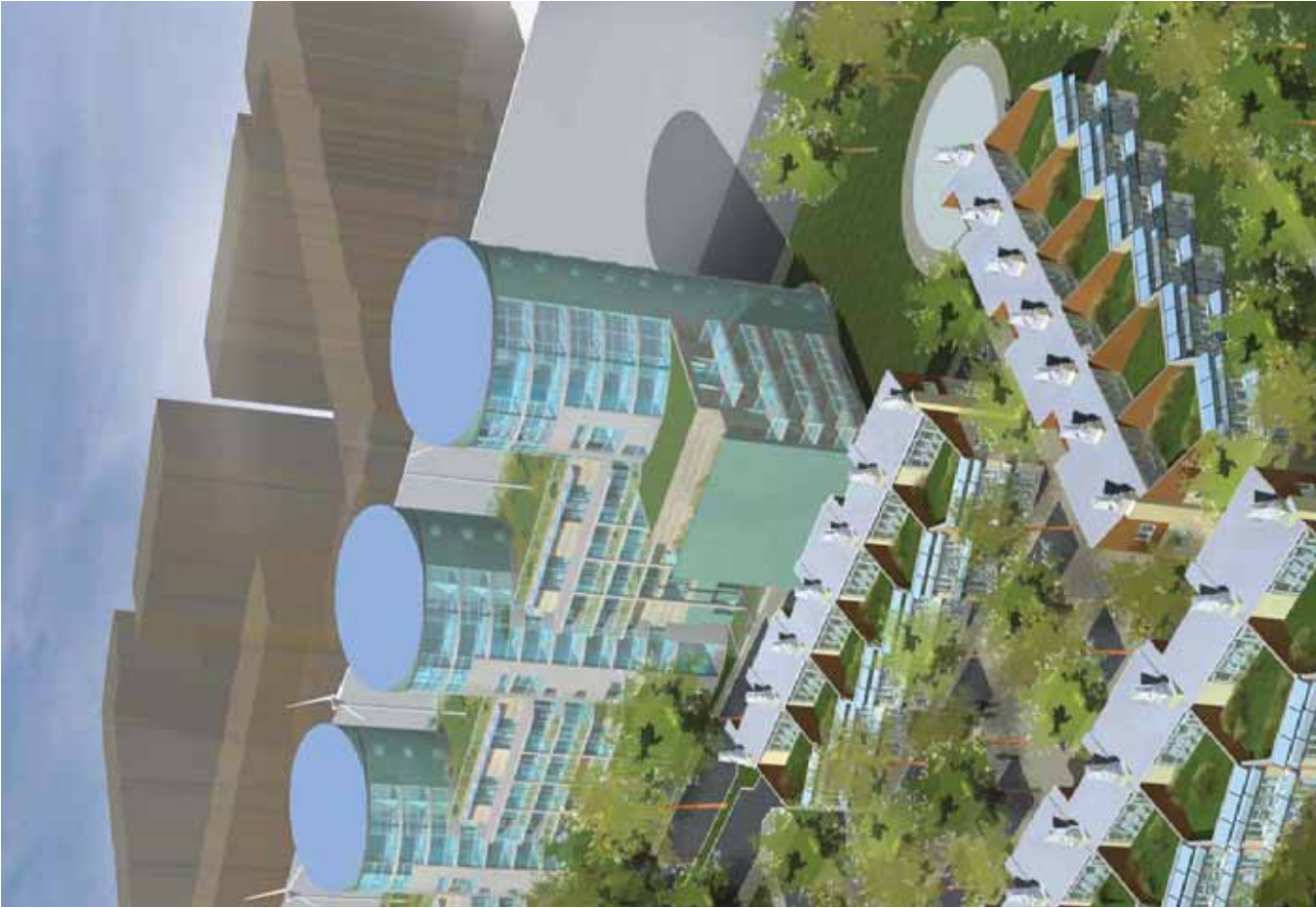
This is a community planning it's own future. Rigorous weather and calendar compensated CO2 targets are set, and the LED globe provides immediate feedback on whether there are being exceeded in real time with the beacon

signalling this achievement to the wider city.

Passing under the glazed canopy, collecting window shoppers from both the arcades on Witan Gate and Avebury Boulevard reveals an intimate relaxed urban square flanked by pavement cafes and lime trees. The pedestrian prioritised square provides a more intimate social focus to the Green Quarter, with parking giving way to cobbles, benches, market stalls and in one corner the new Community Hub. This houses the zero CO2 transport hub, the carpool administrations, and mechanics to repair bicycles and small electric scooters, as well as receiving food box deliveries from the local organic farm. As the new community grows, activities could include childcare, telecommuting shared facilities and possibly even a 'green tomato' taxi service running off locally produced bio fuel.

A timber staircase climbs from the market square over the double height biomass square CHP wood chip loading bay doors - leading into a new hidden courtyard- the informal heart of the Green Quarter. Now the perimeter housing blocks step and stagger to catch the sun. Every roof





surface becomes a terrace or garden. Each flat peers around or over it's neighbour to catch a snatch of sunlight. Oiled FSC cedar cladding wooden patio doors and the colours of earthen lime render create a more relaxing urban landscape.

A lush cascading garden with edible plants, and ponds covers the underground car park, with a skateboard ramp and a long distance vista out of Central Milton Keynes downhill towards the adjoining housing estates.

Each ground floor home opens out onto it's own garden framing the communal parkland, and each common stair connects to the central promenade route allowing upper floor residents easy access to the outdoor space. The same glazed stairs feed small clusters of single aspect flats with each corridor leading onto communal roof gardens.

Oval towers roofed in solar electric panels break up the southern terrace, following the landscape downhill, a visitor arrives in an open courtyard of terraced three storey town houses. South facing bay windows and roof terraces give privacy and long distance views over Milton Keynes with a secure Children's playground completing the sequence of increased relaxed and private communal gardens. From the roof terraces the cascading diamond shaped solar panels framing the penthouses along Witian gate give the Green Quarter a re-assuring city wall, further emphasised by the sentinel vertical axis turbines spinning between each oval tower.

The transition from low carbon specification to carbon neutral has been achieved by replacing the off site gas powered chp plant with three on site biomass powered Talbot CHP units. The three Talbot units generate approximately 8 % more electrical energy than the community requires over a year, which over a 60 year period, should offset the CO2 embodied in the original construction, together with the carbon footprint of planned maintenance and replacement. The biomass furnaces, hot air turbines and chip store have been carefully planned into one corner of the inner courtyard square, with a double height woodchip loading bay and a small section of underground car park converted into a compact plant room. Special chimney flues integrated into the massing of the corner residential block deliver the non toxic aromatic woodsmoke high enough to avoid the adjacent urban blocks. Ten years after the teams' experience with the first urban woodchip CHP at BedZED, the team are now confident that this technology represents the most cost effective way of producing a zero carbon high density urban quarter - with the efficiency of the building fabric and mixed uses ensuring efficient loadmatching with modest amounts of excess summer heat potentially used to provide trigeneration cooling using absorption chillers for the retail units. If the central Milton Keynes power plant concept is still pursued at a later date - it is both sensible and economic to connect the biomass CHP units into the central CMK district heating main and private wire network - using the Woking precedent to encourage a complimentary range of different microgeneration technologies working within a coordinated and future proofed framework. All the large scale microgeneration devices including large

scale communal rooftop photovoltaics and micro wind generation are linked into one Energy Services Company with remote billing facilities and overall responsibility for both the private wire electric supply and the district heat main supply predominantly domestic hot water. Woodchip deliveries from three medium sized 15 tonne tipper trucks could be required once a week, and these would take place on weekday mornings - freeing up the market square for the weekend stallholders.

Awards List

Royal Institute of British Architects - Presidents Award 2008

The ZEDbook - Outstanding Professional Practice-located Research

Sustainable Housing Awards 2008

St Mathews key worker flats

Housing Design Awards 2007

Future Proof Award - Jubilee Wharf

Sustainability Awards 2006

Low energy building of the year - St Mathews

Housing Design Awards 2006

Highly commended - Hockney Green

Housing Design Awards 2005

Highly commended - BowZED

Exhibition of Excellence - Leicester Bus Garage

Stirling Prize 2003

Shortlisted Main Prize & Winner of Sustainability Award - BedZED

RIBA London Awards 2003

Winner Special Awards - Sustainability - BedZED

Housing Design Awards 2003

Winner - Best Project & Sustainability Award - BedZED

EU prize for contemporary architecture 2003

Nominee - Fundacio Mies van der Rohe Award

Evening Standard Lifestyle Award 2002

Winner

Energy Globe Award 2002

Winner

Eurosolar Award 2002

Winner

The World Habitat Awards 2001

Finalist

Other Citations

Prime Minister's Better Public Building Award

The Conference Building, Earth Centre,

Finalist in 2002

Design Sense Award

Hope House shortlisted 1999 by the Design Museum

RIBA Downland Award 1996

Hope House shortlisted

British Council Delegations

☞ China, Beijing

☞ China, Shanghai

☞ Los Angeles

☞ Japan

Bill Dunster's CV

Date of Birth July 9th 1960

Nationality British

Higher Education MA Hons Edin.
Degree Course at Edinburgh University

Following several years of research and development into high-density sustainable housing, Bill presented the BedZED scheme, a carbon neutral live/work community, to the Peabody Housing Trust. In early 1999 suitable land was found in the London Borough of Sutton, and both the BedZED project and Bill Dunster architects (BDa) were born.

Since 1999 the practice has completed a number of award winning building projects.

Prior to setting up BDa, Bill was an Associate at Michael Hopkins and Partners, and was with the practice for 15 years, specialising in low energy and sustainable development.

July 95 - July 1999

Nottingham University New Jubilee Campus was the final project Bill completed as an associate for MHP. He took the scheme from the initial competition bid through to completion. Opened in December 1999 by HM the Queen, the campus has since been awarded the Stirling Prize, Sustainability Award 2001.

Aug 92 - July 95

Before Nottingham, Bill developed the environmental strategy and detailed façade design for Portcullis House. This work followed 4 years of research in the European Union funded Joule Research Project, collaborating with the leading environmental consultants in Europe, including Arup, CSTB Nantes, Christian Bartenbach and Conphoebus.

July 90 - Aug 93

Bracklen House redevelopment, City of London. Contract value £85 million. Senior architect

Bill has also taught at the Architectural Association and Kingston University. He speaks regularly within the UK, and has been a member on a number of overseas British Council delegations to China and Japan.



photo - Morley Von Sternberg



New parliamentary building, London



David Mellor factory at Hathersage Derbyshire

Asif Din

Director
Ba Hons Dip arch RIBA



Asif studied energy efficient building with Robert and Brenda Vale and Sue Roaf before joining ZEDfactory. Asif has also worked with a range of research groups including Royal Melbourne Institute of Technology (RMIT), Australian Greenhouse Office (AGO) and Mobile Architecture and Building Environmental laboratory (MABEL). At ZEDfactory Asif was employed to detail BedZED and since then has been involved on a range of projects from SkyZED to Jubilee Wharf which he was site architect for in Penryn in Cornwall. He is also involved in ZEDproducts development such as the wind cowl and has undertaken academic lecturing and teaching at various academic institutions from Deakin University in Australia to University of East London. He has previously worked for T P Bennet Partnership on a wide range of commercial projects prior to his diploma course.

Matthew Hoad

Senior Architect
BA(hons) Dip Arch (Kingston),
AIWSc, RIBA



Matthew studied at Kingston University and the Royal Academy of Fine Arts in Copenhagen and has subsequently worked extensively on environmental based projects since qualifying. Matthew has lectured at Kingston University and written journal articles on sustainability and timber construction.

Prior to joining ZEDfactory in May 2004, Matthew worked for architects Michael Hopkins and Partners for 5 years from 1997 and for specialist timber framers, the Green Oak Carpentry Company from 2002 to 2004. This has brought design and contracting expertise to Bill Dunster Architects where the development of buildings is closely carried out with manufacturers and specialists to deliver innovative architecture.

Steve Harris

Technical Director
BSC Hons DipArch (UCL) RIBA

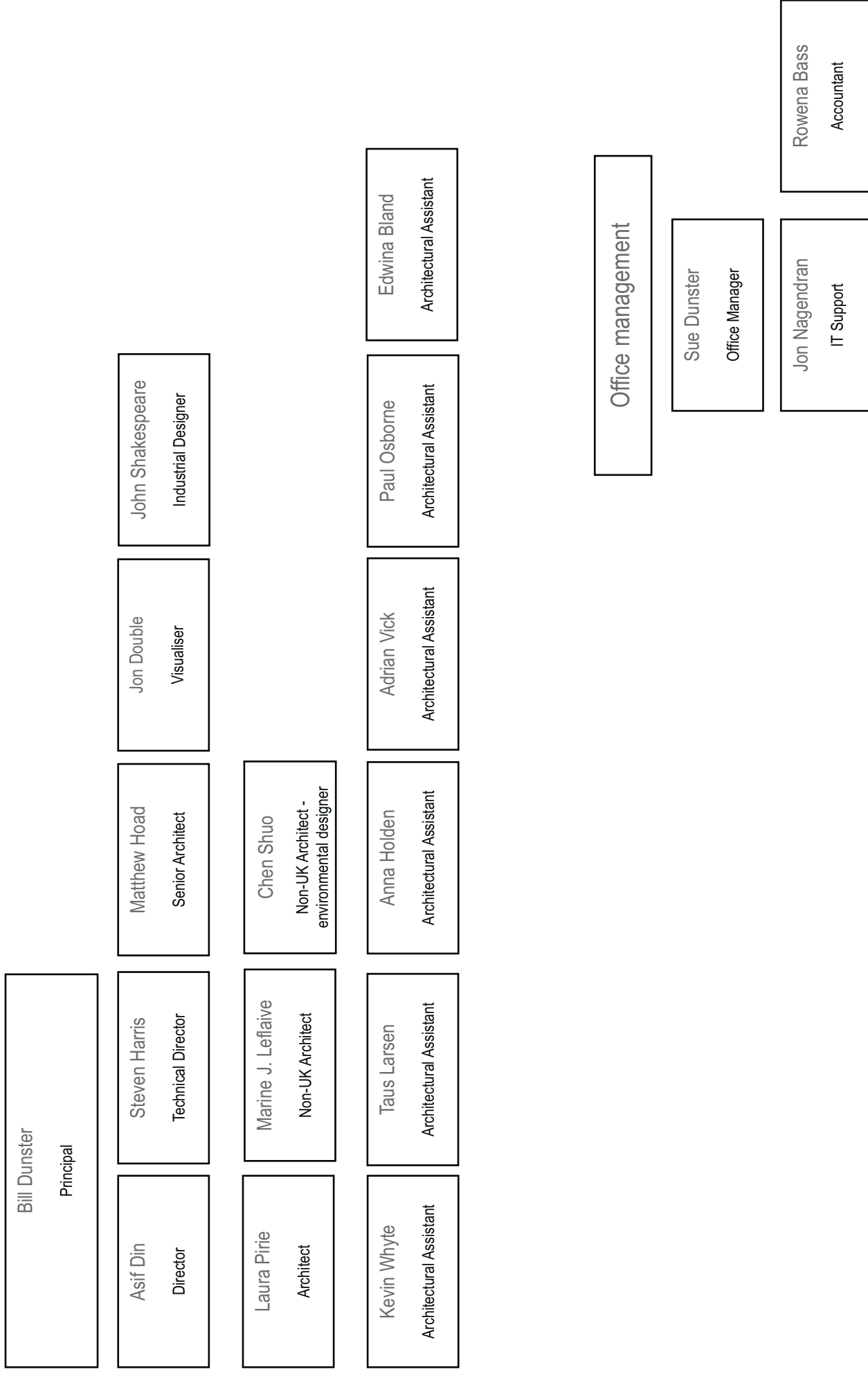


Steve Harris has been working with Bill Dunster since 1994, firstly at Michael Hopkins and Partners, and from 2000 at ZEDfactory. He has been involved with BedZED since its inception, originally working on the project privately for Bill when they were both at Hopkins. Currently he is project architect for a number of projects and has cross office input on construction detail and energy systems. He has also been involved in a number of studies looking at energy payback and building physics.

Between 2002 and 2005 Steve also took on a role as a Senior Lecturer in Environment and Energy at East London University School of Architecture and the Visual Arts. He is a member of the Hackney Sustainable Development Group for Hackney Council and has undertaken external representative roles for the GLA.

From 1988 and 1993, Steve studied at the Bartlett School London (UCL) and qualified as an architect in 1996.

Organisational Structure



tel **020 8404 1380** fax **020 8404 2255** email **info@zedfactory.com**
www.zedfactory.com or visit **www.zedstandards.com**

