



Bill Dunster

ZED Factory

We're introducing a new agenda. We can get a huge reduction in environmental impact. We can improve the quality of life. That's what we try to sell.



ZEDLife

- Don't spend two hours a day commuting – walk to work
- Don't worry about young children – walk to the nursery, and pop them home for lunch
- Don't spend a fortune on expensive cars – simply borrow what you need when you need.
- Don't live in dark gloomy houses with poor ventilation
- Don't live in flats without gardens – everybody needs to be outdoors sometimes
- You don't need to go out of your way to stay fit
- Don't spend a fortune on utilities bills
- You don't need to worry about untried technology.
- You don't need to live in a spaceship
- You don't have to worry about resale
- You don't have to live in a completely new house
- You don't have to live in a dormitory with little sense of community
- You don't have to eat organic veg flown in from the other side of the world
- You don't have to worry about finding a mortgage



BedZED

- BedZED is an urban village for The Peabody Trust located on a brownfield wasteland site in the London Borough of Sutton.
- 82 dwellings in a mixture of flats, maisonettes and town houses, and approximately 2,500 m² of workspace/office & community accommodation including a health centre, nursery, organic café/shop and sports club.

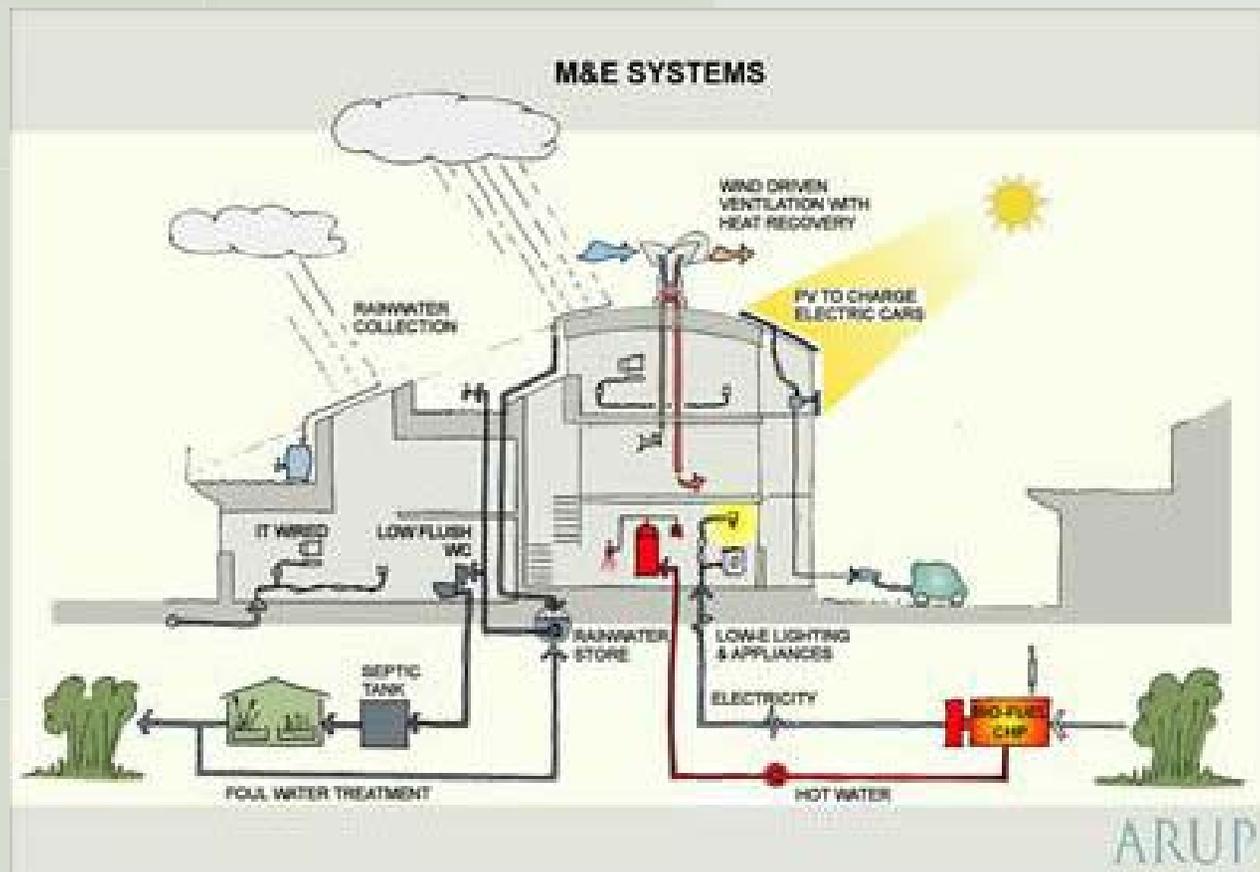


BedZED

- BedZED has a childcare center and is a five-minute walk to the train station
- Solar panels provide free power for those w/electric cars.
- On-site businesses include engineers, psychotherapists, environmental groups, property developers, and recycling companies.
- Insulated lockboxes outside residents' front doors provide temporary storage for groceries, delivered en masse by store vans, saving individual car trips.
- Built-in bins in the kitchen simplify the recycling process. Recycled timber adds aesthetic warmth to rooms, while sedums planted on the buildings' roofs attract birds and butterflies.



BedZED Mechanical & Electric Systems



RuralZED

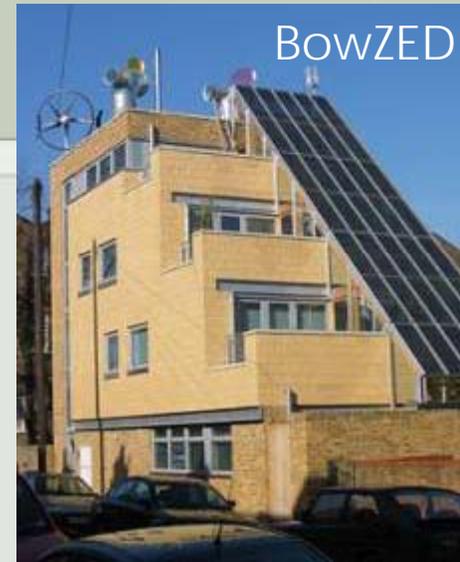
- The scale of RuralZed is much smaller and aims to develop techniques using thermal mass into projects for more affordable homes.
- Using precast concrete structures of dense concrete, RuralZed was completed in 6 weeks. Further similar properties are planned for demonstration purposes at the Eden Project in Cornwall.
- It is a terraced-house design that can be built wholly from West Country raw materials. These include recycled railway sleepers for the foundations, timber from demolished buildings for the main frames and partitions, locally-made solar panels and an environmentally-friendly "passive ventilation/heat recovery system" - a stack that pumps heat through the house and expels stale air without opening windows.



Hope House & BowZED

- Hope House is a suburban environmental house which demonstrates how a home can adapt as a family's lifestyles changes. BowZED is a more urban home with similar design intents.
- The ground floor may change from home office to granny flat and back again in cycles of twenty years. As children move out of the house, older homeowners could then generate an income by subletting a ground floor flat.

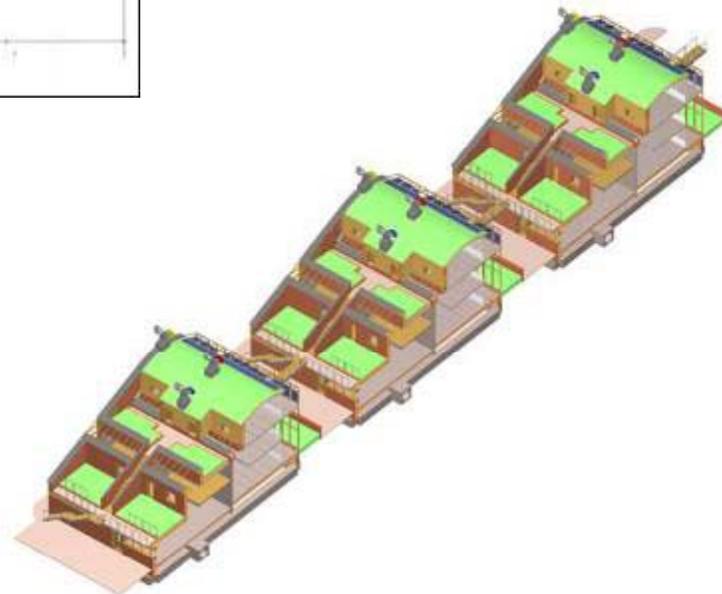
'We're trying to break the endless accusation that you can't build green because it's too expensive,' he says. 'We have 2,000 people wanting one of our homes. We know there's a market for them, but need to persuade developers to build them.'



ZED in a Box

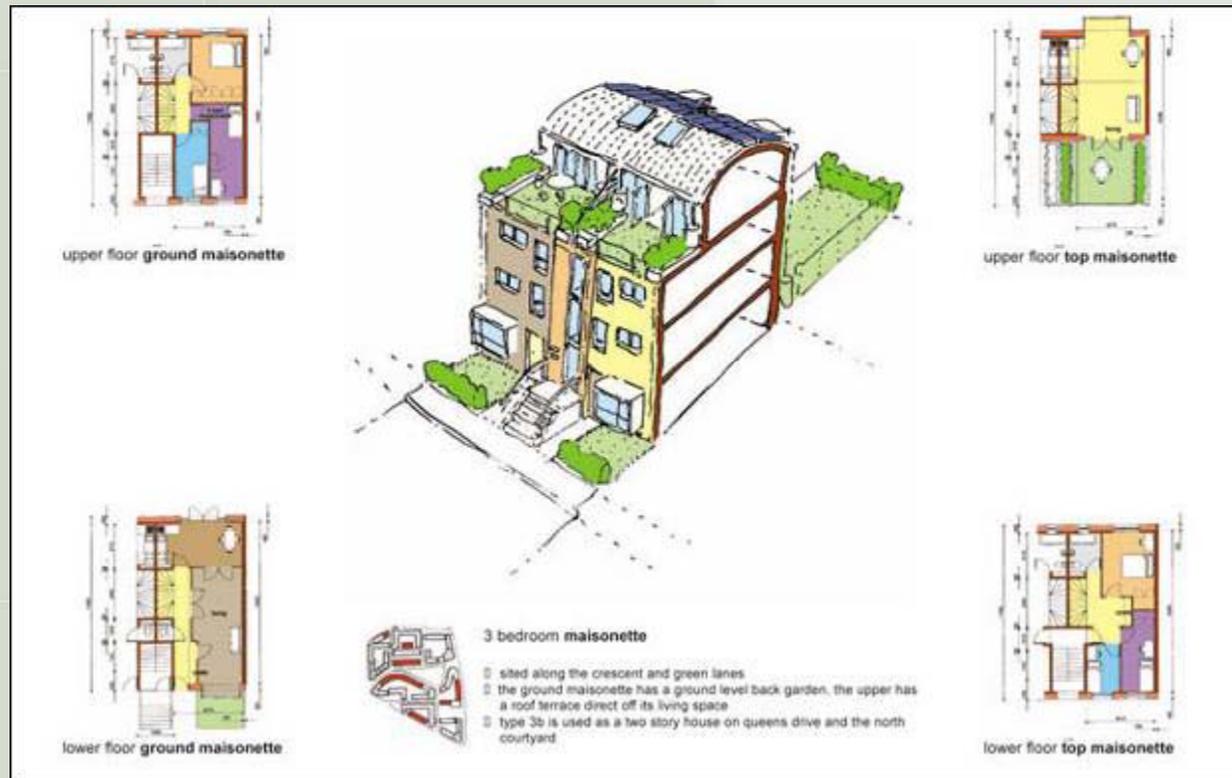


- Planned mass production of the ZED concept for environmental tract housing.



Rehabs

Proposal for Kings Crescent rehabs



SkyZED

- A 'solar urban village' with mixed use (homes, schools, recreation etc) that generates its own power with combination of wind and photovoltaic cells mounted in the cladding and roof
- Each tower petal contains a mixture of two bed flats or three bed maisonettes, with good views and daylight to most rooms. An open balcony opens out onto the living rooms on the leading edge of each petal, where wind velocities are slowest, and privacy greatest





Some 'Ingredients' of a ZED Tower

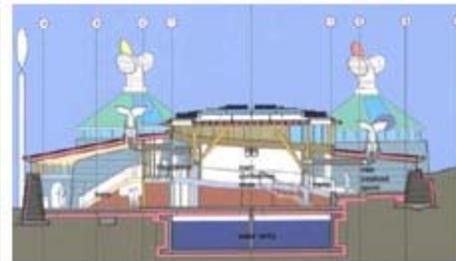
- A ground level reception is reached through a glazed tunnel with visitors walking past two banks of **living machines** treating all grey and black water. **Lilies grown in the tanks** decorate the reception and are sold in the farm shop as a cash crop.
 - A **farm shop** to re-establish urban rural links, and reduce food miles is placed on the ground floor with an internet delivery reception.
 - Four to six floors of workspace and retail are placed closest to street level to help provide the potential for a **live work community** as at BedZed
 - Link floor joins all four accommodation wings - providing a **communal toplit indoor garden every four floors**. The roof of the link floor becomes lawn for the flats above.
 - A mixed community of two bed, one bed and three bed maisonettes is housed within the tower wings, enabling all age groups to be housed in the same block.
 - The uppermost link floor houses a **healthy living centre, bar , restaurant with views over London, and a gym**.
 - Two full size **all weather tennis courts** with generous grass verges are provided at roof level. Photovoltaic louvres reduce windspeed, and provide shelter.
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MedZED

- MedZED how key worker housing can be combined with a modern efficient hospital plan.



Earth Centre, Donwcaster UK



Section aa - through the foyer



Section dd - through the function rooms

Key:

terrafino	window colour	reclaimed boarding	low embodied energy concrete	300mm super-insulation
gluelam beam	crushed concrete gabions	reclaimed poles	galvanised steel	



- Following a design competition in August 1999, Dunster was appointed to design a new conference and arrivals facility at the earth centre.
- The buildings shape & low profile were designed to not block the views of Conisborough Castle.

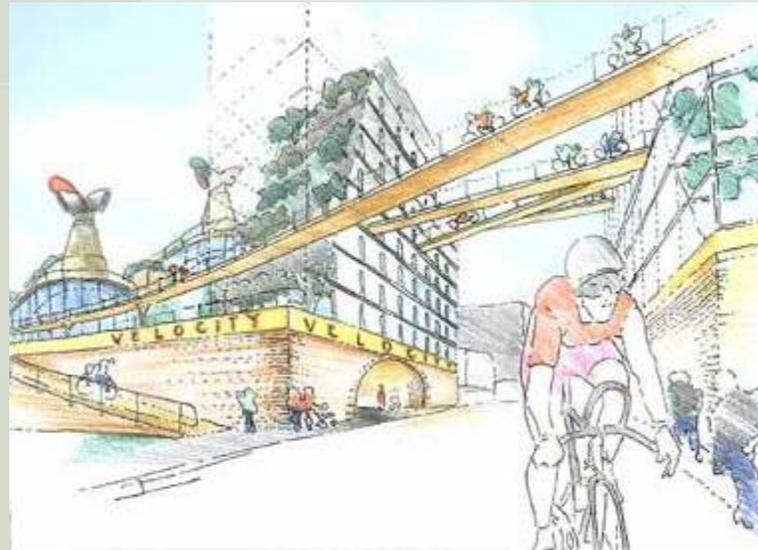
Earlier Work

- **Nottingham Jubilee Campus** - solar powered ventilation with heat recovery on a new university campus
- Bill Dunster was project associate at Michael Hopkins and Partners responsible for all aspects of design, construction and project realization.



Current Work in China

- Chinese state planners have suddenly 'got' the environment in a big way. By the end of 2010, all Chinese buildings will need to reduce energy use by 50%.
- A development of 140 Dunster-designed homes based on BedZed's model will be built on the outskirts of Beijing this year (as reported 8/06). And earlier in 2006 Dunster unveiled proposals for a suburban extension of Changsha, the capital city of Hunan province.



Continued Work in the UK

- In the UK, he unveiled his Climate Change Shop, which showcases a package of renewable energy technologies, including biomass boilers, solar panels and micro wind turbines, that consumers can buy off the shelf, with instructions for DIY installation.
- Dunster has two major bids for 2006,--including preliminary designs for an 800 plus Zed style development in the Ashford town centre, and is waiting to hear from English Partnerships whether a separate 500 plus unit scheme will be approved in Milton Keynes.



Links

- www.zedfactory.com
- "The Impossible Come True"
<http://www.opendemocracy.net/debates/article-6-129-2470.jsp>
- <http://www.sierraclub.org/sierra/200501/dunster.asp>
- "Building a Zero Carbon World"
<http://observer.guardian.co.uk/business/story/0,,1843213,00.html>
- http://www.sd-commission.org.uk/communitiesummit/show_case_study.php/00035.html
- "Eco Warrior Upsetting the Establishment"
<http://www.taipeitimes.com/News/editorials/archives/2006/07/13/2003318606>
- Blog of a student currently living at BedZED:
<http://www.ourplanet.com/tunza/issue0102en/pages/liveframe.html>
- <http://www.sd-commission.org.uk/communitiesummit/slideshow.php?id=35&pic=6>

