

**BedZED - Beddington Zero
Energy Development
Sophie Johnson**

Project Motivations

- Joint project of the Peabody Trust and BioRegional Development Group. Designed by Bill Dunster.
 - Objective was to create sustainable living without sacrificing a modern lifestyle.
 - Wanted to include people of all incomes and ages:
 - Sizes range from studios to 4 bedrooms
 - 34 units are market-rate, 48 are subsidized rental units for middle and low income residents, 18 are converted condominiums
-

Sustainable Features

- Brownfield Development
 - Built on the site of an old sewage plant
- Low Embodied Energy
 - Used recycled, reclaimed, and/or local products.
 - 83% timber was certified; 52% of materials were within a 35 mile radius.
- Low Energy Demand
 - Heavy insulation, high thermal mass
 - Roof ventilation systems
 - Passive solar heating
 - Solar panels for electric car charging
- Combined heat and power plant
 - Ran off of tree waste
 - Not currently working

More Sustainable Features

- Green Travel Plan
 - Near public transportation
 - Pedestrian friendly
 - On-site businesses reduce travel needs
 - Car sharing option
 - Incentives to own electric cars
- Water Conservation
 - Rainwater is collected and used for toilets
 - Toilets are dual flush, fixtures are low flow
 - An onsite sewage plant used to treat the water
- Biodiversity Support and Greenspace
 - Native plants were used
 - Each original residence has a private garden or balcony.

Electricity Consumption

Daily Water Consumption

Water Heating Consumption

Conclusions

- High Demand
 - Selling prices are 10-20% higher than other real estate properties
 - Overall performance is good
 - Reduced energy and water demands.
 - There are hopes to replace the combined heat and power unit with something else.
 - The onsite sewage treatment may start back soon.
-

References

- “BedZED.” Bill Dunster Architects.
<<http://www.zedfactory.com/bedzed/bedzed.html>>. Accessed 22 Oct. 2006.
- “BedZED – Beddington Zero Energy Development.” BioRegional General Information Report 89. Energy Efficiency Best Practice Programme. March 2002.
<http://www.bioregional.com/programme_projects/ecohous_prog/bedzed/BedZED%20Best%20Practice%20Report.pdf>. Accessed 20 Oct. 2006
- “BedZED Bulletin.” Bill Dunster Architects. October 2002.
<http://www.zedfactory.com/BedZED_bulletin_1002.pdf>. Accessed 21 Oct. 2006.
- “Factsheet: BedZED.” Peabody Trust.
<<http://www.peabody.org.uk/FileStore/PressRoom/downloads/BedZEDfactsheet.pdf>>. Accessed 20 Oct. 2006.
- Slavin, Terry. “Living in a Dream.” *Guardian*. 17 May 2006.
<<http://www.guardian.co.uk/renewable/Story/0,,1776166,00.html>>. Accessed 20 Oct. 2006.
- Snell, Marilyn. “Better Homes and Garbage.” *Sierra*. January-February 2005.
<<http://sierraclub.org/sierra/200501/dunster.asp>>. Accessed 20 Oct. 2006.
- Tarnay, Stella. “Living Green.” *Urban Land*. June 2006. p. 54-61.
<<http://www.oneplanetliving.org/assets/UrbanLand.BedZED+OPL.PDF>>. Accessed 20 Oct. 2006.