

Suggest a Case Study

EXPERIMENTAL & SELF-BUILD HOUSING: TORUP ECOVILLAGE

Name of Development: Torup EcoVillage (1988+)

Location: Hundested, North-Eastern Denmark

Type of Development: Greenfield Existing Experimental

Tenancy: Owner-occupier (many self-build), co-op, rental; pop. approx 150+

History:

1988 Purchase of Dyssekilde farm near Torup, Hundested; land 13 ha; Construction from 1990; most recent information 2000-2001.

Mix of development types, now in 5 housing groups:

- The Dome group
- "Dysager" - individually designed houses, mainly recycled materials
- "Solpletten" - two- to three-dwelling passive solar/glasshouse architecture houses
- "Højager" - terraced social housing
- "Yggdrasil" - includes wattle-and-daub, timber and straw bale houses, including Denmark's largest strawbale with six small flats and common rooms.

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Case brief: http://ide.idebanken.no/bibliotek_engelsk/ProjektID.asp?ProjektID=103

Size of Development (Lots):

10-50	50-100 (2001)	100-500	500-1000	
1000-5000		5000-10000	More than 10000	Unknown

Vision: "To create wholeness out of the split lifestyle of our time, by integrating dwellings, organic food production for self-sufficiency and local business activity".

Type of Dwellings:

Detached	Attached (2 terraces)	Mixed
Walkup Units	Underground Domes	Other unclassifiable

Development's Sustainability Interest Areas:

Site Ecology:

Cleared, flat farmland: no remnant vegetation; herbaceous mix

5 ha under organic gardening and sheep grazing

Social Sustainability & Placemaking

Social & governance arrangements:

- Meetings of all members four times a year

- All members over 18 must contribute 3000 DKK (400 Euros) a year towards general expenses, and do 3-4 hours' free work per week.

Public (affordable) housing 'social housing' (terraces)

Redevelopment of large old farmhouse to community centre, offices, guest accommodation, shopfront.

Materials and Recycling

Some buildings made partly or wholly of recycled materials

Some strawbale, wattle & daub, earth construction, timber & earth shelter.

Sustainable Water Management

Locally constructed biological waste water/sewage treatment plant: waste water is pumped to the top of a an artificial hill, flowing down sub-surface, feeding plants and trees.

WWT (Bio Waste Water Treatment)



Sustainable Energy Services and Greenhouse Abatement

Energy: wind turbine 450kW, solar including Denmark's first solar collector, passive solar, glasshouse, underground housing, geodesic domes.

Transport

Railway line on boundary.

Main Sustainability Principles of Development:

Experimental approach: demonstrations are essential to facilitate change to sustainable society; considerable latitude given to owner builders (see images below)

ESD taken seriously

Community with manageable-sized subgroups.

EXAMPLES OF HOUSING TYPES (CONSTRUCTION PHASE)

The Dome group



"Dysager" - individually designed houses, mainly recycled materials



Large earth shelter house from recycled materials under construction.

Internal natural light & temperature very pleasant.



During construction, housing made from scrap materials does not look attractive, however the ambience when completed can be engaging.

Note part of "Højager" - terraced social housing in left corner or top left image.



Image below: attractive arched doorway & oven/heating system in living area of recycled brick.

"Solpletten" - two- to three-dwelling passive solar/glasshouse architecture houses



Glasshouse architecture is now quite common in Europe, as it is extremely effective for temperature modulation in cold climates.

It is now also beginning to be used in Australia, being effective also for milder but extreme range climates. See Heij House in Aldinga Arts-EcoVillage Case Study.

It is interesting that the Danes are prepared to spend large sums on substantial solar photovoltaics in a situation where their high latitude means they can only supply approximately 15% of their housing energy by this means (cf Australia where sun is so easily accessed yet until recently has been rarely used).