

## THE GREEN HOUSE: AFFORDABLE SUSTAINABILITY IN DENMARK

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Categories: <u>Energy and sustainability</u>, <u>Low</u> <u>Density</u>, <u>Project</u>, <u>Sigurd Larsen</u>, <u>Territory and</u> <u>mobility</u>, <u>Urban Paradigms</u>

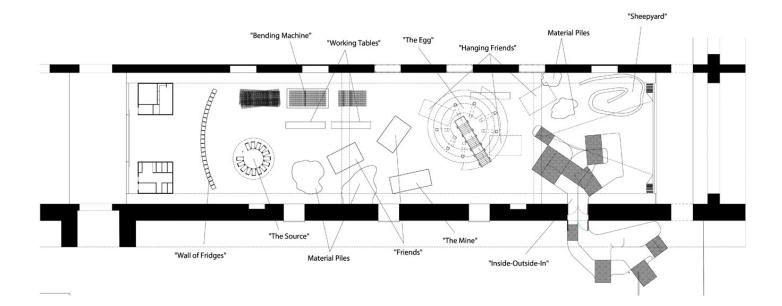
Tags: Affordable Housing, Air, Architecture&climate, Architecture&environment, Climate regulation, Controlled ventilation, Denmark, Eco Building, Ecological agencies, Ecological design, Ecological researches, Energetic Approach, Energy consumption, Energy flow, Grey wood façade, Housing, Lejre, Low-energy building, Passive house standards, Passive ventilation, PASSIVHAUS, Plywood, Plywood ceiling, Private housing, Project, Rural environment, Self-sufficient Housing, Sustainability, Sustainable construction, Territorial Approach, Timber, Urban Paradigms, Ventilation, Wood, Wood construction A series of single family houses is designed for Frikøbing near Copenhagen in Denmark. The development plan for the area has high sustainability demands for construction materials, insulation, energy and air circulation. THE GREEN HOUSE is the first of our typologies to be developed in the area and consists of a simple plan arrangement that allows for low construction costs while offering generous living spaces.





THE GREEN HOUSE, though slightly smaller in terms of floor space, offers a large 32m<sup>2</sup> winter garden at the south-facing façade of the construction. All bedrooms and a bathroom are located on the northern more intimate side of the building, while the living/dining area opens up onto the greenhouse where a south-facing mono-pitched roof ensures that a lot of light filters into the communal areas.









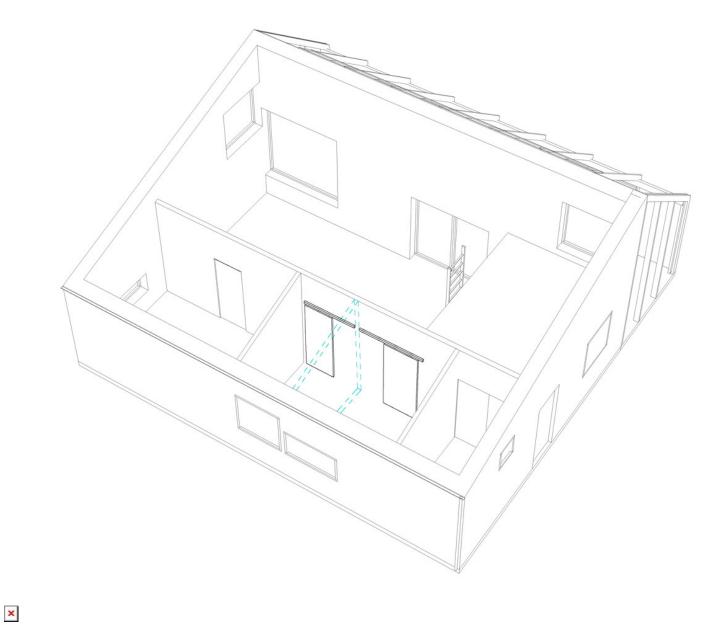
The children's room is prepared to be separated by a wall later. A mezzanine over the kitchen makes the most of the high ceilings to create a cozy cinema room, ideal for cold winter nights. Heat from the sun, retained in the winter garden during the day, acts as a buffer between inside and outside as it slowly releases heat back into the house when it gets dark.

The house is naturally ventilated with the help of a three-layered window that regulates temperature and air flow entering the building.





The inside is entirely clad with birch plywood while the external finish is made of vertical untreated larch panels which will turn to a lighter silver tone over time, allowing the house to adapt to its surroundings.



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