

Project: Sustainable environmental home: New Build

Location: Sea Road, East Preston, West Sussex

Architect: AJSalter: Worthing, West Sussex

Interior Design: Bournemouth University: KJSmith

Sustainable Ecological House

SUSTAINABLE LIFETIME HOME

The intention is to construct a sustainable environmental home that has minimal impact on the locality and eliminate as far as is practicable the negative environmental impact.

The south facing linear house's design maximises the solar gain potential for heating and energy, as well as enhancing natural lighting and ventilation. Its form and proportions respect the local architecture and responds to local conditions whilst being of our time by demonstrating key characteristics of good contemporary architecture. It is innovative and responds creatively to the demands of the environment.

The interior of the house is essentially open plan. At the heart of the 140m² house is the ground floor family area that incorporates the kitchen and dining area, the first floor sitting room has a lofted ceiling with exposed roof ties, the full height south-facing glazing units bring natural warmth and light into the interior and offer views to the sea whilst presenting minimal intrusion to neighbouring properties. A master bedroom suite on the first floor with two further bedrooms on the ground floor make the house an adaptable lifetime home - ideal for visitors, family and friends.

MODERN METHOD CONSTRUCTION

The proposed house is designed to be a low-energy home that reduces the heating requirements and CO₂ emissions to a minimum compared to conventional modern houses in the UK. Maximum energy efficiency is achieved by using locally sourced ICF block-work construction, a "green" Modern Method of Construction using materials that will last the life of the building and can then be recycled for ongoing sustainability.

The building process is quick, tidy and precise with lower equipment requirements than more traditional approaches consequently minimizing the construction impact and local disturbance and along with efficient glazing, airtight construction, and a heat recovery ventilation system the thermal insulation 'u' value of the external walls are reduced to just 0.19 W/m²K and sound insulation to -44 dB.

Other features of the house are rainwater harvesting and automatically switching energy saving lights, all of which result in a design that reflects conscious and responsible environmental forethought.

The belief is that the proposed house is a sustainable modern method home with low running costs utilizing the best affordable technology available today for a responsible and sustainable way of living whilst respecting the traditional values of the locality.