Old Quarry House

Sustainable Subterranean Living

Front elevation

Front elevation - night scene

Lounge

projectGOAL

To provide an energy efficient, low carbon family home, which would blend into the existing hillside. Using a mixture of different and contrasting building materials, sourced locally. The design had to be modern, simple and low maintenance., with plenty of light and space.

The main focus was to provide a unique family home, which serves as a showcase for the homes of the future and to alter the publics perception of subterranean living in the UK. It demonstrates how the future is here now and can be embraced.

Bedroom

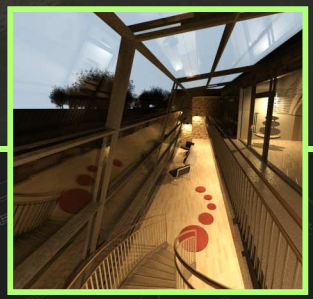
sustainableFEATURES

Constructed in recycled / reclaimed materials • PV Solar panels with energy storage and feedback loop
Solar Triple Glazing • Living Grass walls • Bio Mass Carbon Neutral Boiler • Smokeless Solid Fuel Burner
Ground Source Heat Pumps • Rain water recycling • Grey Water Recycling • Low energy electrical fittings throughout
Cat 6 gigabit home Ethernet system - Fully PC integrated & controlled home • Earth Insulated - the best natural insulator which reduces the requirement for manmade insulation

The main glazed atrium collects heat during the day, trapping it within the building. This heat can then either be circulated into core rooms or vented back out by cross flow ventilation, cooling the building down in the summer months. Each room can then be sealed off or opened up to the main atrium, allowing independent control of ambient temperatures throughout, this ensures minimal heat loss or maximum heat gain (whichever is required).

Atrium - From Grd Flr

Atrium - From 1st Flr



Lounge

sustainableHARDWARE

GROUND SOURCE HEAT PUMP

BIOMASS BOILER

PV SOLAR PANELS

RAINWATER HARVESTING

Accommodation Comprises of:

5 Bedrooms with en-suite
Atrium / Viewing Area
Lounge
Kitchen / Dining
Cinema Room
Utility
2 x Guest Toilets
Boiler Room

sustainableMEANINGFULarchitecture

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