



Scale of development

Medium

Type of development

Educational

Sustainability features



Design



Energy



Biodiversity



Water Conservation



Water treatment & discharge



Health & Wellbeing



Materials



Maintenance



Community

Features

- ❖ Sedum green roofing
- ❖ Locally sourced building materials with recycled alternatives used where possible
- ❖ Design incorporates a number of features for improving the working environment for the children

Introduction

A primary school development in Saltash which aims to “*serve as an educational tool through being an exemplar of innovative and sustainable development*”. The building was designed by ARCO2 in local materials and with large areas of glazing to allow a natural backdrop in the classroom environment.

Construction and Materials

The design is a space frame with high levels of thermal insulation. It incorporates a range of natural and local materials, namely straw, timber and lambs’ wool. The roofing is constructed with timber and a local recycled slate substitute which is made from tyre-derived rubber and recycled plastic.

The ethos of the build was to use local, natural and recycled materials wherever possible. This includes the extensive use of natural timber preservatives, second-hand temporary plywood flooring which was re-used, and the use of natural bonds in fiberboards.

Energy Efficient Design and Technology

The building incorporates high levels of glazing for thermal gain. It also has areas of flat roof which uses green-roofing technology to provide both insulation and a natural complement to the local habitat. The green roof comprises 50mm substrate with varieties of sedum.

An underfloor heating system keeps the space efficiently heated using individual room thermostats. There is also a Mechanical Ventilation Heat Recovery system to reduce heat-loss whilst efficiently ventilating and improving the air quality in the classrooms.

Community values

The design was completed using the local skills and knowledge of the community. Donations from local companies helped to make the energy saving features buildable, allowing the community to benefit from an efficient build.