

Polypipe Terrain Plays its Part in Passivhaus Development

Plastic pipework, water treatment and irrigation systems from British manufacturer Polypipe Terrain have been used throughout Qatar's groundbreaking Passivhaus-Baytna sustainable villa project.



Reducing
water usage
by 50%



Plastic pipework, water treatment and irrigation systems from British manufacturer Polypipe Terrain have been used throughout Qatar's groundbreaking Passivhaus-Baytna sustainable villa project to help meet the target of using 50% less energy and water than in a traditionally-built villa. Polypipe Terrain worked as a supply partner on the project with Qatar Green Building Council (QGBC) and Barwa Real Estate.

In terms of sustainable development, conserving water is a key issue in the Middle East.

With extremely limited fresh water resources, growing populations and urbanisation are placing increasing demands on supply, with annual demand for water increasing significantly over the last decade and projected to continue to increase. Polypipe Gulf General Manager Robin Appleby says: "The Passivhaus concept originated in Germany and focuses on energy efficiency,

looking to reduce overall energy consumption in the construction and running of the building. In the Middle East, we also have to consider water preservation. Virtually all fresh water is obtained via the desalination process, which is not only expensive, but also uses large quantities of energy and has many adverse environmental impacts, so we need to think very carefully about how we use water in the home."

A range of Polypipe products were used in the project. These included Terrain PVC-u above and below ground drainage products, used with the Terrain Pleura ventilation system.

For the hot and cold water distribution systems, Polyplumb pipework was chosen for its fast and reliable installation.

A key feature is the use of a Permavoid water treatment unit for treating foul and greywater which is then used for sub-soil irrigation.

CASE STUDY

Project

Sustainable villa project in Qatar

Client

Qatar Green Building Council
& Barwa Real Estate

Application

Pipework, Water Treatment
& Irrigation

Products

Terrain PVC-u above and below
ground drainage
Polyplumb
Terrain Pleura
Permavoid System

Robin Appleby says: "Polypipe Terrain has focused its development resources on providing piping solutions to enable the utilisation of building technologies aimed at the reduction of CO2 emissions and redirection of energy usage. In addition, the materials we use, are, in themselves, environmentally friendly. Plastics are lighter and more robust than traditional materials so you need less to do more. They help reduce energy usage because they are lightweight in production, transport and use. In contrast to traditional materials like concrete or clay, plastics are recyclable, require no quarrying activities and reduce the carbon footprint from transport."

"Our involvement in the Baytna project has provided us with a valuable opportunity to demonstrate the contribution that Polypipe products can make to sustainable development in the Middle East."

Robin Appleby,
Polypipe Gulf General Manager

