

## The Client:

Joynes, Pike and Associates:  
Consulting Engineers.

## The Problem:

A traditionally built random stone cottage consisting of two “leaves” with a variable width cavity. The outer leaves were buckling due to inadequate wall



ties and foundation movement. The cottage was cold as conventional cavity insulation could not be installed because of the variable cavity width. Foundation repairs could not be undertaken due to the danger of the walls collapsing during the work. Pressure grouting and partial demolition were ruled out as they wouldn't improve the energy efficiency of the cottage.

## The Solution:

Technitherm<sup>®</sup> was injected into the cavity to stabilise and insulate the walls, then underpinning was carried out, followed by rebuilding of the buckled wall. Not a single stone was displaced during the Technitherm installation and the process was completed with the owner in occupation.

## The Outcome:

After treatment with Technitherm<sup>®</sup> the walls were so stable that it was unnecessary to undertake any further structural repairs. Joints in the outer stone leaf were simply raked free of old mortar and re-pointed. The cost was less than 1/6th of alternative repair techniques. Technitherm also protected the cottage from dampness due to wind driven rain because of its closed cell structure. Now the owner is enjoying warmer living conditions and lower energy bills.