

## LAND DRAINAGE WORKS AT SHORE'S GARAGE, NEW TREDEGAR

In 1995, two properties adjacent to Shore's Garage were affected by severe internal flooding, which had the potential for fatal consequences.

It is understood that the flooding occurred as a result of a poor intake structure, located on the upper reaches of a watercourse, becoming blocked with debris creating an upstream dam effect. Eventually, the blockage released itself creating a surge of water that ultimately reached the properties at Shore's Garage.

The project was funded with an 85% grant from WAG and was subject to competitive tendering with Alun Griffiths (Contractors) Ltd returning a lowest tender of £59,965.66 in March 2007.



*Inside the chamber – silt to half depth of pipework*

The proposed works included the complete renewal of the upper intake structure and amendments to the lower structure.

During the works, a supposed velocity-breaking chamber (above) became evident between the two structures. This was found to be fully silted (a situation that is perceived to have existed in 1995). Health and safety hazards prevented the removal of silt by mechanical excavator, since the structure is a confined space. The removal of silt was eventually carried out by specialist contractors utilising a "Vactor" device from outside the chamber.

The final out-turn cost of the scheme was £141,279.46. The extra cost of the project is attributed to the de-silting exercise and re-laying of a surface water system at the lower site which was totally unforeseen.

The works at both lower and upper sites were contained wholly within their immediate localities. The design team were only made aware of the mid chamber during the construction phase.