

# Borehole Sources Drinking Water Quality Regulation

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# Scope

- What is DWI?
- Regulatory framework for water quality
- Borehole construction and water quality regulations
- Provision of information to local authorities

# The Drinking Water Inspectorate (DWI)

- Drinking water quality regulator for public supplies in England and Wales
- Supervisory role with respect to private water supplies (PWS)
  - Technical advice to local authorities (LAs)
- Technical advice to Government on both public and PWS
- Reports to the Secretary of State, Welsh Government and the European Commission on compliance with standards for both public and PWS

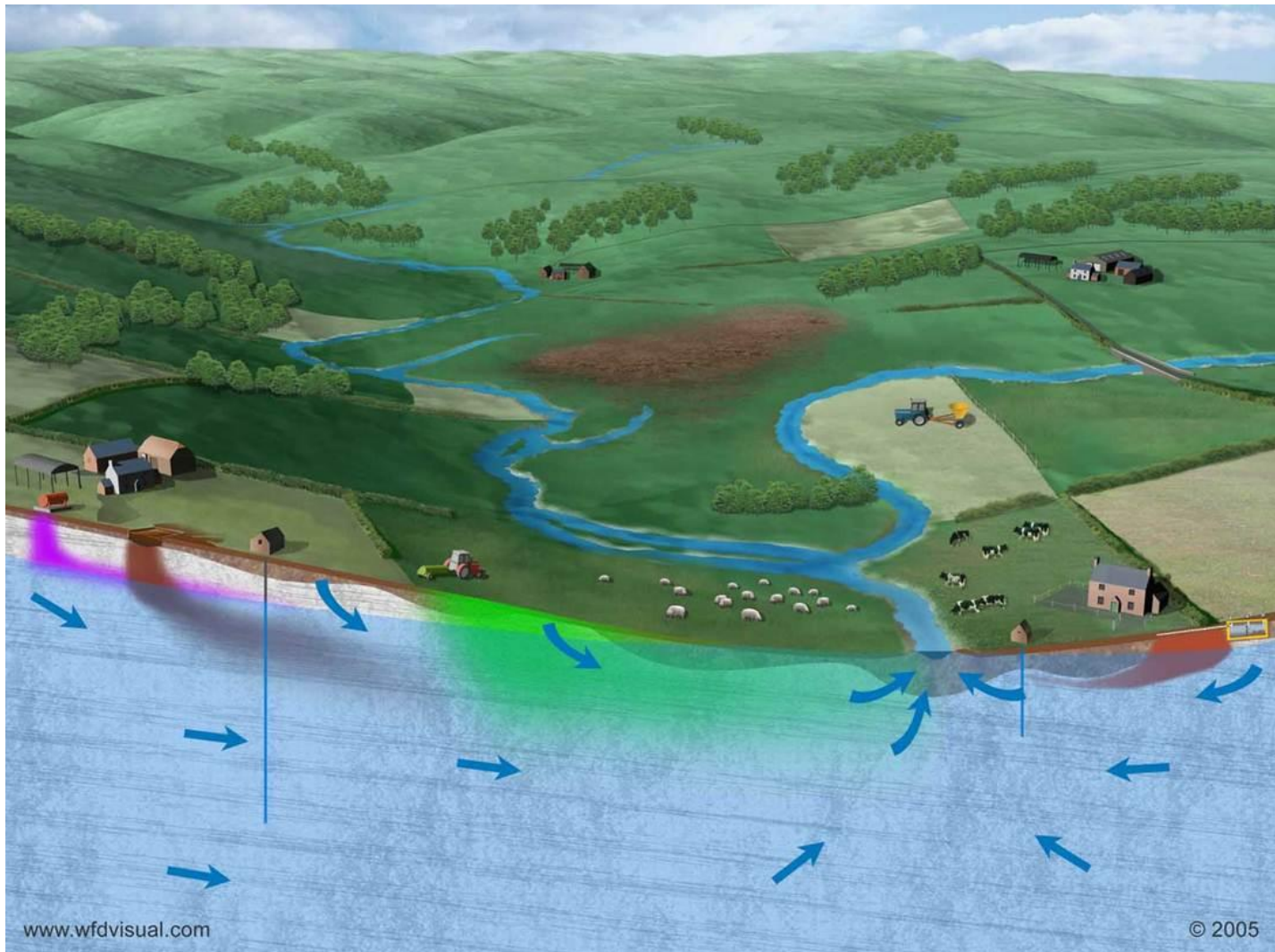
# Legislation

- Drinking Water Directive
  - Directive 98/83/EC
  - Protect human health and ensure wholesomeness
- Water Industry Act 1991
  - Primary Legislation
  - Transposes EC Directive into UK law
- Private Water Supplies Regulations 2009
  - Secondary Legislation
  - Details water quality standards etc

# WQ Legislation and Borehole Construction

- Legislation requires water to be safe for human consumption
- Powers to Gov. to ensure this
- Where water is not wholesome it is typically due to:
  - Poor source location
  - Poor construction
  - Lack of appropriate treatment (and advice)
  - Compounded by lack of notification of PWS to LAs

# Location



# Location



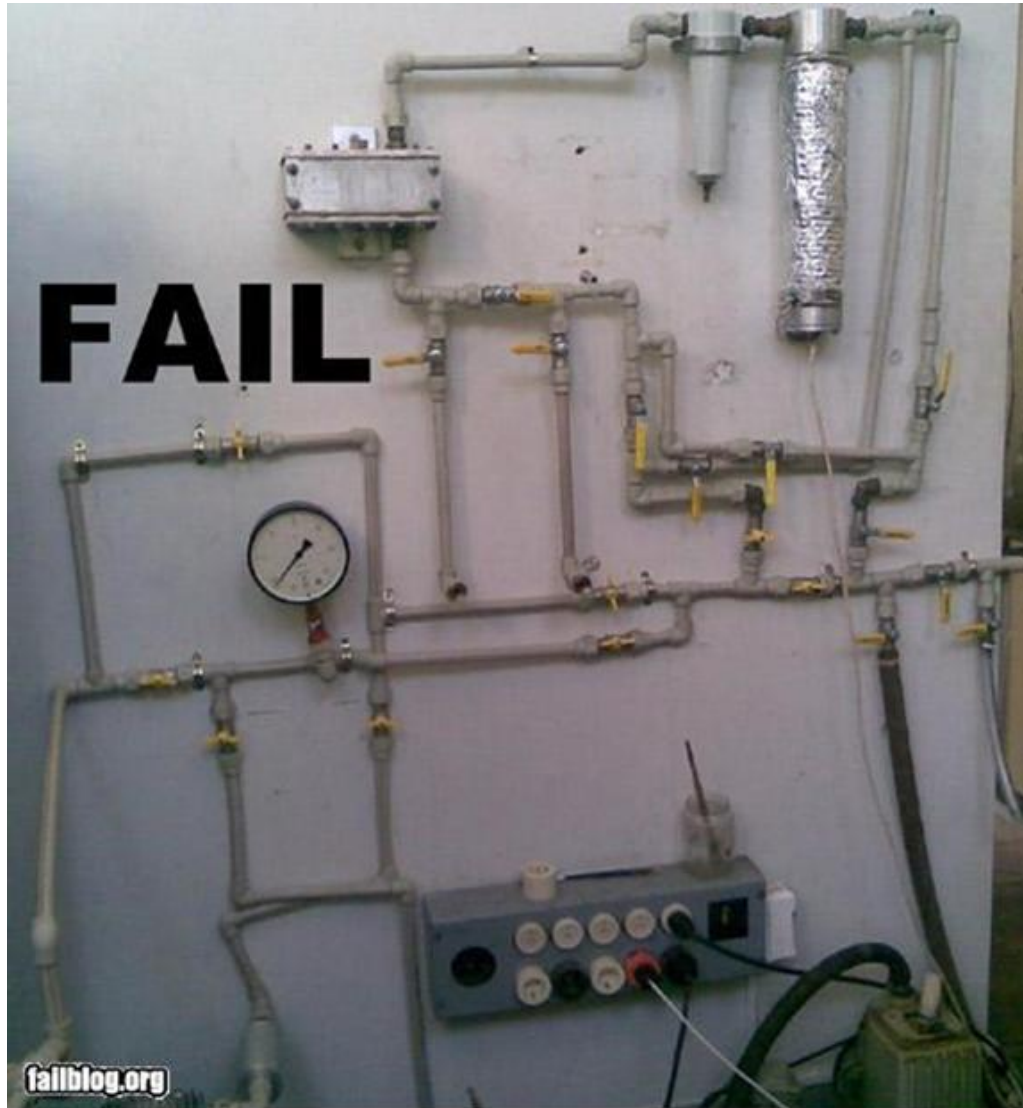
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# Construction





# Treatment



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# WQ Legislation and Borehole Construction

- What happens when WQ is impacted due to borehole location, construction or related treatment installations?
- Depends on type of supply
  - Reg. 8, 9, 10 or Single Domestic Dwelling
- Typically requires LA to be aware
- LA powers
- Impact on drilling and installation industry?

# Case Study

- Commercial food manufacturer
  - Located on an industrial estate with solvent using industries
  - Solvent contamination (TCE) of groundwater
  - Recent work to extend warehousing and install a new standby borehole
  - No abstraction licenses
  - Cross-connection between drinking water and raw supply
  - Personal fine for MD of company

# Ideal Situation

- Holistic approach, considering all risks
  - Source to tap
  - Appropriate pre-drilling study to identify catchment risks
- Early liaison with LAs
- Appropriate construction and installation
  - Borehole
  - Treatment systems

# Information Provision

- Provision of information to LAs
  - Water Industry Act, S.85
    - Local authority power to obtain information for the purposes of functions under Chapter III.
    - (1) Subject to subsection (2) below, a local authority may serve on any person a notice requiring him to furnish that authority, within a period or at times specified in the notice and in a form and manner so specified, with such information as is reasonably required by that authority for the purpose of exercising or performing any power or duty conferred or imposed on that authority by or under any of sections 77 to 82 above.
    - (2) The Secretary of State may by regulations make provision for restricting the information which may be required under subsection (1) above and for determining the form in which the information is to be so required.
    - (3) A person who fails without reasonable excuse to comply with the requirements of a notice served on him under subsection (1) above shall be guilty of an offence and liable, on summary conviction, to a fine not exceeding level 5 on the standard scale.

# Questions?