Water Supply (Water Fittings) Regulations 1999
Guidance Note 7 (for Internal Reference Only)

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Guidance for Determining Suitable Pipes for use in Contaminated Land

1. The purpose of this Guidance note is only to provide information in choosing the appropriate pipe material to be used to carry potable drinking water installed in land that is regarded as contaminated. The determination of what constitutes contaminated land is a matter for WRAS. See WRAS Guidance Note 9-04-03.
2. There is in this document **NO** consideration given as to health and safety over the installation methods adopted in laying pipes and services this is considered beyond the remit of water regulations.
3. Regulation 4 of The Water Supply (Water Fittings) Regulations 1991 stipulates that every water fitting shall be of an appropriate standard and be suitable for the circumstances in which it is used. It is necessary therefore to ensure that any water pipe used to convey potable water with not be detrimentally affected by the ground conditions in which it is placed.
4. Every water fitting shall be of the appropriate quality and standard and be suitable for the circumstances in which it is used.
5. For the purpose of determining that the pipe is of a suitable standard it should bear an appropriate CE markings in accordance with Regulation (EU) No 305/2011.
6. All fittings and materials must have certification from an appropriate approved testing body.
7. Northumbrian Water's policy is to ensure that all fittings installed shall comply with Regulation 4 and therefore all fittings will be listed in the directory.
8. Northumbrian Water policy is where there is any risk of contaminated ground soil samples must be taken to determine the nature and concentration of any contaminant
9. In accordance with the WRAS Guidance Note 9-04-03 The Selection of Pipes to be laid in Contaminated Land, the following is their advice.

Type of Contaminant	Nature of Contaminant	Examples of Location	Suitable Pipe Material
None	None	Greenfield Sites	No Special Requirements
Flammable	Methane	Waste Sites	Metal Pipe when dealing only with Methane
Toxic **	Cyanide, Lead Antimony Heavy Metals	Heavy Industry	Metal or Plastics
Organics	Tars, Phenols Hydrocarbons	Garages Petrol stations coals and Gas works	Metal Pipes **PE/AL/PE** *(Barrier Pipe)
Corrosive	Sulphates High and Low Ph	Slag Sites Old Brickworks Ash	Plastic Pipe Plastic coated Copper
Organic and Corrosive	Determined from Site Investigation		Wrapped Iron **PE/AL/PE** *

- **As with all of the principal manufacturers it is important to realise that the physical characteristics of the pipes and connection methods are unique to each. Therefore the pipes and connectors must come form the same manufacture . They are not interchangeable.**

10. For the purpose of simplicity it is acknowledged that the vast number of cases the contaminant falls into 2 categories organic and corrosive. At present NWL do not request information on inflammables (i.e. Methane). It is therefore recommended that the following should apply.
11. Corrosive contamination sulphurs and pH's high acidic and alkaline use plastic pipe (PVC or Polyethylene mains and Polyethylene for services)
12. Organic contamination i.e. petrols tars phenols and PAHs ETC use metallic pipes (Iron for mains Copper for services)
13. For any further queries contact Northumbrian Water Regulations Department.

- ** *It should be recognised that the concerns over toxic substances are more related to health and safety issues surrounding the installation of pipes and fittings rather than any detrimental reaction with the pipe material.*