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## **DESIGNING DRAINS AND SEWERS FOR BROWNFIELD SITES**

Plastic drain and sewer pipes and inspection chambers have been widely used in construction for many years in the UK and are suitable for all greenfield, as well as most brownfield, sites.

In the UK, 184,000 new homes were built in 2016/2017. Currently it is estimated that over 70 per cent of new housing is built on brownfield sites and this is set to increase. In its report 'State of Brownfield 2018' the Campaign to Protect Rural England (CPRE) estimated from the local authority brownfield registers that came into operation in 2017 that one million homes could be built on 18,000 brownfield sites around the UK. It is certain that brownfield sites 'have a significant contribution to make in meeting the UK's housing needs.'

The BPF Pipes Group has issued guidance on the use of plastic pipes in brownfield sites to support drainage designers and housing developers.

The guidance includes a flow diagram, setting out the steps needed to consider the effect of contaminants on ingress to drains and sewers. Plastic pipes can be used for previously developed sites where the appropriate remediation measures have been taken to protect human health from direct contact with the soil and to protect the quality of wastewater entering the drainage system.

A second flow diagram guides the reader in the selection of pipe material. Plastic pipes for drains and sewers are manufactured from unplasticised polyvinylchloride (PVC-U), polypropylene (PP) and polyethylene (PE). These materials are naturally resistant to inorganic compounds such as acids, alkalis, sulphides, chlorides, sulphates and cyanide. Their properties are not affected by the presence of metals in the soil. Where organic compounds are present in the soil, guidance is given on the type and level of contaminants which could affect the use of plastic pipes for drains and sewers. Even where high levels of organic contamination are a legacy of the former site use, amendment of the remediation plan before work commences to

remove the source of the contaminant or the pathway to the pipework may often allow plastics pipes to continue as the material of choice.

The provision of clear guidance to help those developing brownfield sites means asset owners can be reassured that waste water systems on such sites can be correctly installed first time.

The BPF Pipes Group website provides advice and guidance on many plastic pipe applications, including pipes for contaminated land at [www.bfppipesgroup.com/support-downloads/guidance-notes/](http://www.bfppipesgroup.com/support-downloads/guidance-notes/) and it is a useful reference base for those working with plastic pipe systems across all utilities, construction and plumbing and heating.

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PHOTO-CAPTION: New guidance from the BPF Pipes Group aims to help those specifying for brownfield sites

**BPF Pipes Group contact:**

Caroline Ayres, BPF Pipes Group, 01932 343409, [caroline.ayres@bfppipesgroup.com](mailto:caroline.ayres@bfppipesgroup.com)

**Media contact:**

Bridget Summers, Footprint PR, 01723 447424, [bridget@footprintpr.org.uk](mailto:bridget@footprintpr.org.uk)

**About the BPF Pipes Group**

Part of the British Plastics Federation, the BPF Pipes Group is a trade association representing manufacturers and material suppliers of plastic piping systems across the UK. Committed to sustainable construction, its aims are to provide a forum for the exchange of technical expertise between member companies and to promote the importance of plastic as a pipework material, for the full spectrum of above and below ground, pressure and non-pressure applications. It also plays a key role in initiating and disseminating research and informing and influencing the standards bodies pertaining to plastic pipe systems. It works closely with the BPF and TEPFPA, the European Plastic Pipes and Fittings Association.