

7 March 2018

PVC-U RAINWATER SYSTEMS FOR SUSTAINABLE HOMES

By Steve Skeldon, Chair of Soil and Waste Applications, BPF Pipes Group

It may well be time for a change of mindset when it comes to the selection of gutters, downpipes and fittings for rainwater use in domestic housing.

Previously, plastic pipes were considered to be the economical option, but not necessarily the most sustainable or most visually attractive choice, particularly on older or more traditional homes. However, they have a number of attributes that should be seriously considered when selecting the right product for contemporary and existing houses – and, surprisingly, for those wanting to construct a home with low embodied energy.

The Government is encouraging the building of truly sustainable homes, through initiatives such as BREAM, Every Home Counts and the Building Performance Network. The focus now is quite rightly on the major users of energy and areas which will make the biggest difference to our energy and resource use. Building a truly sustainable home is about much more than just the building fabric and energy design in the property. It is about lifestyle choices, in how rainwater is collected and utilised, in responsible energy use and in permeable paving to prevent flooding events in urban areas.

The sustainability question

The fact is that aluminium, copper, stainless steel, lead and titanium zinc are all derived from the earth's resources, and so require considerable energy to be extracted and then manufactured for rainwater pipes and guttering purposes. All metal pipes cause greater depletion of fossil fuels than polymer-derived plastic. When the overall impact of PVC-U rainwater systems (incorporating gutters, downpipes and fittings) is considered against other materials, taking into account raw material extraction right through to the processing of waste at the end of life, its impact on the environment compares favourably in terms of air quality (CO₂ emission and photochemical oxidation), resource management (mineral depletion, fossil fuel use) and water quality (phosphate levels, eutrophication, acidification). TEPPFA, the

European Plastic Pipes and Fittings Association, commissioned studies by the Flemish Institute for Technological Research (VITO) to assess the environmental impact of a product and benchmark it against other materials for the same application. The resulting Environmental Product Declarations (EPDs) were independently validated and presented in a standard format for a wide range of products. The TEPPFA EPD found that PVC-U pipes for rainwater applications compared favourably to other materials. <http://www.teppfa.eu/pvcu>

Which is easier to work with?

For a self-builder there is no question about it: plastic pipes are light and easy to handle, simple to install and can be put in place without the need for a professional builder. They can also be supplied in a huge range of colours and in continuous lengths, and so offer lots of options for enhancing the appearance of a contemporary home. They have no seams and need no paint, with much less chance of corrosion over time. They are less likely to show dents, blemishes and scratches than metal pipes. They have a lifespan of up to 50 years, which compares well with other materials that require much more regular maintenance (eg, anti-corrosion painting) during their lifespan.

Today, more than ever, homeowners and self-builders are seeking sustainable homes with low environmental impact and responsibly sourced products. Plastic rainwater systems offer affordability combined with sustainability. BPF Pipes Group manufacturers contribute to the bank of practical knowledge available to today's architects and house builders, especially those looking to construct homes with low embodied energy.

ENDS

PHOTO-CAPTION: PVC-U has some surprisingly good credentials for rainwater systems in house-building

Contacts

Media information:

Bridget Summers, Footprint PR, 01723 447424, bridget@footprintpr.org.uk

BPF Pipes Group:

Caroline Ayres, BPF Pipes Group, 01932 343409, carolinea@plasticpipesgroup.com

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 TEPPFA, the European Plastic Pipes and Fittings Association.