

SUDS and the Solutions...

The importance of SUDS (Sustainable Underground Drainage Systems) demands that only suitable porous materials are specified for both new build schemes and also when re-laying existing areas.

With limited land space and the need for more housing this means a greater emphasis is being placed on how we handle flood management.

Serious flooding in 2007 in the UK resulted in the loss of life, disruption of people's lives and an estimated damage of £3 billion.

Drains throughout the UK were built many years ago and were not designed to cope with increased rainfall caused by climate change. A major factor to this problem has been the increase in homeowners paving front gardens increasing the risk of flooding due to the overloading of the drainage systems.

The harm caused by paving gardens is not limited to just flooding. Hard surfaces such as concrete and asphalt collect pollution such as oil, petrol, brake dust etc... that washes off into the drains. Many drains carry rainwater directly to streams and rivers where the pollution damages wildlife and the wider environment.

In older areas the rainwater may go into the foul water sewer which normally takes water from household bathrooms and kitchens to the sewage treatment works. These overflow into streams and rivers in heavy rainfall. As more water runs into foul sewers from impermeable paved areas, there are more frequent overflows, passing untreated sewage into watercourses.

Replacing grass with concrete and asphalt surfaces means water does not soak into the ground, this reduces the amount of water into the water table.

How do SUDS work

Sustainable drainage systems such as **easylyay™** combine environmentally friendly elements to harness surface water run off to the nearest possible soak away before entering the water table.

easylyay™ is an innovative porous paving solution that drains water straight back to the water table or drainage system.

By using a patented design, **easylyay™** can be installed both as a tile (450 x 450 x 30mm) or poured for larger areas. The product consists of recycled tyre crumb, mixed with a specially formulated resin and a range of pea gravel finishes to suit, using a special UV protected resin.

In either product form, the end result is an aesthetically attractive, hard wearing solution to all paving, footpath, roof patio's and gardens, tree pits to name but a few. **easylyay™** offers significant savings in terms of labour time and cost compared to similar porous solutions and is environmentally friendly by utilising large volumes of recycled tyres which has previously been a real concern for the environment agency.

Local authorities look favourably on developments that utilise SUDS. A new planning policy statement requires new developments to incorporate sustainable drainage wherever possible and the Association of British Insurers is campaigning for reduction in premiums for schemes that incorporate SUDS.

Porous surfaces work by allowing water to soak through the surface into the ground below. Materials used in permeable construction are different to those used in impermeable construction.

For porous construction, different materials are required that allow water to pass through. Sub Base's for porous construction are known as 4/20 (clean gravel) or type 3 sub-base. These are described as open graded and mainly consist of larger pieces of stone that have space to store water. The open graded materials must still be compacted in the same way as normal sub-base to provide a firm foundation but will have voids between the pieces of stone.

Legislation

As of 1st October 2008, planning permission will be required to lay traditional impermeable driveways that are over 5 square metres to combat uncontrolled runoff from the front gardens to the road.

Planning permission will not be required if a permeable paving system such as **easylyay** is installed or if there is sufficient soak away to ensure that runoff from non-permeable surfaces does not go directly onto the road.

Easylyay meets all the requirements and has an added bonus in that it utilises large volumes of recycled tyre crumb to allow porosity.

With over 48 million tyres disposed of annually in the UK and strict legislations on landfill, **Eco Composite Recycling Ltd** are developing patented products to meet the needs of industry and reduce climate change.

Summary

Eco Composite Recycling Ltd (ECR) are pioneers in recycling. With over 30 years experience of designing recycling process' for major business'. ECR are now developing environmentally sustainable products that are commercially acceptable to industry