

# Taking the lead in flood management

In December 2008, the government announced local authorities are to take the lead role in managing flood risks. With some parts of the country still recovering from the floods of July 2007, it is clear that implementing prevention measures is crucial. Andy Doel, managing director of Lytag, explains how material choice in landscaping can help deliver efficient drainage and contribute to the management of flood risk.

**A**gainst the background of recession, it is more important than ever to avoid the considerable cost implications of flooding. July 2007 cost the country around £3 billion, and the resulting message from the public comes across loud and clear, with a report published by the Association of British Insurers in July 2008 showing that 96% think improving the UK's drainage system is the most important first step to flood prevention.

The flood prevention measures documented in the media are often those that are the most dramatic and which require huge investment, but there are number of simple quick wins that can also make an important and effective contribution.

Using materials that can facilitate efficient drainage in landscaping projects is a simple way that the public sector can help to mitigate the risk and deliver high quality in the long term.

One material that can help in creating efficient drainage, is secondary aggregate. For example, LYTAG lightweight aggregate is one such material that will quickly soak up rainfall and drain excess water from the surface, and it is a solution that has been adopted by a number of high profile projects including the Millennium Stadium and Cowdray Park.

The material's honeycombed structure can absorb around 20% of its own weight in water and also allows much more water to flow through the drainage system, which means grassy surfaces recover quickly after wet weather. In addition, the moisture absorbed is gradually released back into the soil, helping to keep surfaces greener for longer during dry spells.

In addition to helping create a controlled environment, using a lightweight aggregate as part of a drainage system provides some important advantages in terms of logistics and performance. LYTAG lightweight aggregate, for example, is around 50%

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**Secondary aggregate is used as a efficient drainage medium in some high profile venues.**

lighter than natural aggregate making it a cost-effective option due to the higher volume of material per tonne, hence greater volumes per vehicle delivery. For the contractor, the reduced weight makes it easier and safer to handle than heavier aggregate.

Secondary aggregate has been used as a drainage medium in some of the UK's highest profile venues such as the Millennium

Stadium in Cardiff, where the pitch needs to be maintained to the highest standards to reflect its role as the host of top level, international competition. This means having a drainage system that is both efficient and reliable is crucial to ensuring that the pitch remains playable in the frequently cold and wet UK weather conditions.

By using LYTAG lightweight aggregate, Cardiff Millennium Stadium had an improved pitch drainage system, meeting the needs of a world-class facility, and the material's lightweight quality allowed an innovative removable pallet design to be put into practice.

Another prestigious venue where secondary aggregate has been used to



improve drainage performance is world-renowned polo club Cowdray Park, which used around 330 tonnes of 4-8mm LYTAG lightweight aggregate to allow quick and even drainage over approximately ten hectares of grounds.

On both these projects, sustainability was a key consideration and, as LYTAG lightweight aggregate is wholly manufactured from pulverised fly ash, the by-product of coal-fired power stations, using the product helps to divert thousands of tonnes of waste from landfill and also reduces demand on natural quarried materials.

Heavy rainfall cannot be prevented, but there are steps that we can take to prepare; measures that can help avoid the inconvenience and financial burden that flooding brings. And since December, it is the duty of local authorities to lead the way. Using materials such as secondary aggregate that can facilitate efficient drainage in landscaping projects is a simple way that the public sector can help to mitigate the risk and deliver high quality in the long term.

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