



1,500L Platin Tanks, North West Bicester, Oxfordshire

Case Study



BACKGROUND

Ninety one brand new, true zero-carbon homes have been built in Bicester, Oxfordshire, as part of the UK's first ever eco town, North West Bicester. To reach Code for Sustainable Homes Level Five standards, developers A2Dominion needed to limit each property's potable water consumption to just 80 litres per person per day. Flooding protection was also a key concern, so they enlisted the expert help of civil engineering consultancy Infrastruct CS Ltd to specify a water management solution.

SOLUTION

The Infrastruct team worked with Graf UK to design, install and commission a complete rainwater harvesting and stormwater management package for each of the 91 properties – consisting of a 1,500L Platin tank and a soakaway made of Rain Bloc modules. The overflow pipe from each Platin tank feeds into individual soakaways, where water is gradually released back into the underlying ground conditions in a controlled way – reducing pressure on the drains and minimising flood risk. The Rain Bloc black modules have a lorry-bearing capacity of 60 tonnes with a 500 mm earth covering. Weighing just 19 kilograms, the modules are also easy to install and are quick to link together using simple connectors.

RESULTS

The complete rainwater harvesting and stormwater management systems from Graf UK are now up and running in the homes – helping them achieve Code for Sustainable Homes Level Five standards and minimise flood risk. The Platin tanks sit out of sight underground, and use submersible pumps to feed collected rainwater into a header tank in the loft of each home. The header tanks then gravity-feed the water to the properties' bathrooms, where it is re-used for sustainable toilet flushing.

“ The system is engineered to use hardly any mains water, only diverting to the mains supply if the tank is empty (for example, after a particularly hot, dry spell). This not only helps save water, but also keeps bills down for homeowners and tenants. Graf UK is a company that's local to us, and we've worked with them several times before – so we knew they could help us find the right water-saving solution to meet the needs of this unique project. Tim Trotman, Director at Infrastruct CS Ltd ”