



## Lillington Road, Leamington Spa

## Basement Flooding



The house is an imposing newly built detached property with a large basement designed to house a cinema room, bar, gymnasium and wine cellar and which also houses the plant room for this substantial home. Although the basement was originally waterproofed, complete with a drainage system around the external perimeter, water ingress was flooding the basement regularly after heavy and prolonged periods of rainfall. Two sump pumps, which had been retro-fitted into the floor of the basement, were in daily use and failing to prevent flooding. In desperation the client was considering adding another six pumps. When he heard about ECO-90™ he contacted us and we were delighted to solve his problem.

### INTRODUCING THE ECO-90™

- Deals with storm water at source
- Unique design that forms a differential hydraulic head to move water down
- Moves ground water to multiple unsaturated soil stratas
- Installed to depths of 12 metres plus
- No moving parts, no external power needed, self-cleaning sealed system
- A CARBON NEGATIVE drainage system
- Now with over 300 successful installations

### ECO-90™ Technical System Specification

We were asked to design a ECO-90™ system to resolve the flooding. We installed an array of 134 ECO-90s™ to depths of up to 12 metres around the perimeter of the property. It took just two weeks from the beginning of the installation for the existing sump pumps to dry out and be removed. The ECO-90™ system cancelled out the hydrostatic pressure around the basement walls and floor, and there was a subsequent 1500mm drop in the level of ground water leading to a completely dried out basement within three months of our installation.

**£500,000**

### PROFESSIONAL INDEMNITY COVER

Where we supply and install an ECO-90™ engineered drainage solution we offer an insured warranty, covered by up to £500,000 Professional Indemnity cover. Higher cover is available as required.

In some instances, such as natural turf where we offer our own ECO-90™ drainage design solution and install, we offer a two year defect warranty.

This means we will return to site to remedy any problems at our expense.



## The ECO-90™ Transforming Drainage Design & Scope

The ECO-90™ is an internationally patented product with unique characteristics that solve a multitude of drainage problems. We launched it in the UK under licence in 2012, since when we have completed over 300 successful installations, from commercial and residential new builds to car parks and cemeteries. We also have our 'Hall of Fame' installs.

Made from high density polyethylene (HDPE), standard drainage extrusion, the unique ECO-90™ design uses a multiple open chamber system that creates lateral (horizontal) water transfer to soil stratas to a depth of over 12 metres (go to [www.groundwaterdynamics.co.uk](http://www.groundwaterdynamics.co.uk) for full information).

Our ethos is that the time has come for a new drainage solution that:

- does not move large amounts of storm water from A to B in conventional horizontal pipes creating problems “down the line”, including the flooding of water treatment facilities that then discharge into critical marine, river and stream ecosystems
- improves the carbon footprint by removing external energy requirements to deal with storm water, with no need for pumps moving water or the energy requirements of treatment works
- stimulates plant growth, creating ECO-90's™ CARBON NEGATIVE standard
- does not take storm water directly off the surface into deep borehole systems creating possible pathways for contaminants.

Instead, we have introduced a drainage system that takes ground water, indirectly, laterally through the ground into an installation of multiple ECO-90s™, **changing the drainage characteristics of soils which previously were unable to accommodate positive infiltration rates.** That's the game changer.



Edgbaston CC



Gleneagles



Royal Ascot



Silverstone

“The ECO-90™ design requires no maintenance, has no mechanical moving parts and needs no external energy requirement to function. It uniquely harnesses soil based gravitational pressure, porosity and waters enthusiasm to keep on moving.”

“The unrivalled result is that a ECO-90™ installation uses the entire volume of soil to a depth of 12m below the ground for water drainage, creating a massive volume of earth to deal with storm water. For new build sites this results in less area for drainage, more for building and higher GDVs.”