

## Motor Point, Stockton-on-Tees

## New car park drainage



Motor Point have recently acquired the former Jennings Ford car dealership which is undergoing redevelopment into a Motorpoint Car dealership, similar to the above. Much of the existing main car parking areas are to be replaced with hardstanding surfaces ready for the opening of the site in early 2021. The sizeable hardstanding areas will be drained by a GD90™ system incorporating a storm water trench. All storm water will be dealt with on site.

### INTRODUCING THE GD90™

- 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

### GD90™ Technical System Specification

#### Based on the Drainage Design Statement

Project:	On-site drainage for new car park
Impermeable area:	5,811m <sup>2</sup>
Maximum storm water event:	1 in 100 year plus 30% addition for climate change
System design:	Storm water trench supported by GD90s™
Trench size:	Length 180m; Width 1.8m; Depth 1.2m; Capacity: 155m <sup>3</sup>
GD90™ system size <sup>1</sup> :	Array of 900 secondary GD90s™ at depths of 3m below the trench base.
Total GD90™ rod lengths:	2,700m
Consultant engineer (providing Drainage Design Statement): EC49	

<sup>1</sup> A Primary GD90™ is either 6 or 12 metres in length, a Secondary GD90™ is either 1.5 or 3 metres in length.

### £2 MILLION WARRANTY

Every GD90™ installation has £2 million of Professional Indemnity cover. We can increase this for individual projects.

## The GD90™

### Transforming Drainage Design & Scope

The GD90™ 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 GD90™ 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 GD90'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 GD90s™, **changing the drainage characteristics of soils which previously were unable to accommodate positive infiltration rates.** That's the game changer.

"The GD90™ 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 GD90™ 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."



Edgbaston CC



Gleneagles



Royal Ascot



Silverstone