

Consolidation & Working Platform Design

Drainage Layer, Pozidrain G, Magna Park, Lutterworth, UK



Project Description

Magna Park (Lutterworth) provides a high-quality business environment specifically focused on logistics and distribution. Covering over 550 acres, it is bounded by the M1, M6 and M69 motorways making it the first choice for logistics due to its strategic position in the centre of the country.

Home to 29 different occupiers, with 8.3 million sq ft (771,155 sq m) of sustainable logistics floor space in 32 buildings, Magna Park Lutterworth is Gazeley's flagship distribution park. Since the development of the Park in early 1988, Magna Park's continuous growth has contributed significantly to the development of the local economy and infrastructure.

Gazeley appointed Hydrock Consultants to design Magna Park South enabling works and commissioned Mick George to complete all required earthworks operations on this ground breaking development widely regarded as Europe's premier logistics location.

The Challenge

A substantial amount of earthworks and ground improvement was required to enable construction of the distribution centres. The challenge was to accelerate consolidation, reduce construction time and achieve carbon savings by eliminating the use of drainage stone. An innovative and cost effective design solution was needed to enable fast consolidation. A large proportion of this development was constructed on weak ground where it was necessary to first drain the sub-formation using prefabricated vertical drains (PVDs). The geosynthetic solution required a high performance geocomposite drainage layer to discharge the water from the PVDs.

Project Information

Client Gazeley (GLP) Ltd

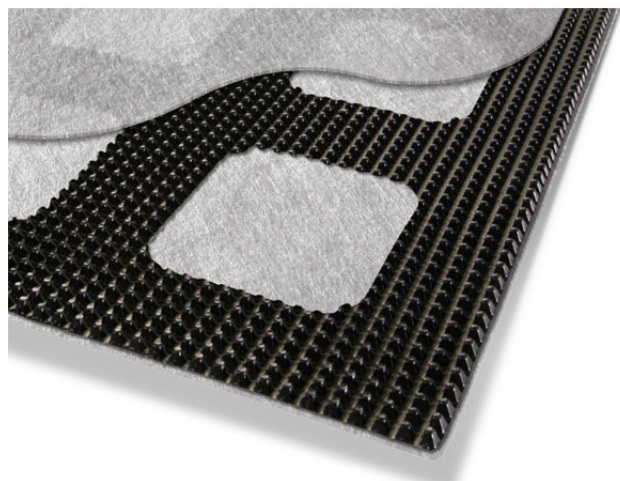
Contractor Mick George Contracting Ltd

Consultant Hydrock Consultants Ltd

Products Pozidrain G4SD

Quantity 400,000m²

- Benefits
- High flow capacity in both directions
 - Accelerated consolidation
 - Large rolls for fast installation
 - Saving 80,000m³ of drainage stone
 - Substantial 86% CO₂ saving



ABG Pozidrain G
Geocomposite specifically designed
for consolidation applications

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The Solution

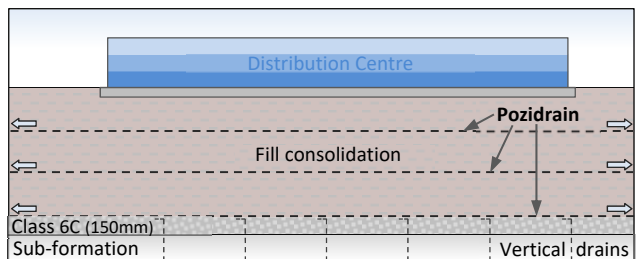
The designer Hydrock, working with ABG, developed a geosynthetic solution that would provide adequate drainage to ensure consolidation of the sub-formation and the embankment fill.

The **Pozidrain G4SD** geocomposite drainage layer was used to provide drainage above the 150mm Class 6C platform and PVDs at a 1.5m grid spacing. Pozidrain was also installed within the embankment fill at 3m vertical spacing to provide accelerated consolidation.

The use of geocomposite instead of drainage stone in this design resulted in **86% or 2,998 tons of CO₂ saving**.

The ABG Service

ABG provided technical advice and design assistance. On this large project it was important to schedule deliveries to ensure efficient installation and meet the required completion deadline.



Multiple Pozidrain layers ensured accelerated embankment fill and sub-formation consolidation



Magna Park Lutterworth



Embankment fill installation on top of Pozidrain

Contact ABG today to discuss your project specific requirements and discover how ABG past experience and innovative products can help on your project.