

Stallingborough DN41 8DD - KIA CAR PARK

Project	JJM2496 - Car Distribution Centre
Location	Stallingborough
Client	nmcn
Key works delivered	Ground Stabilisation
Project Duration	August 2020 - 4 WEEKS
Stabilised Area	5,500m ²
Earthworks volume	2,750m ³



PROJECT OVERVIEW

Area of car park with poor CBR test results <10%. >30% min requirement for parking facility

PROJECT CHALLENGES

Ground water and poor clays posed a problem for traditional excavate and imported fill to achieve the required CBR %.

Project programme and site constraints on vehicle movements would not be met with traditional method of construction either.

Our design would need to consider the effect of Ground Water on the construction make up.

ENGINEERING AND SOLUTIONS TO OVERCOME THE CHALLENGES

In order to overcome the project challenges, our team:

- Carried out trial holes and recovered samples of the materials present to establish the depth of clays and the depth at which the ground water is located.

- Laboratory testing and on site CBR testing enabled JJMac to generate a very efficient design solution for the pavement and dealing with the ground water for our client
- Materials that would ordinarily be sent to landfill and be replaced with imported aggregates were re-engineered in-situ.
- The design was agreed with our client to Engineer and Stabilise 800mm in three layers. Sub Formation 300mm lime and cement. Sub-Base 250mm Lime and Cement. Base layer 250 with lime and cement. All three layers combined created a very robust pavement which yielded >50+% CBRs across the site.
- The Earthworks included excavating and side casting the two top layers to allow the sub formation to be stabilised. Subsequent layers were replaced and Stabilised in-situ
- Final trimming and levelling was carried out by our GPS enable dozer
- Regulating layer of 75mm type1 was replaced by the Barber Green and Tarmac laid directly on the tye1

Progress In Motion



BENEFITS TO CLIENT

