

# Rolls Royce Bognor Regis Earthworks and Stabilisation



Client: **Bericote Properties**

Main Contractor: **Mclaren Construction**

Value: **£2.4million**

Location: **Bognor Regis Sussex**

Duration: **22 Weeks**

Volume of Firmafil Stabilized Soil: **130,000m<sup>3</sup>**

Area of Firmabase Stabilized Soil: **75,000m<sup>2</sup>**



This was a subcontract to McLaren Construction to undertake earthworks and ground improvement works to provide a development platform for two large industrial units for Rolls Royce.



The works involved the excavation, placement and Firmafil treatment of 110,000m<sup>3</sup> of cohesive soils to form the development platform. The works were carried out over the period November 2014 to April 2015. As the site was developed in a flood plain the excavated materials came from a flood compensation area which was formed to a shape as agreed with the Environment Agency before being restored to farmland.



Again as a result of the flood plain the underlying soils in the main development site were soft and the water table was within 1 metre of the original ground level. Therefore band drains and surcharge were used to consolidate the underlying ground. Geofirma stabilised an initial surface layer for the installation of the band drains. Following the installation of the band drains a lay flat drain solution was installed by others and Firmafil was directly placed on top of the drains, a stone layer was not required. Upon completion of the Firmafil to the formation levels up to 3m of topsoil surcharge was placed. After a settlement period of up to 8 weeks the surcharges was removed to resoil the flood compensation area. The volume of surcharge was 50,000m<sup>3</sup>.



Upon completion of the Firmafil works to formation level the top 300mm layer was Firmabase stabilised to 30% CBR and topped off with 75mm stone. This acted as the piling mat for up to four piling rigs.

The use of Firmafil and Firmabase ensured that this contract was completed on time over the winter period without using significant quantities of imported stone. Geofirma, along with the other parties to the contract provided a robust sustainable solution for both challenging ground and seasonal conditions.



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