brymor group

CLIENT

Rutland

LOCATION

Surrey

VALUE

£10.8M

DATE

August 2016
August 2017

CASE STUDY

Dunsfold Park.

About the project.

After nearly two years, works at Dunsfold Park were successfully completed in August 2017.

We handed over in phases, starting with the construction of a new 500m road, the diversion and installation of new services and then the completion of six new industrial units.

The units are single-storey portal framed structures with mezzanine floors. The buildings are clad with metal faced insulating wall panels and profiled steel insulated roof panels with masonry wall construction at low level. Internal unit dividing walls are of masonry construction, with power floated concrete flooring. All units have mains statutory services supplied with storm and foul drains connected.

The project was then enhanced with a number of tenant office fit-outs. One of the new build industrial units is occupied by Gordon Murray's brand new exhibition. The exhibition includes more than 40 iconic race and road cars from Gordon Murray's career gathered from his own, and other private collections. Highlights included Brabham and McLaren Formula 1 cars, McLaren super-cars, lightweight concepts, one-off specials and city car fit-outs.

The team is extremely proud of what was achieved on site and have a delighted Client, with an Excellent Delivery sign-off.

The original design for the substructures included piled footings for both the structure and the floor slabs. This had been specified to ensure that the buildings were not subject to heave of the soils due to moisture changes, in part caused by the proximity of the trees at the site boundary. To eliminate the heave risk, we identified the extent of soils which might be susceptible and then introduced a foundation solution, which supported both the column bases and also the general warehouse slab areas.

Our approach was to re-engineer all the soils which were considered suspect or susceptible to future volume change. By excavating the soil, lime and cement stabilising the material, and then reinstating the treated material, we changed the strength of the material and therefore how it would respond to moisture content changes in the future. The first step was to take bulk samples from the site which were treated and tested in the lab, to establish a suitable mix design.

As the work proceeded, the formation (base of excavation) was inspected to check for the presence of roots. Even though the excavations were planned to be 3m deep in areas, we had some evidence from sampling exercises undertaken, that the roots may have been even deeper. Any soil with roots evident were removed and the soil treated, to eliminate the heave risk.

This was a very unusual approach for treating heave susceptible soils and remained financially sensitive to the mix design requirements and also quantifying the total quantities of soils to be treated. Small chemical differences in the soil make up required the increased addition of cement and lime to compensate.