

Case Study

Service: Slab Loading Test

Location: DDC160 Distribution Warehouse, Dartford, Kent, DA1 5BU

Client: Readie Construction Ltd.

Swantest were contracted by Readie Construction to perform loading tests on a floor slab in DDC160 Warehouse, Dartford.

The purpose of this test was to check the load capacity of the slab and to accurately monitor settlement once loaded. Four test panels were marked out and agreed with our client. Each panel was circa 6.7x6.7m in area & was loaded up to 25kN/m². We utilised concrete kentledge blocks to produce the required load on each test panel. Surrounding this load, we created a 7x7 levelling point grid to maximise settlement monitoring.

One prerequisite of our client was to ensure that the concrete floor finish was not damaged in any way; therefore adequate protective sheeting was used to eliminate this risk. A complete level survey was carried out prior to & immediately after loading each panel. The load remained in place for three days with a complete level survey being carried out twice each day. Once the test was completed on one panel, the load was moved to the next & the test procedure repeated for all four panels.

Our level surveys were conducted to meet a tolerance of 0.1mm using high accuracy Leica DNA03 levels. A detailed daily report was issued to our client illustrating settlement and detailing any movements recorded.

Key to images:

1. DDC160 Warehouse is 160,552 Sq. Ft.
2. Kentledge blocks being lowered into position.
3. Concrete floor protected by plywood sheeting.
4. Swantest team completing baseline/unloaded level survey.
5. Graphical representation illustrating slab movements.

