

Single Storey Factory and Offices



Location:
Dorking, Surrey



Client:
Bucher Municipal



Architect:
Campus Park



Value:
£6M

Civil Engineering

Structural
Engineering

Building
Consultancy

Geotechnical and
Geoenvironmental
Engineering

Project Management

Specialist services

The building of 61m long by 43m wide by 11m high is an extension of the existing production facility site in Dorking for Bucher Municipal formerly Johnson Sweepers. The building is used for the assembly of their new trucks.

Engineering and Design Factors

The structure comprises a steel portal frame carrying four overhead cranes supported on piled foundations and ground bearing floor slab. The slab loading in the production floor area provided comprises 20 KN/m² uniformly distributed loads. The office areas are designed for 5 KN/m² live load. The construction build-up of the production floor comprises 200mm of concrete floor slab, 200mm to 250mm of stone to form the subbase of the slab. The external service yard areas are of concrete construction laid on stone subbase. The foundation of the building comprised piled bases to support portal frame and the steel frames to the office area with galvanised steel channels to form the perimeter edging for the floor slabs. The site has a medium gas main crossing the site. We advised the client to carry out accurate survey to locate the pipe. The depth and position of the pipe was clearly indicated on all our drawings with a warning triangle. Building had to be shifted so that the foundations are clear of the influence zone. We adopted CFA piles for the building to minimise any vibration effect on the pipe.

Description of the Works

The previous Flood Risk Assessment carried out for the site by others had to be supplemented by an addendum report that addresses the updated site condition. Lengthy discussions were held with the EA and LLFA to incorporate their concerns in order for them to remove their objections to the development. The building was designed to BREEAM Excellent which was a corporate requirement of Bucher Municipal.

Core services

Sectors

Industrial, Manufacturing and Petrochemical

Project: Single Storey Factory and Offices

Alan Wood & Partners