

Frederic Smart & Son

Peter Dann provided engineering services to construct a new facility for this local warehousing and distribution company specialising in food products. Our client was to relocate the business to accommodate future expansion of operations.

The development consisted of approximately 5000m² of high bay warehousing with new offices and lorry docking facilities, a storage and maintenance building, external hardstandings and drainage. The site was to be developed in two phases with a second warehouse proposed to be built at a later date to double the warehouse capacity.

The most significant challenge was the poor ground conditions for the warehouse slab which would induce loads of up to 75kN/m² from high bay racking. The site had been used as a dumping ground for arisings from excavations on adjacent plots. There was up to 2.0m of made ground over the remnant topsoil layer across the site. Peter Dann proposed a ground remediation strategy using rolling dynamic compaction and treating the clay fill with cement/lime stabilisation to allow a ground bearing slab to be used and all soils to be retained on site.

The proposal was extended to the external hardstandings where increased bearing capacity reduced depths of imported sub-base. The main warehouse was constructed from a traditional steel portal frame and was fitted out to provide both a temperature controlled and ambient environment for the stored product.

