

Project Spotlight



Tesco Distribution Centre DIRFT, UK

74,500m² Steel Fibre Reinforced Concrete (SFRC) Ground Bearing Internal Floor Slab for Tesco

Twintec was chosen by Volker Fitzpatrick to design and build the internal concrete floor slab for the new Tesco distribution centre at DIRFT. The distribution centre is rail connected with BREEAM 'Excellent' accreditation and a carbon neutral envelope.

The Twintec design team, together with Volker Fitzpatrick and engineers RPS, carefully selected materials that provide better performance and value for the client. The project utilised the latest advances in materials and equipment to overcome a tight programme and to meet Tesco's operational requirements.

With on-site weather conditions the coldest in the UK for over 100 years, and heavy snow over a sustained period, the interaction between members of the project team was more critical than ever in ensuring that the programme could be met without compromising on quality.

The selected design option was a Twinplan® steel fibre reinforced concrete (SFRC) 'jointless' floor slab 170mm thick. The floor was constructed using almost 13,000m³ of 32MPa concrete reinforced with AFT 1/50 steel fibres.

The concrete was batched on-site by Volker Fitzpatrick which ensured demanding high daily output requirements were met and a shared commitment to the project in terms of both quality and consistency of delivery was a key success element for the project.

The fibres, together with the PCE superplasticiser, were added using a specially designed Integration Machine also located on-site and manned by experienced Twintec operatives. Twintec believes this is the only proven method of ensuring that a high dosage of steel fibres is evenly distributed throughout the concrete mix. The trucks were then required to mix further under Twintec control to ensure that all fibres were fully dispersed.

The floor was finished to a flatness tolerance of FM2 Special in accordance with TR34 (2003 Edition).

This project followed the Twintec unique D-B-G (Design-Build-Guarantee) formula and brings to almost 700,000m² the total area of jointless SFRC slabs built by Twintec for Tesco in the UK.

Project Data

End User:	Tesco	Slab Depth:	170mm
Main Contractor:	Volker Fitzpatrick	Fibre Type:	AFT 1/50
Consultant:	RPS	Completion Date:	January 2011
M ² :	74,500m ²		

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