



Southampton container terminal

Steel fibre concrete

Sika® concrete system:	Fibre reinforced concrete
Client:	Pantalver / associated british ports
Contractor:	Raymond Brown construction

Southampton container terminal

Hanson Concrete, Southampton plant, working in close partnership with **Sika**[®], supplied high grade, steel fibre reinforced concrete, to Raymond Brown Construction for use in their latest contract for Pentalver Transport, at Southampton Docks. Continually needing to adapt to the ever increasing volume in containerised transport worldwide, Pentalver Transport, has recently increased its footprint by some 23 acres. The deep-water port, uniquely with 'double tides', handles many of today's largest container ships and in turn the largest containers. Container service providers, Pentalver are leasing the site from Associated British Ports. **Hanson Concrete**, using **Sika**[®] admixtures were chosen to supply the concrete for this new container storage area.

The concrete mix for the 23 acre slab was critical, as it would have to withstand continual vehicle and container movements on top of the stacking and storing of the containers themselves. **Hanson Concrete** and **Sika**[®] technical staff, with the assistance of Propex Concrete Systems, designed a reinforced concrete that had high flexural and compressive strength, good freeze/thaw resistance, with high abrasion qualities and capable of coping with the aggressive marine environment.

A C40 concrete mix was specified, incorporating Novocon FE1050 steel fibres and **Sika**[®] **Fibrepack** polypropylene fibres, to provide increased flexural toughness and resistance to early and long term cracking. Granulated blastfurnace slag (GGBS) at 40% was also incorporated in the mix to further increase the durability of the concrete, together with **Sikament**[®]-10 superplasticiser for water reduction.

Starting in August 2007, **Hanson Concrete** supplied main contractor Raymond Brown Construction Ltd, with up to 1,100 cubic metres of the concrete per week from their Southampton plant two miles from the site. Now complete, the



total supply has been in the region of 26,000 cubic metres. With its double loading plant and 90 cubic metre an hour capacity, **Hanson Concrete** were more than capable of supplying this project whilst still servicing their other customers.

Hanson Concrete and **Sika**[®] technical staff closely monitored the project throughout, ensuring a good finished product and a close working relationship with the client.

Mark Watts, district sales manager for **Hanson Concrete** said: "This has been a great project for ourselves and **Sika**[®]. Working together we closely monitored the project throughout, enabling us to meet all of the project's challenges. **Hanson Concrete** plant supervisors Martin Glasspool and Steve Briggs worked extremely hard to produce the mix and volume of concrete required throughout the project."

Hanson UK

Hanson House
14 Castle Hill
Maidenhead
SL6 4JJ

For more information please visit www.hanson.com/uk