

The Tensar solution required 30% less imported rock fill compared with traditional gabions.

Maximising space, minimising cost

A TensarTech[®] Rockwall™ system delivered a cost-effective retaining wall solution to support a car park extension, maximising the usable space.

CLIENT'S CHALLENGE

Central Car Auctions wanted to extend its car park over a sloping site bordered by the Glasgow-Edinburgh railway. A 160m long, up to 6.5m high, reinforced soil retaining wall alongside the rail line was needed to raise the site and to create a level area for the car park.

TENSAR SOLUTION

Tensar's TensarTech Rockwall System was chosen. This fast and economical solution required less imported rock material to fill its gabion-style basket facing and enabled more site-won material to be used behind as fill reinforced with Tensar uniaxial geogrid.

The approach delivered significant material and construction cost savings, while achieving the attractive appearance the client wanted.

Central Car Auctions

Reinforced soil retaining structure

📍 Glasgow, UK

BENEFITS

30% reduction in imported rock material compared with traditional gabion solutions

£10,000 saving on imported rock fill material costs

Fast, cost-effective construction of a perimeter retaining wall



The new perimeter retaining wall forms an attractive boundary alongside the Glasgow-Edinburgh railway line.

PROJECT BACKGROUND

Central Car Auctions in Baillieston, Glasgow, wanted to expand its car park on an adjacent piece of land which sloped down to the Glasgow-Edinburgh railway line.

A 160m long retaining wall, up to 6.5m high, had to be built alongside the railway to create a level area for the new car park and maximise the usable space. An earlier extension of the main car park included a Tensar system wall and Central Car Auctions wanted the appearance of the new structure to match this existing structure built in 2003.

Cost was a major driver and the TensarTech Rockwall system was the perfect solution. Contractor RJ McLeod installed the system, comprising galvanne-coated wire facing units connected to layers of Tensar uniaxial geogrid that reinforce the soil behind, to form the near-vertical wall.

The gabion-style facing units are manufactured from welded mesh panels, which minimises the potential for face bulging. Tensar's high efficiency bodkin joint creates a mechanical connection to the geogrid, rather than relying on friction alone. Pre-tensioning of the facing units is not needed, speeding up construction.

As the facing units are narrower than traditional gabion systems (just 675mm deep), the amount of imported rock material needed to fill them was reduced by 30% (about 250m³), saving an estimated £10,000. Site-won backfill could also be used behind, so no imported bulk fill was needed, nor did any material have to be taken to landfill, delivering further cost savings.

Main contractor:

RJ McLeod

Consultant:

**Struer Consulting
Engineers**

Client:

Central Car Auctions

“Using the TensarTech Rockwall system meant the car park could be built quickly and delivered significant materials cost savings.”

**Gordon Murray
Agent**

RJ McLeod

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