



Tensor[®]

**WALLS
AND SLOPES**

Tensor's TensorTech TR2 system comprised steel mesh face panel securely connected to uniaxial geogrids to reinforce the site-won fill behind.

Safe on MARRS

Tensor's TensorTech TR2 reinforced soil wall system was the ideal solution for a temporary raised platform, allowing the safe installation of piles for a new bridge on the Manchester Airport Relief Road Scheme.

CLIENT'S CHALLENGE

Morgan Sindall needed to build a temporary piling platform for construction of a new bridge to carry the off-slip road of the Manchester Airport Relief Road next to the A523 Macclesfield Road, while avoiding an historic weir wall that was in poor condition. One edge of the 4.7m high platform was formed by sheet piles but a reinforced soil solution was needed for the other sides.

TENSAR SOLUTION

Tensor's TensorTech TR2 temporary reinforced soil wall system delivered a stable, low-cost solution that supported the rig loading of 150kPa, while being quick to build, without the need for crane lifts, foundations or specialist skills.

Manchester Airport Relief Road Scheme

Temporary retaining wall

📍 Manchester, UK

BENEFITS

Low cost and robust

temporary wall for piling platform

Simple solution

to staged temporary works

Minimising loading

on a weir wall that was in poor condition



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PROJECT BACKGROUND

The A6 to Manchester Airport Relief Road Scheme (MARRS) provides a vital link across Stockport, Manchester and East Cheshire, reducing congestion on local roads.

In Hazel Grove, contractor Morgan Sindall needed to build an off-slip road to the A523 Macclesfield Road. This meant building a raised working platform to install CFA piles for the bridge. The edge of the platform next to the A523 was formed by sheet piles, while the other two sides were to be formed by a reinforced soil wall.

Tensor worked with Morgan Sindall Professional Services' (MSPS) temporary works design team to develop free application suggestions using its TensorTech TR2 reinforced soil wall system, used successfully by MSPS on previous projects. The solution was adopted by the scheme designer as part of the temporary works.

The TR2 system is a robust, low cost solution, ideal for temporary works, comprising steel mesh face panels connected to uniaxial geogrids (via a highly effective bodkin connection joint), to reinforce the fill behind. Panels are lined with geotextile to prevent loss of material at the face.

Recycled site-won 6F5 fill was used for the platform, saving time and money. An added benefit was that no formwork was needed during construction, as the wall was braced internally and held in place by the geogrid and fill. This allowed Morgan Sindall to install the wall quickly and easily, without foundations or specialist equipment.

Main contractor:

Morgan Sindall

Consultant:

**Morgan Sindall
Professional Services**

Client:

**Stockport Council,
Manchester City Council,
Cheshire East Council
and Transport for
Greater Manchester**

“Tensor provided a good robust solution to enable piling in a restricted working area, without compromising adjacent historic structures.”

Kathryn Tomlinson

Senior Geotechnical Engineer

Morgan Sindall

Professional Services

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