

# Tensar slope system reduces noise for new housing residents



## Darkhouse Lane

Bilston, Wolverhampton – West Midlands, UK

Tensar reinforced slope systems were used to create a landscaped noise attenuating bund with a narrow base width, enhancing the residential environment with minimum take of usable land.

### CLIENT'S CHALLENGE

The housing developer wanted to increase property values and improve the living environment by building a barrier to protect new houses from noise from an adjacent road and railway. They needed to minimise the construction footprint and build above a toe slope and tie-in to an existing noise barrier.

### TENSAR SOLUTION

The proposed Tensar steep faced reinforced soil systems were constructed on existing ground without any prior treatment. To minimise the construction footprint of the back-to-back earth bund, a different Tensar system was used on each face. i.e., a 45-degree TensarTech® NaturalGreen formed the outer face and a 70 degree TensarTech® GreenSlope formed the inner face. This allowed the bund to reach the required height with minimal base width, which resulted in reducing land take and enabling tie-in to the existing noise bund at the end. Posts for the closely boarded timber noise barrier were fixed in isolated concrete post foundations, which were accommodated within a reinforced soil zone with careful cutting of geogrid layers for the closely boarded fence as a noise barrier.

# Tensar®

A Division of CMC

#### PROJECT DETAILS

Application

**Earth Retaining Walls & Slopes  
Foundation & Embankment systems  
No. 528**

Constructed in  
**2024**

Client

**Morro Partnerships**

Contractor

**Cahill Contractors**

Consultant

**Mucklow & Harris**

## B E N E F I T S

- **Residential environment improved** by noise reduction
- **Steep slopes maintained maximum usable land**

## PROJECT BACKGROUND

Darkhouse Lane in Bilston, is a new housing development providing new energy-efficient affordable homes built by the MORRO Partnership for the Black Country Housing Group.

The development on Darkhouse Lane provides safe and secure accommodation, comprising one, two and three-bedroom homes whilst regenerating the site of a former ironworks.

The first phase was completed in 2020, which consisted of 142 plots, with further houses completed this year. MORRO is a partnerships property developer that is driven by Environmental, Social, and Governance (ESG) principles and is focused on reducing the overall impact the construction industry has on our environment, there were a number of environmental goals embed in the development.

Noise from an adjacent road and nearby railway would impact on the housing. The developed decided to include a noise attenuating structure to protect the new properties. This would improve the living environment and also benefit property values. To achieve the required height, the solution adopted comprised a closely boarded timber fence as noise barrier. By limiting the base width of the bund, the usable amenity area could be increased. Selecting the Tensar reinforced soil slope systems for the bund allowed the slopes to be naturally vegetated to enhance the environment.



**“Tensar’s system allowed poor quality, site-won material to be utilised in the construction of this noise-bund, and the flexibility of Tensar’s systems allowed strict spatial constraints to be achieved”**

**Myles Partington**

Project Engineer — Reinforced Soil Structures  
Tensar UK

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