

ECOCRIB CASE STUDY

A14 Widening, Kettering



PROJECT IN BRIEF

LOCATION: A14 J7-9 Kettering Bypass

CLIENT: Highways Agency

MAIN CONTRACTOR: BAM Nuttall & Morgan Sindall (BMJV)

STRUCTURAL ENGINEER: Mott MacDonald

ECOCRIB SYSTEM: Mass Gravity

MAX. RETAINED HEIGHT: 4.5 m

FACE AREA: 1,800 m²

PLASTIC WASTE DIVERTED FROM LANDFILL: 160 tonnes



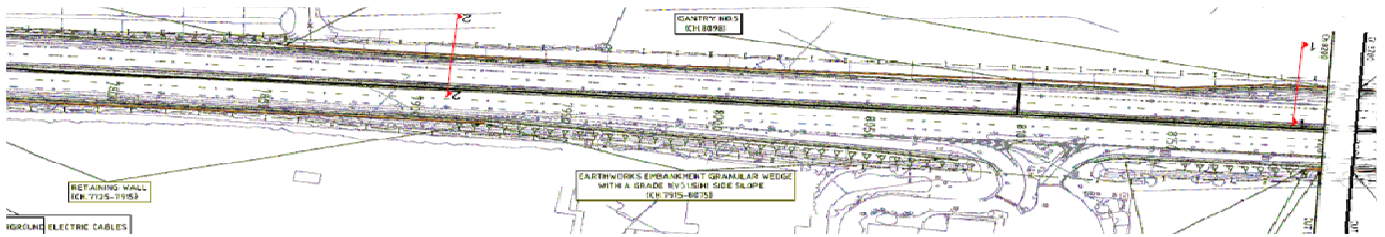
A14



**MORGAN
SINDALL**

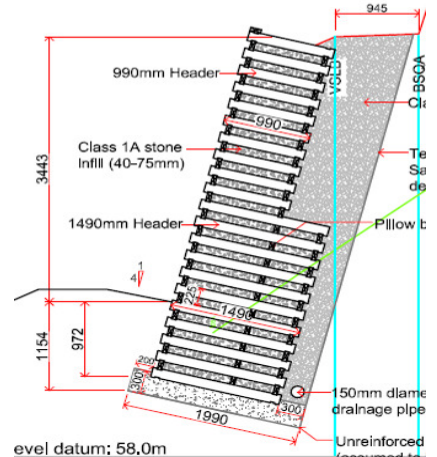


PROJECT IN FULL



The Challenge

In 2013 a joint venture of Bam Nuttall & Morgan Sindall (BMJV) were awarded the £42M contract to build an extra lane in each direction of the A14 (junctions 7 to 9). Hundreds of metres of retaining walls over 4m high in places were needed to allow the new lanes to be built within the existing highway boundaries. A durable, robust, economic and sustainable retaining wall solution with a British Board of Agrément (BBA) Highway Authorities Product Approval Scheme (HAPAS) certificate was required to satisfy the Highways Agency.



The Solution

An Ecocrib mass gravity retaining wall now supports over 400Lm of the heavily trafficked A14 east bound carriageway designed, supplied and installed by PC Construction. Awarded a BBA HAPAS certificate in 2012 with a design life in excess of 120 years, Ecocrib is structurally robust yet the most highly sustainable retaining solution currently available for highways applications. Although numerous Ecocrib retaining structures have been constructed throughout the UK, this was the first example of its use on a major highways contract. The BBA HAPAS certificate proved invaluable when gaining technical approval from the Highways Agency. The Ecocrib retaining wall was designed to support an environmental noise fence, withstand heavy goods vehicle loadings of 20kN/m² and strictly in accordance with BSEN 1997-1:2004 Eurocode 7.

Developed from timber crib technology, the 50mm x 125mm Ecocrib profiles are totally resistant to decay and considerably less harmful to the environment than poisonous CCA (chromated copper arsenates) treated timber. Ecocrib profiles are manufactured entirely from recycled UK plastic waste with any wastage or surplus material re-processed to form new Ecocrib profiles. Ecocrib can be recycled when it reaches the end of its useful life.

1,800 SQM of Ecocrib was used on the scheme equivalent to 32 million plastic bottle tops or 160 tonnes of plastic waste diverted from landfill.

BMJV design manager Simon Spink said, "Gaining technical approval from the Highways Agency can be a difficult and arduous task. A comprehensive design submission and the BBA HAPAS certificate was essential to getting through the approval process." he further commented, "I would have no hesitation in using the Ecocrib system on similar future projects."

