CASE HISTORY
Ref: UK / CH / RW — Rev: 00, Nov 2016

M32 Bus Lane Bridge Extension
Bristol

RETAINING WALLS— Bus Slip Road
Product: Macwall Vertica 4 Deg BBA

Problem:
The M32 in Bristol is a busy road causing congestion, slow bus travel times and high levels of pollution. The site is to the North West of Bristol which crosses the M32 then connects a route from Bristol to the M4.

Solution:
A smarter way of travelling was needed to speed up bus journey times, relieve the congestion and reduce pollution. As one of the many bus priority improvements in Bristol, it was agreed that a bridge would be constructed extending the M32 Bus lane, which would only allow for buses. With this bridge in place bus journey times would be reduced by 30 minutes, a substantial amount for commuters. The design and build contract to construct the 35m span bridge overall costs were to be £10m.

Prior to this construction, an installation of a new MetroBus bridge over the M32 in June 2016 was successful, this gave great headway for this project.

The lane will link to a new junction on the M32 which provides access to the motorway.

In order to minimise impact close by on Stoke Park Estate and the area surrounding, extensive parts of the new proposal will include tree planting and landscaping.

The M32 will still be open when this work is carried out, this will reduce disruption although there will be times when evening motorists will be diverted onto junction 3 of the motorway across a roundabout then immediately back onto it.

The bridge construction is two pairs of braced steel beams weighing at 70 tonnes each and over 35m long. Graham Construction closed the M32 over a weekend to allow the bridge to be safely lifted into place.

Site clearance works were undertaken and drainage and fencing works.

As part of the contract, Maccaferri will be constructing sections of the slip road with our MacWall® Vertica.

Main Client:
BRISTOL CITY COUNCIL

Client’s Engineering Consultant:
ATKINS

Main contractor:
GRAHAM CONSTRUCTION

Installer:
MACCAFERRI CONSTRUCTION

Products used:
MACWALL VERTICA 4 DEGREE

Date of construction:
SEPTEMBER 2016
MacWall® vertica is a cost-effective engineered product where only a narrow construction space is needed. MacWall® is a vertical wall with concrete facing panels, in this case the wall was set at 4 degrees to retain. Macwall is used a lot in support of infrastructure projects all over the globe. MacWall® is segmental reinforced blockwork, it is considered as a vertical wall although normally the walls have a slight angle. The walls are combined with masonry aesthetics with engineered reinforced earth support.

The segmental block retaining wall has increased in popularity over a number of years. The construction process is followed with ease, it is very cost-effective which saves large amounts of funding and it is extremely versatile.

There are two main components to our Maccaferri MacWall® System

- A split face modular block (concrete), choice of proposed environment suited colours.

- Geogrids in between each course of block, Reinforced Paragrid® geogrids.