Issue
10

Summer/Autumn 2013

this issue

Rediweld Reports

New Road, Hengoed

New Road, Hengoed junction improvement was delivered in 2013. As part of the scheme design/construction Rediweld products were incorporated. The schemes main aim was to address a number of collisions at the junction which involved turning manoeuvres. Consequently, the physical works prohibited certain movements to reduce conflict. In addition the location had no suitable crossing facilities; therefore enhanced crossing facilities were included in the project to improve pedestrian safety at the junction.

The RediKerb kerbing and RediPave Islands were installed by Rediweld within 3 days, with traditional materials this construction would have taken over 3 weeks. The scheme was the most cost effective solution causing minimal disruption, producing no spoil and requiring less traffic management.

Site specific constraints were overcome by selection of this product which assisted engineers in achieving the required shape, final construction was then formed by infilling behind the kerb with asphalt. The pedestrian crossing construction utilised RediPave Refuge Islands and RediFix surface mounted tactile tiles.

Rediweld products were used as construction alternatives in the form of islands and kerbing. The product due to the black and white markings also enhances the visibility of the kerb alignment along the route. The product also assisted in shortening the construction phase and additionally reduced the impact of the temporary traffic management at this traffic sensitive junction.

Wattsville, Caerphilly

For 20 years Rediweld has been supplying Speed Cushions that have reduced accidents and saved lives.

Here we are pleased to share a case study, seen through the eyes of a local authority client.

Going back to a scheme carried out by Caerphilly County Borough Council shows how these vertical measures can reduce speeds and inturn reduce accidents.
The community of Wattsville, which was bisected by the A4048 (now B4591) has residential properties directly fronting the highway for a length of approximately one mile.

In 1995 the former Gwent County Council constructed a number of build-outs into the carriageway with the purpose of providing protected parking bays, preventing parking at junctions with the A4048 to increase visibility together with improved crossing facilities for pedestrians. This was however, the limited options available to the Highway Authority at the time as, having an 'A' road status prevented the use of traffic calming using vertical features from being provided.

Complaints however continued to be received by the Highway Authority relating to both the speed and volume of traffic through the community together with a recognised accident record. This culminated in the receipt of a petition in 2007 requesting that traffic calming be provided through the community. This coincided with a strategic review of the highway network within the County Borough, which proposed de-classifying the A4048 to a B road status. This would enable traffic calming using vertical measures to be considered.

As a consequence a public exhibition was held within the community to gauge views on a draft proposal to install Rediweld speed cushions through Wattsville with the objectives of:

- Reducing vehicle speed.
- Reducing the frequency and severity of accidents.
- Improving crossing facilities for pedestrians.
- Reducing traffic volumes by discouraging vehicular traffic from using the route as a short cut and use the A467 as the preferred alternative.

In addition, in line with the policy of the Council to provide a holistic approach to such projects, consideration would also be given to:

- Improving street lighting to increase visibility to pedestrians and enhance the feeling of community safety.
- Replace/upgrading all street furniture, signing, lining and surfacing etc in order to enhance the quality of the scheme.
- Rationalising signage to reduce urban clutter.

The vast majority of the feedback from those who attended the exhibition was positive and as a consequence the Council approved the project.
Due to the relatively close proximity of residential properties to the highway and the knowledge that the route is frequently used by HGV's for access to a nearby Industrial Estate, it was decided to use Rediweld's 3000mm x 1600mm x 65mm high cushions rather than the 1700mm wide x 75mm high that the Council had traditionally used. This decision has however been justified since implementation as there have been no reported complaints related to traffic noise or vibration generated by the cushions.

The scheme was subsequently implemented in 2008.

End.

Enfield Council

Mick Pond from Enfield Council looks at the comparisons between Bitumen & Rubber cushions

I am a Senior Engineer for the Highway Improvements Team for Enfield Council and last year was given the objective of looking at alternative materials and processes as part of my yearly appraisal.

One of the areas I chose was speed cushions as we had some 20 mph zones to build and I also knew that several more were in the pipeline.

The construction we used at the time was the traditional bitumen construction of a 75mm high cushion, 2.5m long and 1.7m wide. These were quite time consuming to construct with a gang of three men able to construct approximately 4-6 per day depending on the location. The main problem with this type of construction is the use of temporary traffic signals and the delay to vehicular traffic.

I looked at several alternatives and these included precast concrete and bolt down rubber cushions.
Precast concrete offered durability against bitumen, which often deteriorates on the edges of the cushions, but offered no saving on time. Upon investigation of the installation methods, it appeared that construction could actually take longer on a live carriageway.

The precast units have to be laid on a 150mm bed of wet C40 concrete that must have at least 24 hours curing time before it can be opened to traffic. What with the reinstatement of the wearing course, the whole operation will take between 27-28 hours to complete one cushion.
Enfield does have some of these concrete cushions in the borough but they were installed by a developer on a new housing estate road during its construction and as such were not hampered by vehicular traffic during their construction. They have been in place now for ten years and show no signs of deterioration.

Bolt down rubber cushions on the other hand can be installed at less than one per hour, with a gang of three installing approximately 9 per day.
The cushions come in 8 separate rubber profile pieces and two metal angle iron lengths. Firstly the metal lengths are bolted down and the rubber sections are then laid over the top. These sections are also individually bolted down, with all raw plugs being fixed with an epoxy resin. This provides a strong and interlocking structure with the metal lengths adding security against any slip caused by hard breaking of vehicles on top of the cushions.
Care does need to be taken when choosing the site and areas of rutting and crazing should be avoided.

They both have a standard profile that does not deteriorate, whereas bitumen is prone to potholes on the sides. Size and height can also vary during construction with bitumen.
The main advantages of using rubber is that they are made of recycled truck tyres and are therefore a sustainable material, they are light and easy to handle and most importantly very quick to install. The other advantage is that if the road needs to be resurfaced at any point in the future, the cushions can be taken up and replaced when the work is complete.

Mick Pond, London Borough of Enfield

More recently Enfield Council have been using a speed cushion with a white marking around the cushion, should the cushion be removed then there is no reinstatement needed, which saves maintenance costs.

End.

Mandale Road, Bradford

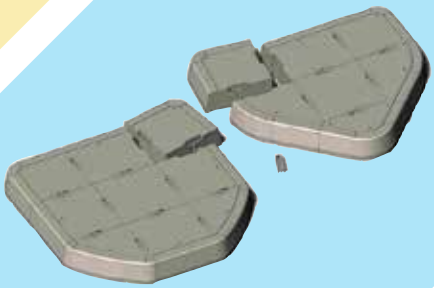
Mandale Road in Bradford is generally used as a rat run on a daily basis, but due to a recent fatality the Council and residents wanted to take action and enforce traffic calming measures.

A graduate Engineer was involved with the scheme and drew up plans incorporating Traficop Speed Cushions with RediPave Central Islands, to prevent overtaking.
With these measures in place this would offer reduction in speeds and also reduction in further accidents.

Darryl Ginns has joined Rediweld as Business Development Manager for Traffic Products.

Darryl has a wealth of experience working with local authorities. He previously worked at Leafield Environmental as Highways & Traffic Product Manager selling a range of Signage products, Grit bins and Bollards etc.

His responsibilities include servicing the existing customer base in the North and Scotland as well as looking for potential new markets and customers.



New RediPave Modules

To compliment the existing D-Shape RediPave Island, we can now provide a more triangular look to our Islands.
The new modules which consist of a Bull Nose, RH & LH module can create a variety of shapes.
For a standard Island fewer modules are required which reduces the cost.
RediPave Islands are available in Black, Grey or Granite with or without white markings.

For more information please see our website
www.rediweldtraffic.co.uk

REDIWELD Traffic Products

6 - 10 Newman Lane
Alton
Hampshire
GU34 2QR
traffic@rediweld.co.uk
www.rediweldtraffic.co.uk