

Junction Improvement Pipehill

OSBORNE



Early Innovation and Stakeholder Strategy enhance Safety Scheme

At Pipehill Junction, the improvement scheme required flexible, pro-active Stakeholder Liaison and Traffic Management Plans to keep traffic moving and maintain good relations with the community and road users. The junction is much used by local people and is also on a major transport route to destinations such as Lichfield Victoria Hospital, Lichfield Rail Station and Staffordshire University. The scheme was earmarked as a priority site by Staffordshire County Council after 18 accidents were recorded over a five year period. It was also planned to reduce traffic delays and improve air quality by reducing emissions from slow moving or stationary vehicles.

The Considerate Constructors Scheme Auditor commented:

“
A key feature of this project has been the way in which the needs of others have been carefully considered and placed at the forefront in executing the works – the project also demonstrates that far from the perception that considerate practice actually costs the contractor money, there are good examples of money (public money) having been saved through carrying out less disruptive activities.
”

The safety upgrade project comprised the construction of 1km of new carriageway; a new roundabout; associated footways and paved areas. We also provided new street lighting and traffic signals works; and sustainable drainage including 9 balancing ponds and spillways; landscaping, diversion of overhead power cables, medium pressure gas main and BT fibre optic and copper cables.

This scheme was highly rated with “Performance beyond Compliance” commendation by Considerate Constructors Scheme with several aspects recognised as “exceptional” and all parties working closely to achieve a CEEQUAL Excellent Whole Project Award.

Value Engineering Provides Environmental and Financial Benefits

Through a thorough understanding of the technical constraints and needs and concerns of our customer and stakeholders we were able to recognise and develop opportunities where value engineering would generate numerous benefits:

- An early initiative to turn the muck-away operation into a muck-shift operation saved over 2,000 wagon

IMAGE: Pipehill Junction improvements

Junction Improvement Pipehill

OSBORNE



movements with the associated pollution and removed the requirement to install traffic management on an already busy network.

- By relocating a drainage run away from existing STATS we were able to utilise faster, cheaper and less disruptive trenching methods to reduce both programme and other time risks and decrease costs.

- Through working closely with BT we were able to redesign the service routes avoid the need for large road chambers which would have required 24 hour Traffic Management providing significant programme and cost savings.

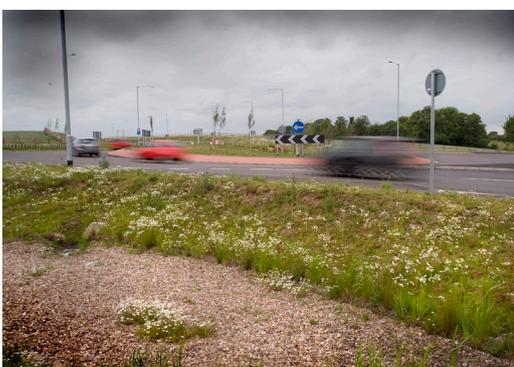
- Through close co-operation with Eon we ensured that neighbouring properties were given extended notice of power outages and the number of properties affected was minimised.

- During the Early Contractor Involvement stages of the scheme we introduced lime stabilisation into existing sandstone to create a hard compacted surface instead of the proposed traditional capping layer. The cost effective solution mitigated the need to import non-renewable aggregates, normally delivered by road, thus further reducing the carbon footprint of the scheme.



Innovative Technology Provides Methodology Efficiencies

The pioneering solution used for the cut and fill earthworks operation resulted in the on-site engineering team not having to erect a single profile to sculpture the banks, batters, ponds and road formation levels. Three dimensional electronic design models were used directly by the on-board plant control systems. The computers used position information to drive the valves for automatic blade control to obtain the tightest of tolerances.



TOP: Pipehill Junction improvements

MIDDLE: Pipehill Junction signage

BOTTOM: Pipehill Junction improvements

Junction Improvement

Pipehill

OSBORNE



A local resident commented:

“
May I take this opportunity to express how good the main contractors have been. They have in my opinion done a fantastic job. They have been very organised and tidy in the way that they have worked. They have also been very courteous and helpful.... In this day and age, it is all too easy to complain and moan but in this case I have to give credit where credit is due. They have been brilliant! I hope that you also feel that you have had a good result. A good choice of contractor from my point of view.

”

IMAGE: Pipehill Junction improvements

Environmental Consideration and Care from the Outset

The site was close to a Site of Special Scientific Interest with a population of great crested newts, badger sets, and protected trees to work around. Ducting work was carried out to avoid the newt breeding season, only once the project team's ecologist had conducted a daily fingertip search to ensure that it was safe for work to go ahead. Specific site methodologies were developed to ensure there was no danger to the newts such as CCTV surveys within the ducting to check the presence of newts prior to pulling cables through.

Stakeholder Strategy at the Fore

Although disruption to road users and neighbours was inevitable, our site team took great care to ensure that such disruption was kept to a minimum and the needs of others was at the forefront of our planning.

Through high levels of engagement we ensured everyone was kept informed of progress, night works and any intended traffic management changes through measures such as regular liaison with the local Parish Councils, local radio stations, customer website and letter drops to neighbours.

- In order to avoid any damage to or loss of farmer's crops, we sought a weed killer, which would not damage rape seed and also deferred installing rabbit netting until the crops had been harvested.
- The special needs of one of our neighbours, who required daily medical treatment, were taken into account whilst planning of the works.

In addition to a dedicated information/complaints line being set-for all stakeholders, our site manager also gave his personal mobile number to the 17 neighbours most affected by our work; a true demonstration of the personal service and dedication of our staff.