Year 17 | April 2013

# Annual of the second se

M1-A1 Link Road

## Connect roads

WE ARE CURRENTLY IN THE MID-TERM OF OUR 30 YEAR ROAD MAINTENANCE CONCESSION CONTRACT WITH THE HIGHWAYS AGENCY, AND REMAIN PLEASED TO REPORT ANOTHER SUCCESSFUL YEAR OF OPERATION.

Major roads operation and maintenance is surprisingly dynamic, with rarely two days being quite the same. New operating challenges and performance requirements are never too far away, which means there is no room for complacency, even with some 17 years of local knowledge. This is why Connect Roads remains committed to innovative ways to seek continuous improvement.

Welcome

In this report we highlight some of the initiatives which we have implemented to enhance our service, in a safe and sustainable manner, with due regard to the diverse needs of our client (the Highways Agency) and our customers, the road users and affected residents. Should you have any comments about this report or wish to discuss other issues, please do not hesitate to contact us at the address found on the back cover. **OUR PROJECTS** 

**CONNECTING THE UP** 

We hope you enjoy the read.

**Mark Mageean** General Manager

In partnership with





# About us

#### CONNECT ROADS OPERATES AND MAINTAINS THE M1-A1 LINK ROAD, A DEDICATED MOTORWAY LINK OF NEARLY 30KM IN LENGTH WHICH PROVIDES STRATEGIC CONNECTIONS BETWEEN THE M1 AND M62 MOTORWAYS TO THE SOUTH OF LEEDS AND THE A1(M) TO THE SOUTH OF WETHERBY.

The project commenced in March 1996 as part of the Government's Private Finance Initiative (PFI) and runs until March 2026. The contract was let by the Highways Agency, on behalf of the Secretary of State, the Highway Authority for the route.

In addition to the construction of the M1-A1 link road, the project included

improvements to the M62 east of junction 28 to the Lofthouse Interchange, the M1 from junction 42 to near Belle Isle and the upgrading of the A1(T) from Micklefield to Bramham to motorway standard. Since opening, the circulatory carriageways and link roads of M1 junctions 45 and 46 have also been incorporated into the concession. In partnership with our operator, Balfour Beatty Construction Services UK, Connect Roads undertakes all the maintenance requirements, and working with its client, the Highways Agency, identifies and delivers improvements focusing on road user and road worker safety, journey time reliability and road user information.



#### ABNORMAL LOADS

The M1-A1 link road forms part of a vital north-south link through Yorkshire, connecting the M1, M62, A1(M) and, more locally, the M621 motorways. It is a major route for the conveyance of both people and goods between the north and south of England and also links with the M62 corridor between the ports of Hull in the east and Liverpool in the west.

The route is heavily used with 758 million vehicle kilometres being travelled along the route in 2012, of which approximately 18.5% were HGVs. On the busy trans-Pennine M62 the proportion of HGVs rises to an astonishing 25% on some sections. The A1(M) is also designated as a high and heavy load route, meaning vehicles up to six metres high and 365 tonnes can use the route without the danger of damaging a bridge. These vehicles, along with any other wide or overweight loads, are classed as 'abnormal, indivisible loads' and hauliers have to notify the operator if it intends to use the route. In the last 12 months we have been notified of 13,009 abnormal loads – that's over 35 processed every day.

Every one of the abnormal load notifications has to be reviewed by our operator and depending on the width, length, height and weight of the load either a simple confirmation is given or a structural assessment of all the bridges along the proposed route has to be undertaken to ensure the load can pass safely along the network.













# **Continuous** improvement

#### CORROSION PROTECTION

Knowsthorpe Bridge is a reinforced concrete structure carrying a section of the M1 past the Stourton area of Leeds. When first constructed in 1998, one small section of the northbound carriageway wall was found to have raised chloride ion concentration levels

To alleviate this issue a cathodic protection system was installed. This passes a very small, continuous electric current through the structure to prevent corrosion of the steel reinforcement occurring.





However, despite being of very little scrap value, this system was vandalised and the cabling was stolen on a number of occasions. This meant that road workers had to repeatedly implement lane closures and traffic management in order to fix the damaged system, placing themselves and road users at risk.

Connect and its operator, Balfour Beatty Construction Services UK, worked with its supply chain to implement an alternative solution that would protect the structure



without the need for electrical wiring, electrical control units, cabling and cable management systems - all of which appear to attract vandalism and theft

The alternative solution is a system called Prosion, which is retro-fitted to the concrete surface without excessive breakouts and with any wiring kept to an absolute minimum and embedded within the concrete.

The system is now working effectively, requiring little ongoing maintenance and is much less susceptible to vandalism and theft. This means road users can pass over the structure without being disrupted by temporary traffic management required previously for repeated repairs and replacement.

# Enhancing the Route

#### M62 MANAGED MOTORWAY SCHEME

Fully opening in Autumn 2013, the managed motorway scheme will relieve congestion on a busy section of the M62.

Over the course of the last two years, Connect Roads has been working with the Highways Agency, its designer Atkins and its delivery partner bmJV to develop and implement the design and construction of the M62 (junctions 25 to 30) managed motorway upgrade scheme. The objective is to deliver increased capacity and improved journey time reliability on this very busy and often congested section of the M62, the trans-Pennine route, linking the cities of Manchester and Leeds.

Through the Project Safety Control Review Group (PSCRG), Connect has provided input to ensure that the design and construction promotes road user and roadworker safety on the section maintained by Connect between junctions 28 and 29. This has been improved through the following:

- Creating a new westbound merge layout at Lofthouse Interchange where the M62 meets with the M1. This simpler lane-gain layout will reduce congestion and delays for merging traffic (17% of which are HGVs).
- Value engineering to eliminate the requirement for an originally proposed 14 lane span gantry at Lofthouse Interchange. This reduces capital expenditure for the Highways Agency and future maintenance requirements for Connect.
- Provision of dedicated Maintenance Access Platforms (MAPs) for maintenance vehicles to park in a safe position off the hard shoulder and further away from the risks associated with working in live traffic.

Use of 3D/Building Information Modelling (BIM) to identify and resolve design issues:

Installation of 'smart' meters to all electricity supply points on the route to save people having to stop on the hard shoulder to read electricity meters.

The measures demonstrate Zero Harm re-thinking in action, with Connect contributing to reduced risks for construction workers, road workers and road users.

More details of the project and the operation of managed motorways can be found at http://www.highways.gov.uk/ roads/road-projects/m62-junctions-25-to-30-managed-motorway/



# **Zero Harm**

#### **IPROVING PLANT AND VEHICLE MANAGEMENT PLANS**

In our objective to continually improve site safety and management and to demonstrate best practice, our maintenance contractor has introduced pre-works plans specifically designed for the safe movement of plant and personnel within any proposed individual works areas.

The plan is a useful tool that enhances safety around the operations and any public interface requirements.

The plan specifies what vehicle and personnel movements are permitted within the site location and designated working and associated safety zones.

The pre-construction plans have been in use for over six months and are constantly being refined and improved. The operator requires all supply chain partners to produce their own site safety and management plans to carry out works on the M1-A1 link road.

# **Road Safety Week**

#### THE BRAKE CHARITY ROAD SAFETY WEEK IS AN EVENT WHICH CONNECT ROADS SUPPORTS, WITH A PARTICULAR SLANT TOWARDS ROAD WORKER ROAD SAFETY.

In 2012 we held events at all five of our road concessions for the third year running. These events spanned the length of the UK from Dorset in the South West to Glasgow in Scotland. We incorporated road safety issues into each event that were relevant to the audience: for example safe crossing at primary schools and navigating roundabouts.

The participation of our operatives added real value to the events as the public were able to put a face to the person in the hi-vis jacket and ask them questions about the work they do. We also had attendance

from the local police and fire services helping to convey the importance of our message.

In order to promote Road Safety Week on the M1-A1, the Connect team chose Wetherby Service Station as the location to target road users with Road Safety Week messages. This service station is one of the busiest in the UK, which was reflected in the number of road users the team spoke with. The team gave advice as well as giving out ice-scrapers, pens and other road safety items. Volunteers from the Incident Support Units came along to







hand out safe driving CDs and leaflets to HGV drivers who were taking their break at Wetherby.

The M1-A1 Operations Centre hosted a number of students from the Kings School. Pontefract. The students were given an introduction to the role of Connect and took part in a workshop on road safety and risk for young people. Feedback from the workshop showed that the students found the day beneficial, with one student saving that the top tip was to slow down when they see road workers!





#### **ENERGY REDUCTION & GREEN ENERGY**

Connect is responsible for the maintenance and operation of various electrical assets on the M1-A1 link road, including over 1,000 road lights. Recognising the environmental impact, Connect has worked with the Highways Agency to identify areas where energy consumption, and associated CO<sub>2</sub> emissions, could be reduced. Recent improvements to the Operations Centre, including low energy lighting and light wells have also helped minimise our carbon footprint. Additionally, Connect is responsible for the procurement of energy for the electrical assets. Entering into a new electricity supply agreement in 2011, Connect took the opportunity to procure 100% renewable energy. No additional costs were incurred given that the premium for renewable energy is offset by removal of Climate Change Levy. The energy produced from renewable sources replaces energy produced by conventional generation. This results in less greenhouse gas emissions to the atmosphere, helping to support the Highways Agency and our own sustainability goals.





# **Sustainability**

#### NHANCEMENT OF WILDFLOWER AREAS

The establishment of wildflower areas to replace standard grass areas around the Operations Centre at Bramham Maintenance Compound following its opening in 2011, has improved the bio-diversity of the site. The M1-A1 link road already contains extensive areas of wildflower verges, which are managed to encourage greater bio-diversity of flora and fauna along the route.

A recent review of this new wildflower area has already identified a number of wildflowers that are establishing, including Self Heal, Wild Carrot, Oxeye Daisy, Common Valerian, Common

Birdsfoot Trefoil and Cow Parsley. There has also been an observed increase in the activity of bees, birds and other insects.

Connect's landscape adviser recently met with representatives from BugLife, the Invertebrate Conservation Trust (www.bualife.ora.uk) to discuss further improvements to the network this Autumn, including the extension of existing and creation of further wildflower areas. This will support Buglife's B-Lines and Plan Bee initiative to create strips of wildflower habitat to link existing wildlife areas, creating a network of roads for bees across the country.

As well as improving local bio-diversity and creating a pleasing vista for road users, the wildflower areas can reduce overall maintenance requirements and thereby the exposure of operatives to the high speed road environment.



#### **JO CHEUNG**

JO CHEUNG IS THE ADMINISTRATOR FOR THE M1-A1

#### How long have you worked for Connect and what have you done previously?

I have been in the job six months and all is going well so far providing administrative support to the busy team here at Bramham. I have previously worked for the National Grid and utilities companies. Before this I was a professional dancer for a travelling theatre company, working across Italy which was guite different!

#### What is the most challenging aspect of your role?

As I am new, the most challenging part of the job has been getting up to speed and getting used to the new systems. I am getting to grips with it now and everyone has been very friendly and helpful.

#### What is the most rewarding aspect of your role?

Every day is different, there is always something new to do. I like getting the work done and knowing I have done a good job in providing support to the team. It can be an entertaining place to work and has a nice atmosphere - we have a laugh.







#### If you could give your local road user a message, what would it be?

Be aware of drivers around you and adapt your driving to changes in weather and road conditions.

#### What are your hobbies outside of work?

I like to keep active, walking, swimming and going to the gym. I love to travel and see different places.

### **Planned major maintenance**

THIS LIST IDENTIFIES THE AREAS TO BE TREATED UNDER THE 2013/14 PERIODIC WORKS PROGRAMME. THE MONTHS SHOWN FOR TREATMENT ARE AN INITIAL TARGET AND MAY BE SUBJECT TO CHANGE.

#### 2013-2014

LOCATION	DESCRIPTION	EXPECTED COMPLETION
M62 eastbound to M1 northbound free flow link	Slope stabilisation (geotechnical) works	Spring 2013
M1 northbound and southbound, junctions 43 to 47	Refreshment of roadmarkings	Spring 2013
M1 junction 45, northbound and southbound exit slip roads	Inlay re-surfacing and high friction grip surfacing	Spring/Summer 2013
A1(M) northbound, Micklefield to Bramham	Inlay re-surfacing to lane 1 and sections of lanes 2 & 3	Summer 2013
M1 northbound, junction 45 (Newsome Green)	Inlay re-surfacing to lane 1	Summer 2013
M1 northbound, junction 46 (Austhorpe)	Inlay re-surfacing to lane 1	Summer 2013
M1 southbound, Aire Valley Viaduct	Carriageway re-surfacing works	Summer 2013
M1 northbound, junctions 46 to 47	Inlay re-surfacing to lane 1	Summer – Autumn 2013
M1 southbound, junctions 47 to 46	Inlay re-surfacing to lane 1	Summer – Autumn 2013
M62 eastbound to M1 northbound free flow link, lane 2	Inlay re-surfacing to lane 2	Summer – Autumn 2013
M1 junction 47, northbound exit slip road	Inlay re-surfacing to lane 1	Autumn 2013
M1 junction 47, southbound entry slip road	Inlay re-surfacing to lane 1	Autumn 2013
M1 junction 45 roundabout	Inlay re-surfacing to discrete areas	Autumn 2013



# **Performance monitoring**

VARIOUS PERFORMANCE INDICATORS ARE REPORTED TO OUR CLIENT AS FOLLOWS:

CUSTOMER SATISFACTION		
	Target	Monthly average
Number of enquiries	n/a	4
Number of complaints	n/a	9
Complaints requiring corrective action (%)	50%	62%
Complaints requiring corrective action that were closed within 15 working days (%)	95%	100%

RESPONSE TO EMERGENCY INCIDENTS		
	Target	Monthly average
Emergency incidents for which an immediate response by an ISU was required	n/a	21 No.
ISU call-outs to emergency incidents achieved within the response time defined in the contract (%)	100%	100%
Average response time achieved for ISU call-outs	20 mins	10 mins

NETWORK AVAILABILITY		
	Target	Monthly average
Peak availability	98.5%	99%
Off-peak availability	98%	99%
Night time availability	98%	98%

STREET LIGHTING OUTAGES		
	Target	Monthly average
Night time availability	100%	100%

REACTIVE MAINTENANCE		
	Target	Monthly average
Response to category one defects	100%	100%
Category one defects repaired in 7 day response time	100%	92%
Category one defects repaired in 28 day response time	100%	100%
Average time for repair of 7 day category one defects (days)	5 days	5 days
Rolling 12 month % of category one '24 hour' defects which remain open and overdue	n/a	0%
Rolling 12 month % of category one '7 day' defects which remain open and overdue	n/a	1%
Rolling 12 month % of category one '28 day' defects which remain open and overdue	n/a	0%



**100%** COMPLAINTS THAT WERE CLOSED WITHIN 15 WORKING DAYS



**100%** RESPONSE TO CATEGORY ONE DEFECTS



**100%** CALL-OUTS REACHED IN TIME



**100%** CATEGORY ONE DEFECTS REPAIRED IN 28 DAY RESPONSE TIME



The Zero Harm logo (including the gold disc) is a registered trademark of Balfour Beatty plc, 130 Wilton Road, London SW1V 1LQ.



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