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May 2016

Lancashire

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Smart motorways coming to the North West

Win tickets to a family show

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North West frogs leap to success

Liverpool's new blockbuster exhibition

£2.45



The **Motorways** of the **North West**



Britain's first length of motorway - now much improved and quiet on a Sunday morning



Andrew Harris investigates the past, present and future of our motorways

Just 2.4% of all the roads in England are motorways or trunk roads yet they carry 33% of all road traffic – and 67% of all freight traffic. With just 1,700 miles of motorways it is vital that we make the most of them as the Department for Transport forecast that the volume of traffic will increase by 44% between 2010 and 2035. So where are we now and what, if anything, can be done to meet this demand?

Britain's first motorway – the Preston By-Pass – was opened by the then Prime Minister Harold MacMillan on the 5th December 1958. It ran for 8.26 miles from Bamber Bridge to Broughton and included 22 bridges. Since then the North West has always been well-served by motorways compared to most other regions of the country; we now have 12 of them as shown by our map and panel. The peak loadings for each motorway total an impressive 1,288,661 vehicles a day but the hourly peaks and troughs of traffic flows make this a misleading figure.

The Department of Transport calculate that the capacity of a motorway is 1,800 vehicles per hour per lane; thus a 4-lane motorway can be used by 7,200 vehicles per hour. Our busiest motorways are not all 4-lane, however, and the average vehicles per hour on our busiest motorway (Junction 13-12 of the M60) can be 8,138 vehicles per hour – well in excess of the theoretical capacity even before allowance is made for less busy periods overnight and daytimes without commuters. The result is that our top 5 busiest motorways are regularly being used beyond their capacity for parts of the day – as regular users know to their cost!

This is all very theoretical, of course. What about



Motorways of the North West
LEAGUE TABLE
 Maximum Vehicles Per Day
 during traffic counts in 2014

	M/way	Location	VPD
1.	M60	J13-12	195,325
2.	M6	J20/21	162,294
3.	M56	J4	160,881
4.	M61	J2	155,567
5.	M62	J19	124,825
6.	M66	J1	92,311
7.	M602	J@M62	85,458
8.	M65	J8-9	73,166
9.	M53	J10-9	70,817
10.	M55	J@M6	70,170
11.	M58	J5/6	52,437
12.	M67	J1	45,410

Source of data DfT



Traffic Officer Phil (left) and Supervisor Darren Lean.

breakdowns, road works and accidents? Well, that is where Traffic Officers have a crucial role to play. To learn more your columnist joined Traffic Officers Darren and Phil at 0600 hours on the 19th February at their base at M6 junction 31 to see them at work. From the previous midnight to 0700 hours that morning 231 incidents had been recorded. Traffic Officers work to keep motorway users safe and keep the traffic flowing wherever possible. There were reports of a possible suicide from a motorway bridge, we achieved a 'rolling stop' to escort a roaming swan from the M65 near Burnley and lane 1 of the M6 was closed to enable a lorry driver and helpers to replace a punctured tyre safely. Reports came in to reveal a series of actions to help drivers and traffic flow. 3 or 4 times a week there are reports of pedestrians

on the motorway whilst accidents are random but need Traffic Officers to be custodians of the motorway freeing-up fire, police and ambulance to perform their vital roles.

Just two days after the patrol with Darren and Phil the hazards faced by Traffic Officers were highlighted in a tragic way. Two other Traffic Officers were attending an incident on the hard shoulder of the M6 in Cumbria when they were struck by a vehicle which veered off the main carriageway. Traffic Officer Adam Gibb – aged just 51 and from Penrith – died from his injuries and his colleague was airlifted to hospital where 4 weeks later he was reported to be in a serious but stable condition. This loss of life is, above all, a personal tragedy. Adam Gibb's family expressed their feelings: "Adam was a fantastic dad and a wonderful

husband and will be deeply missed. He enjoyed mountain biking, fell running and walking on the fells with our dogs. Adam loved his job and really enjoyed being part of the team there."

Fifteen days after this tragedy a lorry struck the central reservation of the M6 in North Lancashire and ruptured its fuel tank resulting in a 12-mile stretch of the southbound motorway being closed. Two hours later three other lorries collided causing another fuel spillage. One driver was airlifted to hospital. Some lanes reopened to traffic with all lanes useable by late evening.

It does not detract from the heroic work of fire, police and ambulance personnel to salute Traffic Officers for being the custodians of the motorways and the driver's friend in hazardous circumstances. Your columnist is convinced that we need them to

DRIVER INFORMATION

For announcements
 speed changes
 & lane closures

CCTV CAMERAS

To monitor traffic, hazards & incidents

ENFORCEMENT CAMERAS

To ensure compliance

TRAFFIC SENSORS

To detect slowdowns & change speed limits

HARD SHOULDER BECOMES EXTRA LANE

To increase capacity with refuges at regular intervals

THIS IS A SMART MOTORWAY -

Using technology to manage traffic & help journeys





help drivers and keep the motorways – the arteries of the country – open for business.

Hearing much about how ‘Smart’ motorways will use technology to improve performance in our region, your columnist was then booked into the Regional Control Centre of Highways England at Wakefield to witness how their smart motorway - the top end of the M1 – was achieving this. It was the 4th March when Lancashire and Yorkshire turned white with snow; a perfect time to test the system. I witnessed lane closures, mandatory speed limits being varied and assistance being rushed to vehicles in need. Carriageways of the M62 were closed to allow the Yorkshire Air Ambulance to land. Operators in this space-age facility could observe all threats, hazards and slowdowns and respond to them. It was an impressive display of proactively managing our motorways which we will experience when the current upgrading of the M62 to ‘smart’ motorway status in Greater Manchester is completed. For a summary of the features of a smart motorway see the motorway sign in this feature.

Your columnist was much impressed by all the anecdotal evidence he witnessed of better motorway management by the use of Smart Motorway technology; but will it improve safety and performance?

Chris controlling traffic from the Wakefield Regional Control Centre



For hard results he turned to a report prepared by consultants one year after the M6 between junctions 8-10a was improved in this way. The key results were:

- Using Smart Motorway technology and techniques enabled the motorway involved to cope with traffic increase between 3% and 9% with potential for a 14% increase
- The increase in traffic flow is mainly during the peak periods
- Whilst there was no reduction in collisions there was a ‘large reduction in collision severity’
- There has been a reduction in the ratio of Killed and Seriously Injured collisions from 11% to 3%
- Some journey times have been reduced by 20%
- Better results are likely if/when neighbouring lengths of motorway are upgraded to ‘Smart’ status

Highways England have plans to upgrade more of our network to

Smart Motorway status but will this and the role of Traffic Officers be enough? Highway improvements now in prospect include the Heysham Link Road – to be known as The Bay Gateway - now nearing completion, a commitment to the M62 becoming 4-lanes and studies into upgrading the A69 North Pennine route, the A66 from Penrith to Scotch Corner and a possible 18-mile tunnel to improve the road link between Manchester and Sheffield. These and other improvements are all promising but - apart from The Bay Gateway – painfully slow. In the meantime Traffic Officers and Smart Motorways will help.

Andrew Harris (mailto:andrewharris.co.uk) is a chartered surveyor with a background in planning and development in the public and private sectors.

