

Traffic regulation

The last bastion of institutionalised inequality and a rich source of beneficial spending cuts

Martin Cassini

My estimate of the scope for savings in traffic policy reform may be speculative, but as long as industry costs remain hidden and traffic authorities refuse trials to test my case, I assert my right to make informed estimates. The savings estimated below and summarised at the end might even err on the side of caution.

We are told there are no silver bullets for our economic problems, nor for our congestion or road safety problems. But there is. Traffic system reform – based on equality instead of priority – is that bullet.

Some of the reforms – under the banner of shared space or my term, Equality Streets – have been gaining ground. But they remain largely misunderstood, marginalised or neglected. So it is worth explaining how the current system gets things wrong, and how reform could put things right.

Almost exclusively, traffic regulation treats the symptoms, never the *cause* of our problems on the road. The spanner in the works that contrives the conflict that regulation seeks in vain to mitigate is *priority*. Abandoning common law principles of equal rights and responsibilities, priority licenses main road traffic to plough on regardless who was there first.

Imposed in 1929 upon an unsuspecting public with no reference to Parliament or the People, priority makes roads intrinsically dangerous by giving one set of road-users right-of-way over others, not because they had arrived first, which is the civilised way to behave, but because of the contrived distinction between major and minor roads (or main roads and side roads).

After a spate of road deaths as people tried to cross the priority streams of traffic, what did the “experts” do? No, they didn’t abolish priority. They put up traffic lights. So now, to avoid the inconvenience of slowing down, we have to stop. Genius. Thus is most traffic control a monstrous – and monstrously expensive – exercise in self-defeat.

Priority allows motor traffic to dominate the public realm and intimidate the vulnerable. Side roads and pedestrians must run the gauntlet of fast-moving traffic coming at them from opposite directions. Children have to learn age-inappropriate road safety drill to survive on roads turned into rivers of death by priority.

It's hardly credible that a system which flouts safety and decency so brutally is supported by the law of the land. If the law is an ass, nowhere is it more asinine – and deadly – than in the traffic arena.

Few question the system, least of all the traffic engineers and policy people who, despite the vast cost of control, fail so signally in their duty to keep us safe. 25,000 killed or seriously hurt on our roads every year is a resounding indictment of current policy.

That traffic lights ensure safety is a myth. The latest safety audit from Westminster City Council shows that 44% of personal injury accidents occurred at traffic lights. Compiled in the defective context of priority, the statistics don’t tell us how many of the remaining 56% of “accidents” are due to priority. I put accidents in inverted commas because most “accidents” are not accidents. They are events contrived by the misguided rules and design of the road.

Intrinsically dysfunctional and operationally counterproductive, the traffic system is skilled at escaping scrutiny. In the event of an “accident”, the driver is always at fault, never the system or its anonymous perpetrators.

We are supposed to accept traffic controls without question. But why should we stop at red when no-one is using the green? Who is the better judge of when, or what speed to go – you and me at the time and the place, or lights and limits fixed by absent regulators?

As social beings, we want to take it in turns. Jump a cashpoint queue and you'll cause a riot. But the rule of priority tells us to ditch our manners. "Get out of my way!" yells priority, as it denies infinite filtering opportunities and expressions of fellow feeling. As a basis for road-user relationships, priority is a disaster.

Instead of living and dying by priority, let us live and let live by equality. "After you", says equality, as it allows us to rediscover our humanity and make common cause. We would be able to dispense with the array of high-cost traffic control that represents a vain attempt to solve the fallout from the original sin of priority. Given that central reform, all road-users could coexist in peace, without let or hindrance.

You see it when traffic lights break down. Peaceful anarchy (self-government) breaks out. We use common sense and courtesy to filter. As a cooperative species, we respect the equal rights of others. The only case for traffic lights is at multi-lane intersections at peak times, or on blind single-track two-ways (e.g. Dunster).

Priority from the right, as at roundabouts, is an advance, because it limits danger to one side. But it too licenses aggression by denying our instinct to give way to others who were there first. And it produces a "need" for lights at roundabouts – to interrupt the priority streams of (peak-time) traffic from the right.

The purpose of roads policy should be to make roads safe for *all* road-users. Those who demand more restriction and enforcement miss the point. They condemn us to a vicious circle of vain, expensive failure. It's *reform* that's needed; reform based on a trust in human nature rather than an obsession with controlling it. The biggest indictment of the current system? It puts the onus on *children* to beware motorists. It could and should be the other way round!

Reform based on *equality* (a social model) as distinct from *priority* (an engineering construct), will lead us out of congestion and road safety problems that kill thousands, delay millions, cost billions, stump governments and plague us all. This is a charter for transformational gains across the board. The only losers will be the traffic experts who for decades have been driving us down the road to nowhere, symbolised by this traffic sign in central London.



The only way to achieve authentic safety is to integrate road-users on a level playing-field. Liberty from vexatious regulation + equality for all-road-users = fraternity, i.e. peace instead of war on the roads. Only the traffic control establishment, with vested interests in subjugating us to its systems of lucrative control, could oppose such an inclusive approach. Most of the vast traffic control budget is misapplied. TfL wants a 40% reduction in KSIs (killed and seriously injured) by 2020. Yet it throws good money after bad on bogus "solutions" to man-made problems, such as segregated cycle lanes and pedestrian countdown. And why, unlike Equality Streets, isn't it aiming for the complete elimination of "accidents"?

Removing priority removes the "need" for lights *and* the need for speed, enabling all road-users to do what is natural and intrinsically safe: approach carefully and filter. Could it be that simple? It could. Equality is the key to good relationships on the road, as it is for society as a whole. Equality stimulates empathy. Drivers see pedestrians as fellow road-users rather than obstacles in the way of the next light. Restoring individual responsibility and harnessing human nature will achieve what coercion never will: considerate behaviour, safe speeds, co-operation, and compliance without resentment.

But if there are no traffic lights won't we crash into each other? Why should we? My interest in avoiding collision with *you* mirrors your interest in avoiding collision with *me*.

Traffic officers like us to think we need their interventions to protect us from each other. No, we need protecting from their system which makes roads dangerous in the first place.

Traditional road design and policy are stuck inside the box marked "priority", enshrined in the rulebook, the nattily-entitled *Traffic Signs Regulations and General Directions*. In the trade it is known as "the bible", so dogmatically are its tenets applied.

The DfT's most recent Research Report questioning 24-hour traffic lights still sees signal or priority control as the only options. Nowhere in its recommendations does it mention the commonsense, common law solution which overnight would solve most of our problems on the road: sociable streets based on *equality and taking it (more or less) in turns*.

Why was none of this taken into account by the Transport Select Committee in its 2011 report, *Out of the Jam*? Nowhere does the report mention traffic lights as a cause of congestion, despite submissions from myself and Kenneth Todd, another critic of the current system.

The case for reform

As a taxi driver says in this [video](#) explaining the rationale for deregulation, when lights are out of action, "you just have to be a bit more careful on the junction, that's all." An apt soundtrack for the give-and-take that breaks out whenever traffic lights break down would be "We Can Work It Out".

After my 2008 Newsnight report, *The case against traffic lights*, I continued to pitch for lights-off trials to prove the case. In 2009, after reading about the absence of congestion when traffic lights failed in Portishead, I contacted Councillor David Pasley who showed my video, *The case for a no-lights trial*, to the Chamber. On the spot, 26 out of 27 councillors agreed to a trial. At 10am on 14 September 2009, the lights were bagged over. Within seconds, the queues of traffic melted away. Local people expressed delight at the transformation. Pensioner Jean Bryant commented: "This is an absolute, absolute pleasure." Schoolchildren spoke of time gained and drivers stopping to let them cross. Anne Brewer, initially a doubter, testified to a journey time cut from 20 minutes to just five. "I timed it," she says in this [video](#).

Monitoring by Keith Firth (then with Colin Buchanan, now Norman Rourke Pryme) confirmed that journey time had fallen by over half with no loss of safety, despite a return from back-street rat-runs and greater numbers using the now free-flowing main route. The switch-off went permanent. But the council declined my proposal to be the first town in the UK to go entirely traffic light-free. It retained another set of time-consuming lights, and reverted to mini-roundabouts and zebra crossings at Cabstand. But still it represents the success story of a junction operating far better under self-control than under the most sophisticated automated traffic control (MOVA).

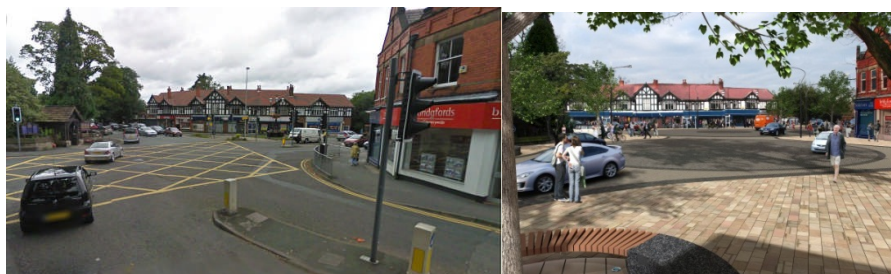
In the teeth of evidence that self-control is more efficient and at least as safe as formal control, Cambridge, despite my lobbying, went ahead with a £900,000 traffic signal "upgrade" at the very junction where I saw the light about traffic lights in 2000.

Ironically, there is no legal requirement for priority or signal control, so there are no liability issues. We could put up lights-out signs and let people filter in turn tomorrow. Road-users have a duty to proceed with care. Under priority, of course, that duty is forgotten. It re-emerges when, free of controls that distort our nature, we rediscover our humanity and our manners, and make common cause with other road-users.

Accolades for the best implementation to date of deregulated, sociable street design go to Poynton, a village at a crossroads in Cheshire. For decades the community was divided and dominated by multi-lane traffic queueing or speeding through lights, making pedestrians wait in the fume-filled air. Against fierce resistance, Councillor Howard Murray commissioned Ben Hamilton-Baillie to redesign the junction. Ben scrapped the lights, railings, bollards and road-markings, and reduced multi-lane approaches to single lanes, doubling pedestrian space and creating a sense of *place*. Now drivers give way to people on foot and each other. With the lights gone, artificial delay, dead red time and serious accidents are things of the past.

Speeds are low, there is less congestion, less noise and less air pollution. There is free on-street parking, and the place is thriving again after liberation from decades of oppressive traffic engineering.

Poynton shows how street redesign can not only calm traffic and make roads safe, but revitalise a community. It shows how public money can be spent for the good rather than the misery of all.



Fountain Place, Poynton before

Fountain Place now

How much does traffic (mis-)management (TM) cost?

Equality-based reform can cut congestion and emissions. It can eliminate accidents where regulation plays a disruptive role. It can transform quality of life and space, boost growth and bring regeneration. It can provide sustainable *kind* cuts of £100bn a year. How do we arrive at that figure?

The all-in cost of traffic control is a detective story in its own right. "The field is impossible to unravel," said traffic engineer, Keith Firth. Suku Phull, a senior official at the DfT (Department for Transport) was unable to help. "It's as long as a piece of string," he said.

As Jeremy Paxman said in his introduction to my 2008 Newsnight report, "Traffic lights have spread across the country like some form of multi-coloured acne. 14,000 road junctions are now controlled by them." In fact, no-one knows the exact number of traffic lights in the UK. Despite costing £13bn a year to run, even the DfT is in the dark. "Installation and maintenance of traffic signals are the responsibility of the local highway or traffic authority. They can install traffic signals without reference to the Department and are not obliged to report how many are in use."

The National Audit Office (NAO) will know ... No. It turns out they have never audited traffic control. They referred me to the Audit Commission, who replied, "We are not equipped to know as we haven't looked at traffic management." In turn, the Audit Commission referred me to "the DfT who should know." Ha!

The NAO also suggested I ask professional bodies, HMTA, CIPFA and ADEPT, which represent highway authorities that manage traffic systems. I pursued these and other leads, but was given only snapshots. No-one will guess at a total figure. Apart from my 2010 article for *Economic Affairs*, this might be the first stab at an overview. It has been checked and verified by Mark Wadsworth, an accountant at Shipleys LLP.

My checklist included traffic control centres, the DfT, the Highways Agency, TfL, local traffic authorities, staff, premises, pensions, insurance, transport, fuel, policing, accident costs, PR, advertising, signage, line-painting, railings, bollards, speed cameras, traffic orders, parking meters, traffic wardens, safety audits, and of course, traffic lights.

Firth calculates there are 31,000 signal-controlled junctions and 25,000 pelicans. Signals cost an average £150,000 to install and £7,500 a year to maintain; pelicans £50,000 and £2,500. Add 1331 signals in Scotland (no distinction between junction and pedestrian signals so I've used 100k/5k; and 450 junctions and 515 pelicans in Northern Ireland. So, excluding Wales (who didn't reply to my enquiries), that makes £6.1bn capital and £306m running costs (round figures).

Moreover, says Adrian Gray, Head of Highways at Hampshire CC and chairman of the Traffic Systems Group, "electronic systems have an operating life of only fifteen years", so infrastructure renewal means capital costs recur. Gray added, "Although electronics have only a 15-year operating life, infrastructure such as cabinets and duct systems can last longer."

In England there are 154 local traffic authorities, 32 in Scotland, one in Northern Ireland, say 14 in Wales = 200 in total. The average cost of running one is ..? Requests in England went unanswered. Brian Maxwell of the Northern Ireland "DfT" replied thus:

In answer to your queries:

(1) Q. What is the number of local traffic authorities in Northern Ireland and the annual inclusive running cost including staff and premises?

A. "The Department for Regional Development, Roads Service is the single roads authority in Northern Ireland and responsible for the management of all public roads. The Department has 4 Client Divisions and the traffic engineers within those Divisions are responsible for all traffic management functions, such as traffic calming, direction signage, parking etc as well as traffic signals. The traffic engineers are based in Divisional Offices which also deal with many other functions, and some of the Divisional offices are shared with other Government Departments not directly related to roads and traffic. The costings of annual running costs specific to traffic management staff and premises are, therefore, not readily accessible."

(2) How many traffic control centres are there and how much a year do they cost?

A. "The Department has one traffic control centre based in Belfast with responsibilities for traffic signals, motorway control and travel information. The site upon which the Traffic Information and Control Centre (TICC) is located is shared with other Roads Service operations. The cost specific to TICC would require to be proportionally estimated from that of the complete site, and is not currently available. With regard to operational costs, we are currently in a tendering phase for traffic signal maintenance so it would not be appropriate to release these costs at this time."

So it would seem the authorities themselves don't know their own costs, or they are keeping them secret.

"Arriving at an annual cost is difficult," says Gray, "and varies from authority to authority. Traffic management refers to the electronic systems that make up traffic control, Intelligent Transport Systems (ITS), and measures such as parking controls and fixed signs. Traffic control systems (TCS) are mostly made up of traffic signal controlled junctions. ITS includes equipment for data collection (detection systems, CCTV, ANPR, etc) and equipment to disseminate data, usually comprising control centre and roadside equipment. This is increasingly the case for traffic control systems, which use central management tools to co-ordinate and monitor installations for equipment faults. As a result, TCS and ITS incur telecommunication costs along with the costs of operating and maintaining the equipment. Increasing use of computer systems also means software costs for licences, updates and maintenance."

For the purpose of this calculation, I'm estimating the cost of LTAs (local traffic authorities) at £5 billion.

Gray's replies underline the complexity of the field, and the need for a full audit, especially in the light of my core point that priority – an unfit framework for road-user interaction – is what created a "need" for the systems in the first place.

In my attempt at a costing, I excluded road maintenance but included road safety, the environment, pedestrianisation schemes, bus priority and cycling measures ("SEPBC"), because these would be redundant if we lived by equality instead of lived and died by priority. For these items, CIPFA provided a figure of £5bn.

Chair of the Transport Committee, Tony Ciaburro, told me to include street lighting, "about £2.5m for an average-sized traffic authority". $200 \times 2.5 = £500m$. "Remember energy cost – millions per authority. [Say $3m \times 200 = £600m$.] Some signs have to be lit and traffic management depends on street lighting. Traffic control centres are numerous and hugely expensive. It's a major exercise to add all this up given everywhere is different. Parking enforcement often covers itself, but orders have to be processed and advertised at a cost." (Parking enforcement might cover its own costs, but what of the millions extorted from motorists who do not cause congestion, and only add to it in their search for parking?)

So, the precise cost of traffic management is unknown, but clearly it runs into tens of billions, dwarfing the £18bn in welfare cuts that are stoking strike action and striking fear into the poor. **The story is one of untold sums of public money going on systems of dubious merit.**

The power and vested interests of systems manufacturers such as Siemens can only be imagined. What goes on behind closed doors at meetings between traffic officials and system salesmen? At a talk some time ago – entitled, without irony, “London’s Moving” – Steve Norris listed the causes of congestion. Not once did he mention traffic lights. But he did argue for more controls. Is it a coincidence that at the time he was chairman of ITS, a major supplier of equipment to traffic authorities?

Efficiency savings from reform

In this survey of the scope for efficiency savings in traffic reform (summary at end), I include reductions in congestion and “accidents”. You can’t put a value on a life lost or damaged, but the DfT puts the annual cost of accidents (now euphemistically referred to as collisions) at £36bn. On Equality Streets where approach speeds are low, any accidents that might occur will be minor. So we can predict a dramatic drop in serious accidents, possibly complete elimination. Conservatively, let’s say 75%, i.e. £27bn.

There are 4,000 premature deaths from poor air quality in London alone, and some 40,000 in the UK (cf Stephen Holgate, Southampton University). A Commons Audit Committee puts the health costs of air pollution at £20.2bn. Based on the Portishead data, with traffic dispersing freely and journey times cut by 60%, let’s apply a conservative 25% saving in health costs, i.e. £5.05bn.

The CBI and a recent study by TomTom put lost productivity from congestion at £20bn. Positing a 50% saving provides another £10bn.

Using a standard (traffic engineer’s) value of £6 per person per hour, time savings at Portishead exceed £450,000 a year. Extrapolated across the country, removing signals could provide journey time savings of £450,000 x 56,000 (the number of signals) = £25bn. To put these figures in perspective, the Police are facing cuts of £3bn, and thanks to the Lords’ vote, the Chancellor has just lost out on £4bn in cuts to tax credits.

Expenditure by the Highways Agency is £4.2bn (a few years ago it was £6bn).

TfL failed to respond to my enquiry, but its 2010 annual report shows an annual budget of £5.3bn excluding “exceptional items”. Undertakings by the then Commissioner Peter Hendy (salary £348,000) and Boris Johnson to make internal efficiencies of £5bn over the next few years suggest a long-running gravy train, and that TfL has been overspending by £5bn. Courtesy of the tax and fare-payer, TfL pays 217 of its managers over £100,000, and provides benefits including private medical insurance.

“Traffic lights have a vital role to play in managing day to day operations on the road network, regulating traffic flow and helping to keep pedestrians moving,” says TfL. Worth noting that pedestrians are often held in “pens” – engineers’ jargon for railed-in pedestrian refuges. Yes, to traffic engineers, we are sheep.

TfL makes no apology for stating: “Traffic lights have grown rapidly in London over the last 10 years, from about 4,800 in 2000 to over 6,000 today, and numbers are increasing.” The explosion took place under Ken Livingstone, who added no fewer than 1800. Crossings as minute as Eastcastle Street/Berwick Street, W1 were force-fed the red-light treatment, conjuring congestion where there was none before.

Turkeys don’t vote for Christmas, so it’s not surprising that TfL resist reform. In 2004 they blocked a lights-off trial I had agreed with Brent Council. In 2008, they refused to take part in my Newsnight report. During power cuts in November 2007 and February 2008, traffic lights were out of action across central London. Did traffic grind to a halt? No. Familiar congestion vanished into thin air. I emailed TfL the news. They replied that the absence of congestion was due to police cordons around the affected area. I emailed a contact at the Met who checked police records and replied that *no such action had been taken*.

There is a limit to how long traffic authorities can resist change. In its annual report, TfL says, “Concerns have arisen that some signals cause unnecessary delay for both road traffic and pedestrians. Signals also add to the level of clutter on the street. Given tighter funding constraints, the affordability of maintaining such a number of signals is also a consideration.”

Greenhouse gas emissions from traffic regulation

If tighter budgets are the only reason TfL is now considering the disadvantages of traffic lights, what does that say about its duty of care over the years to our time, health, quality of life and the planet? The mayor

and TfL have a duty to cut harmful emissions, yet *for seven years* while Midland Rd was closed for work on the tunnel link, they failed to switch off or even re-time signals at the junction of Midland Rd and Euston Rd. This was despite my emails to John Thane, environment chief at Camden Council, whose premises overlooked the junction. I stand by what I wrote in 2006 for *Economic Affairs*: "Euston Road carries 95% of the traffic, but gets only 50% green time ... Euston Road/Midland Road is a glaring example of traffic mismanagement based on defective principles allied to negligence and hypocrisy."

How many man hours are lost in the mists of dead red time? Multiply the accumulated minutes spent idling by the number of traffic lights, by the number of vehicles, and is it surprising that polar bears are running out of ice? Polluted air contributes to lung, heart, and many other diseases, especially in young people. Prof Stephen Holgate says poor air quality is responsible for 40,000 deaths in the UK every year. Allowing traffic to filter on opportunity at low revs and low speeds would cut fuel use and emissions by a factor of four. Overnight. That is a quick win. Moreover, vexatious regulation produces the stress hormone cortisol which shortens life. Dr Nick Lane (Life Scientific, 23.2.16) says spontaneous order springs from chemistry. I sometimes use *love* to describe the cooperation that springs eternal when we are free to use our inner lights, but *chemistry* is equally apt. We could say that coercion and regulation interrupt the chemistry, the free flow, the life force. Regulators' interference in road-user relationships kills the chemistry!

Traffic system reform along the lines advocated here is a no-cost way of cutting emissions. The electricity alone that's required to power our galaxy of 24-hour traffic lights produces 57,000 tonnes of CO₂ a year. The embedded energy in the manufacture, delivery, installation and maintenance represents further huge potential savings, as does the elimination of the wasteful stop-start drive cycle caused by traffic lights. Stopping and restarting multiplies fuel use and emissions by a factor of *four* (see [No Idle Matter](#)). Dr Prashant Kumar of Surrey University says the multiple could be as high as [29](#)! Should the perpetrators of traffic control be facing corporate manslaughter charges?

Initially dismissed, these ideas have been gaining ground, e.g. in Coventry, where Colin Knight is removing all city centre signals. But with empires to protect, most authorities resist change and throw good money after [bad](#).

A new £750,000 signalised junction in Reading increased congestion and accidents to the point where transport head, Pat Baxter, commissioned 17 proposals for re-thinking the junction. Where on the list was the FIT (filter in turn) solution which worked wonders at a similar staggered junction in Portishead and which we had submitted to her at least a year earlier (2009)? Nowhere. The Shinfield Action Group accuses the traffic authority of negligence and corruption in its handling of the matter.

Councils who find excuses for inaction and continue to squander public money on systems of dubious control are in breach of the 2004 Traffic Management Act. Under the Act, traffic authorities have a duty to explore all options for improving road safety, congestion and air quality. In the words of the Act, they

- have a duty to manage their road network with a view to securing the expeditious movement of traffic
- shall make arrangements ... and consider any possible action to mitigate problems.

Politicians continue to fund a defective system despite briefings about the sociable approach. When Robert Goodwill was Shadow Roads, I briefed him in his Westminster office. Now he is Roads Minister, he spends millions on big yellow road signs announcing the number of accidents on stretches of road with the motto, *THINK!* If he spent any time thinking, he would see that if roads were designed for equality, they would be genuinely safe. Instead of road-users at daggers drawn, we would coexist in harmony.

Outside schools you see yellow signs saying, "Parking here could endanger a child's life". They are another example of a failure to treat the root cause of our road safety problems, and a myopic fixation on symptoms. If the rules of the road and the driving test promoted equality and civility instead of neglect and hostility, we wouldn't need such signs. The reason children's lives are in danger is the priority system, which allows traffic to dominate the public realm and intimidate the vulnerable. Teach people to drive by context, and children - all of us - will be safe. Goodwill also supports HS2, a staggering false priority. Would £60bn not be better invested in a civilised road network, where all road-users could live in peace?

Another candidate for an OBE (Order of Buffoonery, England) is transport minister, Patrick McLoughlin. At a UN conference on road safety, he cited mobile phone use as the primary cause of “accidents”. The abject failure of government ministers to tell symptoms from causes, and their failure to make our roads safe and efficient shows that defective policy is ingrained, and reveals the low priority given the field. The stupefying ineptitude infects all parties. 15 years ago, the then transport minister, Alistair Darling, proposed adding a fourth lane to the motorway network to ease congestion. Observe any motorway or dual carriageway, and you see a largely empty inside lane. Wouldn't it be better to remind people of the Highway Code which says use the inside lane except when overtaking, thus maximising existing road capacity at no cost?

Traffic regulation in Oxford

Recently, inadvertently, I entered a bus-only zone in Oxford. Perhaps the signage was ineffective, or I was suffering from regulation overload. I was certainly obeying the Highway Code: watching the road and other road-users, particularly people on foot and cyclists. By taking our eyes off the road, instructional signage negates the fundamental principle of safe driving.

In my appeal, I asked if the Council was aware of the 2004 TMA, and the Portishead success story. Or the evidence from Drachten which showed that buses took half as long to cross town when there were no traffic lights or bus priority. If the Council is unaware, I argued, its ignorance reveals lack of due diligence. If it is aware and does nothing, it is in breach by failing in its duty to the planet and the public good.

I also asked if Oxford CC were aware that traffic lights are no guarantee of safety, citing the audit from Westminster CC (44% of personal injury accidents at traffic lights). Poor air quality from traffic congestion causes ten times as many deaths as accidents, I added. By limiting capacity with round-the-clock bus lanes and restricted zones, and making traffic stop at red even when no-one is using the green, OCC are in breach of their duty of care to our health and well-being. If they are aware and take no action, or if they are unaware, they are breaching their legal duty to “consider any possible action to mitigate problems”.

It is incumbent upon us all, especially the authority, to minimise fuel use and emissions. By preventing economic use of the available road space, and insisting upon a longer route with more signal-controlled junctions, the Council is also in breach of EC directives on the environment.

Directive 2008/50/EC on ambient air quality and cleaner air for Europe states: “It is particularly important to combat emissions of pollutants at source and to identify and implement the most effective emission reduction measures at local, national and Community level. Therefore, emissions of harmful air pollutants should be avoided, prevented or reduced and appropriate objectives set for ambient air quality taking into account relevant World Health Organisation standards, guidelines and programmes. [Ref 2008/50/EC of the European Parliament and the Council of 21 May 2008 on ambient air quality and cleaner air. [Web.](#)]

Bus lanes during rush-hour in the direction of rush-hour traffic, as on the Finchley Road, make sense, but 24-hour restrictions, eg on Marylebone Rd, where round the clock, air pollution exceeds safe levels, are examples of control for control's sake. There are several ironies in the fire: the authorities fail in their duty to investigate options which mitigate problems, yet their traffic control measures are not legally required. “There is no statutory requirement for priority, signal control or road markings,” states the DfT.

Highway Risk and Liability Claims (UK Roads Board, ICE 2009) states there is

- an overall presumption that road-users are intelligent, able, and expected to be responsible for their own safety and have a duty to take roads as they find them, [and it is]
- not necessary for design to take independence of judgement out of the hands of the road-user.

Needless to say, my appeal against Oxford CC failed, because only narrow technical grounds are allowed. Adjudicator CJE Nicholls wrote: “Both in his notice of appeal, his correspondence and during the hearing, Mr. Cassini raised general concerns about the traffic scheme adopted by the Council and whether it complies with the council's obligations under domestic and European law. Those interesting comments raise issues which are well outside the jurisdiction of this Tribunal and on which it is not appropriate that I comment. It is a matter for Mr. Cassini whether he wishes to take private legal advice on his position.”

Judicial review is the only recourse, but punitively expensive. So the system immunises itself against reform. It becomes a self-serving public disservice, accountable to no-one. Politicians could do something, but they

resist unusual ideas, and fail to see the grief caused by defective traffic policy – from bereaved families to motorists desperate for the loo but stuck in a monster traffic jam caused by traffic lights.

Ironically, Oxford is finally making progress, albeit in a piecemeal fashion, by scrapping traffic controls in Frideswide Square, for years polluted and congested by overbearing regulation in the form of traffic lights.

Removing traffic control

Of Portishead, the ever-cautious traffic engineer, Keith Firth, writes: “removing or not providing formal controls at busy, urban junctions seems to offer a legitimate form of traffic management, that may not be any worse than conventional priority or signal controlled methods, and indeed may show significant benefits.”

If we accept the formal evidence from Portishead and Poynton, and the evidence from countless informal observations, that self-control is at least twice as efficient and at least as safe, then, given the stupendous cost of the control system that compromises efficiency and promotes danger, it becomes clear that money would be better spent, and spent sustainably (i.e. one-off, not continuing expenditure), on de-regulation, re-education, culture change and roadway redesign. Then the sky would be the limit for improvements in safety and efficiency. With equality stimulating civility instead of priority generating hostility, there will also be less need to police roads.

Exhibition Road in London is now “shared space”, though drivers still assume priority in the time-honoured fashion dictated by traffic controls. Also it remains plagued by traffic lights at both ends and forever beyond. [Britannia junction](#) in Camden is getting a makeover but retaining signals. The DfT has published an advice note, but it’s not policy, and there is a lack of vision about the wider potential of these ideas.



Coventry High St with signals

After signal removal

“These are interesting times,” writes Firth, “for traffic managers faced with the task of keeping their networks moving, improving capacity and journey time while improving the public realm, reducing clutter, avoiding delays and improving road safety. We need to embrace the ideas of simplified streetscape design and wherever possible switch off traffic signals and do something more challenging instead!”

Shared space proponents think streetscape design alone can bring about the desired changes in driver behaviour. My view (borne out by a death in [Coventry](#) and a man hit in [Exhibition Road](#)) is that in addition to redesign and deregulation, we need (1) to change the basic rule of the road from priority to equality, (2) re-education to help people unlearn the bad habits of a lifetime instilled by the current rules of the road, (3) roadway redesign to express equality and a social context, (4) legal reform to make drivers liable for accidents with vulnerable road-users unless they can prove a reckless act, (5) a driving test to include cycling proficiency and a motorcycle licence as mandatory components. Not only would reform along these lines make roads genuinely safe, it would bring a host of social and economic benefits. Any investment would soon be swamped by the savings.

Firth wrote a [report](#) for the GLA which found that traffic lights provided significant economic benefits, with only a proportion of sites showing an economic benefit from part-time control or removal. But GLA-funded analyses of signal removal persist in thinking inside the box marked priority. They have no input values for road-user relationships, quality of life and space, well-being, or the common good. Nor do they factor in

the premature deaths from poor air quality, or the cost of “accidents”. All this raises questions about the value of these analyses, and for the computer modelling which supports them.

Firth decided not to extrapolate the Portishead findings nationwide because of the small sample size, and because of the difficulty in obtaining a definitive count of traffic lights. But it's Catch-22. The authorities resist the trials that could provide the proof, starting in 2004 with TfL's refusal to sanction the Brent trial. Recent refusals to countenance lights-off trials, despite the success of Portishead, is particularly damning for Reading. Recently I was asked by Alan Bristow of TfL to document the transformation of a junction, but work won't be starting for some time, and really, only one junction? In 2014 I had a meeting with George Ferguson, mayor of Bristol, a city rendered mean and claustrophobic by innumerable traffic lights. I proposed a citywide lights-off trial for 2015, when Bristol was Green Capital of Europe. He was more interested in citywide 24-hour 20mph zones and banning cars from the city centre.

Who decides, who judges?

Our lights-off trials showed that self-control is safer and more efficient than conventional control. When we pitched Boris and the GLA in 2008, they produced this excuse for inaction: "The idea is too radical and it would be hard to win public support." They said they were considering re-timing lights and left-turn on red. "That would bring mild improvements," I said, "but it amounts to fiddling while London continues to fume." Their proposal to cull 145 sets of lights followed my lobbying of Westminster City Council in 2009. Yet they persisted in ignoring the *cause* of our road safety and congestion problems – *priority* – and failed to convey the wider context. Hence opposition from vulnerable road-users such as the blind. In view of the fact that Livingstone installed 1800 new sets of lights, would a cull of 145 sets reverse the tide of regulation to any useful degree? In a vicious cycle of expensive intervention, Livingstone imposed the congestion charge before any of these low-tech, sustainable solutions were even tried.

Risk-aversion and pre-occupation with network resilience miss the potential in unconventional solutions. 'Defensive design,' writes the UK Roads Board, 'has hampered innovation and necessary change [and opposes] the spirit of Best Value and the interests of the public'.

If deregulation reduces accidents and congestion, policymakers will have to act. Or will they? In 2003, a Cambridge councillor welcomed my proposals for easing congestion. When I asked why no action was taken, he replied, "We want to inconvenience drivers so much that they leave their cars at home." For one thing, there is scant public transport in outer districts. For another, when did traffic managers qualify as social engineers?

Institutionalised inequality

Our highly-evolved conflict-resolution skills are unparalleled. Yet decision-making and responsibility are taken out of our hands. For decades, 24-hour traffic lights have frustrated motorists and brought injustice. Now the introduction of round-the-clock 20mph limits is gathering pace, regardless of context, and speed limiting technology in new cars is being mooted. Blanket automation and regulation of human behaviour nullifies our greatest resource – human intelligence.

Speed limits tell us to drive by numbers. Would you want to be hit by a bus doing 20? Ben Alston, 6, was. Forcing us to drive by numbers is futile, it infantilises us, and fails to protect the vulnerable. We should learn to drive by *context*. On a busy street, especially when children are about, let us proceed at walking pace. On the open road, within reason, let us choose our own speed. Perhaps the concept is too subtle. *BRAKE!* would claim that freedom to exercise judgement based on context is a licence to drive carelessly. No, it's a blueprint for driving with *true* care and attention.

If the duty of government is to lead intelligently on matters that affect life, death and well-being, it is failing. Poynton shows that money spent on conventional traffic management is money misspent. In Poynton there are no special speed limits. And there is free on-road parking. Let the law make the driver automatically liable in the event of a collision with a more vulnerable road-user.

Economic regeneration

Traffic control is the last bastion of institutionalised inequality, and a rich source of *kind* spending cuts. Reform would benefit all except traffic officers whose interventions are too often counterproductive. But they will have useful work to do: redesigning the road network to express an inclusive social context instead of an alien traffic engineering one.

Redesigning streets and roads would provide sustainable jobs and revitalise the economy. Staff could be redeployed to clear the network of distracting instructional signage, and improve directional signs. Too often, signs are a sign of failure to design roads in a way that clarifies context and stimulates civility. A switch to Equality Streets need not involve big expenditure: during the cultural transition period, rather than being repaved, junctions and streets could be re-painted, e.g. as zebra junctions and zebra streets. Stop lines could be painted out, or give-way markings painted at each entry to a junction, signifying an all-way yield or filter-in-turn. Broken double white lines will double as = signs, signifying equality for all.



Once people know that on the road they can act as they do in other walks of life – give way to others who were there first – everything falls into place. Human nature is harnessed instead of thwarted. Self-control replaces signal control, which, as Portishead shows, is twice as efficient and, even without the benefit of re-education, at least as safe. As equality and driving by context became the norm, the need for signs and road markings would disappear. With traffic free to filter, bus lanes too could be scrapped.

At multi-lane junctions at peak times, traffic control might be needed. But it should be the last resort. A system based on equality will render redundant the traffic control system which for too long has enslaved and endangered us. Given equality, our children won't need to learn age-inappropriate road safety drill. Instead of watching the lights, drivers will watch the road and act according to context. Blind people will be able to go in safety, with or without kerbs.

The desire to cooperate is in our genes. In the absence of lights, enforced consecutive queueing gives way to self-sufficient simultaneous filtering – infinitely more efficient. Violent acceleration and braking give way to gentle speeds and low revs – infinitely safer and less polluting.

The North Devon Journal (2.8.12) reported that [Alec Dennis](#), 61, pleaded guilty to doing 52mph in a 30 limit on his way to hospital, driving his son who had stomach pains. "We didn't ring for an ambulance because in the past we've had to wait 30 minutes." It turned out to be kidney stones. Dennis was given 6 points, £85 fine and £15 victim surcharge. The time of day the camera caught him committing his "crime"? 4.20 a.m. The only victim – of asinine traffic law – was Dennis. I haven't tried to estimate the cost of vexatious traffic law, but undoubtedly it is responsible for untold injustice against the citizenry, and represents another area of potential cost savings for humankind and the public purse.

Does speed kill? Or is it inappropriate speed that kills (the very speed we get at priority and signal-controlled junctions)? Whether or not Chris Huhne tried to pass the buck, his saga reveals the contortions to which citizens can be driven to escape the tentacles of a system that values the letter of the law above the spirit.

The optimum guide to action is our ability to negotiate movement based on context. The current system stands accused of negating that ability, of presiding over a peacetime casualty toll greater than that of two world wars, and of squandering public money on a prodigious scale.

Government abdicates responsibility for roads policy to technocrats. Technocrats remove responsibility from where it belongs: the people, whose instincts are uniquely equipped to negotiate safe movement.

Junctions could be congenial public spaces for social interchange, but they are dehumanised by traffic controls which impose unequal rights, discriminate against the vulnerable, and put us at odds with each other and our surroundings.

Democracy is about fairness, the common good, maximising human potential. Traffic policy is, or should be about providing a safe framework within which we can go about our lawful business without needless interference or delay. Traffic control is AUTOcratic. In usurping our judgement, it negates DEMOcracy.

In a period of overwhelming economic gloom, amid peacetime spending cuts that threaten the police, the NHS and the disadvantaged, the state continues to pour tens of billions into systems of traffic control that are largely (in) vain and counterproductive.

Not a day goes by without variations on the theme of painful cuts or the need for growth. Traffic system reform can deliver lasting, transformative safety and efficiency benefits, and *painless* cuts in the tens of billions. Redesigning the public realm to express a social rather than a traffic engineering context will regenerate the public realm and boost growth. There are no downsides, except for redundancies in traffic management. But many of the officials who impose traffic management at public expense will find constructive employment realising the life-enhancing reforms advocated – *demanded* – here.

Item	Current cost £	Projected savings £	%
DfT	13,000,000,000	6,500,000,000	50%
Traffic control centres	5,000,000,000	3,000,000,000	60%
Traffic lights	6,400,000,000	4,800,000,000	75%
Highways Agency	4,200,000,000	1,500,000,000	25%
Local traffic authorities	5,000,000,000	3,750,000,000	75%
SEPBC (see P.6)	5,000,000,000	3,750,000,000	75%
Street lighting	1,100,000,000	550,000,000	50%
Accidents	36,000,000,000	27,000,000,000	75%
Health costs	20,200,000,000	5,005,000,000	25%
Congestion	20,000,000,000	10,000,000,000	50%
Journey time		25,000,000,000	
Transport for London	5,300,000,000	2,650,000,000	50%
Bollards, railings, white lines	2,000,000,000	2,000,000,000	100
Instructional signage	4,000,000,000	3,600,000,000	90%
TOTAL POTENTIAL CONTINUING SAVINGS		99,105,000,000	

Martin Cassini

(first draft submitted on 12.10.2012. Re-drafted 27.10.15, 21.1.16, and 18.3.16)