

Deadline 6A Submission, in response to the Applicant's updated Traffic Modelling
(by Robin Beard)

Although I am glad to see that National Highways have acknowledged the risk of weaving on their A13 West approach to the Orsett Cock roundabout (as described in 3.8.2 of their Localised Traffic Modelling Appendix C), I am not convinced that their proposed solution will suffice. Lengthening the approach to 200m (as shown in Plate 3.5) will give drivers a little more time to make their way across to their desired lane, but when travelling at speed that will really only amount to a few extra seconds, scarcely enough to make a difference – especially if there happens to be a queue of traffic already waiting at the traffic lights, thus shortening the distance available for drivers to manoeuvre!

We already know from this very report that 90m is not far enough... but all it would take is for one driver at the front of the queue to stall his engine when the lights turn green, or to be looking at his phone or something, and a dozen vehicles that would otherwise have made it through the lights will instead still be stuck there when they turn red again. This is not a far-fetched scenario... & it means that in practice, the length of tarmac available to vehicles approaching the Orsett Cock roundabout will often be much shorter than the 200m proposed here, and may even be less than 90m during the rush hour, potentially.

I don't know if the computer model used by National Highways takes things like this into account, but I must assume that it does not, because it seems self-evident to me that even 200m is nowhere near long enough... indeed, when I originally flagged this approach as potentially dangerous in my original submission back in July, I thought the length of this approach was already about 200m, so from my point of view nothing has changed! To learn that the original design was apparently only 90m long boggles my mind... how could professional road planners expect such a huge volume of traffic to weave into the correct lanes in such a short distance?! And yet they did... and even now I think they are under-estimating the scale of the problem.

I also have concerns about the proposed Modified Lane Markings at the A128 (N) Exit, as outlined in 3.9.4. I do understand why they want to make these changes – with so few vehicles expected to use the A128 Exit, allowing vehicles bound for that Exit to use two of the three lanes seems like an unnecessary complication (especially if one of those lanes cannot be used by anyone else, and will thus always be 'under-utilised'). However, their proposal that all three lanes should therefore allow drivers to continue right, around the roundabout, seems so dangerous to me... because instinctively, drivers in the middle lane will not expect vehicles in the outside lane to still be there after the Exit, and that will inevitably cause accidents!

It's all very well painting arrows on the road so as to alert drivers to which lanes they and their fellow drivers are entitled to use, but those arrows are not always visible, if there happens to be a queue of traffic parked on top of them... and of course that can and does happen, on a roundabout with traffic lights. Also, it is natural for drivers to expect vehicles in the outside lane to leave the roundabout at the next exit, because that is what the outside lane is supposed to be for... so permitting drivers who intend to stay on the roundabout to use the outside lane is counter-intuitive, and thus dangerous! It stands to reason that drivers in the middle lane, hoping to head East on the A13, will want to move across to the outside lane after they pass the A128 (N) Exit, in readiness to leave the roundabout at the A13 (E) Exit... and if even a single driver does this without checking his mirrors, he will collide with those drivers occupying the outside lane, who are inexplicably still alongside him.

Just because the computer model illustrates that this design has certain advantages, does not mean that this design will be readily understood by the drivers who actually have to use the roundabout – and since the success of the junction depends on drivers using it safely, it is vital that we consider it from their perspective. But it seems that National Highways have failed to do this...

In fact, one of the main reasons why these Modified Lane Markings are being proposed in the first place is because, as mentioned in 3.8.4, 'traffic travelling from the right-hand lane on the western overbridge needs to change to the middle lane for the A13 (E) exit', and, supposedly, this 'causes delays upstream of the stop line.' But, why should it cause delays? This is just normal roundabout behaviour, and as long as the traffic from the middle lane migrates across to the outside lane, ready to leave at the next exit, there should be plenty of room for the traffic from the inside lane to change to the middle lane, so that they can both use the A13 (E) slip road (which, happily, has two lanes, so it can accommodate both lanes of vehicles). Any driver who has ever used a roundabout should be able to do this in their sleep; but no, National Highways thinks that it will cause delays, and so they propose to alter the lane markings to resolve this non-existent issue.

...And yet, according to 3.9.4, their solution will not resolve the issue, because traffic that is bound for the A13 (E) will still be allowed to use the inside lane, so it will still be required to move to the middle lane to exit onto the A13, and thus will logically still cause delays upstream of the stop line! The only difference is that now, the traffic in the middle lane will not be able to migrate across to the outside lane to make room, as the outside lane will already be occupied by the vehicles that did not turn north onto the A128... effectively, three lanes of traffic bound for the A13 must merge into just two lanes, and if National Highways think that this will reduce delays, then I really don't know what to say.

The real solution is obvious: first, the outside lane stays dedicated to traffic leaving the roundabout, and all of the traffic that uses it must turn north up the A128, thus leaving the equation; second, just dedicate the middle lane to traffic bound for the A13 (E), and allow that middle lane to 'become' the outside lane once the A128 (N) exit has been passed; and then third, allow the inside lane to stay as it is, for both A13 (E) traffic, and A1013 traffic... and once the A128 (N) exit has been passed, that inside lane 'becomes' the middle lane, and a new inside lane is 'born' for traffic that wishes to head south, or west.

Admittedly, this might result in the outside lane still being somewhat 'under-utilised', but it is much more intuitive, and thus safer. It will also mean that there should not be any 'delays upstream of the stop line', as drivers would not technically have to change lanes at all – the lanes themselves guide the drivers to where they need to be, and the drivers simply have to follow them. (Also, if all of the A128 (N) traffic was obliged to use the outside lane, as I am suggesting, it would concentrate said traffic into that lane, freeing up more space for A13 (E) traffic in the middle lane... it's so obvious!)

In section 3.9.2, National Highways do say that 'requirements for further improvements... would be determined following... stakeholder engagement and using the flexibility available within the draft DCO', which is just as well, because this revised proposal is still decidedly lacking, in my opinion. But the fact that it would need to be revised further, all due to such glaringly obvious design flaws, just seems absurd, to me... if even I can see the shortcomings of this design, how could the experts at National Highways have overlooked them?! I don't even have a traffic model, I'm just using my common sense – and I don't like the proposed Orsett Junction anyway, I prefer my own design, two miles down the road! And yet still, I seem to have given their design more thought than they have... it's ridiculous!