M3 Junction 9 Improvement Project
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Unique Reference: 20034384

[redacted]

Final Submission

SUMMARY
Winchester FoE

PERSONAL INTRODUCTION:

I am just going to pray for you at St Paul's, but with no very lively hope of success.

Rev Sydney Smith

I came to this Inquiry to represent, as its convenor, Winchester Friends of the Earth, but I cannot help having a personal perspective, born of nearly 50 years of campaigning against road-building. An experience of many public inquiries of the old sort, which though much fairer were still exhausting; the camaraderie of campaigning with like-minded people; the highs of excitement in the early M3 days and the later Twyford Down events, even when I broke my arm; the low of a 'joint tortfeasance' High Court action, which threatened me with loss of everything I owned and everything I would earn for the rest of my life.

I came to this Inquiry with '*no very lively hope of success';* we must do without hope in these darkening times. But I have the need to believe my grandchildren will come to know that I tried, in my limited way, to reduce the harm we are imposing on their generation.

I come towards the end of this Inquiry, only with gloom. Even if the result of this Inquiry would be a recommendation against the scheme, I know that Government is likely to overrule it (as it has done with Stonehenge). That 6 months of our lives and that so much effort (20,000+ pages of documents) can be expended to such an ignoble and irresponsible end, is truly a matter for deep despair.

INTRODUCTION

Insanity:

I suppose the advocates of unreason think that there is a better chance of profitably deceiving the populace if they keep it in a state of effervescence.

Bertrand Russell

More than 50 years ago, when Donella Meadows spelled out the Li*mits to Growth,* who would have thought that her case, so compellingly researched and so well borne out in subsequent decades of research[1], that governments, now on the very edge of catastrophe, remain in complete denial of the reality. Most of them (Tufton Street excepted) may not deny the facts of Global Heating and the Anthropocene Extinction, as spelled out in words and graphs and numbers, but they deny them in their policies and actions. It is not *cognitive dissonance,* which might be a psychological dysfunction, but the wilful blindness of those with an unscrupulous intention to sell the future for supposed political gain in the present.

[1] Though the limits have broadened from those of the availability of resources to geophysical and biological planetary boundaries. See: *'The Limits to Growth – 50 Years Ago and Today'*; T Döring and B Aigner-Walder; Intereconomics, 2022, 57(3), 187-191

I came to this Inquiry, stating that I considered this scheme and the whole RIS programmes it is part of, to be actually insane. How can it be any more sane than hosing a burning house with petroleum, to deliberately burn fossil fuel, on a burning planet, in order to deliberately create a situation where much more fossil fuel will be burned? Nearing the end of the Inquiry I am even more astonished at the sophistry and the laboured fallacies that the Applicant has been prepared to inflict on us, to justify the insanity. A whole cant vocabulary is used: *proportionate, resilient, appropriate, reliability, balance, contextualised*, … Humpty Dumpty words, without their usual meaning.

What is this scheme *proportionate* or *appropriate* to? Certainly not the future of the planet – does anyone at this Inquiry really believe that the next, suffering generation will understand that any of this nonsense was taken seriously? How is it *resilient* to carry on business-as-usual, when we are already concerned with what we need to do in the way of adaptation to a problem that such business-as-usual has created – is a resilient response to chronic alcoholism, to drink more vodka? And much time has been spent here on *contextualisation*, with Dr Boswell, forensically doing the big sums while the Applicant airily waves away the arithmetic with meaningless verbiage and legalistic reference to nonsensical policy. But in what world could rational people see a *context* in which a burning house could be saved by pouring more petroleum over it?

Arcana:

> *"As priestcraft was always the enemy of knowledge, because priestcraft supports itself by keeping people in delusion and ignorance, it was consistent with its policy to make the acquisition of knowledge a real sin."*
>
> Thomas Paine

The deceitful vocabulary is not unexpected nor, in fact, is the handwaving, nor the priestcraft, but we have seen and heard so much of it at this Inquiry that it has been especially wearing. It is in the exchanges on non-road alternatives, that the Applicant has been well caught out on its habit of condescending assurances. Options *"would have been considered"* at some higher level beyond the understanding of we, the plebeian folk. Except that the Applicant has been unable to find the smallest bit of documentation to show that its statements are true.

We should reflect on the level of dishonesty revealed by this forced admission, because it relates to my first submissions on modelling and economics (AS-010/11). My essential points there, were that, over decades of asking, the DfT has never been able to show me any documents or research to demonstrate that there is an economic benefit to the nation of building roads, nor that there is a safety benefit. Nor has it ever presented any evidence to counter the statistical work that I have done, that suggests that the very opposite of economic and safety benefit from road building is evidenced.

The Applicant, however, goes beyond the failure to actually provide any evidence behind the assumptions within the black boxes of the appraisal mechanisms (REP4-037):

> *The Examining Authority and the Secretary of State do not need to be concerned with the national methodology and national assumptions around the key drivers of transport demand.*

So neither the government nor the Planning Inspectorate need to bother their heads with whether or not the Applicant's assertions of appraisal results have any basis in reality. Who then should be concerned with this? The Applicant is to be the judge and jury and only provider of evidence in its own case. This is priestcraft – *we know better than you; we have sole access to the arcana in the Holy of Holies, and what we say is ex cathedra and must be obeyed by you lot.*

This explains why the Applicant in REP4-052 feels entitled to dismiss out of hand any attempt to get any data other than what it deems appropriate to provide. Re my request to see the COBA output file:

> *The Applicant notes that the requested files rely on the use of specialist proprietary software to access the data (such as SATURN, DIADEM, TUBA, WITA) and this also requires training and experience in the software and related assessment methodologies to process and analyse the outputs.*

This is a preposterous, unfair and arrogant position for the Applicant to take. The offensive assertion that interested parties would need to be trained to understand the processes is pure priestcraft. It is also untrue, as I pointed out in my response to REP4-052 (which does not appear in the Documents Library). *"The Applicant considers that it is not proportionate"* to provide this data. There is nothing 'proportionate' in withholding relevant data from the Inquiry or Interested Parties. It is simply unjust.

Numbers and Data:

> *I shall try not to use statistics as a drunken man uses lamp-posts, for support rather than for illumination; and I shall try not to let my pen stray too far from the tethers of sanity of things seen.*
>
> Attributed to Andrew Lang

The Applicant has consistently refused to engage with normal statistical methods. It has asserted meaningful validation of its traffic model beyond the bulk data in the main corridor, into the tails of a statistical distribution, so that it can claim pollution and economic benefit on the streets of Winchester. It does this without a single regard for the wide variance error distribution of that internal city street data or its model fit to the selected means of those data. In its dismissal of the requirement to make allowance for the optimism bias that is supposed to bring some realism to the habitual under-estimating of project costs by National Highways, it repeatedly asserts that the calculation is 'most likely'. Yet it has not once responded to the question of what the confidence region (error ellipsoid, variance or covariance or whatever) is on this maximum likelihood estimate. Yet with the poor economic return on this project, that confidence region could easily extend well into the realm of negative benefit.

Black Boxes:

Phil Gagg has on several occasions complained that all we see from the Applicant is the output of black boxes – *"don't tell me, show me".* We are never shown anything of this except what the Applicant wants to show us. The black boxes have three elements that we are supposed to take on trust:

- Input data – almost entirely unseen by this inquiry – we do not know whether the data is correct, properly representative or properly fed into the process.
- Mechanism – formulas and base data for some TAG processes are known, but the workings and reliability of some black boxes (e.g. $PM_{2.5}$ modelling) are unknown.
- Output data – chosen by the Applicant and we are told we are not competent enough to interpret the rest of it. So, for example, we don't get to see where the traffic model congests different links and junctions at certain points in the future; we don't see where the major parts of the modelled benefits/costs are occurring in the network.

Trust is at the heart of this. Those of us with long experience of National Highways are clearly not going to be sold more snake oil, but on what basis does ExA accept what it is being told rather than shown? The fact that the Applicant categorically asserted that non-road alternatives *"would have been considered",* but was then unable to find any evidence of the truth of that assertion, ought to be a cautionary lesson.

A Camel's Back:

The Applicant has a habit of asserting an insignificance of adding small harm to a system in a critical or overloaded state of harm. Carbon emissions are insignificant measured against those of some wide region or the nation as a whole. Nitrogen deposition on the neighbouring grassland is insignificant because levels are already at the point where habitat is compromised. The growth of traffic in an already suffering Twyford and Colden Common is small and we can ignore it. In fact it is not small – they are doing that DS-DM thing again (see below) – these communities are going to suffer a lot of harm.

The planet is in overshoot – thousands of years of climatic harm are probably now locked in, nature is into a major extinction phase. The breaking of the camel's back may not be the single painful event of the metaphor, but many of the consequences of climate change are now ineluctable.

There is an irony and hypocrisy in this. The idea that the sum of small emissions (though no road scheme has small emissions) is small, is at odds with a Webtag appraisal methodology, where the sum of millions of insignificant (and arguably dubious) time savings is somehow deemed to be economically significant.

SCHEME OBJECTIVES

In a preliminary submission (REP1-039) we drew attention to the 5 scheme objectives and we revisit these now in the light of what we have learned from this inquiry.

Congestion Relief:

We pointed to the fact that, historically, this universal claim of all NH road schemes, is illusory. Making no observations on the anomaly of the COViD period, the relationship between road building and congestion appears, if anything to be in the reverse direction from that which the NH claims:

So the claim of network relief by road building has no basis in the observable data. Nor indeed does the draft NPSNN document see any prospect of actual relief arising out of the RIS strategies. At §3.3 we have:

> *Increases in the number of seconds of time lost due to congestion on motorways also varies under the Core scenario; from 81.8% in one region to 215.5% in another.*

The pointlessness of forever building capacity that forever fills up, is somewhat akin to the dysfunctional management of Britain's rivers over the last century, where the received wisdom was to straighten and widen channels. Belatedly we have realised that a nature-based solution, to the increasingly common flood events resulting from over-development of land and climate change, is to do the exact opposite.

Now we have the curious forked-tongue position of the Applicant, that congestion relief does not lead to traffic growth. We address this position separately below.

Journey Time Reliability:
The claim is a corollary of the congestion relief claim and equally illusory, not only because the corridor effect can only be temporary, since the scheme allows corridor traffic to grow, and it ignores the wider network congestion and journey time unreliability the induced trips produce (including that for Winchester streets, for which, bizarrely, the Applicant claims benefit – see below).

There is an additional reason for suspecting that capacity increases do not bring about improved reliability or indeed journey times, since Jevons Paradox manifests itself in the change of behaviour demonstrated by David Metz.[2] Journey time is not saved because the time saved is spent travelling further, for the same economic purposes.

The Applicant has not adduced any evidence at this Inquiry that disputes these well-observed effects.

Safety:
The idea that road safety is improved by road building is an invention of the WebTAG appraisal process. It has become apparent in this Inquiry that, while actual accident data on some local links has 'informed' the accident benefit calculation, the Applicant has not countered the fundamental objection to the process. The process assumes that the difference between the DS and the DM networks is mostly characterised by the average user-behavioural properties of the links and junctions within them. The assumption of zero boundary effects (that drivers exiting from a high speed road on to a road of accident characteristics X, behave in the same way if they come to such a road from a lower-speed road) has never been demonstrated by NH. In my early evidence (AS-010/11) I pointed out that the statistical cross-correlation data between national accidents and/or casualties and strategic road building was in the positive direction – the reverse of the assumptions made by WebTAG.

The health disbenefits of the growing traffic the strategic road programme induces or permits, come under several headings: air pollution, inactive lifestyles, noise pollution, intimidation of active transport.

Economic Growth:
While modern economists (i.e. not those who teach our politicians) generally recognise that economic growth has never come decoupled from major environmental damage, there are one or two[3] who declare themselves agnostic about the possibility of sustainable growth within trophic boundaries of ecology, climate and social equity. We can only find out in the unlikely event of governments taking us within the boundaries of planetary and social sustainability.

But even if we accept the goal of unsustainable economic growth that governments seek, it is sensible to ask if road building serves that purpose. It suffices to point out that neither the Department for Transport nor the Treasury have been able to point to any research that demonstrates that growth (as measured, say, by GDP) arises from building additional roads in a relatively mature network. Correlation of time-series data is not determination, as the Eddington Report found; cross-correlation of time-series incremental data is likely to be more revealing. The DfT has never countered the cross-correlation calculations I have carried out, that show a negative GDP growth dependence on road capacity growth.

Road users massively externalise their costs and Eddington stated that these externalities should be paid for by the user. In defiance of Eddington, recent governments have progressively moved in the direction of increasing subsidy to this uneconomic activity. If even the non-climate- related externalities were paid for by the user, the elasticity of road use demand over price would signify a level of traffic on UK roads comparable to that pertaining in the 1950s.

[2] The Myth of Travel Time Saving; May 2008; Transport Reviews: 28(3):321-336
[3] e.g. Kate Raworth: *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist;* Random House; *2017*

Active Travel Benefit:
It is hard to see anything greatly significant here and what there is doesn't take us much beyond the *status quo ante* the NH widening of the traffic lanes on the roundabout about 4 years ago, which put cyclists at a significant disadvantage, intimidation and actual danger. What the scheme does do is permit a growth of traffic on the surrounding network, choking the streets of Winchester (predicted to grow traffic in some cases by more than half). How that is supposed to contribute to active travel is a mystery on which the Applicant, or its slavish echo, the HCC do not enlighten us.

TRAFFIC GROWTH

Ever since reluctantly conceding the central conclusion of the SACTRA report, that road building induces traffic, the DfT and NH have been indulging in neat little bits of legerdemain to undermine what ought to have been the significance of that conclusion. Firstly they represented induced traffic as an economic benefit in itself, through the rule-of-half calculation – i.e. claiming a benefit from an opportunity being grasped by those road users making trips they would not have made before. There would be a valid argument for this, if it were true that the user's demonstration of willingness to pay was based on him/her paying the true cost of journeys. But it is not true. Nevertheless, the VDEM model is almost certainly claiming some rule-of-half benefit on the basis of this false assumption.

Secondly, and more significantly, the road builders have re-framed the argument about what is induced traffic. This is at the heart of the extraordinary claim by the Applicant here, that its scheme results in insignificant induction. There is clearly a semantic problem. There are lots of different types of things that can happen to the Trip Matrix and the Journey Matrix that can result from a change of infrastructure, economic changes, policy changes etc. The existing trips (e.g. the trip to get daily needs shopping) can result in the same journey (e.g. shopping at Sainsbury's) done differently (e.g. by change of mode or route or differing speed), or at a different frequency, or in a different journey (e.g. shopping at Lidl), or combined with another existing trip (e.g. do shopping in a market town centre , taking in a restaurant), or no journey at all (e.g. not making the trip to the restaurant but staying at home, or replacing a meeting journey with an on-line link, or arranging delivery of the goods one used to make a journey for). Or entirely new trips may result (e.g. I can now reach that theme park I never thought about going to before), or the trip purpose may change (let's go to the beach instead of the theme park this weekend).

Any of these outcomes are possible if the transport conditions change. What is more, existing trip ends can move: a greenfield housing estate 10 miles from a town, served by a new arterial road can attract residents away from higher density town centre rental properties; a supermarket in a town can move to an out-of-town location. There may be some particular utility involved in a trip-end displacement, or more likely some utility is gained by one element of society at the expense of others (an out-of-town hypermarket essentially externalises parts of its transport costs on to its customers and especially those who do not have car mobility), without there being any discernible economic efficiency benefit to society as a whole. This is the sort of outcome that explains the Metz phenomenon.

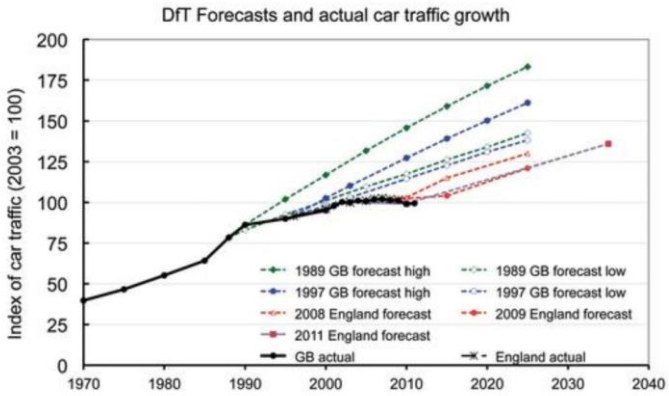
The technical punctilio in this, may be that "induced traffic" is that resulting from entirely new trips that would not be made at all without the provision of a scheme, but this is not representative of the entirety of trip differences that will occur as a result of a network change or the traffic consequences of those differences. Maybe it is this punctilio that is at the heart of the VDEM mechanism, i.e. that there is little 'induction', but which the Applicant then infeasibly asserts as meaning little traffic generation.

The Applicant's position on this is illogical. It effectively says it has an economic benefit from relieving congestion at this junction, that outweighs the costs of provision of the scheme. It gets most of these benefits from the users of

the roads. It's denial of traffic generation as a result of reducing user costs is an assertion that there is no elastic response between price and demand. Yet is that very price-demand curve (willingness to pay) that is at the heart of the cost-benefit analysis. The Applicant cannot have it both ways.

Maybe interested parties have too loosely used the term **'induction'**. The real point is not the semantic punctilio, but what is the entirety of the traffic **generation** that results from a scheme? Nobody can seriously doubt that all schemes that increase capacity (and the argument about whether it is a widening scheme or not is just plain silly) will increase total traffic on the network. SACTRA said it decades ago and it has been demonstrated over and over again since[4].

The question is how we unravel the traffic generation of road building, from what is usually deemed by the DfT to be natural growth in traffic. The historical failure of DfT traffic forecasting is almost the stuff of parody, as the Goodwin 'porcupine' graph illustrates:



There has been significant growth of traffic, not monotonic, but generally relentless. It actually peaked around 2008, until George Osborne stimulated it with additional subsidy (a process continued by the current administration), at the same time as reducing support for public transport. Interrupted by COVID, traffic is on the rise again. This slow natural growth does not reflect the forecasts at any period; yet, if you take traffic levels on a strategic corridor like the M3 or A34, where huge capacity increase has been provided, steep rises are seen. So what is happening here?

Consider any one of the porcupine quills and see that, as a prediction of natural traffic rise it is hopelessly overdone. But the quill is used to say that there will be a steep rise in natural traffic on a corridor for which the NH wishes to build a road. New capacity is provided and classically that capacity encourages corridor growth of the same dramatic kind as the prediction. This positive feedback is thus enabled by this predict-and-provide positive feedback.

But it is fundamentally dishonest because the feedback mechanism does not sit equally on the two halves of the DS-DM economic analysis that supposedly justifies the scheme. If this scheme is not built, what possible reason have we for saying that DM will follow the porcupine fantasy projection, rather than the 'natural' growth curve? What the Applicant does with its scheme is, not reduce the user costs of the traffic that would have grown, but claiming a reduction in costs for the traffic it has generated.

There is an economic absurdity here, but we do not particularly need to examine that further, since, even in the scales of NH or TAG economic thinking, this is such a poor value scheme that the Applicant has had to invent wider

[4] See: CPRE: *The Impact of Road Projects in England*; L Sloman, L Hopkinson and I Taylor; Transport for Quality of Life; March 2017
Also: https://tapas.network/35/hopkinsongoodwin.php; for gist of unpublished submission to NNNPS Consultation 2023; L Hopkinson and P Goodwin.

economic benefits with nothing in the way of a plausible narrative and supposedly error-free construction cost estimates to offset the poor return in user benefits. The important thing is what this deliberate stimulation of traffic, through a feedback mechanism that drags the 'natural' traffic growth towards a fictional forecast growth, does to much more important considerations.

The Applicant creates a DM growth rate, knowing that by providing new capacity, permits at least some of it to take place. Without the scheme nothing like the DM growth rate would occur; without the scheme, nothing like the carbon emissions of the DM trajectory would occur; without the scheme nothing like the particulate pollution increases would occur; without the scheme the 50% plus increase of traffic on Winchester's streets would not occur. On the latter point, it couldn't occur anyway, either physically because much of Winchester's network is already near stationary for significant parts of the day (see REP6-037), or politically because it defies the objectives of the Movement Strategy (see below for the imbecility of the HCC and WCC statements that this scheme is key to the WMS).

Rather than making claims that its scheme provides benefits related to DM-DS costs (in fact nearly all its claims are of this kind) it ought logically to be examining ΔM-ΔS, where ΔM is 'naturally' grown traffic and ΔS is the growth stimulated by this scheme. I do not know what the latter is, but it could be estimated by comparing historic growth rates on improved corridors with the national 'natural' growth curve. And, in fact, the 'natural' growth curve can be pretty well represented as a constant plateau.

The direct traffic consequences, ΔS-ΔM, of the scheme are not given to us by the Applicant, apart from its DS estimates for the streets of Winchester. We have not been told what traffic increase this scheme brings about for Twyford (all we have seen is DS-DM, which is not a measure of the burden they are being asked to endure). We do not know how the scheme's traffic growth will create the congestion in the Twyford Down cutting that NH wishes to see in order to implement their 1993 widening plan.

TRAFFIC MODELLING

Traffic Modelling – Winchester Streets: There is nothing wrong (since they are testable) with the processes of modelling current traffic flows or using the model to predict what would happen with changes of network. What is important is to recognise what the statistical validation tests tell us about the reliability of this for making secondary assertions. Optimisation of a traffic model does not permit assumptions of validity in regions of the data where the fit is not good. The optimisation process will naturally weight the bigger traffic flows higher (since their fractional errors of observation will be smaller) so that the fit will likely be less good proportionately for the smaller flows. The validation data over the Winchester streets has a standard deviation of mismatches of 26%. These mismatches are against a single observable snapshot of a local traffic distribution, itself of very high variability (from SD 20% to ~60% according to proxies used), so that the combined variance of the data against which DS-DM differences are asserted to be significant, ranges from SD 33% to 65%. Local effects (such as air pollution improvement) cannot be sensibly claimed against such a statistical background.

But the lack of significance in the DS-DM that is the basis for assertion of benefit, is not the major point. What the scheme does is allow a growth of traffic above the 'natural' – the scheme imposes a cost on the people of Winchester and then tells them they should be grateful for reducing the cost a bit.

CLIMATE

While I have made a number of observations on climate matters in my several submissions, I believe that Dr. Boswell and Mr. Gagg have made such strong submissions on the arithmetic of the carbon consequences of this scheme, that

I do not need to add very much here. I restrict myself to remarking on the stand-out peculiarities of the Applicant's case.

DS-DM is Not Representative of Harm:
As indicated above, there is significant traffic growth brought about by this scheme, above what we would expect from the near flat 'natural' growth curve. The climate consequences of the scheme, therefore, should not be construed as the difference between DS and DM emissions, but between ΔS and ΔM emissions. The latter, like the former should reflect the traffic trajectories with time and the assumed decarbonisation trajectories for the vehicle fleet.

Since DM is a very significant exaggeration of ΔM, it follows that the DS-DM figures on which the Applicant relies, will have woefully underestimated the scheme's measure of climate harm.

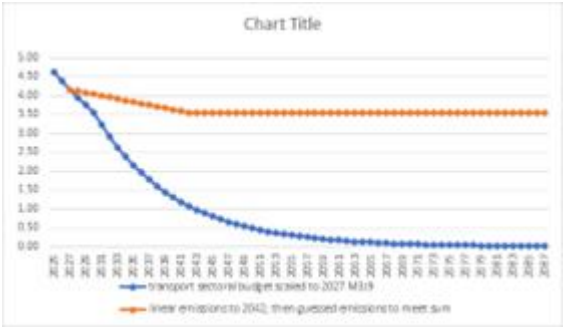
Carbon Trajectory:
I struggle with the plausibility of the carbon modelling. I get the scale and shape of the trajectory of the DfT's Transport Decarbonisation Strategy, that must fit the 4th-6th carbon budgets. I had significant doubts about the likelihood of the technological wish list actually achieving what the Strategy was saying it would, not least because of likely rebound (Jevons) and we have already seen that such effects are occurring – the recent Climate Change Committee report was highlighting a user response to a developing EV market appears to be the purchasing of a greater proportion of heavier SUV models. I also had significant doubts, that have only increased with time, that the Strategy relied on an unlikely growth of renewable energy and particularly on an assumed priority for road transport to get the biggest share. The assumption is especially misplaced since road transport is clearly a far more discretionary activity than other sectors, i.e. much of the activity is unnecessary or has sustainable alternatives, in a way that most of the other sectors cannot easily reduce their needs.

Before Marsden I could not reconcile a transport decarbonisation strategy that asserted a need to reduce the use of cars (the Climate Change Committee believes that a 9% reduction of traffic is needed even if all technology assumptions are correct) , with a roads strategy wedded to major increases of traffic. After Marsden finally forced the information out of the DfT, it was clear that there is an irreconcilable contradiction between the two strategies.

The carbon trajectory of this scheme is baffling. The only visible output of the GHG modelling presented to this Inquiry is summarised at 6.1 Climate §14.7.16. The end-user carbon emissions for the DM scenario is as follows:

- 2027: 4,157,875 tCO2e
- 2042: 3,549,335 tCO2e
- Total over modelled 60-year operation (2027-2086): 222,088,200 tCO2e

Whatever 'contextualisation' means in the NH vocabulary (and it is very hard to discover) there must surely be some mapping of the modelling to the carbon budget for the surface transport sector. The scheme figures can only be sensibly reconciled by interpolating between the two dates and finding a plausible line to the end of the scheme life that gives the predicted cumulative emission. It appears that the scheme is assumed to have constant (DS-DM) emission from 2042. The sectoral budget can be extracted as a log-linear curve from the three carbon budget figures. It is very hard to see a mapping (contextualisation) between the scheme trajectory and the exigency of the carbon budget for the transport sector.



NH seems incapable of understanding that what matters much more than Net Zero is the trajectory for meeting it (i.e. the cumulative emissions is what the future of the planet and the carbon budget is all about). It is very clear that the Climate Change Committee is unhappy with what is happening on road transport. Even before the Sunak revisionist announcement, the sale of EVs is only 'on track' in the sense that it is already on the lowest "headwinds curve" (currently 17% of sales) in the 6th Carbon Budget. We've yet to see how vehicle purchasers will react to the kicking of the 2030 deadline into the long grass.

AIR QUALITY

The Health Issue:

The scourge of air pollution is still not widely understood. The widely quoted 40,000 early deaths per year in England (not the UK), of which 29,000 are attributed with greater precision to $PM_{2.5}$ particulates and for the 25+ age group, is indication of the second largest cause of death. Even so it is not usually understood that 'early death' in this context signifies about 10 years of life lost. So, since passing the 2010 deadline for compliance with the European Directive, some 4million years of life have been lost in England. It is a scandal that post-Uxbridge political opportunism has deliberately promoted the interests of the polluter, with no concern for the very real victims.

DEFRA has downplayed both the role of transport and the scale of $PM_{2.5}$ particulate pollution as a health burden on the nation, but the issue can no longer be avoided. In its proximity to human receptors and in its chemical toxicity, traffic-generated particulate pollution is a very significant contributor to mortality and morbidity. DEFRA is proposing to change the legal threshold for $PM_{2.5}$ to the old WHO level (but still at twice what WHO sets now). The Applicant is wrong to make the assertion that Winchester already meets this threshold, but even more wrong in its presumption that things can only get better. This kind of pollution seems set to rise with the growing component of electric vehicles.

Putting aside the doubtful validity of the Applicant's $PM_{2.5}$ modelling, what is not in doubt is that such pollution will rise with the traffic generated or permitted by this scheme. It will rise on the corridor and in the residential areas next to it. Whether the traffic for the streets of Winchester will be allowed by the local Councils to rise towards the levels predicted by the Applicant, is unknown. What is also very likely is that the assumption in DMRB that pollution from traffic will continue to decline through technological improvement, is unsound. Vehicle weight increases associated with ICE-to-EV transition seem likely to significantly increase levels of $PM_{2.5}$ through tyre wear, the size and chemical composition of such pollution being especially toxic.

The City Council is right to stress that the real issue with air pollution has moved on from the clumsy limbo dancing to get under EU thresholds (which never did fit with WHO assertions of harm) to actual expressed concern for health consequences. The Public Health England report referred to in our D5 submission on Air Quality was the key to this

transition of concern. No level of $PM_{2.5}$ is safe and every increment in it carries an actual, significant, quantifiable impact on life expectancy of those exposed to it.

The AQ Benefit Claim:
The Applicant's case that an air quality benefit arises from this scheme is bizarre. Firstly it comes out of a traffic modelling that compares DM with DS traffic, ascribing statistical significance to these differences despite significantly large variances of the model fit to observed traffic means and the additional sampling variances that should be ascribed to the observed data, but which the Applicant has not determined. Secondly, it assumes that the local authorities will allow traffic to grow on the streets of Winchester instead of meeting their declared objective (in the Movement Strategy) of decreasing it.

Thirdly and most importantly, the DM assumption is not an assumption that reflects natural traffic growth, but only occurs because the scheme drags the data towards porcupine traffic forecasts. The scheme generates the DM pollution, that DS supposedly diminishes. There is logical framework within which this can be construed as a benefit (see Economics)

Habitat Pollution:
Nitrogen deposition on the neighbouring chalk grassland may not be primarily sourced from road traffic, but the levels are already well beyond the critical loading consistent with retaining the richness of the flora. It cannot be sensible for the Applicant to argue that its scheme adds an insignificant extra burden. That is an argument for never having thresholds that need to be met. It appears that Natural England is also not persuaded by the Applicant's straws-and-camels argument that small additions don't matter in relation to large dangerous numbers. Chalk grasslands in this corridor are already in species decline.

ECONOMICS

I do not intend to rehearse my evidence on the false economics of WebTAG – its faux science, with highly circular assumptions, the nonsense of a willingness-to-pay assumption in a highly subsidised economic sector or the unbounded assumption that addition of infrastructure at any level must be beneficial. Instead, I confine myself to the economics of this scheme according to the methodology used to assess it.

The first thing to say, by these criteria, is that the scheme is poor value for money. It is very poor value based on user benefits. It is still poor value for money when wider economic benefits are invented and an unjustified benefit is claimed for reducing air pollution the scheme itself has allowed to grow.

The user benefits are a function of traffic forecast. Professor Marsden has shown that the forecasts are incompatible with the Transport Decarbonisation Strategy (TDS) and its trajectory (which relies on reduced traffic rather than increased). If traffic is not allowed to grow then user benefits would be much smaller and still smaller if the decarbonisation assumption of a 9% traffic reduction expectation were met. The Applicant is wrong to claim benefit from a growth of traffic that breaks the TDS.

An air pollution benefit is nonsensical for the reasons already given. If anything the economics ought to show the disbenefit of a scheme that brings traffic to the area that would not have come without it. In any case the proper assumption is that levels of traffic in Winchester will be determined politically and both local authorities have said that their aim is to generally reduce them.

Wider Economic Benefits (WEB) are an unjustified addition to the brew. No plausible economic narrative is given to justify the addition. Recent literature, where this lack of evidence casts huge doubts on the practicality of the whole idea, concludes:

> *Claims of large WEBs are generally unjustified. When WEBs are claimed, an economic narrative and explanation is essential rather than applying "assumption laden black-box formulae as has increasingly been the norm".*

The WEB calculation in this appraisal is all about black-box magic, without any serious analysis of assumptions, or indeed of any real statement of what the assumptions are – why the supposed agglomeration is not displacement, is not already included in user benefits (e.g. no explanation as to why the asserted WEB agglomeration benefits should not be counted within the traffic growth assumed in the user benefits) or does not result in induction with additional carbon emission.

National Highways has a bad record of underestimating its construction costs, as recently highlighted by the National Audit Office. The Applicant has not answered the question about 'Most likely' assessment of costs, not having a statistical risk error bar, nor that the NH routinely bias optimistically the estimates of most-likely costs. That is what optimistic bias addition is all about. How big is the risk of this estimate? Would the Applicant's staff tie their future salaries to it being right?

ALTERNATIVES

We have nothing to add to Phil Gagg's clear evidence on the possibilities of rail alternatives to solving a projected congestion problem in this corridor. We simply want to make some general remarks.

In a well-ordered society we would look at transport as a system and look for the best way of bringing about a harmonious, functioning whole. We would not, as DfT does, partition the problem into silos; modal silos (roads, public transport, active transport) and funding silos (infrastructure and operational). The absurdity of this appraisal is that, quite apart from issues of equity, environmental and social costs, it makes no attempt to discuss real transport efficiency.

The general public should be forgiven for supposing that because we have national transport strategies and an Infrastructure Commission that somebody up there has done the homework on transport needs and everything must feed down from well-thought-out studies. We now know that nothing of the sort happens. The Infrastructure Commission has never considered any strategy for multi-modal transport infrastructure. Nor has the Department for Transport ever done alternative mode optioneering for strategic corridors. If it had the Applicant would have been able to find evidence for it.

The Applicant has bombarded us with legal assertions as to the meaning of the Holgate judgment on Stonehenge. We shall have to wait and see what happens with the latest appeal against a reapproval of a scheme that was rejected at Inquiry. Will it be one of those things where it is deemed reasonable for a Secretary of State to act unreasonably?

On the matter of alternatives, it is clear that NPSNN considers that alternatives to road schemes through a National Park are not to be confined to alternative road schemes. The *"some other way"* has to be considered.

REGIONAL AND LOCAL POLICY

Transport for the South East:

The Applicant cites the Transport for South East Strategy (TfSES) as a demonstration of accordance with regional planning. It is true that the TfSES is sufficiently incoherent (some might say spoken with forked tongue) that it can mean different things to different people. It is true that there are the usual 'just one more cigarette' arguments for building out road schemes already in plan. But its main themes, however, are to do with breaking bad transport habits. It excoriates the very basis of the methodology behind this scheme:

> *Traditionally, transport planning has used a 'predict and provide' approach to justify the need for future investment. This approach involves using existing trends to forecast future demand and congestion on the transport network to make the case for the investment needed to alleviate that congestion.*
> *In recent years, however, there has been a significant shift in thinking away from the 'predict and provide' approach. There is substantial evidence to suggest that providing additional road capacity and addressing bottlenecks in the highway network has the effect of generating additional demand for the road network, thus eroding or even eliminating any expected reductions in traffic congestion.*
> *Furthermore, this approach, if followed in an unconstrained fashion, risks promoting urban sprawl, high dependency on car use, and significant degradation of the natural environment. In the long run, 'predict and provide' risks creating a transport network that is less efficient and damaging for the local communities and environment it passes through. This transport strategy involves a shift towards a 'decide and provide' approach to transport provision. This means actively choosing a preferred future, with preferred transport outcomes as opposed to responding to existing trends and forecasts.*

The TfSES has a strategic objective:

> *A reduction in the need to travel, particularly by private car, to reduce the impact of transport on people and the environment, with indicators of success:*
> *A net reduction in the number of trip kilometres undertaken per person each weekday.*
> *A reduction in the mode share of the private car (measured by passenger kilometres).*

HCC - LTP4:

It is a pity that the County Council, with its declaration of climate emergency, does not recognise the consequences of its stance at this Inquiry, but apparently lives in a world of cognitive dissonance. This is apparent in the incoherence of the emerging LTP4. This is what the more enlightened voices are saying:

> *Principle 1: Significantly reduce dependency on the private car:*
> *Principle 2: Provide a transport system that promotes high quality, prosperous places and puts people first:*
>
> *The traditional approach to transport planning has involved 'planning for vehicles' by creating additional highway capacity to cater for predicted traffic growth. This has often simply generated additional demand (increasing the number of vehicles on the road), eroding the expected reduction in congestion and creating other social and environmental problems. This draft LTP4 seeks to instead plan for the needs of 'people' and 'places' to support: - successful and vibrant places, which are not dominated by cars; and - physically active and rewarding lives, supported by a range of travel choices.*

Movement Strategy:

The Movement Strategy started out with the declaration that it aimed to reduce traffic in Winchester. The strategy has been brewing for about 5 years and has mysteriously changed its objective to predict-and-provide parking

provision. Nothing much else is known about it. Both WCC and HCC state that this scheme serves the aims of the Winchester Movement Strategy (WMS). We must repeat that this Strategy remains opaque to the public. Nowhere has it ever been explained how this scheme helps to enable the strategy. In the absence of any such explanation, the Inquiry should ignore this supposed dependency.

OTHER

NPSNN:

I find the arguments for a slavish following of an out-of-date policy about as bizarre as asserting we still have a right to shoot a Scotsman with a crossbow on the streets of York, simply because a statute has never been repealed. The NPSNN. The Applicant quotes the NPSNN stance on carbon emissions:

> *The Government has an overarching national carbon reduction strategy (as set out in the Carbon Plan 2011) which is a credible plan for meeting carbon budgets.*

Yet the Climate Change Committee cannot find credible plans for meeting more than 38% of the budget.