Suggestions in response to the borough of Greenwich draft Transport Strategy

By Simon Pirani, September 2022

These suggestions, sent to Greenwich councillors, follow on from those I made in February last year about the borough's Carbon Neutral Plan.[1]

==

1. Total greenhouse gas emission reduction targets should be clarified and stated unambiguously, preferably in the form of carbon budgets.

The introduction to the Transport Strategy states that it will sit below the borough's Carbon Neutral Plan, which envisages "net zero" emissions by 2030.

Experience in the UK and beyond shows that the huge challenges presented by global warming can best be met by using clear targets in the form of carbon budgets, i.e. set amounts of emissions permissible in given time periods. These are important not only for councillors faced with making policy decisions, but also to explain to the public the dangers associated with greenhouse gas emissions and the means for addressing these.

Carbon budgets for Greenwich have been proposed by researchers at the Tyndall Centre for Climate Change Research at the University of Manchester.[2] These budgets have the advantage of being based on climate science, and derived from global emissions budgets in a transparent way, that takes account of social equity issues.

The Evidence Base for the borough's Carbon Neutral Plan, drafted by Element Energy,[3] presents two scenarios – a Baseline scenario and a Maximum ambition scenario – but the connection with climate science is not spelled out clearly. The Carbon Neutral Plan states, with commendable honesty, that the actions proposed "do not go far enough to make Royal Greenwich carbon neutral by 2030" (page 13), but no numerical estimates are provided, either of the target it is aiming for or the expected effect of policies adopted so far.

For comparison, the Tyndall Centre's recommended carbon budgets for Greenwich are:

660 kt/year CO2 in 2018-22;

340 kt/year CO2 in 2023-27; and

180 kt/year CO2 in 2028-32.

Element Energy's Baseline scenario envisages 850 kt/year CO2e of emissions in 2030; its Maximum ambition scenario envisages 200 kt/year CO2e of emissions in 2030.[4] For 2030, therefore, the Maximum ambition scenario reflects a level of decarbonisation similar to the Tyndall Centre's proposed carbon budgets. The latter, though, are better suited to guiding policy.

[1] These can be downloaded from https://piraniarchive.files.wordpress.com/2021/02/comments-on-carbon-neutral-plan-feb21.pdf

[2] J. Kuriakose et al, Setting Climate Commitments for Greenwich. Downloadable from https://carbonbudget.manchester.ac.uk/reports/E09000011/. The budgets were produced by the Scatter project, conducted by the Tyndall Centre with Anthesis Group and Greater Manchester Combined Authority, and funded by the Department for Business, Enterprise, Innovation and Skills (BEIS)

[3] Element Energy, Development of the Greenwich Carbon Neutral Plan, November 2019

[4] Development of the Greenwich Carbon Neutral Plan, page 56

2. References to "net zero" should be avoided.

The Transport Strategy refers (paragraphs 1.8 and 5.4) to the borough's goal of "becoming carbon neutral by 2030". I suggest that concepts such as "carbon neutrality" and "net zero" are at best confusing, and at worst present obstructions to policy development.

Both of these concepts reflect the principle of climate science that, on a global level, atmospheric warming will stop under conditions where the total of greenhouse gas emissions from the economy is equal to any reductions in greenhouse gas levels, either by natural means (e.g. forests) or artificial means. However, it is widely recognised that the idea of "net zero" has become misused by governments, who have both scaled down emissions reduction targets on the false hope of large-scale artificial greenhouse gas removal, and used carbon offsetting schemes to make false claims of progress.[5]

The Greenwich Carbon Neutral Plan states, correctly, that "the potential for removing CO2 from the atmosphere is likely to be limited and costly, and offsetting is not a sustainable strategy in the long term as emissions would need to be cut globally" (page 7). These are good reasons to avoid references to "net zero".

It would be preferable to adopt, and offer for public discussion, carbon budgets that are clearly linked to climate science.

3. Greenhouse gas emission reduction targets for transport should also be clarified, and stated unambiguously. The council should commission research on the effect of the various transport measures proposed, in terms of these targets. Targets e.g. to 2030 should be supported by interim targets.

Emissions from road transport have been increasing, as a proportion of Greenwich's total emissions, in recent years. In the decade 2005-2014, road transport emissions stayed at around 24-27% of the total. There was some success in reducing other emissions, but road transport emissions stayed at the same level – and so grew as a share of the whole to more than 33% in 2016 and more than 35% in 2019. In absolute terms, emissions from road transport in Greenwich were 281.6 kt CO2 in 2019.[6]

Ideally, the borough should set carbon budgets for the road transport sector, to guide policy, and, in addition to targets e.g. to 2030, set interim targets for decarbonisation measures. If we take the Tyndall Centre's carbon budgets for Greenwich, and allow a constant 33% for road transport, we arrive at these budgets:

Indicative carbon budgets for Greenwich, kt CO2 / year				
	2018-22	2023-27	2028-32	2033-37
Total	660	340	180	100
Road transport (33% of total)	220	113	60	33
Source: Tyndall Centre / my calculation				

[5] See the Not Zero report by climate policy organisations, downloadable at https://whatnext.org/research_pubs/not-zero-how-net-zero-targets-disguise-climate-inaction/#prettyPhoto. Also, "Climate scientists: concept of net zero is a dangerous trap" https://theconversation.com/climate-scientists-concept-of-net-zero-is-a-dangerous-trap-157368

[6] BEIS statistics, downloadable from https://www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics

This is just an example. I am not saying that road transport should necessarily be allotted 33% of the borough's carbon budget. But I suggest that such budgets are adopted, and road transport granted whatever proportion is found to be appropriate.

For comparison, the level of emissions in 2030, were such budgets succesfully applied, would be 60 kt/year CO2. The level envisaged by the Element Energy's Maximum ambition scenario is roughly 70 kt/year, i.e. not substantially different.[7] Both of these figures are less than one quarter of Greenwich's road transport emissions in 2019.

Once such a budget is set, attempts should be made to estimate the effectiveness of policy measures designed to reduce emissions to these levels.

The Transport Strategy proposes (a) a 45% reduction in car use by 2030 (paragraph 3.4); (b) that 80% of trips should be walking and cycling by 2041 (paragraph 3.10); (c) that congestion should be reduced by 10-15% by 2041 (paragraph 3.11) (this is unclear: what does "congestion" refer to?); and (d) that car ownership should fall from 80,297 in 2016 to 75,200 in 2041 (paragraphs 3.13 and 4.18).

What would be the effect of all these policies, in terms of carbon budgets?

4. The council's central, and very welcome, proposal for greenhouse gas emissions reduction is a 45% reduction in vehicle-km travelled by car, by 2030. However the strategy should state plainly that even this substantial reduction will not achieve the necessary greenhouse gas emissions reduction.

Of Greenwich's 2019 road transport emissions of 281.6 kt CO2, I estimate that about 163.3 kt CO2 were from cars, 36.6 kt CO2 were from heavy goods vehicles (HGVs) and 28.2 kt CO2 from light goods vehicles (LGVs). The Transport Strategy proposes a reduction of the vehicle-kms travelled by car by 45%, and of the vehicle-kms travelled by HGVs and LGVs by 10%. The effect would be that those cars, HGVs and LGVs, which together produced 228 kt CO2 of emissions in 2019, would produce only 148 kt/year CO2. Total road transport emissions would be reduced by 80 kt CO2/year, to a little more than 200 kt CO2/year.[8]

To stick to the carbon budget for 2028-32 indicated in the table above, a further 140 kt CO2/year of emissions reductions would have to be found. (To reach the target indicated in Element Energy's Maximum ambition scenario, a further 130 kt CO2/year.)

These are rough calculations. But I am confident that they indicate the scale of the problem: that the most ambitious proposal in the transport strategy for reducing road transport emissions achieves less than half of the reduction required.

5. The very modest targets for reductions in vehicle-km travelled by vans and trucks should be reconsidered.

Part of the reason for the modest impact of the Transport Strategy's bold proposal to reduce traffic, measured by vehicle-km, is that the proposed reduction in vehicle-km driven by

[7] Development of the Greenwich Carbon Neutral Plan, page 56. I say "roughly" because I have not seen the underlying calculations for the graphs in Element Energy's report.

[8] I have assumed that, in London, cars account for about 58% of road transport emissions, heavy goods vehicles (HGVs) for about 13% and light goods vehicles (LGVs) for about 10%. (My calculation, from the sector breakdown for 2015 in the GLA Zero Carbon Pathway tool.) I have assumed that each reduction in vehicle-kms travelled results in an equivalent reduction in emissions. In that case, emissions by cars would go down from 163.3 kt CO2/year to 89.6 kt CO2/year; by HGVs from 36.6 kt CO2/year to 32.9 kt CO2/year; and by LGVs from 28.2 kt CO2/year to to 25.4 kt CO2/year.

HGVs and LGVs is only 10%. Were HGV and LGV traffic, as well as car traffic, reduced by 45%, there would be an additional 22.5 kt CO2/year of emissions reductions.

In the coming years, when the council is explaining to residents the logic of reducing vehicle-km driven by cars, this question is certain to come up again and again. Why should companies that use HGVs and LGVs for their business, for the benefit of shareholders outside the borough, not be required to devise ways of reducing the vehicle-km driven, just as households are being asked to do?

6. The policy measures proposed for Greenwich need to be coordinated with those proposed at London level.

Proposals (b) and (d) above, for an increase in the proportion of trips made by cycling and walking, and for a reduction in the level of car ownership, are linked to the London Mayor's Transport Strategy of 2018. But in January this year, the Mayor announced a set of new climate targets, and the strategy is out of date.

The London Zero Carbon Pathway was updated in line with the announcement, and it now envisages a much more rapid reduction of greenhouse gas emissions from road transport. Whereas in 2018 the Zero Carbon Pathway aimed to reduce road transport emissions to 4.26 Mt CO2/year by 2030, now it aims to reduce road transport emissions to 2.93 Mt CO2/year by 2030.[9]

If these targets are to be taken seriously, City Hall's targets for alternative mode trips, car ownership, etc, will also presumably have to be revised. (Of course the commitment of resources by City Hall to the Silvertown Tunnel project takes policy in the opposite direction. But City Hall's inconsistency is no reason for Greenwich to be inconsistent.)

7. The proposals for a reduction in car ownership are welcome. However the needs of households that do not own a car need to be more fully understood. The first priority must be to support those who can not afford a car, with free access to public transport and support for non-car modes of transport.

The Transport Strategy (paragraph 3.37) states that 44% of households in the borough do not have a car, and that the borough aims for a further "significant reduction in car ownership" by 2041. For this policy to be implemented, I suggest two courses of action.

First, research should be conducted to ascertain the reasons that households do not have a car. In some cases it will be due to low income levels. It should be a policy priority to support such families; to negotiate with TfL with a view to providing free access to public transport for them; and to find other ways of supporting their transport needs.

Second, all measures that support road infrastructure should be halted, and resources switched to supporting public transport and alternative modes. After years of cuts in council funding, every pound spent supporting road infrastructure is a pound not spent supporting public transport and alternative modes.

For example, the council recently advertised for an officer to coordinate the completion of the Silvertown tunnel project. The salary and support for that officer represents a subsidy to road transport, at the expense of alternative modes, and at the expense of schemes to support low-income families without cars. Ways should be found of avoiding such expenditure.

[9] Both versions of the Zero Carbon Pathway are downloadable at https://data.london.gov.uk/dataset/london-s-zero-carbon-pathways-tool

8. Investment in new road infrastructure directly contradicts the aims of greenhouse gas emissions reduction, and the aims of social justice in transport. The borough should unequivocally oppose such investment, starting with the Silvertown Tunnel project.

The Transport Strategy (paragraph 3.44) states that the Silvertown tunnel will provide "a new road and public transport crossing, due to be completed in 2025", and that a DLR extension to Thamesmead from Beckton is being considered, but "has not been confirmed for delivery". In other words: despite opposition from Greenwich and other boroughs, from local political parties, MPs, climate scientists and the community, the Mayor of London is pressing ahead with a £2 billion-plus road infrastructure project, while public transport projects are postponed. At London level, this will inevitably encourage higher levels of road traffic, divert resources away from public transport and alternative modes, and undermine attempts to decarbonise transport.

Although boring of the tunnel has now started, the borough should not drop its call on the Mayor of London to pause and review the project in the light of climate and air pollution policies. Any such review would certainly find that the tunnel project is a massive misappropriation of resources; even now, it would be cost-effective to cancel it; it would then remain only to find alternative uses for whatever parts of the tunnel have been completed at that stage.

Continuation of the project can only make it substantially more difficult for the borough to reach its targets for reducing vehicle-km driven.

9. While electric vehicles may play a modest part in greenhouse gas emissions reduction in the long run, it is doubtful that the council should contribute its own resources to EV infrastructure at this stage.

The Transport Strategy includes a commitment (page 15) to produce an Electric Vehicles (EV) Action Plan. In doing this, the borough should adopt an approach that commits its resources to EVs only after the necessary investments in traffic reduction, public transport and alternative modes have been made.

Central government has on one hand cut council resources to the bone, and, on the other, committed its own resources to EVs rather than to more effective transport decarbonisation policies (see point 10 below). EVs also have behind them the considerable social and financial weight of the motor manufacturing industry. Initially, the council should allow government and the motor manufacturers to invest in EV infrastructure, and focus its own resources on reducing social inequality in transport, and decarbonisation measures.

The council should also consider the body of research that shows the limited decarbonisation potential of EVs. The carbon intensity of manufacture, and of electricity generation (until such time as UK electricity ceases to be produced from gas), cancels out much of the advantage given by additional engine efficiency. For this reason, the phrase "zero emission vehicles" (paragraph 3.4) be avoided. EVs are a very long way from being "zero emission".

Until EVs are produced with lower emissions on a life-cycle basis, and until EVs affordable to Greenwich residents become widely available, resources should be focused on public transport and alternative modes.

10. The borough should publicly distance itself from the climate-trashing, pro-big-business approach to transport taken by central government, and should question the Mayor of London's commitment to road building, which contradicts London's declared climate policy aims.

The Transport Strategy states (paragraph 3.18) that transport policies of central government and the Mayor of London "focus on mitigating the impacts of climate change and air pollution, promoting economic growth and reducing social inequality". This is not the case, and a more accurate assessment is needed.

Government transport policies have been criticised by transport, energy and climate researchers, for ignoring the need to reduce dependence on motor transport, while betting recklessly on vehicle technologies with limited decarbonisation potential. The government's Transport Decarbonisation Plan, published in July 2021,[10] focused mainly on EVs, and included no specific targets for reducing the overall volume of traffic. The UK's leading transport policy researchers denounced the strategy. For example Jillian Anable of the Institute for Transport Studies at the University of Leeds, said that the focus on EVs was "delusional", and that no transport sector emissions reductions could be achieved by 2030 if traffic growth was allowed to continue.[11]

The plan recycled £2 billion for cycling and walking infrastructure, promised in 2020 – but this sum was dwarfed by the £27 billion being spent on the strategic road network. This approach has been shown to be incompatible with action on climate change. A report on the strategic road network by Transport for Quality of Life included estimates that the government's second Road Investment Strategy (RIS2) would produce an extra 20 Mt CO2 from the strategic road network in 2020-2032, a period during which emissions should be 167 Mt CO2 lower than projected, if climate targets are to be met.[12]

11. The borough should initiate a wide-ranging public discussion on the Transport Strategy, with an emphasis on the potential for it both to improve people's lives, and reduce greenhouse gas emissions, at the same time.

Even the Transport Strategy targets as currently stated – in particular, the reduction of vehicle-km driven by 45% by 2030 – constitute a huge shift not only in transport policy but in the way people in Greenwich live. A bold combination of support for public transport, resistance to the demands of the haulage industry and government policy, and encouragement of alternative modes of transport, can both improve people's lives and take big strides towards limiting greenhouse gas emissions.

The council can not do this on its own. It needs the support of residents and of community organisations. And such support will have to be won in opposition to the transport policies pursued at government level, and in spite of the sharp contrast between words (about emission reductions) and deeds (investment in the Silvertown Tunnel) at London level.

I suggest that the first step is a wide-ranging public conversation on transport policy and decarbonisation.

(end)

[10] https://www.gov.uk/government/publications/transport-decarbonisation-plan

[11] "In depth Q & A: what is the UK's 'net zero' plan for transport?", Carbon Brief, 15 July 2021 https://www.carbonbrief.org/in-depth-qa-what-is-the-uks-net-zero-plan-for-transport. See also: Christian Brand, "Obsessing over EVs is impeding the race to net zero: more active travel is essential", Oxford University comment, 14 July 2021 https://www.ox.ac.uk/news/2021-06-14-obsessing-over-electric-cars-impeding-race-net-zero-more-active-travel-essential; Nick Eyre, "The UK Government's ten point plan for a green industrial revolution", Centre for Research into Energy Demand Solutions, 26 November 2020 https://www.creds.ac.uk/the-uk-governments-ten-point-plan-for-a-green-industrial-revolution/

[12] TfQL, The Carbon Impact of the National Roads Programme. Download at https://www.transportforqualityoflife.com/policyresearch/roadsandtraffic/