Transport: an environmental perspective

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People feel strongly about this

Sit-in halts second Archway inquiry

By John Andrews

A SECOND attempt to build a relief road scheme at Archway near Highgate has been postponed after the independent supporter...
Why?

- Local environment
- Landscape and land use
- Climate change
Local environment

• Noise
• Local air quality
• Intrusion and severance, from
• Traffic volumes and speed
• Street design
• Change imposed from outside
Logistics issues

- Intrusion of heavy lorries
- Increasing van and lorry traffic
- Resistance to freight-generating development (stores, night deliveries, depots etc)
Landscape and biodiversity

- Car dependent development
- Landscape impacts
- Impacts of transport developments on habitats and biodiversity
Logistics issues

- The land use implications of just in time (big warehouses next to motorway junctions)
- Trade offs between landscape/biodiversity protection and logistics (ports, road-rail depots etc)
Climate change

- “Biggest threat we face” – PM, David Cameron etc
- Scientific consensus that climate change is real and is caused by human activity and that it will result in potentially catastrophic impacts for people and the planet

Transport is implicated:
- Transport accounts for 24% of UK carbon emissions, set to be 30% by 2030 (and this excludes international aviation and shipping)
- Freight carbon dioxide emissions grew 48% 1990-2002
- Aviation climate change effects worldwide could increase by 300-1000% 1992-2050
Consequences

• Much higher temperatures (with health consequences)
• Changing rainfall patterns – more floods and erosion
• Melting glaciers and sea level rise
• More infectious diseases
• Significant extinction of species and habitats
• No lawns!
Carbon constraints

Even leaving aside climate change, we will be living in a carbon constrained world because:

- Policies to increase security by reducing reliance on imported oil from politically unstable areas
- Rising real oil prices with rising demand from emerging economies and peaking in oil supply
Transport is at risk

Oil based transport becomes:

- Dearer generally
- Subject to supply shocks from weather or politics
- Fluctuating prices
Oil to hydrogen?

• Technology not proven and long term

• Unit costs higher than present technology

• New distribution infrastructure

• Source of energy for hydrogen?
Shorter term

- Hybrids/alternative fuels but not yet mass market
- Need regulation and incentives

In any case, technology on its own won’t release us from carbon constraints: need behaviour change
Past trends can’t continue

- Trip lengthening
- Falling vehicle occupancy
- Mode switch to car/lorry/air
Logistics issues

• Reversing the freight trends in energy/carbon
• Less reliance on oil
• Can the logistics business model survive this?
Some research questions

• Can we create a urban-friendly lorry? What are its economics?

• Transhipment/smaller vehicles/lorry bans – why are these routine in Europe and the exception here?

• Does road pricing help or hurt green logistics? What does it do to rail freight, shipping etc?

• Is air freight growth inevitable? What are its full environmental costs?
Some research questions 2

- Can the current logistics business model survive climate change levies or $150/barrel oil?

- What are the economics and impacts of local/regional sourcing and distribution versus global?

- What are the possibilities and limits of technology to solve these problems?

- What would freight/logistics need to do to reduce its CO2 emissions by 60% by 2050?
The case for inaction

- Cutting transport emissions is expensive per tonne of carbon saved compared with e.g. home insulation and the value of carbon saved is outweighed by the economic benefits of transport.

- The fuel protests etc – any “anti-car/truck” policy is not politically possible.

- Any action should be confined to technology (fuels, tunnels, mitigation etc).
But...

- There is now good evidence that travel behaviour can be changed without huge protests
- This applies to freight as well as passenger travel
- Measures that can reduce transport’s environmental impacts can be cheap and have good returns

And especially with climate change, this is urgent and important
Environment vs economy?

- We face carbon constraints anyway through oil price rises and oil insecurity/price shocks
- Local environmental quality contributes to economic prosperity
Different routes to prosperity

- Vienna: car use has fallen from 40% - 36%, 30% of journeys are now on foot or bike, 34% public transport
- Los Angeles: 90% car, 10% rest
Directions

• Cleaner technology/fuel
• Support for less polluting/intrusive forms of transport
• Managing demand – road pricing etc
• Minimising need to travel – local production/distribution?
Conclusion

- Freight transport has large environmental impacts
- These can be reduced and transport can actively enhance the environment
- These measures can enhance the economy as well
- It is possible to influence travel behaviour
- Climate change requires urgent action on transport
- We face a carbon-constrained world anyway, and failure to plan for this will affect competitiveness.
- Pressure on transport policy to respect the environment will grow so should be treated as core, not an add-on
This is bad for economy and environment