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**“Where will all the traffic go?”**

# **Explaining Traffic Reduction**

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# Explaining Traffic Reduction

## “Where will all the traffic go?”

- Surely the most rational of questions, from concerned community groups, retailers and elected representatives, when transport agencies propose new traffic management measurements in their area.

## “It evaporates, right?”

- Actually it does. Not very scientific sounding, or even helpful, many might think.
- But there is a sound basis for this counter-intuitive idea and lots of evidence to support it too.
- The question is: how to explain this?

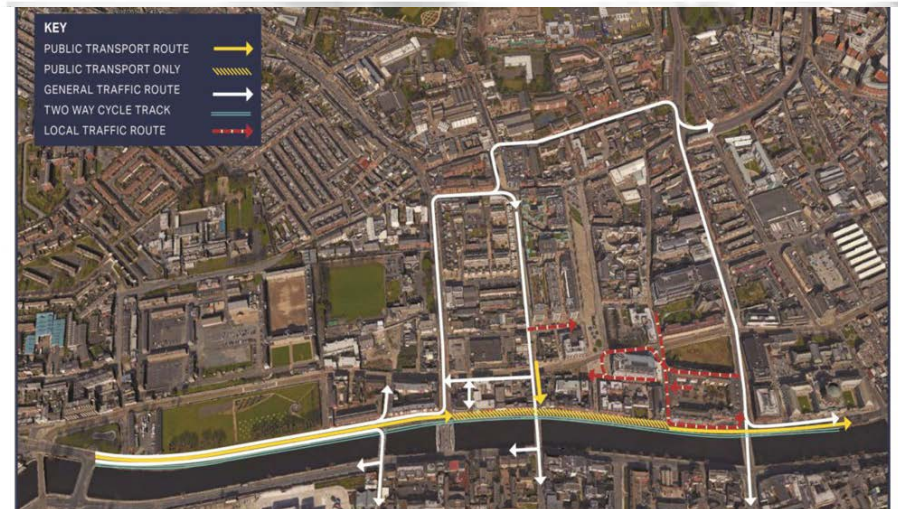
Dublin Inquirer

## So Where Will All the City-Centre Traffic Go?



David O'Connor

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<https://dublininquirer.com/2017/05/17/david-so-where-will-all-the-city-centre-traffic-go>

# Explaining Traffic Reduction

## Traffic Reduction happens...

- Traffic reduction, or “traffic evaporation”, as it is increasingly referred to, is a recognised effect of traffic management schemes. And the point of it is that, when executed well in cities with good policies, the traffic doesn’t divert on to nearby streets, it disappears or, indeed, evaporates.

## ...but how?

- This is based on hard evidence and the experience of other cities. And there is a reason for it.
- The important question still is: how to explain this?



A. Freiburg's Cathedral Square was used as a car park in the 1960s (above left). During the mid-1970s cars were banned. It is now a lively pedestrian zone with an open air market (above right).



B. Klarastrasse was a street designed for cars, in the 1960s (above left). Since traffic calming in the late 1980s, car traffic has dropped and it is now a safe and quiet neighborhood street (above right).



C. The Wiwili Bridge in Freiburg ca. 1970 (left): Both lanes were reserved for motor vehicles. The former tram line crossing this bridge was removed in the 1960s. In the 1990s the bridge was closed for cars and is now used exclusively by bicycles (right).

*Photos provided by the City of Freiburg and Karl-Heinz Raach, Freiburg*

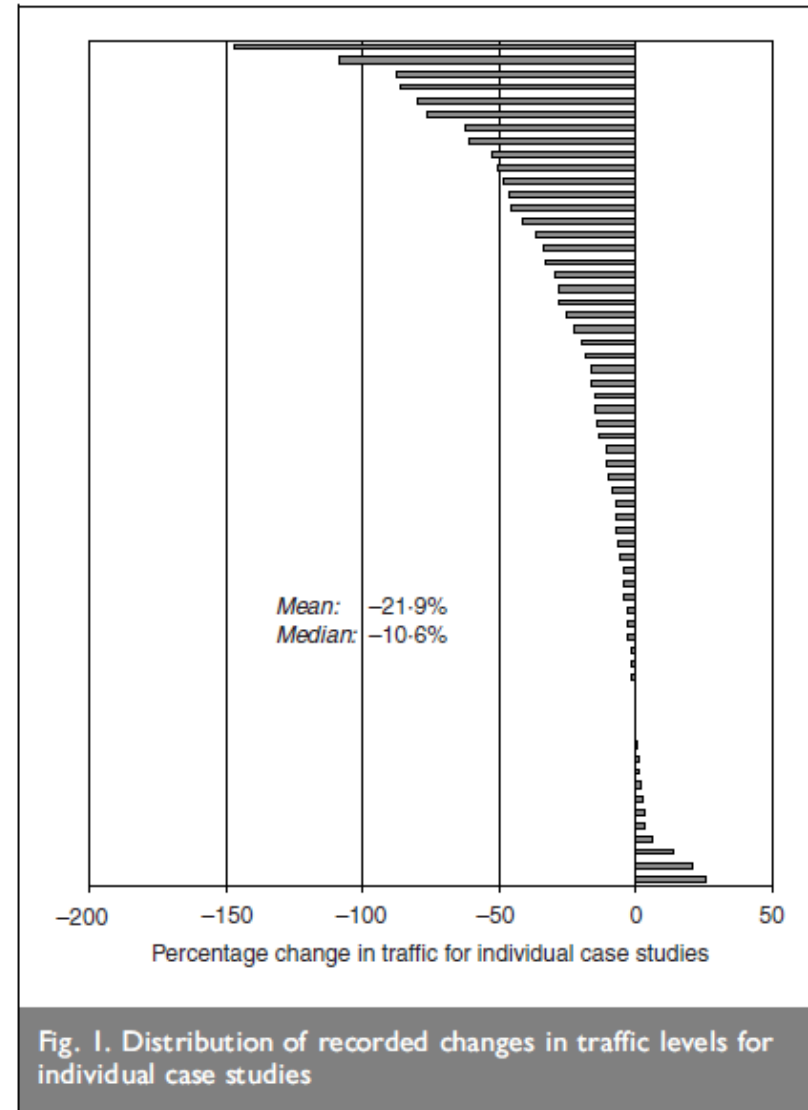


*“Sustainable Transport in Freiburg: Lessons from Germany’s Environmental Capital” Ralph Buehler and John Pucher. International Journal of Sustainable Transportation, 5:43–70 2011*

# Evidence for Traffic Reduction

## Dissapearing Traffic? The Story so far: Evidence on the Effects of Road Capacity Reduction on Traffic Levels, 2002

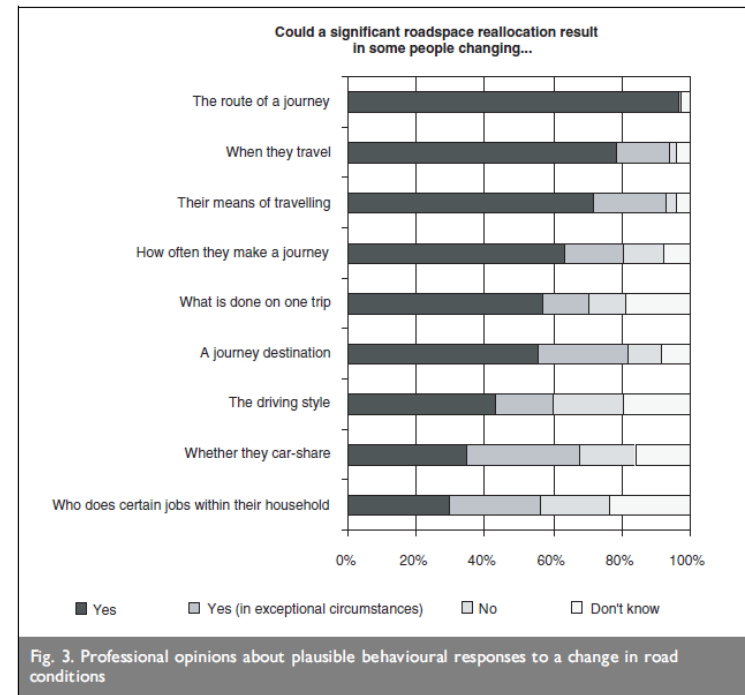
- A seminal UK-based study of studies, by Professor Phil Goodwin and others, from 1998 and updated in 2002, shows that where such traffic management schemes have been put in place, actually little if any traffic redirects onto nearby streets
- “Two characteristic comments from local transport planners: *‘it’ll be all right by Friday’*, and the ubiquitous *‘the traffic has disappeared and we simply don’t know where it has gone’*.”
- Overall traffic levels on adjacent streets usually stays about the same and in many cases even reduces.



# Explaining Traffic Reduction

## Goodwin et al (2002) – Induced Demand in reverse: -

- people changing their mode of travel
- choosing to visit alternative destinations
- changing the frequency of their journey
- consolidating trips for different purposes
- altering the allocation of tasks within a household to enable more efficient trip-making
- car-sharing
- or no longer making journeys (e.g. by working from home occasionally)
- Longer-term responses: changes in job location, changes in household location and changes in location of new development
- Most notably: the co-efficient of change was very low

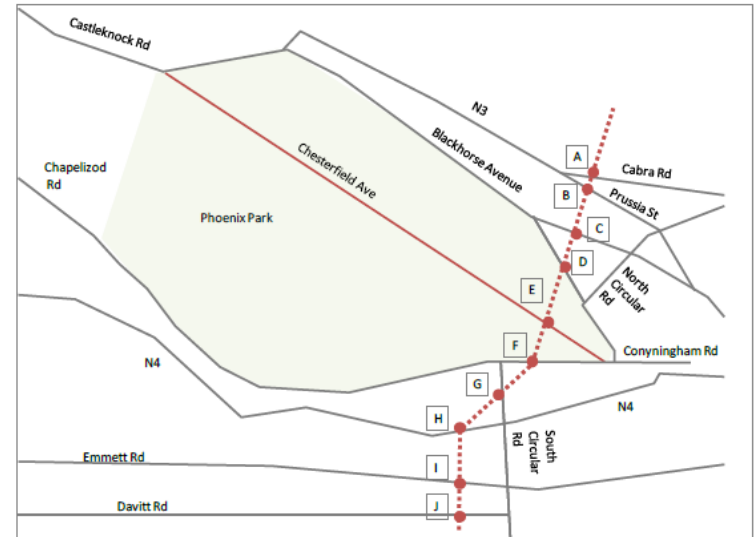


Source: Goodwin et al (2002)

# Evidence for Traffic Reduction

## Evidence from Dublin (O'Brien and O'Mahoney), Aecom, 2015

- December 2011 closure of Chesterfield Avenue
- Screenline study showed that traffic reduced overall with little evidence of displacement
- “Assuming no changes in background traffic demand (as suggested by the independent data), a suppression effect of 30.9% is estimated between 06:00 – 21:00”
- Authors recommending investment into further quantitative studies



# Evidence for Traffic Reduction

## Evidence from Dublin

- **North Frederick Street bus gate (2002)**
- **Implementation of the “bus gate” restricted cars on the same link but also reduced southbound car traffic on O’Connell Street from 1,100 vehicles to 74 only.**
- **The streets around Gardiner Square and Mountjoy Square never saturated with diverted traffic**
- **public transport access materially improved**
- **Similar impact at Parkgate Street [pictured, right] (in 2009) with journey time reductions of up to 20 minutes reported**

## THE IRISH TIMES

Fri, Nov 9, 2018

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### New restrictions planned for Dublin traffic

© Fri, Sep 28, 2001, 01:00

FRANK MCDONALD

 Dublin Corporation is to impose another round of restrictions in the city centre, including bans designed to reduce the volume of southbound traffic on O’Connell Street.

 Other major changes, announced yesterday by the Director of Traffic, Mr Owen Keegan, include closing the link between Pearse Street and College Street to all traffic except buses, taxis, bicycles and motorbikes.



# Healthy Streets for London



**Before and after at Orford Road (below) and East Avenue (above)**



**“Mini-Holland” at Waltham Forest**

# Explaining Traffic Reduction

## Conclusions

- Conventional predictions of traffic chaos are usually highly misleading
- Evidence suggests that potential for behaviour change is significantly higher than generally assumed
- Managing how schemes are perceived by the public and reported in the media are often critical to their success

