Housing, land use and travel demand

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Campaign for Better Transport

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- Charitable trust promoting sustainable transport
- Support from wide range of interests
- Co-ordinates NGOs concerned with transport
- Commissions and publishes research and now has a think tank, “Tracks”
- Conducts public campaigns
- Promotes pilot projects and good practice

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Transport modelling underplays land use influence on demand

- Still tendency to treat land use as fixed
- Still seen as much less important influence on demand than price
- Addressed mainly through complex LUTI models

But there is good evidence that land use patterns and planning have huge influence on travel demand

Evidence sources

- Literature reviews: commissioned by CBT and Urban Transport Group/ pteg
- Case studies: “Getting there” report
- New research on urban extensions funded by the Foundation for Integrated Transport

Masterplanning Checklist 2008

- Literature review of over 100 studies
- Focus especially on “smart growth” North American literature (e.g. Litman, Cervero) and Australia (Kenworthy et al)
- UK literature: Melia, Curtis, Headicar

“Thriving Cities: integrated land use and transport planning”, 2011, for pteg, now Urban Transport Group

- Evidence of benefits of integration on reducing car dependence
- Case studies: Vauban, Germany;; Media City, Salford; Liverpool developments; Stockholm
- Public transport centred development, or in US “transit oriented development” - TOD

Location of development

Car use will reduce if development is:

- Not close to major roads
- Within walking distance of major public transport hubs
- Adjacent to/ within major urban centres not smaller freestanding towns

Density of development

- Density vs. other factors (street design etc.) – difficult to disentangle
- Cervero & Radisch (1996): two areas in St Francisco, same public transport and freeways, different densities = 4-15% of non work trips by sustainable modes
- Kenworthy et al have shown density has inverse relation to annual car miles/capita

Local facilities and jobs

- Availability of local facilities and employment reduces car use
- schools, pubs, supermarkets, open space, big determinants of car travel, also health centres and chemists
- With local facilities car use is substituted with walking

Other determinants

- **Street design:** “filtered permeability”, network of safe cycling and walking routes, low speeds, not cul-de-sacs etc.
- **Public transport** quality and proximity, especially rail-based systems
- **Car parking** levels, costs and location
- **Travel planning** at residential developments as well as other places

Conclusions from literature

- Land use patterns and planning can influence travel demand, in shorter as well as longer term
- Location and density of development matter
- Availability of local facilities, street design, public transport and car parking important

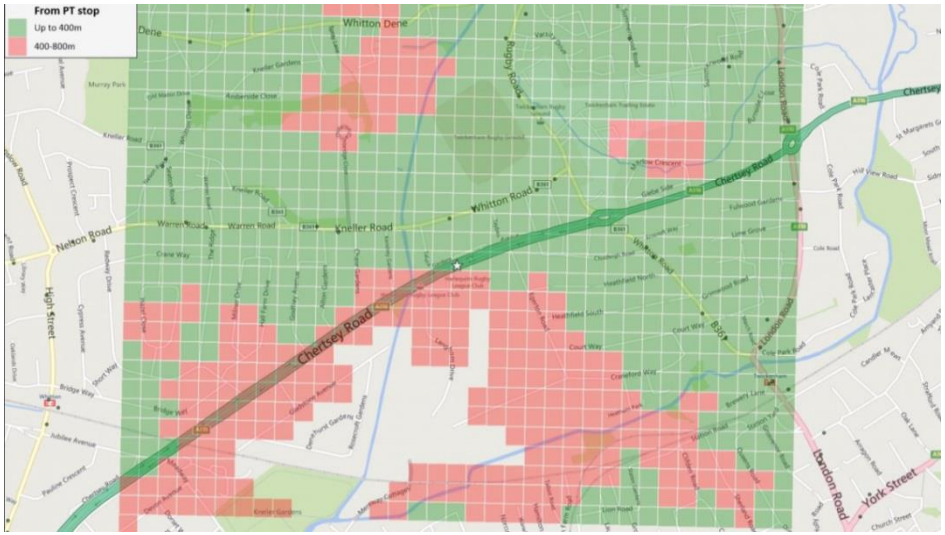
And these can happen in the UK

Transport and development

- “Getting There” research found UK examples of development around both bus and rail
- “Tracks” thought leadership programme: “Development around stations” report and roundtable
- New DfT division on transport and housing reviewing links and modelling
- Examples of projects include

1. Planning and strategy

- Black Country Core Strategy
- South Yorkshire traffic light grading
- PTALs in London



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2. New retail development

- Liverpool One
- Trinity Leeds
- Bath Southgate
- Birmingham New Street
- Wakefield Merchant’s Gate

3. New business development

- Quorum, Newcastle (25% bus share)
- Chiswick Park, London
- Green Park, Reading (now to have new station)

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4. Housing

- Kilnwood Vale: extension of Crawley
- Shawfair: built around station on Borders rail
- Kent Fastrack: guided buses around Ebbsfleet
- Leighton Buzzard

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5. Revitalising towns and cities

- Media City, Salford
- Princesshay, Exeter
- Hull City Centre

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Devon County Council has done this, so counties in the South East can too

- New stations serving housing and commercial development
- “Devon Metro” rail services
- Tavistock reopening
- Bus links to Cranbrook

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Benefits of developments around stations (1)

- Raising money for the railways: reusing old rail land and moving depots to make way for higher value activities
- Meeting housing goals: NR/HCA collaboration, TfL's experience
- Creating catalysts for growth: development around new/ reopened lines and stations

Benefits of developments around stations (2)

- Regenerating communities through improving gateways: station travel plans, "Fixing the Link"
- Improving liveability: creating inviting places

But modelling will tend to downplay future demand for rail/public transport –based development

Conclusions

- Land use patterns and planning have been underplayed in modelling future travel demand
- There is however an evidence base showing the importance of the location, design and facilities of new development in travel demand.
- There are European and UK examples showing development around public transport
- However, in practice recent planning reform has side-lined transport and promoted car-based development, with impacts on demand

For more information

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