Enquiry in Public for

Cribbs Patchway New Neighbourhood

Reducing commuting by locating housing close to employment

Matter 22
Reference ID No 2799265.
On behalf of DFSR.

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Response to Inspector’s question regarding the reduction in commuting by locating housing close to employment

Introduction
During the CPNN EIP the question has arisen as to whether there is any proof that having jobs and residential areas in close proximity will reduce commuting. The team has carried out research in this matter and reports as follows:

Research
There is a wealth of documentation and research relating to the idea that locating residential areas close to a broad mix of uses will reduce the amount of travelling that takes place – car use in particular (see Appendix of Reference Documents).

However statistical quantification of this effect is scarce and generally refers to situations where there is a wide range of uses rather than focussing on the specific issue of traffic loads arising purely from the relative proximity of jobs and housing.

Where attempts are made to quantify the jobs and housing question, the spectrum of statements in support of the assumption that the proximity of housing and jobs reduces commuting levels is matched by examples which state that this assumption cannot be proved. Our conclusion is therefore that, even though the assumption is likely to be true, the attempt to prove the point through statistics will be open to challenge, by simple reference to the research that concludes there is no such relationship.

Beyond that, in order to be definitive, the statistics would ideally exclude all the other factors that in reality influence people’s travel choices, such as shopping, picking up kids or attending appointments which themselves are affected by the ease of access of the destinations they need or wish to reach.

Policy and Guidance
However the fact that statistics cannot be brought to bear does not invalidate the principle. Indeed much policy and guidance supports it whole-heartedly. For example:

1) Paragraph 37 of the UK’s National Planning Policy Framework states:

“Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities”.

2) Pilot Credit 29 from the USA’s LEED sustainability system states:

“Reduce vehicle miles traveled for occupants:

Travel to and from work is a major source of carbon emissions. Locating housing next to job centers will significantly reduce the vehicle miles traveled of the average occupant”.

3) The UK’s PPG13 Transport (superseded in March 2012 by the NPPF) explained as context in paragraph 1 that:

“Our quality of life depends on transport and easy access to jobs, shopping, leisure facilities and services.......”.

It also set out at paragraph 4 that:

“The objectives of this guidance are to integrate planning and transport at the national, regional, strategic and local level to:

Promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling......”.

So it is clear that, to achieve this objective, the different land uses need to be located close to each other.

4) The central conclusion of the EU-funded research project “ECOCITY” involving teams from 7 European countries is that the ‘city of short distances’ is the key element for sustainable settlements.


"The best transportation plan is a good land-use plan"......

"Mixed use neighbourhood centres should be within walking distance of all homes and businesses, so that all of the basic needs of daily life are within walking distance".

To summarize these examples of policy and guidance; cutting-edge, progressive studies typically regard mixed use neighbourhoods, in which the necessary destinations, including workplaces, are close at hand, as being a fundamental principle of sustainable masterplanning.

The majority of policy and guidance available relates to the multiple advantages of mixed-use development, as opposed to separately zoned land uses, and provides strong evidence in terms of the available documentation. Its focus is on factors such as quality of life, health, building community and overall sustainability. Reductions in traffic flows make a significant contribution to these factors at all levels.

**Further Consideration of Movement between Employment and Housing**

Clearly, people will have short journeys to work if their jobs are nearby. But, even if Person A lives in a mixed use neighbourhood that contains employment areas, he or she may well work elsewhere. By the same token, Person B may come from elsewhere to work in Person A’s neighbourhood.

So, whilst mixing the uses may well reduce travel distances by offering jobs in easy reach of home, even if it does not do so the benefits of counter-commuting should lead to journeys that are faster and more convenient. Those travelling should experience less congestion, because the traffic is more evenly distributed, and emissions should be lower because the cars will spend less time on the roads and in traffic jams.
Reducing Dependency on Cars

"The best transportation plan is a good land-use plan"......

The above analysis is based on the idea that people will continue to get around in their private cars, albeit with greater ease. This is likely to occur where land use patterns are fragmented so that people are travelling in many different directions and demand is insufficient for public transport systems to be viable.

Therefore the key to the “good land-use plan” is that the size and location of the mixed use centres creates enough demand to support public transport systems, thereby incentivising people to leave their cars at home.

At first glance this may seem to replicate the typical pattern of rail/metro commuting to major urban centres. However the large number of people gravitating to major urban centres causes strong tidal flows, with packed trains in one direction and empty trains returning to pick up more commuters from the suburbs. By having a land use structure with a series of mixed use centres, journeys between them will be more evenly distributed, meaning that the trains/buses/trams are used more efficiently, with lower maximum demand at any one time and in any one direction. This in turn means that fewer trains/buses/trams are required, and those that make these journeys are more likely to be full, thereby enhancing the viability of the public transport services provided.

Conclusion
Applying the principles set out above, we believe that the CPNN area will be at its most sustainable with a mix of housing and employment areas in reasonable proximity, and in conjunction with the requisite range of social infrastructure uses, all served by, and generating sufficient demand for, an integrated public transport system.

- The Mall will benefit from new customers with less need to access it by car

- The re-opening of the freight rail line for public use can make a significant contribution to the mobility options in the area, which need to be complemented by further integrated transport infrastructure that will enhance the choices of the existing and new populations to access destinations of all kinds, including employment.

- This enhanced range of choices will offer greater flexibility in the ways people can move around the newly planned area and in the organisation of their professional and private lives.

So, to reiterate Paragraph 37 of the UK's National Planning Policy Framework:

“Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities”.
EU Eco-city project
Appendix of Reference Documents

Document 1
Evaluating Measures of Job-Housing Proximity: Boston and Atlanta
Elsevier

http://www.elsevier.com/wps/find/bookd...cws_home/707443/description#description

Abstract:

This paper describes how balanced growth has been a major policy component of
the smart growth initiative. Increased congestion, particularly in suburban areas, has
been linked to numerical imbalances and qualitative mismatches between jobs and
housing. Balanced growth that improves job-housing proximity (that is, the spatial
proximity between workplace and residence) is believed to have the potential for
reducing commuting time and distance. This paper hypothesizes that different
selection of job-housing proximity measures can bring about a different quantitative
relationship between job-housing proximity and commuting. Existing studies of
commuting length in American metropolitan areas have mainly used three categories
of measures of job-housing proximity. They are: (1) the ratio of jobs to employed
residents (JER); (2) job or labor accessibility; and (3) minimum required commuting
(MRC). Although existing studies have justification of why a particular category of
measure or a particular format is preferred, none of them have presented
comparative empirical evaluation of different measures. In order to address this, this
paper offers a qualitative assessment and empirical examination of the three
categories of measures, revealing their possible weakness regarding their ability to
relate job-housing distribution to commuting.

Monograph Title:
Access to Destinations

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Atlanta (Georgia); Boston (Massachusetts); Commuters; Housing; Job satisfaction;
Job sites; Proximity; Public transit; Suburbs; Traffic congestion

Subject Areas:

Economics; Highways; Passenger Transportation; Planning and Forecasting; Public
Transportation; Society; I21: Planning of Transport Infrastructure

Last Modified: May 25 2006
Document 2

**Land Use Impacts on Transport – how land use factors affect travel behaviour**
Dated 25 May 2012

By Todd Litman, Victoria Transport Policy Institute.

  The section on Land Use mix seems to indicate that the ‘drive alone’ mode share reduces by only 0.9% if a mix of land-uses are provided.

- [http://www.vtpi.org/tdm/tdm24.htm](http://www.vtpi.org/tdm/tdm24.htm)
  The section on Travel Impacts indicates that following the principles of ‘new urbanism’ (which involves mixing land-uses) can result in a reduction in driving activity of between 20 and 35%)

Document 3


Document 4- LEED

[http://www.leeduser.com/credit/Pilot-Credits/PC29](http://www.leeduser.com/credit/Pilot-Credits/PC29)

Document 5

Institute for Transportation and Development. Europe’s Vibrant New Low Car(bon) Communities. New York: ITDP; 2011


Document 6

Sustainable Transport Planning; Tools for creating Vibrant, Healthy, and Resilient Communities.
Author: Jeffrey Tumlin. John Wiley and Sons, Inc 2012

Document 7

ECOCITY - EU research and development project: “Urban Development towards Appropriate Structures for Sustainable Transport”. Towns from 7 participating countries: Spain, Italy, Germany, Austria, Slovakia, Hungary, Finland.

John Thompson & Partners (JTP) were expert advisors to the international team on sustainable urban design and participatory planning