Public housing and public transport – a perfect match?

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1. The Integration of Public Housing and Public Transport

An integrated planning and transport policy is an indispensable condition to contribute to the needed transition of urban mobility. The right location of new housing in terms of its integration with the public transport network can be a vital contribution to influence travel behaviour towards more sustainability. On paper this logic is clear, but how does it work in practice?

This paper presents a case study from the German state of North Rhine-Westphalia (NRW), where a policy has been established that new social housing must be built in the close vicinity of public transport stops and stations. A first evaluation by ILS NRW (cf. Dittrich-Wesbuer/Müller/Stiewe 2003) has found that this policy is generally successful, but not sufficient to result in a noticeable change of travel behaviour. Mobility management can be a supportive strategy to make new housing developments more successful in terms of sustainable transport.

Since 1998 all new rented flats of social housing in North Rhine-Westphalia need to be constructed within a maximum of 1500 m around (existing or planned) public transport
stops and stations. The preference is on rail stations but also qualified bus stops are possible. This planning condition has been fixed in the (annual) funding regulations for social housing of the Housing Ministry NRW.

Aim of the public funding for social housing is to support households with difficulties in the general housing market. In this task social, ecological and town planning qualities are among the primary objectives for housing policy. As the share of social housing flats among all new housing is decreasing (currently 20-25 % in North Rhine Westphalia), the possibility of having an effect on the spatial development is somewhat limited. Nonetheless, in a housing market that becomes more qualitative then quantitative this policy should contribute to the (location) quality of housing and should set an example for the private market. Especially for low-income tenants the integrated sites with a close connection to the public transport network have social benefits, as the access to mobility and services is enhanced, especially for those without a car. Furthermore a lesser number of parking spaces needed will contribute to lower costs of housing.

After several years with this new policy approach a small study was commissioned by the Ministry of Urban Development and Housing NRW for an interim evaluation. ILS NRW has been evaluating both the handling of the new policy in practice and also the travel behaviour of new tenants. In a first phase a questionnaire survey was carried out in autumn 2002 among 184 tenants of eleven new housing projects built under the new policy. This study was carried out in three regions: City of Dortmund, Rhine-Sieg District (near Bonn) and the Paderborn region. These regions represent an urban, sub-urban and rural context with different housing market conditions. The study is exploratory in its scope and does not allow representative results for all social housing in NRW or Germany. The framework conditions for mobility (vehicle ownership, driver’s license, knowledge about public transport etc.); satisfaction with flat, housing quarter and town; travel behaviour; attitudes and assessments regarding personal mobility have been included.

2. Implementation of the New Policy

At the time of the survey 102 social housing projects with 1650 rented flats have been constructed in the three regions since the policy change of 1998. The projects differ very much in size ranging from single semi-detached rented houses to a project with 140 units
to revitalize a brownfield site. From all analysed projects only three with together 19 housing units (= 1,2 %) do not fulfill the condition of a near public transport station.

Only 40 % of the housing, though, is actually built near a rail station, which should be the preferential condition. Here we find substantial variation among the regions, which reflect the availability of railways. In the city of Dortmund 88 % of the flats have a nearby rail access, whereas in Paderborn (where only two rail stations exist) this quota is only 8 %.

Not only the existence of a station is essential but rather the quantity and quality of the service. 90 % of all analysed housing units are served at least every 30 min. during the peak hours. For further analysis a quality index for the public transport at the station has been calculated, which includes several criteria of temporal and spatial availability (distance, number of departures, travel time to nearest main station, interval between departure etc.). A further condition with high importance is the availability of basic local services (food store and basic services). Here the study finds large differences: whereas the urban sites are usually served quite well, in the rural areas these services are found in a much further distance.

In summary, only about 32 % of all the new housing units in the analysed regions have been built close to a high quality public transport and only 12 % are additionally within 500 m of basic local services.

3. Mobility of the Residents

Eleven housing sites have been included in a resident survey to find out more about their personal mobility. These sites differed substantially – from a single house with 12 units to a new quarter with over 100 units. Six of the projects are served by rail, five only by bus. Personal standardised interviews have been held with one person in 184 households (68 % response rate). Personal mobility behaviour and its framework conditions, resident satisfaction, attitudes toward mobility and a comparison between the new and the former place of residency have been covered by the survey.

The sample is predominantly female (63 %) and young (average age: 34 years). Household size (average size: 2,9) is larger than average; there are many families with
more than one child. Only half of the sample is working (part or full time). Satisfaction with
the flat and the living quarter is generally high.

A key result of the study is that a large majority of tenants is quite satisfied with their
overall personal mobility situation. Persons without a car are less satisfied, though. The
satisfaction with the single service components of the public transport compares to those
measured in similar general surveys on public transport satisfaction.

The differences in travel behaviour of these low-income tenants of social housing
compared to the general public are smaller than expected. Car ownership is significantly
lower, but it is not so much a higher number of households without a car (27 % vs. 20 % in
NRW) but the very little share of households with two or more cars (9 % vs. 27 %). /4 % of
all persons in the sample have a driver’s license, which is a little less than the German
average of 87 % (18 years and older). The degree of public transport pass ownership
varies considerably among the regions.

Public transport is used at least once a week by 37 % (18 % (almost) every day), which is
higher than in the general population in North Rhine-Westphalia (25 %). There is a weak
but significant correlation between the use of public tranport and the distance of the stop
(0.24**). A market segmentation according to the use of public transport (cf. Fig. 1) does
not show many differences to one from a large representative sample of the German
population in general as it resulted from the latest survey on travel behaviour (KONTIV
2002, cf. DIW/infas 2003). Only the group of captive riders is significantly higher in the
public housing sample (13 % vs. 8 %), which can be explained by the lower degree of car
ownership.

Nevertheless, also in this low-income sample the main mode is still the private car: 47 %
use the car as driver on a daily basis. The private car is the main mode for all trip
purposes. But 38 % of the sample never drive a car themselves and 29 % never ride in a
car as passenger.

There is quite a variation in travel behaviour among the studied sites. There is no linear
relationship between public transport (location) quality and its use. Car availability, attitude
toward and satisfaction with public transport are intervening variables.
Fig. 1: Market Segmentation in Public Transport (Dittrich-Wesbuer/Müller/Stiewe 2003, p. 40)

4. Conclusions of the Study

The survey has shown that the residents of new public housing are satisfied with their mobility situation overall. Their mobility behaviour does not differ substantially from the general public. Although car ownership is lower, a general disadvantage cannot be assessed. Since public transport use is slightly higher the policy to link public housing and public transport can be considered successful in general. The study has also shown that the implementation of the new policy is positive. The priority on rail access, which generally offers a higher quality service, is somewhat neglected and must be strengthened, though.

There is no simple conclusion in a sense that easier public transport access leads to more public transport use. The good location with regard to public transport is a necessary but not sufficient condition. There seems to be some room for improvements of the policy regulations:
1. A maximum distance of 1500 m is not sufficient to have an effect on travel behaviour and it should be lowered to 1000 m.

2. A certain minimum standard for the level of service at these public transport stops should be considered.

3. The access to basic local services needs special attention.

In a second phase of the study the acceptance of the new policy and its practice among the main stakeholders will be analysed. In 2004 a number of qualitative interviews will be carried out with local and regional authorities (planning, housing, economic development), housing companies, developers and other involved bodies.

5. **Mobility Management for Housing Quarters as Complementary Strategy**

The study has shown that the right location of new housing close to a public transport stop is necessary but not sufficient to reach the goal of higher public transport use. Location planning is one task, to implement complementary measures is another one. Mobility-related services can be valuable instruments to support a strategy of public transport oriented development. Mobility management schemes oriented at the living quarter – an innovative and growing part of the mobility management approach – need to be developed much further.

So far mobility management focuses heavily on activity locations outside the home: workplaces, schools, etc. The home is indeed a good access point, as the majority of trips start or end there and people can be reached in their familiar environment. Although home-related mobility management has been discussed for several years now (cf. Endemann/Müller 2000) it is still in its exploratory phase. In Germany there have been different pilot projects since the mid-90’s (cf. Bäumer 2004, Bäumer/Freudenau 2004), but it is not yet an established practice. But in recent years the development is positive and the potential is increasingly recognised.

In many applications existing mobility services, e.g. Car-Sharing, are specifically tailored to the needs of the residents in the housing quarter. Two main services are often included in such a mobility management scheme: 1) rebated public transport passes for residents of a specific quarter or tenants of a specific co-operating housing company; 2) Car-Sharing
Additional services such as information on mobility options, improvement of the public transport offer, bicycle parking, rental bikes, delivery services are further options within an integrated approach.

As in any mobility management scheme new partnerships are crucial for success. In this field the establishment of co-operations of housing providers and transport operators/service providers is a main part of the task. In Germany it has recently become somewhat easier to spark initial interest from housing companies in such co-operations, as the shrinking markets make it necessary to increase the attractiveness of their product “rental flat”.

Several German good practice examples, e.g. in Hamburg, Munich, Münster, Berlin, are being described in the network “Wohnen plus Mobilität” (Housing plus Mobility): www.wohnen-plus-mobilitaet.nrw.de. A recent success is the rebated tenant ticket in Bochum, where residents in 13,000 flats owned by VBW are being offered a public transport pass with 11.5% discount. (For further details see the presentation by Bäumer at this ECOMM conference: Bäumer 2004).

A combination of an integrated planning and housing policy with mobility management schemes can increase the possibility to reach the goal of a sustainable mobility and provide several high quality mobility options for social housing tenants. First of all, the location of new housing is a central requirement. Here urban and regional planning can make a valuable contribution by practising a consistent rail-oriented development with short distances to public transport stations. Secondly, a co-operation of housing companies and providers of mobility-related services, especially public transport operators and car-sharing organisations, increases the options for a sustainable mobility beyond private car use. A interesting question is how these approaches can be transferred also to the owner-occupied housing sector. Here, the idea of a substantially rebated five-year public transport ticket included in the price of a single family home has been put forward (cf. Endemann/Müller 2000) but could not yet be implemented.

Mobility management schemes that are applied directly to the home face a positive development perspective and can easily reach the same or even higher level of strategical importance as the well established mobility management work in co-operation with companies.
Literature


