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Albert Jansen, A. Walraad et P. Van Beek:

TRAFFIC PLANNER MEETS CITY PLANNER

“Design method in reverse” contributes up to 30% of energy saved in traffic planning - first by designing a network of footpaths followed by cycle tracks and roads

Key Facts

A change in urban planning policy can lead to a drop in motor-traffic. Model projects show that by using the “VPL-Method” (Verkeers-Prestatie op Locatie Method) developed in the Netherlands by combining town planning and traffic planning for new installations and the reconstruction of residential and industrial areas, 30% of the energy can be saved.

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The urban planning policy has a strong influence on the energy consumption of traffic and transport. According to a study by the Dutch company Novem from 1977 30% of the traffic can be reduced by a specific urban planning policy, if town and traffic planning are effectively brought together.

The VPL-Method (Verkeers-Prestatie op Locatie) makes this co-operation of town and traffic planners possible, which up to now has not existed, with their conceptional planning and in the design models. By integrating city planning and traffic planning, the VPL-Method achieves improved spatial planning by means of which the ways of looking at the problems of traffic planning can already be considered on major plans for new construction. In the meantime, the reconstruction of existing areas in the cities is included with and without industrial areas.

With help from the developed VPL-Method (order of the Dutch Ministry of Trade & Commerce) it can be demonstrated convincingly to politicians what the complex effects might be arising from new built-up areas and measures taken in redevelopment areas involving all interested parties. The effectiveness of this method was verified on 3 test sites. The precise manner of action differs according to the site. With further development of the method parallel methods, traffic models and additional characteristic quantities ought to be included.

The test sites vary between 300 and 20,000 dwellings depending on the planning of the project idea up to the traffic development plan. In each case alter-



natives are developed in the framework of the VPL-Method, then assessed and extracted for the weighing up process.

In Veenendaal-Oost a new residential area of 3,000-3,500 homes was examined which should come into being between 2002 and 2017; in Amersfoort Vathorst a larger area was examined with 10,000 dwellings, 45 hectare industrial area, shops, offices and supply utilities and in Zutphen Leesten-Oost the new construction of 1,100 homes. Several scenarios were calculated every time for the traffic and spatial development, which were then discussed by the politicians in a process, which led every time to a change in the original plan. By means of the model project it was shown that this method in practice leads to a saving in energy of 30%.

Basically, the VPL-Method is based on a bringing together of a behaviour model, a traffic planning model and a planning method. According to model studies, traffic behaviour is shown, the choice of transport plus the distance and the energy consumption of the traffic is determined. The sight of somebody cycling, walking or driving along a street also determines how this person finds out about the neighbourhood, this also influences traffic behaviour. This is why long, wide straight stretches of road invite people to drive too quickly and a cyclist who has to wait a long time at a traffic light then feels that cycling in this place is a second class kind of locomotion.

In order to guarantee that the slow means of transport receives priority locally, the VPL-Method introduces the “design method in reverse”. In one area space for the pedestrian is determined first, after which the cycle traffic network gets space allocated and finally cars and forms of public transport.

As a result not only was the expected energy consumption reduced by means of the VPL-Method but also the local emissions, such as CO₂ NO_x, noise, dropped and road safety was improved. In addition, the infrastructure costs went down. The city planning quality rose.

Contribution “*Verkeerskundige ontmoet stedenbouwer*” [Traffic planner meets city planner], by A. Jansen, A. Walraad and P. van Beek, in *Verkeerskunde*, July/August 1999 (and on the Internet under <http://www.goudappel.nl>)

Authors Engineer A. Jansen <e-mail: a.jansen@novem.nl>, Novem in Utrecht, P.O. Box 8242, NL-3503 RE Utrecht, Tel; +31-30-2393 549; Fax: +31-30-2316491; ir. A. Walraad, Novem; Drs. P. van Beek, Goudappel Coffeng, P.O. Box 161, NL-7400 AD Deventer. Tel: +31 570 666 222, Fax: +31 570 666 888