2004 Yearbook

Roads and Traffic Administration

Con

tents

R e

view

by the Director-General

Mobility in general, and road safety in particular, have been much-discussed topics in recent years. And with good reason. The continually-increasing pressure for greater mobility combined with entrenched ways of thinking would inevitably develop sooner or later from a concern of transport specialists into a widespread cry for help in society at large. It is thus encouraging to find that the structural approach to the problem of mobility and road safety has been enshrined in the policy of the Flemish government, among other things through the Flanders Mobility Plan.

The starting-point for the Flanders Mobility Plan is the concept of "sustainability", which translates into five challenges for the future: people and goods must reach their destination swiftly (ease of access), people who want to move around must be able to (ease of use), in safe conditions (road safety) but without causing annoyance to others (quality of the roads network), including nature and the environment (quality of environment). Helping to achieve these five strategic goals of the Flanders Mobility Plan is, and will continue to be, a tremendous challenge for the Roads and Traffic Administration in forthcoming years.

When thematically fleshing out these goals, we will be focusing on projects that can be seen as critical for achieving these goals. To achieve every target during this term is clearly being over-ambitious: thus we are compelled to make choices. The further consistent realisation of the "black spots" project, and improvements in road safety in general, the phased approach to missing links and capacity expansions, and the further realisation of well-developed cycle path networks, have been placed at the forefront as being the most important points for attention in the policy for the coming years.

In the future, attention will also have to be paid to the following aspects, among other things. The workforce situation is not yet perfect, and that has implications for knowledge transfer, work monitoring and the improvement of the internal functioning. Elaborating and implementing projects becomes increasingly complex and calls for more preparation than ever. Secondly, far more financial resources are required to fulfil all projects and to bring our roads - and keep them - in excellent condition.

This annual report shows how active our Administration was during 2004. All resources provided for investment and maintenance were 100% committed and, besides the more routine schemes, some particularly remarkable projects were carried out. All this was possible only thanks to the huge commitment and enthusiasm of all the staff.

I am proud to have been able to work so long with the Roads and Traffic Administration, and that I have had the privilege of running it over these past ten years. I would like to thank everyone sincerely for their assistance in achieving results, year after year.

ir. Johan Vanderheyden
Director-General

Pro

jects

by the nine Divisions of the Roads and Traffic Administration

- Roads Policy and Management
- Traffic Engineering
- Road Engineering
- Passenger Transport and Airports
- Antwerp Roads and Traffic
- Limburg Roads and Traffic
- East Flanders Roads and Traffic
- Flemish Brabant Roads and Traffic
- West Flanders Roads and Traffic

Roads Policy and Management

The project

Approaches to black spots and dangerous stretches of road in Flanders

In its Flanders Mobility Plan, the Flemish Government sets itself the goal of halving its position where it lags behind European leaders in terms of road casualties by 2010. To this end, the Flemish Government is planning a "catch-up" operation in the field of improvements to infrastructure. Over a period of five years from 2003, there will be a programme attending to dangerous junctions and stretches of road. To this end, 100 million euros will be made available each year during the validity of this programme.

The Roads Policy and Management Division, which is co-ordinating the project, engaged the research office TV 3V (Temporary Association for Safe Traffic in Flanders) to provide back-up for the Roads and Traffic Administration in elaborating this ambitious programme. This partnership, in which TV 3V also acts as delegate principal, is unique. The provincial Divisions of the Roads and Traffic Administration are steering the programme in their capacity of managers of regional roads.

A great deal of attention is paid to good co-operation with the various partners involved. Thus, each solution put forward is discussed by one or more committees: the Provincial Traffic Safety Committee (PCV) and/or the Provincial Audit Committee (PAC). All competent bodies are involved. Although this procedure is time-consuming, it is important in order to reach a solution that is accepted by all parties involved.

Before the black spot is once again opened for traffic, a final audit is carried out in order to ensure that the work is completely satisfactory, in terms of technical requirements as well as with regard to road safety. As soon as accident data are available, the road opened can be monitored for the actual effectiveness of the measures taken.

For 2003 and 2004, 420 projects were started. As indicated above, an entire procedure must be followed in order to design a solution, and to have this solution then be fully approved by the competent committees before it is implemented. These procedures take a great deal of time. Currently, 310 projects have already been approved. Once a project has been approved, it must be prepared so that it can be put out to tender. Quite a few projects call for compulsory purchases of land. Projects that could be executed without requiring any compulsory purchases were already put out to tender in 2004. The Roads Policy and Management Division expects to put a further 240 projects, spread across the five provinces, out to tender in 2005. At the same time, 170 new projects for the 2005 programme are being started. It is thus clear that at the end of 2004 the preparatory phase was completed and the programme for eliminating black spots is now moving into top gear.

The project in figures

Number of projects started, approved and put out to tender in 2004

Province	Projects started	Approved projects	Projects put out to tender
Antwerp	96	79	18
Limburg	83	51	20
East Flanders	82	60	18
Flemish Brabant	82	67	13
West Flanders	77	53	17
Total	**420**	**310**	**86**

The project
Quality grading for motorway parking areas

The service areas along motorways provide motorway users with a rest area to refuel, eat, drink, use the toilet, etc, 24 hours a day, 7 days a week …without the motorway user needing to leave the motorway. In 2004, a quality survey was carried out into the quality control of the infrastructure and the service provided at service areas. On the basis of extensive and repeated surveys and on-site visits, a quality label was awarded to service areas for the first time. The quality survey will be continued in the coming years, and will even lead to a further diversification of the quality grading in the form of a 'star system'. Under this scheme, service areas may be awarded one or two stars in addition to the quality grading, as a sign of appreciation of the quality and service provided.

Furthermore, the necessary steps were taken to establish a new, future-oriented strategic plan for the entire network of service areas in Flanders, as well as up-to-date terms of concession.

The project in figures

In 2004, our inspectors visited each parking area four times. This included one inspection at night and one during the weekend. Early 2005, the basic service provided at motorway parking areas that had scored high marks in the aforementioned inspections was checked one last time.

As a result of this, the following 10 motorway parking areas received the quality label for 2005:

- Motorway parking area E40 Mannekensvere, Furnes direction
- Motorway parking area E40 Mannekensvere, Bruges direction
- Motorway parking area E40 Jabbeke, direction of the Coast
- Motorway parking area E40 Jabbeke, Ghent direction
- Motorway parking area E17 Kalken, Ghent direction
- Motorway parking area E17 Kalken, Antwerp direction
- Motorway parking area E19 Ruisbroek, Mons direction
- Motorway parking area E19 Minderhout, Antwerp direction
- Motorway parking area E313 Tessenderlo, Hasselt direction
- Motorway parking area E313 Tessenderlo, Antwerp direction

The project
Knowledge management

Both the channelling of already available knowledge and the filling of knowledge gaps are major preoccupations of the Roads and Traffic Administration. Against this background, a "knowledge-management" project manager was hired in 2004, whose job it is to further develop the role of the in-house 'knowledge managers', with a view to achieving a better transfer of information within the Administration. The ongoing development of knowledge management within the Administration is of vital importance, considering the ageing of the workforce and attendant departures of experienced staff. As a result, inventorying, codifying and unlocking available knowledge will be a major focus of attention in the coming years.

Other projects illustrating the attention being paid to knowledge transfer within the Administration are the well-received 'trainee-rotation' project and the 'young district manager' project. Under the first project, new staff members familiarise themselves on-site with the functioning of other Divisions over several weeks. In the second project, young district managers are offered support in the fields of knowledge transfer, leadership and internal communication within their district. Current efforts are being directed primarily at level A, but it is intended to extend this facility to other levels in forthcoming years.

Traffic Engineering

The project

Adapting traffic lights to suit policy options and new regulations

In the past few years, various policy options have been drawn up or alterations have been made to the rules applied at junctions equipped with tricolour signals. Consider:

Traffic signal prioritisation for public transport

This project was started during 1998, and over the past few years has resulted in around 800 installations giving priority to buses and/or trams. Meanwhile, a number of systems were assessed, and then re-adjusted and improved on the basis of the assessment. Where practicable, a separate bus lane or tram reservation was constructed. All these arrangements found an ideal application in the coastal tramway. By the end of 2004, all junctions for which traffic signal prioritisation for public transport was requested, and where 'De Lijn' produced the necessary basic data, had been adapted.

Setting the minimum green period for pedestrians

With the Ministerial Order of 27 November 2003, it was decided that the steady green light for pedestrians should at least show for a period that would enable pedestrians to cross the road at a speed of 1.2 metres per second. As a result, the Traffic Engineering Division had to check for about 1,500 tricolour installations whether the times set were in compliance with this Order. In the end, about a third of the installations had to be adjusted, which took place almost entirely during 2004.

Use of tricolour arrow signals

Until the review of the traffic regulation on 17 October 2001, simultaneous use could not be made at the approach to a crossroads of both the regular system of full signals and the arrow signals. This meant that if the three directions of traffic (straight on, right turn, left turn) were controlled separately, 9 arrow signals were required. The requirement to position all these signals at the right-hand side of the carriageway entailed a practical limit to the utility of this system. The different meanings assigned to the various types of arrow light signals in neighbouring countries was another disadvantage.

Under the revised version of the traffic regulation of 15 November 2001, it is now possible to have a conflict-free left-turn control by using a full green signal combined with a tricolour left-turn arrow. Also, the tricolour left-turn arrow no longer absolutely has to be duplicated on the right-hand side of the carriageway. This greatly expands the potential for its use in built-up areas.

In order to improve the recognisability of this "third system" (alongside that of full signals alone and that of arrow light signals alone) for the road user, a suitable road lay-out is worked out in co-operation with the Flemish Government Architect. In the interim, this system has already been applied - even without the new lay-out – at a number of crossroads.

The project in figures

Project 'traffic signal prioritisation'

- Started in 1998.
- Since then, about 800 installations giving priority to buses and/or trams have been realised.

Project 'minimum green period for pedestrians'

- Started in 2003.
- The approx. 1,500 tricolour light signals were checked. A third of the installations had to be adjusted, which took place almost entirely during 2004.

Project 'tricolour arrow signals'

- In effect since the end of 2001.
- Since then, the new regulation has been put into practice at a number of crossroads.

Road Engineering

The project

Specifications on the Internet

At the end of 2000, a project was launched to publish tendering documents on the Internet. After a period of analysis, implementation and testing, the 'Specifications on Internet' application was ready at the end of 2003. It can be found at the following website: http://www.vlaanderen.be/bestekken/

The application went live at the beginning of 2004.

This application provides the various Divisions of the Administration with the opportunity to prepare a notice of publication, to attach tendering documents to the notice, and then to publish the complete set of documents on the website at the right time (i.e. after its publication in the Procurement Bulletin). Any amendment notices can be published in the same way.

Contractors who are interested can easily look up a notice and download the relevant documents free of charge.

Interested contractors can easily look up the notice on a particular contract; one can search for example by province, recognition classification, tendering date. They can then download the relevant documents free of charge.

But this supports more than just the traditional placing of public contracts for works. Other contracts (supplies and services) and methods of awarding (open, restricted, contest, concessions) can be announced in this way as well.
The tendering documents available in this way naturally include the specifications, but may also comprise other documents, such as the tender form, the schedule of quantities, a Safety and Health Plan, study reports, blueprints, etc....

Documents remain available on the website up to a year after the tendering date.

The project in figures

Despite the fact that this application went live only at the beginning of 2004, a large number of calls for tenders were published through the website that year.

These amounted to over 53 calls for tenders by the end of 2004.

Passenger Transport and Airports

The project

Completion of the updating of the regulations regarding passenger transport by road

In 2004, the updating of the Flemish regulations relating to the remunerated transport of passengers by road was finalised.

The basis of the new regulations, namely the Flemish Parliament Act organising passenger transport by road and establishing the Flanders Mobility Council, was already approved by the Flemish Parliament in 2001. In the subsequent years various implementing orders were drafted and approved. It concerns the following Decrees:

- the Flemish Government Decree of 19 July 2002 regarding regular services, special regular services, own-account transport and occasional services;
- the Flemish Government Decree of 29 November 2002 regarding basic mobility in the Flemish Region;
- the Flemish Government Decree of 13 December 2002 regarding network management;
- the Flemish Government Decree of 18 July 2003 regarding taxi services and chauffeur-driven hired car services;
- the Flemish Government Decree of 12 September 2003 regarding reports on passenger transport by road;
- the Flemish Government Decree of 14 May 2004 regarding the operation and tariffs of the Flemish Public Transport Company 'De Lijn'

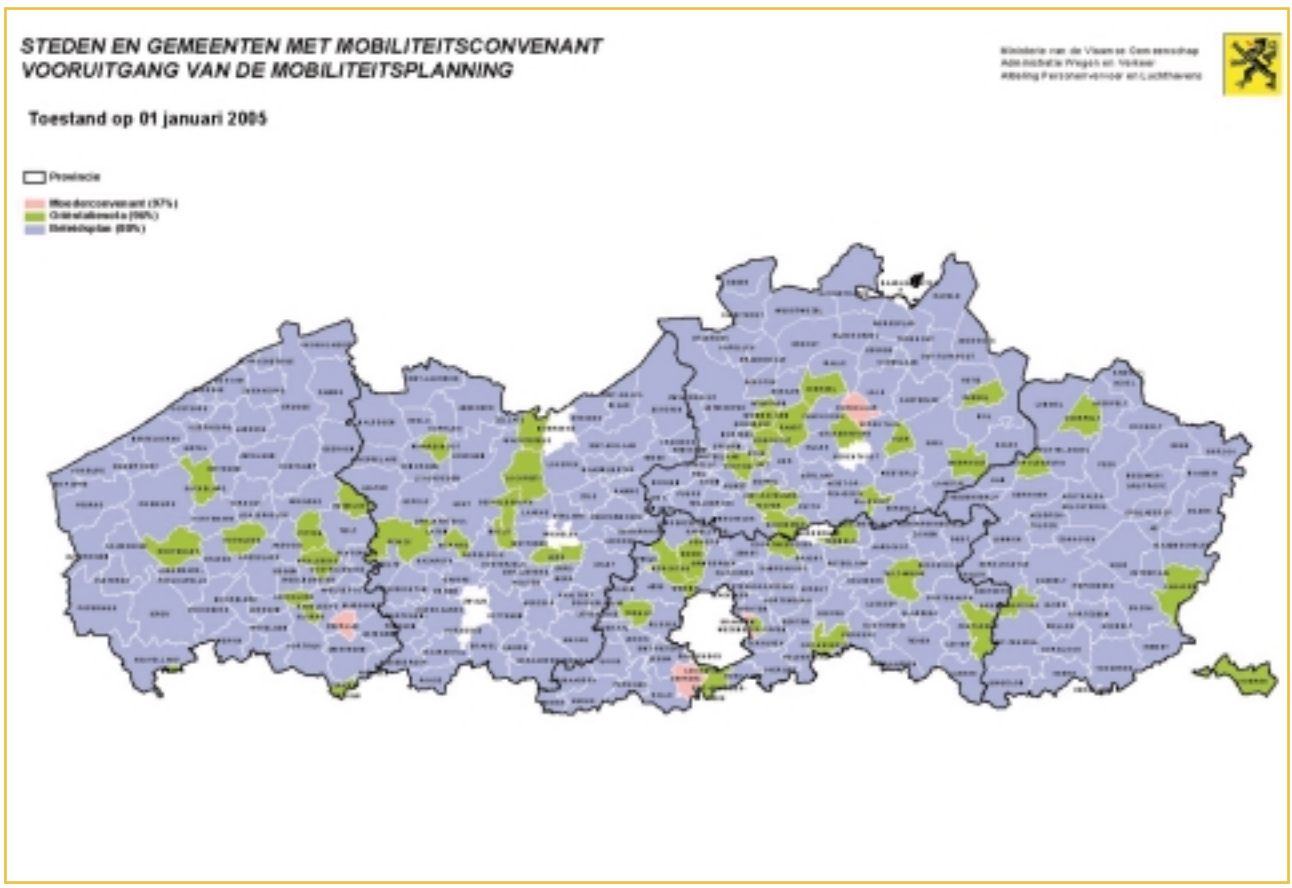
The Flemish Parliament Act itself is better known as the 'Flemish Parliament Act on Basic Mobility', as the Act for the first time guarantees a right to mobility to every inhabitant of Flanders living in a residential area. 'De Lijn' is charged by the Flemish Government with fleshing out basic mobility in Flanders. The management agreement between the Flemish Government and 'De Lijn', concluded in October 2003, not only includes obligations for 'De Lijn', but also provisions for which the Flemish Region is responsible, such as the flow of public transport.

With its Flemish Parliament Act on Basic Mobility, the implementing orders and the management agreement with 'De Lijn', the Flemish Region has a modern policy framework for public road transport.

The project
Mobility planning in Flemish cities and municipalities

The mobility covenants made since 1996 between the Flemish Region, the municipalities, the provinces and the Flemish public transport company 'De Lijn', have led to an integrated approach to mobility issues in many places in Flanders. The local authority undertakes to devise a mobility plan each time a mobility covenant has been signed.

Drafting a mobility plan takes place in four stages: an orientation stage, the development of the mobility plan, the drafting of the policy plan and an evaluation stage. On 1 January 2005, 80% of the Flemish cities and municipalities had completed a municipal mobility plan that was declared in compliance (refer to enclosed chart). Nearly all the remaining municipalities are working hard to finish their mobility plans and have them declared in compliance. Just 10 Flemish municipalities have not yet discovered the added value of the mobility covenant. This means that 97% of the Flemish cities and municipalities have actually jumped onto the bandwagon of the mobility covenants.



The project
New Flemish Parliament Act on subsidies for mobility associations and projects

On 1 January 2005, the new "Flemish Parliament Act laying down general rules for the recognition and basic subsidisation of mobility associations and the subsidisation of mobility projects" came into effect. The aim of this Act is to elaborate a legal framework with clear rules.

Through this Flemish Parliament Act a framework is thus developed for the first time in Flanders under which mobility associations that dedicate themselves to vulnerable road users or public transport users can be recognised in a structured manner.

In this way they may acquire the right to a basic subsidy for four years, which will make them less dependent on project-bound subsidies. In addition, the subsidisation of all kinds of mobility-related projects will be better structured under this Flemish Parliament Act. Non-accredited associations can also submit a project. A number of conditions have been laid down both for the recognition and for the allocation of project subsidies. All projects submitted are compared with each other, applying previously-set quality criteria. Thus, it will be examined whether or not the project submitted will reach a sufficiently large target group in Flanders. Infrastructure projects cannot be subsidised through this Flemish Parliament Act.

From 2006 onwards, subsidies will – for the first time - be awarded in accordance with the new regulation. Compliance with the Act will be monitored by the Passenger Transport and Airports Division of the Roads and Traffic Administration.

The project in figures

Updating of the regulation on passenger transport by road

- Start made with the 'Flemish Parliament Act on Basic Mobility': April 2001
- Management agreement between the Flemish Government and 'De Lijn': October 2003
- Latest implementing order with regard to the operation and tariffs of 'De Lijn': May 2004

Mobility planning in Flemish cities and municipalities

- On 1 January 2005, 80% of the Flemish cities and municipalities had produced a recognised municipal mobility plan that was declared in compliance.
- On 1 January 2005, 97% of the Flemish cities and municipalities had jumped on the bandwagon of the mobility covenants.

New Flemish Parliament Act on subsidies for mobility associations and projects

- New Flemish Parliament Act came into effect on 1 January 2005.
- The first subsidies based on this Flemish Parliament Act will be awarded from 1 January 2006.

Antwerp Roads and Traffic

The project

Major renewal works on the Antwerp Ring Road in 2004

On 22 June 2004, after years of preparation, work began on the renewal of the Antwerp Ring Road. When drawing up this project, very close attention was paid to aspects that did not traditionally feature among an AWV (Roads and Traffic Administration) project leader's duties, but are increasingly viewed as obvious for the implementation of such work. The following aspects command special attention:

- Right from the start of the study, limiting disruption to traffic was included as a guideline for the design. This led, among other things, to the complete recycling of rubble, thanks to which fewer external traffic flows were called for, to the requirement for separate routes to the construction site for construction site traffic, and to the launching of a call for bids with quality and duration of the work as criteria, as well as price.

Given the great initial fear of enormous traffic chaos, some very drastic nuisance reduction measures were taken in order to keep Antwerp and its port accessible.

- Given the great initial fear of enormous traffic chaos, some very drastic nuisance reduction measures were taken in order to keep Antwerp and its port accessible. A Nuisance Reduction Office with an associated Contact Point was set up to devise and execute these nuisance reduction measures and give information about them.

- At the Nuisance Reduction Contact Point, accessibility managers (or target group managers) were deployed to inform the various target groups and start up a dialogue with them about potential solutions to traffic problems. The communication with business and the hotel & catering industry in the inner city had been initiated to this end some years beforehand.

In order to prevent time constraints from having a negative impact on the quality of the execution of the work, a 'project quality plan' was introduced.

- In order to prevent time constraints from having a negative impact on the quality of work, a 'project quality plan' was introduced through which the contractor's responsibility regarding quality requirements was increased. Given the scale of the project and the very tight schedule, the services of an external bureau were called on as well. As mastering the game really quickly was a vital requirement here, this bureau took charge of the quality control and construction site management together with the Roads and Traffic Administration.

Very close attention was also paid to drawing up a large-scale communication plan..

- ∑ Very close attention was also paid to drawing up and implementing a large-scale communication plan, in which all relevant media channels would be involved. The aim was to give good and correct information in time, to produce changes in habits, and to create and maintain a basis for the implementation of the project and its attendant nuisance reduction measures.

The project was conceived using a 'corridor approach'.

- The project was conceived by applying a 'corridor approach'. This means that all existing infrastructure along the Ring Road corridor will be examined, repaired or replaced if it threatens to cause problems in the next few years. This line of reasoning is of course also applied in view of the concern to limit disruption to traffic in the short and long term.

- Moreover, the construction of the new road is designed in such a way that a low-maintenance road is achieved for a 30 to 40-year period. To this end, use is made of continuously reinforced washed concrete. In this way, rutting is avoided.

- Clear agreements have been made regarding scenarios with regard to traffic diversions and the co-ordination of the works with the colleagues at road management and traffic centres in Wallonia and in neighbouring countries. Consultations like this also took place with other road managers in Flanders.

The first main phase of the work – from the end of June 2004 to the end of October 2004 – proceeded smoothly, even seamlessly. The working method was found to be eminently suitable among the various target groups. A wide-ranging review has taken place in view of the second main phase of the work on the Antwerp Ring Road in 2005. This might ultimately result in a guideline in order to be able to carry out work with an enormous impact on traffic as efficiently as possible, accompanied with nuisance reduction measures and targeted communication initiatives.

The project in figures

Expected costs of R1 work: approx. 100 million euros.
These already include a range of nuisance reduction measures, such as the recycling of existing pavements, the reduction of construction site traffic, the construction of special routes to the construction site and of construction site bridges, and the very tight completion date.

Construction site figures:

▼ Asphalt	350,000 ton
▼ Concrete	92,000 m3
▼ Paving	100 ha
▼ Permanent road markings	280 km
▼ Paint markings	135 km
▼ Breaking up of asphalt and recycling as foundation	95,000 m3
▼ Continuously reinforced concrete asphalt	180,000 m2
▼ Three-layer asphalt pavement	200,000 m2
▼ Steel crashbarriers	27.5 km
▼ Road signs	3,000 items
▼ Excavation	130,000 m3
▼ Renewed slip roads	30 km
▼ Sewerage and drainage being inspected, renovated or replaced	170 km
▼ Inspection shafts for sewerage and drainage being attended to	2,500 items

Completion deadlines for the works:

- completion deadline for works on Antwerp Ring Road: 140 calendar days in 2004 and 150 calendar days in 2005
- completion deadline for works on Kennedy Tunnel: 1 month each, in July 2004 and July 2005

Limburg Roads and Traffic

The project

Reconstruction of Kinrooi passage N73-N757-N762

The aim was to create a liveable environment, while retaining the local character of the regional roads and restoring the character of the village square.

On 1 March 2004, work started on the renewal of the regional roads that meet at the crossroads in the centre of Kinrooi. The aim was to create a liveable environment and a safe flow of traffic, while retaining the local character of the regional roads, reducing the space taken up by motor traffic, and restoring the character of the village square.

The redesign of the passage covered:

- renewing the stretches of road within the built-up area, reducing carriageway width, installing traffic platforms at the entrances to the built-up area, gateway effects, placing adjacent slightly raised cycle paths and footways, rebuilding parking spaces and property accesses, interspersed with flowerbeds;
- diverting the fifth branch of the crossroads (N757 Neeroetersesteenweg) via the Rozenstraat and making it traffic-free;
- simplifying and converting the central crossroads into a mini-roundabout;
- placing a drive-over mini-roundabout at the junction with the Rozenstraat;
- creating a new village square and public space at the diverted Neeroetersesteenweg, fitted out as a multi-purpose area with pedestrian zone, bus stop, parking places for cars and cycles, info centre, terraces and suitable street lighting.

All pavings outside the carriageway are produced using small-scale tinted materials. The carriageway from the roundabout and other crossroads, crossing places and traffic platforms was produced with a dual-layer cement concrete hardening, provided with a coloured decorative wearing course, in keeping with the colours of the paved borders.

Work was carried out in 7 successive phases in order to limit disruption and ensure easy access to the centre.

Execution of the work, with a completion deadline of 136 working days, was split up into 7 successive phases in order to limit disruption and ensure easy access to the centre was maintained. Thanks to their accessibility manager, Unizo took care of the communication with the local traders. The roundabout was finished by the construction holiday, and by Christmas 2004 local people were able to use their new village square.

The planning, design and implementation of the project took place in close partnership between Limburg Roads and Traffic Division and Kinrooi municipality.

The project in figures

Start of work: 1 March 2004

AWV contribution:	€ 1.6 million
Kinrooi contribution:	€ 1 million

Completion of work: Christmas 2004

East Flanders Roads and Traffic

The project

A new interchange at Zelzate

The construction of this new interchange forms part of the rebuilding of the N49 between Antwerp and Knokke into motorway E34. And since on motorways intersections must always be multi-level intersections, the original at-grade intersection needed to be replaced by an interchange with multi-level intersections only. As well as a smoother traffic flow, this new interchange also ensures improved safety for all road users.

Work started on 5 August 2002. Completion of the work was scheduled for July 2005, but the interchange was in fact opened on 28 June 2004, over a year early.

The new interchange comprises a cloverleaf, of which one of the four loops is replaced by a tunnel. The following engineering structures feature in the interchange (see also illustration p.29):

- a bridge with four spans, each of 25 metres, 28.9 metres wide, to carry the R4 over the N49;
- a tunnel with an overall length of 950 metres, 11.5 metres wide and 5.3 m high, for traffic coming from Antwerp and heading towards Gent;
- a cycling underpass under the N49 and a cycling bridge over the R4 in order to keep cyclists completely segregated from motor traffic;
- a noise screen and noise protection shoulder to limit noise nuisance.

The road works include the placing of three loops and four connecting roads for the cloverleaf.

The project in figures

Start of work: 5 August 2002

Completion of work: 28 June 2004

The Flemish government was the client, investing 24,630,190 euros in this project.

- Tunnel: length 950 m, height 5.3 m, width 11.5 m, excavation 75,000 m3, concrete 25,000 m3, reinforcement steel 2,600 tons.
- Bridge: span of 100 m, width 28.9 m.
- Cycling underpass under N49: closed section 57 m, open section 43 m, width 4 m, height 2.5 m, access slope 6.42 %.
- Cycling bridge over R4 west: span of 81 m, width 3.4 m.
- Noise screen: length 680 m, height 3.5 m.
- Pavements: 80,000 m2 road concrete

Flemish Brabant Roads and Traffic

The project

Construction of a new bridge and roundabouts at Kampenhout-Sas

The bridge, dating from 1942, was due for repairs.

For decades, there had been talk of the complex in question at Kampenhout-Sas being renovated. The regional roads N26 (Louvain-Malines) and N21 (Brussels-Haacht), with 17,000 and 13,000 vehicles per day respectively, cross each other by the Louvain-Dijle canal at Kampenhout. Both roads use the same bridge over the canal.

The bridge, dating from 1942, was due for repairs. There were only 3 lanes available for traffic, of which one lane was for turning traffic only. There was a raised cycle path and footway of approx. 1.2 m.

The junctions of the two regional roads either side of the bridge were controlled by traffic lights. The study into replacing the traffic lights with roundabouts was the impetus for a multi-modal project which ultimately resulted in the present project in the different directions.

Throughout the project, vulnerable road user traffic was kept fully segregated from motor traffic.

The new bridge includes two separate bridge roads, each with two lanes. Two parallel cycling and pedestrian bridges run on either side, each four metres wide. Thanks to good craftsmanship, the bridge road is about 1.5 m lower than the roadway bridge so that the gradients for cyclists are gentle.

The roundabouts either side of the bridge are restricted to motor traffic. All cycling and pedestrian movements take place through five subways, so that vulnerable road user traffic is kept segregated from motor traffic throughout the project.

All motor traffic on the four approach roads runs over 2 x 1 lanes, separated by a central reservation. By providing a central reservation, all left-turn movements were done away with. Hence, roundabouts were provided in order to facilitate U-turn movements. At the bridge incline on the Louvain side, a bus station has been built in partnership with 'De Lijn', which is accessible to users from one of the cycling and pedestrian subways. The subway also gives direct access to a P+R car park.

Since the construction work would have effects on the entire region, everything possible was done during the work to keep road users and local residents informed.

Given the presence of much industry, and the fact that the other nearby bridges over the canal did not offer a diversionary route, a temporary crossing was erected next to the existing bridge. This had the same capacity as the existing one, but was additionally provided with segregated cycle paths and footways, public lighting and temporary traffic lights.

In this way, demolition of the old bridge and construction of the new bridge could be done without impeding the traffic. Also, construction of the subways and roundabouts was carried out in this way. There was a tight schedule for completion of 730 calendar days.

Since the construction work would have an effect on the entire region, everything possible was done during the work to keep road users and local residents informed. An information leaflet with a print run of 20,000 was delivered from house to house. Progress on the work could be followed at a special website. An info office was opened in the construction site hut, where a scale model of the work was exhibited, and where all useful information could be obtained.

The project in figures

Start of work: 5 August 2002

AWV contribution:	€ 10,700,000
Kampenhout contribution:	€ 750,000
'De Lijn' contribution:	€ 175,000
Zeekanaal contribution:	€ 225,000

Completion of work: 4 August 2004

West Flanders Roads and Traffic

The project

Widening motorway E17 to three lanes over its Courtrai-Waregem stretch

One can actually no longer talk about a mere widening of the E17, as the motorway underwent a complete renovation.

The existing road surface was provided with a new asphalt pavement right across its width. To do this - and to include the extra third lane - no less than 160,000 tons of asphalt were processed. On peak days that amounted to 5,000 tons per day. For the supply of this asphalt alone, 60 lorries were used. About 5,500 loads were delivered. The wearing course consists of a mixture of crushed stone, mastic and asphalt, with good resistance to rutting, and very noise-friendly. 380,000 square metres of new wearing course were applied, i.e. 38 hectares. New durable road markings were of course applied, and all road signs were replaced. The old rusty steel crashbarriers were removed and replaced along the central reservation with a concrete crash barrier which, unlike steel crashbarriers, requires virtually no maintenance.

The ten overhead crossings on the Courtrai-Waregem section were subjected to thorough examination and maintenance. Road joints, the waterproof coating and of course the pavement itself, were renewed. New railings and a new crashbarrier construction were also installed.

The new asphalt pavement was applied over the entire width of 16.5 metres in one operation, as a result of which there are no longitudinal joints in the pavement.

The new asphalt pavement on the 3 lanes and the hard shoulder was applied over the entire width of 16.5 metres in a single operation, as a result of which there are no longitudinal joints in the pavement. This greatly improves its durability.

Nothing was overlooked in order to bring this major stretch of road between Courtrai and Waregem up to perfect condition over its 20-kilometre length, and thus to save having to carry out more work on this heavily-trafficked route in future years.

The traffic flowed reasonably smoothly. This was thanks to a thoroughly-researched diversion plan, based on accurate traffic counts.

Disruption to traffic brought about by the work was minimal. This was, among other things, thanks to the very short period in which the work was carried out.

The contractor completed the entire job in just 75 working days, whereas the contract implementation period was 110 working days. This was only possible thanks to meticulous organisation and a special deployment effort of equipment and teams. At peak times, some 150 workers of the contracting company were engaged on the site. The people involved in production, delivery, administration and the general management are not counted.

Considering the very busy traffic on the E17, traffic flowed reasonably smoothly. There were admittedly some unavoidable delays, but they were kept under control. This was thanks to a thoroughly-researched diversion plan, based on accurate traffic counts, under which some of the traffic was diverted in suitable doses onto subsidiary routes. The existing slip roads to and from the motorway were kept open as far as possible. The road works signs and diversion signs were absolutely excellent. The electronic queue-warning system was brought into service for the first time in West Flanders. We were also able to count on continuous support by the police, which is indispensable in such situations.

The project in figures

Start of work: 1 September 2003

Completion of work: 13 May 2004

- 160,000 tons of asphalt were required for the new asphalt pavement. 60 lorries were deployed for transport, making approximately 5,500 deliveries.
- 380,000 square metres of new wearing course were applied.
- The entire job was completed in 75 working days, whereas the contract implementation period was 110 working days.
- Cost: 14 million euros (including VAT and bonuses).

Roads and Traffic Administration in

figures

What roads network does the Administration manage?

The table below gives an overview of the number of km of roads managed by the Flemish Roads and Traffic Administration.

	motorways	ring roads with motorway status	other ring roads	other regional roads	motorway slip-roads	TOTAL
ANTWERP	202.3	27.9	54.3	907.9	134.9	1327.4
FLEMISH BRABANT	145.0	51.7	42.5	559.2	110.6	908.9
WEST FLANDERS	174.7	11.7	42.0	1242.1	97.9	1568.4
EAST FLANDERS	164.7	81.8	26.9	976.3	104.4	1354.1
LIMBURG	102.2	0.0	14.3	1043.0	66.3	1225.8
FLANDERS	788.8	173.2	180.0	4728.5	514.1	6384.6

Evolution of budgets spent

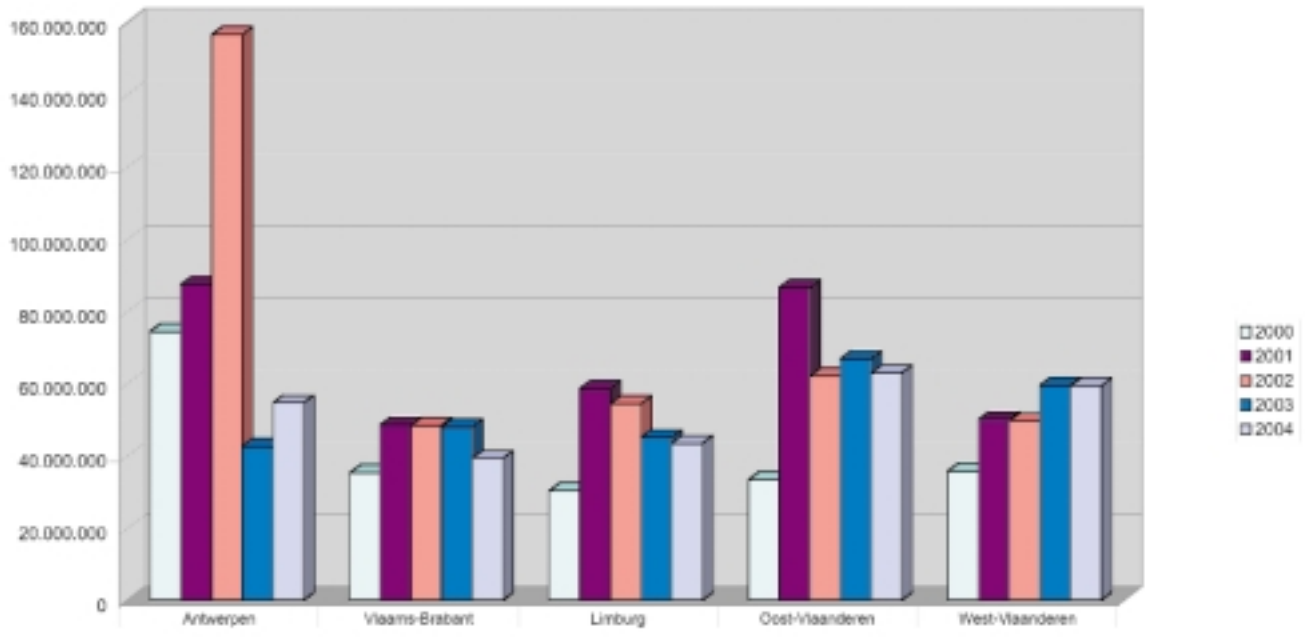
Two programmes are produced each year by the Roads and Traffic Administration:

- the investment programme
- the maintenance programme

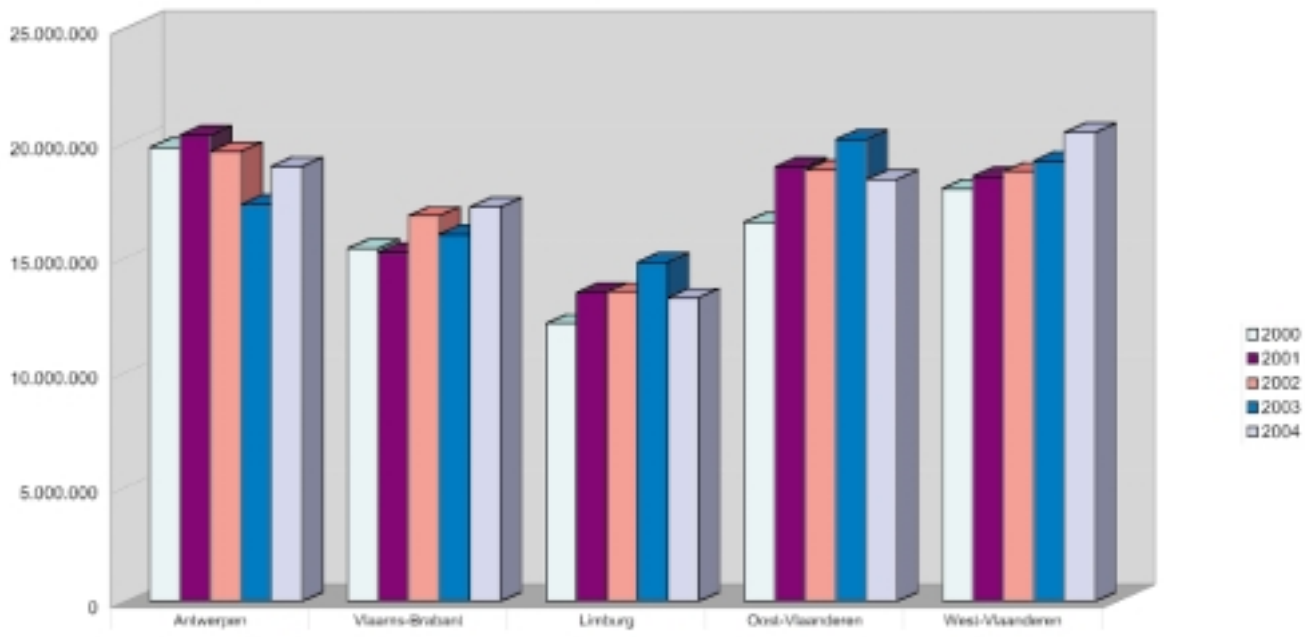
You will find an overview of the evolution of the budgets spent from 2000 through 2004 on the following pages.

The peak in investments which is reported in 2002 is the outcome of the budget made available for the rebuilding of the Antwerp Ring Road (2004-2005).

INVESTMENTS



MAINTENANCE



Investments

	2000	2001	2002	2003	2004
Antwerp	74.403.304	87.493.391	156.669.809	42.711.417	54.676.642
Flemish Brabant	35.304.888	48.513.488	48.379.291	48.048.542	39.351.150
Limburg	30.227.203	58.586.805	54.392.380	45.063.869	43.507.300
East Flanders	33.315.756	86.578.571	62.047.108	66.846.660	62.946.393
West Flanders	35.835.523	50.124.133	49.673.340	59.539.181	59.330.069
	209.086.673	**331.296.387**	**371.161.928**	**262.209.669**	**259.811.554**

Maintenance

	2000	2001	2002	2003	2004
Antwerp	19.758.351	20.310.712	19.598.445	17.286.663	18.947.674
Flemish Brabant	15.368.228	15.200.987	16.795.051	15.980.807	17.179.111
Limburg	12.100.432	13.451.104	13.488.092	14.778.584	13.231.150
East Flanders	16.509.549	18.924.439	18.786.492	20.129.194	18.380.458
West Flanders	17.985.313	18.524.226	18.715.361	19.194.240	20.424.152
	81.721.873	**86.411.469**	**87.383.441**	**87.369.488**	**88.162.546**

Staff

In the table below, you will see the distribution of the workforce size by age and gender for 2004. It is expressed in terms of FTEs, i.e. full-time equivalents.

Ages	25-		25 - 30		31 - 40		41 - 50		51 - 59		59+	
Gender	M	F	M	F	M	F	M	F	M	F	M	F
	49.50	19.00	122.00	51.30	170.30	60.80	249.60	79.00	600.60	115.70	80.00	7.00

This yields a total of 1,604.80 full-time equivalents.

Ministry of the Flemish Community

Composition:
Ministry of the Flemish Community
Environment and Infrastructure Department
Roads and Traffic Administration
Directorate-General

Publisher:
ir. Tom Roelants
Head of Roads Policy and Management Division
Roads and Traffic Administration
Koning Albert II-laan 20, box 4
1000 Brussels

Author:
Sofie Vanhout
Communication Manager
Roads and Traffic Administration

With thanks to:
- the Divisions of the Roads and Traffic Administration for supplying text and illustrations.
- Jan Swinnen and Hans Keymeulen for supplying additional photos.
- Nadia De Braekeler for the graphic design of the yearbook.

Photography:
- the Divisions of the Roads and Traffic Administration
- General Technical Support Division of the Supporting Studies and Tasks Administration.

Graphic Design:
Nadia De Braekeler
Logistics Division – Digital Printing
General Administrative Services Administration

Printing:
Logistics Division – Digital Printing

Registration Number:
D/2005/3241/157

Edition: June 2005