Cycle Policy 2002 - 2012
City of Copenhagen

Cycle Policy 2002-2012 (Danish title: Cykelpolitik 2002-2012**)**
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English version: 1.000 copies, printed in Denmark by Saloprint, July 2002

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Introduction

Copenhagen is known far and wide as the "City of Cyclists" – due to its long-standing and lively cycling tradition and, in recent years , its City Bikes.

In Copenhagen, cycle planning is an integral part of main-stream traffic planning. The cycle track network was already partially completed in the 1960s and 70s although there were much fewer link-ups between cycle track sections then than there are today. Despite the fact that many people bought cars in the 60s and 70s, Copenhageners continued to cycle. Cycling is a socially acceptable means of transport and it is not uncommon to see Danish ministers or mayors riding their bicycles to work. Currently bicycle traffic accounts for a significant proportion of Copenhagen traffic – comparable to public transport and private cars. One out of three Copenhageners cycle to work.

The Copenhagen cycle track network was built over the course of almost a century. The cycle track network consists of cycle tracks on both sides of the major roads with a total cycle track length of over 300 kilometres. Normally cycle tracks are wider than two meters across. Copenhagen bicycle traffic is thus considered a distinct traffic category with its own separate road area – on a par with motor traffic and pedestrian traffic.

Bicycle traffic in Copenhagen has grown in recent years. This has occurred in spite of the fact that the national trend is that people cycle less. A sustained effort on the part of the City is a prerequisite for maintaining the level of bicycle traffic and an even greater effort is necessary to increase the number of cyclists. In 2002 the City budget for road construction was DKK 60 million, one third of which was earmarked for the improvement of cycling conditions.

For the first time the City of Copenhagen is publishing a cycle policy, the purpose of which is to draw attention to the fact that cycling is an environmentally desirable and effective means of transport and also to coordinate initiatives for improvements of cycling conditions. For the past five years the city has published a Bicycle Account which has already provided an input for cycle planning. In future the Bicycle Account will be used to follow up on the goals set forth in the cycle policy.

The cycle policy goals are to increase the proportion of the workforce who cycle to work, to improve safety and a sense of security when cycling and to increase travelling speed and cycling comfort. The goals are to be met within 11 years.

Synopsis

"An overall action plan for the improvement of cycling conditions shall be drawn up. The plan shall contain provisions for the extension of the cycle track network and proposals for new cycle routes and include proposals for the improvement of general passability, cyclist safety and comfort, including necessary maintenance."

City of Copenhagen, Budget 2000-2003

The *Subplan for the Improvement of Cycling Conditions* is a subsection of the *City's Traffic Improvement Plan of 2000*. The plan was approved as the basis for all further work and the subplan may be considered a blueprint for an action plan for the improvement of cycling conditions. The aim is to achive the following goals by 2012:

- The proportion of people cycling to workplaces in Copenhagen shall increase from 34% to 40%.
- Cyclist risk of serious injury or death shall decrease by 50%.
- The proportion of Copenhagen cyclists who feel safe cycling in town shall increase from 57% to 80%.
- Cyclist travelling speed on trips of over 5 km shall increase by 10%.
- Cyclist comfort shall be improved so that cycle track surfaces deemed unsatisfactory shall not exceed 5%.

The *Subplan for the Improvement of Cycling Conditions* was passed in 2000 including an appropriations bill earmarking funds for implementation. Along with *Proposals for Green Cycle Routes* (2000) and the *Cycle Track Priority Plan* (2001), it forms the basis of the cycle policy and action plan presented here.

Quantitative goals make it possible to carry out a continuous assessment of the cycle policy. This will be done, as hitherto, in the *Bicycle Account*. In order to fulfill the objectives, work will be concentrated on nine focus areas:

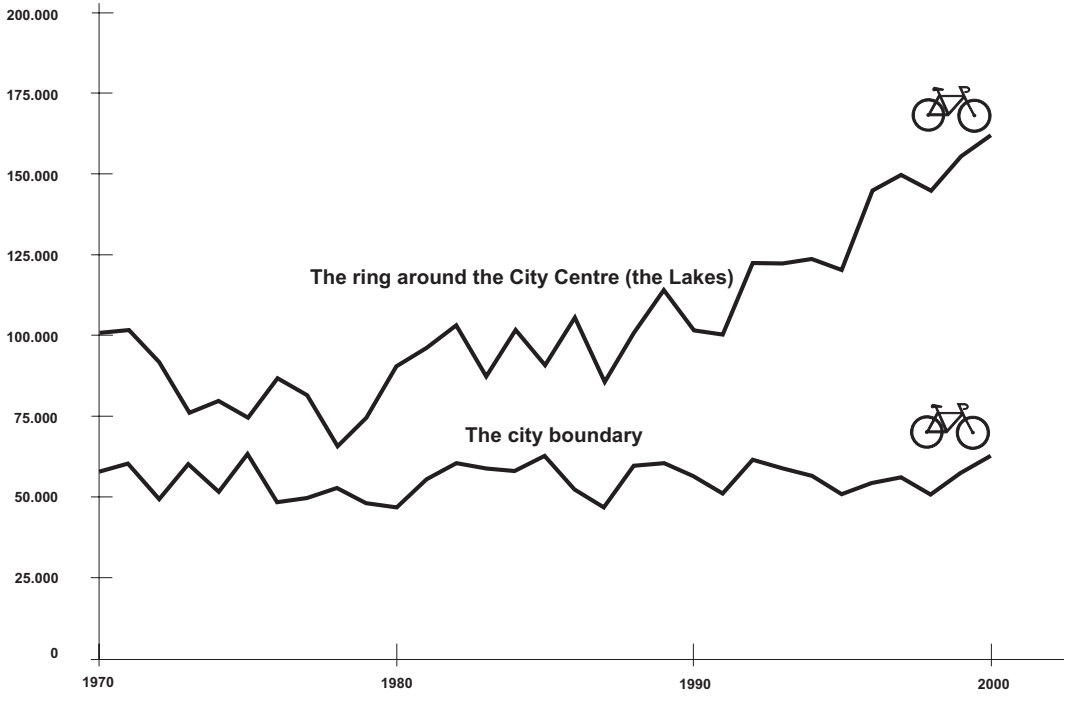
- Cycle tracks and reinforced cycle lanes
- Green cycle routes
- Improved cycling conditions in the City Centre
- Combining cycling and public transport
- Bicycle parking
- Improved signal intersections
- Better cycle track maintenance
- Better cycle track cleaning
- Campaigns and information

Copenhageners Ride Bicycles

The role of the bicycle in Copenhagen traffic

In contrast to many other major European cities Copenhagen has a longstanding cycling tradition. Cyclists come from all walks of life and it is socially acceptable to ride a bicycle.

Cyclists are evenly distributed over all income brackets. Motorist income is high on the average while users of public transport have a relatively low income. Motorists have more children per household than cyclists while users of public transport have fewest. Cyclists often have a higher education than motorists and users of public transport.

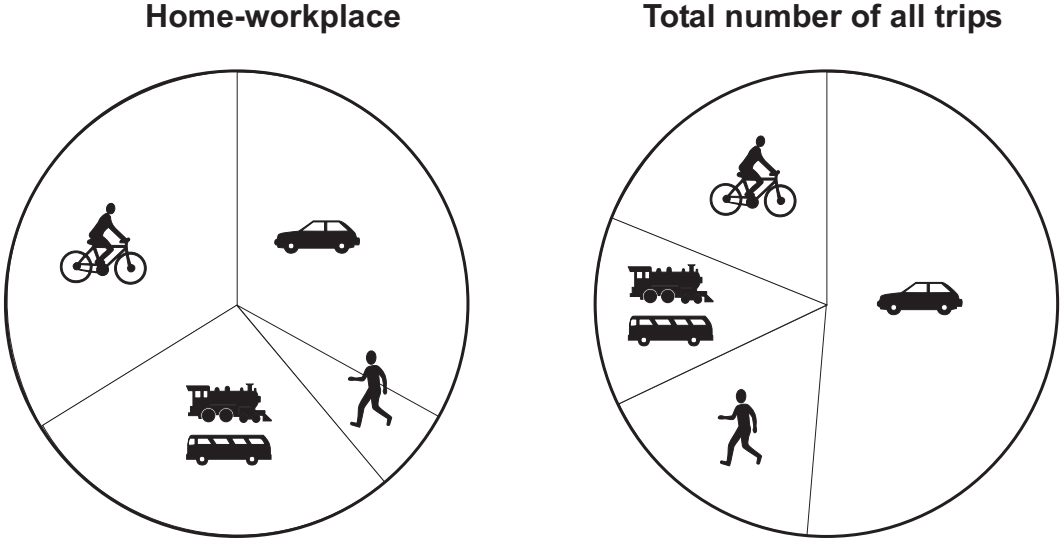


Bicycle traffic trends: Since the mid 1970s, when cycling in Copenhagen was at a minimum, bicycle traffic has grown, especially in the City Centre and in the residential areas around the City Centre. The figure shows the sum of cycle traffic moving in both directions registered at the ring around the City Centre and the city boundary between 6 am - 6 pm.

Copenhagen cyclists are relatively young although there is a tendency for older people to cycle more. The proportion of cyclists over 40 has increased from 25% to 38% in the period from 1998 -2000.

The bicycle is most often used when going to and from work – in fact 34% use their bicycle when going to workplaces in Copenhagen. Over half choose to cycle because it's fast and easy. Almost as many say they cycles to get exercise. Financial reasons also play a role for many cyclists. (*Bicycle Account for 2000*).

The proportion of trips carried out by bicycle in Copenhagen (modal split) is among the highest in major European cities. The share of the total number of all purpose trips is slightly less than one fifth, but the share of home-workplace traffic is as high as one third.



Modal split to workplaces in the City of Copenhagen in 1999 (*Bicycle Account for 2000*) and general modal split in the City of Copenhagen (Statistics Denmark). The share of cycle transport is most substantial in commuting.

The planning framework

The large proportion of the total number of trips in Copenhagen that are cycled contributes greatly to the city's relatively favourable traffic and environmental situation. It continues to be a city planning objective that bicycles are to play a central role in city traffic. The proportion of bicycle traffic is to increase, cyclists' effective travelling speed is to rise and cyclist safety, comfort and sense of security shall be improved. Improved bicycle parking facilities are to be set up at train stations and bus terminals so as to make it easier to combine cycling with public transport. The infrastructure is to be extended by additional cycle tracks and green cycle routes.

The *Traffic and Environment Plan* (1997) mentions a number of elements, including green cycle routes, cycle link-ups through the city centre, safety campaigns, improved bicycle parking facilities, and the extension of the City Bike project to the residential areas surrounding the city centre. The overall goal of the plan is that the total level of city motor traffic may not increase and, while recognizing the issue of traffic growth, states that it must be addressed by increased public transport and cycling.

The City passed the first *Cycle Track Priority Plan* at the same time as the *Traffic and Environment Plan*. The *Cycle Track Priority Plan* was revised in 200l. A *Proposal for Green Cycle Routes* was passed in 2000.

The *Traffic Improvement Plan* is the result of a budgetary settlement for the year 2000. This includes the *Subplan for the Improvement of Cycling Conditions*, which was approved as the basis for all further work. The subplan may be considered a blueprint for implementing cycling improvements. When the *Traffic Improvement Plan* was passed, funds were allocated and earmarked for the implementation of specific projects. Quantitative goals for Copenhagen bicycle traffic development were formulated for the first time in the subplan.

The City drew up a *Traffic Safety Plan for Copenhagen* in 2001. The objective for bicycle traffic is a 40% reduction of serious cyclist casualities for the period 2001-2012. This objective will continue to apply regardless of trends in bicycle traffic volume.

As is clear from the above, cycling is integrated into all levels of city planning. The overall objective is that cycling is to play an even more central role in Copenhagen traffic in future.

The bicycle's competitive edge

The bicycle is an individual means of transport. Many people prefer to cycle over short distances and in congested areas rather than take the bus or drive. This tendency will be reinforced as the issues of motor traffic capacity and parking shortages increasingly make themselves felt. For greater distances bicycles can only compete with cars if there is ample opportunity to combine cycling with public transport such as the train or the suburban express buses.

It is a common experience that cycling is competitive in Copenhagen traffic when it comes to saving time. However, for trips of more than 5 km cycling will often mean a bit of extra time compared with driving. On the other hand, in many situations cycling is competitive compared with public transport over slightly greater distances.

A number of motorists would be interested in cycling to and from work – provided there was a continuous, attractive and safe network of green cycle routes.

People who already cycle are not a homogeneous group. There is a small core group who will cycle under almost any circumstances whereas a larger group of cyclists regularly consider alternatives. There is also a group of motorists and bus passengers who are in doubt as to whether they should cycle instead.

Increased parking fees and possibly the introduction of road pricing might make cycling more competitive particularly for home-workplace traffic. A wide-spread use of carsharing, which is not suited for routine transport, would also mean that a larger proportion of home-workplace traffic would be carried out by bicycle.

A growing number of Copenhageners continue to cycle during the winter. Bicycle traffic volume in winter is roughly two thirds the summer volume. This reflects the fact that bicycles are becoming increasingly competetive, particularly in relation to buses.

More cyclists, but how?

The cyclists of Copenhagen are often taken for granted. But in reality a large number of present cyclists will only continue to cycle as long as they feel welcome in town. An enhanced sense of security and the opportunity to travel at a high speed by bicycle would help retain present cyclists and get more people to use their bicycles. A greater and more highly visible effort to improve security and travelling speed is therefore necessary. The annual "We bike to work" campaign is a pat on the back to those who cycle already. Moreover the campaign provides an opportunity for more people to see what cycling to work is like.

Efforts to increase the number of cyclists might begin by improving the quality of transport for those who already cycle. Altogether four fifths of the cyclists are satisfied with Copenhagen as a city for cyclists, whereas one fifth think that Copenhagen is unpleasant to cycle in. There is a slight increase, however, in the proportion of satisfied cyclists (*Bicycle Accounts for 1998 and 2000*). A vast majority of cyclists should be satisfied, if for no other reason than to prevent present cyclists from choosing other means of transport.

So what can make motorists cycle more? In Copenhagen, the group of impassioned motorists (those who are impervious to argument) is very small. Weekday motorists make up about half of the motorist segment. Two thirds of these say that they could be induced to leave their cars behind if a number of cycling conditions were improved. Leisure time motorists are difficult to reach, but perhaps are not a prime target group since they normally use their cars outside the rush hours when there is less traffic congestion.

There is no significant difference between what weekday motorists say would induce them to cycle and what present cyclists would like to see improved. The only difference is that cyclists are more satisfied with present cycling conditions. Perhaps part of the task is to tempt motorists into trying to cycle in Copenhagen.

The number of Copenhageners who commute out of town in the morning to work in the surrounding suburbs is rising. Out-bound commuters, who are potentially a large home-workplace target group, should have good bicycle parking facilities at the public terminals in the City of Copenhagen. At many suburban stations it is possible to have a bicycle parked safely over night and to continue the trip by bicycle from the station to the frequently widely scattered places of work.

If Copenhageners and commuters into Copenhagen are to have an incentive to reconsider whether their means of transport is the optimal one, then improvements for cyclists must be highly visible.

Transport Quality

Safety and a sense of security, effective travelling speeds, health, comfort and the cycling experience are all significant factors if cycling is to prove competitive. The quality of bicycle transport is thus crucial to Copenhageners' decision to cycle or not.

A sense of security

A sense of security is the cyclist's subjective perception of the risk of being run over. This perception may be based on direct experience of dangerous situations in traffic or merely a purely subjective emotion.

The feeling that "biking is dangerous" may mean that the cycling potential is not fully realized. Of present cyclists, only one out of five cyclists feel insecure, but cycle nevertheless.

The proportion of people who feel unsafe when cycling in traffic increases as practical experience decreases. Only a little more than half of the road users who are primarily motorists or users of public transport and only cycle occasionally feel secure when cycling in Copenhagen. The fact that most of those who do not cycle at all feel that cycling is unsafe, is a crucial factor in their rejection of cycling as a means of transport.

Campaigns such as "We bike to work" may help change how people feel about cycling safety by giving them a new cycling experience.

Safety

Safety is a statistical, objective description of the number of casualties per trip or per cycled kilometre. In 2000, the Copenhagen police registered 168 serious cyclist casualties. Add to this a number of less serious casualties and solo accidents. The number of cyclists that were killed over the past 10 years varies from 3 to 9. 4 cyclists died in 2000.

When the number of cyclists increases, the risk of the individual cyclist is significantly reduced. An increase in the number of Copenhagen cyclists will thus not lead to a corresponding increase in the total number of casualties. If the number of trips cycled per day on major roads is compared to police registered changes in serious casualties and deaths, it will be seen that over the past 10 years there has been a decrease of 40% in the number of serious cyclist casualties

Trends in the number of kilometres cycled on major roads and the number of seriously injured cyclists in Copenhagen 1990-2000. The development over time is based on a census taken at the ring around the City Centre (the Lakes) and at the city boundary and on extensive calculations of number of trips cycled along the major roads in 2000.
Upper line shows the number of kilometres cycled, lower line the number of serious cyclist casualties. A substantial 50%-reduction of risk is found.

while at the same time the number of trips cycled has increased by 25%. Thus risk has be reduced with 50%. This effect is partially attributable to improvements in the cyclists' traffic environment during the course of this period.

This trend gives rise to the belief that individual risk can be reduced even further. The safety goal of the cycle policy in the coming years is to reduce individual risk by half. At the same time, according to the *Copenhagen Traffic Safety Plan*, there is to be a 40% reduction in the number of cyclist casualties from 2001-2012 regardless of changes in cycle traffic volume.

Despite sustained efforts to improve cyclist safety it is more dangerous to cycle

one kilometre than to drive the same kilometre by car. An attempt will be made to calculate cyclist risk per cycled kilometre.

The traditional way to improve cyclist safety is to build cycle tracks. A prerequisite, however, for a positive, overall safety impact is that something is also done about intersections since cycle tracks (and cycle lanes) improve safety on the intervening sections, but do not make intersections less dangerous. It might even be claimed that cycle tracks actually move casualties over to intersections.

In Copenhagen there are two fundamentally different types of cycle track design at signal intersections. One kind goes all the way up to the intersection, the other kind stops at a distance from the intersection. A variant of the shortened cycle track is to roadmark a narrow cycle lane all the way up to the intersection. Safety, a sense of security, passability and motor vehicle capacity at the three different types of intersection are treated at greater length under Intersections.

Work continues to be done on finding intersection solutions which are not only safe but also make the cyclist feel secure.

Travelling speed

Travelling speed for cyclists is crucial in the competition between means of transport. Unfortunately very few studies of cyclist travelling speeds exist and they are not representative of the city as a whole.

The cycle policy goal for cyclist travelling speed is a 10% increase for trips of over 5 km. Attempts will be made to formulate a basis for calculation, making it possible to follow trends.

Cyclists are often delayed because traffic signals are not synchronized for cyclists. Cyclists are further delayed by bus passengers crossing cycle tracks to get on and off the bus.

Unnecessary detours may significantly reduce cycling speeds. In the historic city centre, however, most one way traffic regulations will no longer apply to cyclists as from 2002. This will mean increased travelling speed in the area.

Cyclist speeds vary greatly. The average speed is slightly over 20 km per hour. The fastest cyclists ride around twice as fast as the slowest. Cyclist door-to- door travelling speed (including delays) averages around 16 km/h.

There are two or three places in Copenhagen where narrow, congested cycle tracks are a problem. This is reflected in the *Bicycle Account*, which mentions increasing dissatisfaction with cycle track width. When the day comes that the fastest cyclists prefer the roadway to the overcrowded cycle track there will be serious traffic safety ramifications.

Cycle tracks and cycle lanes make it possible for cyclists – except at bus stops – to increase their travelling speed. Cyclists don't have to swing around waiting cars and when the cycle track continues all the way up to the intersection the cyclist can be off as soon as the light turns green. Withdrawn stoplines for cars, pre-green traffic signals for cyclists (i.e. the traffic signal for cyclists turns green a few seconds before the one for cars) remind turning motorists that cyclists travelling straight on have the right of way. This is essential for both safety and travelling speed.

Green cycle routes enable the cyclist to ride faster. Bus stops are not an issue on cycle routes, but the numerous intersections, particularly signal intersections, may mean a reduction of speed.

Traffic controlled signals are now being introduced in Copenhagen so as to increase the number of cars that can be handled. In connection with this, the issue of cycling travelling speed will naturally also be addressed.

Health

Health reasons are a powerful argument for cycling as studies have shown a significant health benefit from around four hours a week of moderate exercise. Many people will achieve this by cycling to work. Moderate exercise means a significantly improved state of health compared with the normal situation of no exercise. Physical activity plays an essential role for one's general condition and mental well being and reduces the risk of blood clots, among other things.

From a socioeconomic point of view the health benefits derived from cycling, in the form of improved quality of life and state of health, vastly outweigh the risk of being injured or killed in traffic. Air pollution also poses a health risk, but probably does not play a significant role in a calculation involving other factors such as casualties and exercise.

For the individual, too, better health and enhanced well-being are good reasons to cycle and very likely play a greater role when choosing a means of transport than the risk of changes in global climate caused by burning fossile fuels.

Experiencing the city and its life

Experiencing the city and its life also plays a role when choosing means of transport. The city is experienced intimately on a bicyle and the changeable Danish weather keeps the urban dweller in touch with the seasons.

Cyclists prefer to ride on shopping streets where the pulse of the city can be felt and where they can shop on their way home from work. So-called back street solutions have therefore been dropped as a planning principle in Copenhagen.

Green cycle routes are a new option offered especially to cyclists who cycle long distances, but also to those wanting to experience a more quiet side of the city. On the green cycle routes the cyclist comes in closer contact with natural elements and the change of seasons is experienced even more intensely.

Comfort

Comfort – i.e. whether cycle track and street surfaces are even – is of great importance if cycling is to be a pleasant experience. The incline between the cycle tracks and the roadway should be even, gratings should be flush with the pavement and at right angles to the cyclist and there should be no potholes in the asphalt.

Almost half of the cyclists are still dissatisfied with cycle track maintenance, however, and are even more critical of road maintenance. A concentrated effort in 2001 has given visible results and will hopefully mean better ratings in future Bicycle Accounts.

To ensure further improvements an inspector was hired in 2001 whose sole job is to cycle about, registering sections where road surfaces are uneven, where there are potholes, etc. – and to see that something is done about it. To facilitate rapid registration a comfort meter will be mounted onto a bicycle.

Cleaning is also vital to cycling comfort – not only routine dayly sweeping but also snow clearance during heavy snowfall.

Focus Areas

If the City is to realise its objective of getting more people to ride bicycles, then cyclists have to feel that the City is making a serious effort to improve conditions.

In order to achieve the level of transport quality which would have the desired impact of increasing the number of cyclists in Copenhagen traffic, work is being done on a specific number of focus areas:

- Cycle tracks and reinforced cycle lanes
- Green cycle routes
- Improved cycling conditions in the City Centre
- Combing cycling and public transport
- Bicycle parking
- Improved signal intersections
- Better cycle track maintenance
- Better cycle track cleaning
- Campaigns and information

Cycle tracks and reinforced cycle lanes

The cycle track network will be extended in accordance with the Cycle Track Priority Plan 2002-2016. Reinforced cycle lanes will be established as a relatively quick, but temporary measure. Traditional cycle tracks will be built in the most problematic sections and in sections where it is not possible to establish reinforced cycle lanes.

Traditionally, cycle tracks along the roads are the chief element of the Copenhagen bicycle traffic infrastructure. At the end of 2001 there were 307 km of cycle tracks and 9 km of cycle lanes.

A fixed framework for the completion of the cycle track network is set forth in the *Cycle Track Priority Plan 2001 - 2016 (*Municipal Council Resolution 2001). According to the plan, 51 km of cycle track, "reinforced cycle lanes" and a few "other solutions" shall be laid out over the next 15 years at an estimated cost of DKK 123 million (DKK 7.5 corresponds to EURO 1 or $ 1).

The priorities set forth in the plan are based on the following principles:

- Reinforced cycle lanes shall be established as a quick and cheap first stage whenever possible.
- Cycle tracks shall be built as quickly as possible in the most difficult sections.
- Short sections which can form a link-up to the network shall be given high priority.
- Sections with heavy bicycle traffic shall be given higher priority than sections with little bicycle traffic, under equal conditions.

"Reinforced cycle lanes" received political approval as a temporary measure following a pilot project involving six streets in the city centre in which cycle lanes were indicated solely by road marking. The project was assessed favourably in cyclist ratings, behavioural studies and an external traffic safety inquiry.

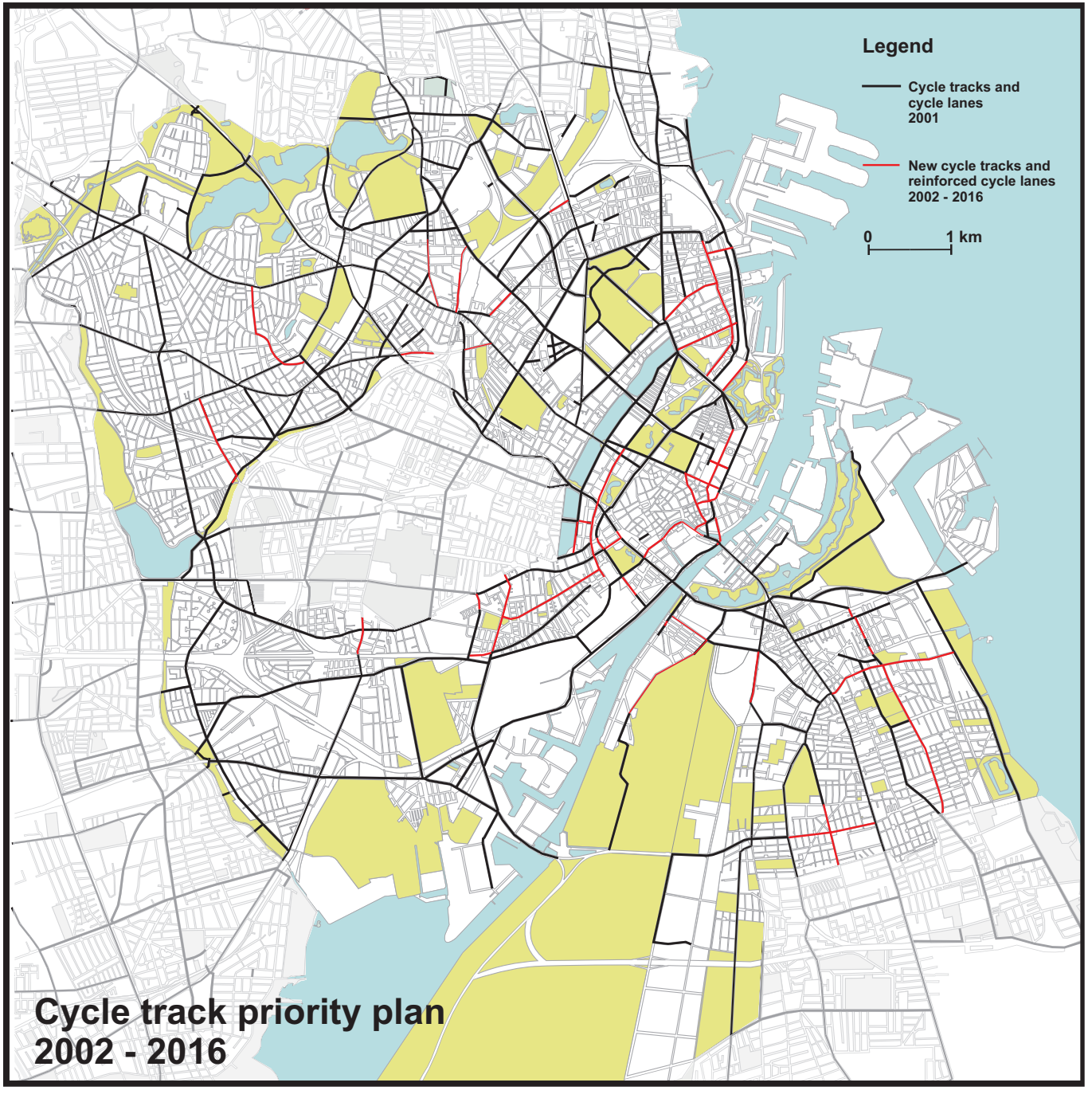
Reinforced cycle lanes are a combination of roadmarked cycle lanes, short sections of cycle track (e.g. at bus stops) and the use of traffic islands etc. so as to physically separate cyclists from motor traffic. In 2002 it is estimated, that the average cost of reinforced cycle lanes will be DKK 1.6 million per km. The cost of establishing one kilometre of traditional cycle track is DKK 6.2 million. This estimate is for a facility on one side of the road.

The Cycle Track Priority Plan is divided into three 5-year periods and identifies the road sections on which cycle tracks and reinforced cycle lanes are to be built for each period.

In addition proposals are made as to which road sections should be given cyclist facilities in 2002 and 2003. For instance, cycle tracks and reinforced cycle tracks are projected for the roads Søndre Fasanvej, Enghavevej, Østrigsgade, Hammerichsgade at the Royal Hotel and at the Town Hall Square between Jernbanegade and Vesterbrogade. Major improvements for the cyclists in the historic city centre could be achieved by building bicycle tracks against one way-traffic in Bremerholm and Gothersgade. For information on this, turn to the focus area on cycling conditions in the City Centre.

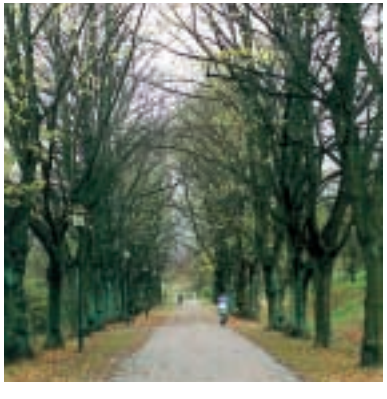
The plan sets the annual framework for the realization of the *Cycle Track Priority Plan* at DKK 8 million, 3 million of which are to be spent on building traditional cycle tracks.

The Roads and Parks Department investment plan defines the annual framework for cycle path construction, etc. Work can not be initiated until the Building and Construction Administration has also allocated earmarked capital on the basis of a recommendation including a detailed description of the project and its consequences.


Legend
Cycle tracks and cycle lanes 2001
New cycle tracks and reinforced cycle lanes 2002 - 2016
0
1 km
Cycle track priority plan
2002 - 2016

Green cycle routes

Green cycle routes are to be developed on the basis of "Proposals for Green Cycle Routes". A plan to develop the Nørrebro cycle route by stages has received political approval and it is proposed that a similar stage-by-stage plan for the Amager route be drawn up. In addition, work is being done to initiate other green cycle routes, and also to upgrade existing cycle routes such as the Vigerslev route.



Green cycle routes in Copenhagen are intended as a new option for cyclists, particularly those who have a long way to go. Cycle routes are built to a high standard, and usually include a wide cycle path and separate pedestrian walkway. When possible cycle routes run in their own separate area through green surroundings and are designed to minimalize the stops cyclists have to make because of other traffic. In addition to serving as home-workplace routes, they are also intended to have a recreational function.

The report *Proposals for Green Cycle Routes: Home-Workplace Routes and Recreational Routes* was approved in 2000 by the Building and Construction Board as the foundation for further planning and development of green cycle routes although nothing specific was decided concerning priorities or details. The plan includes 21 routes, a total of 100 km. The length of the routes varies from under 2 km to over 8 km. One third of the network already exists, although the standard is lower than could be wished.

Cycle routes were incorporated into the *City Plan*. This ensures that all routes may be implemented in the long run, although in itself it is no guarantee that the routes will be implemented. The plan has already proved its viability by preventing new building projects from blocking future routes.

On those promenades along the harbour which serve as cycle routes and on promenade sections with heavy bicycle traffic in general, separate cycle tracks will be established. In the long run bridges across the harbour may link up the promenades along both sides of the harbour.

It will also be possible to establish subsidiary sections linking up several existing sections. The existence of an approved and continuous plan for green cycle routes makes it easier to do this. Whenever possible, sections of a cycle route may also be built in connection with other construction, such as building projects, stations, squares, linear parks, etc.

Existing cycle routes, such as the Vigerslev route, may be gradually upgraded to a higher standard.

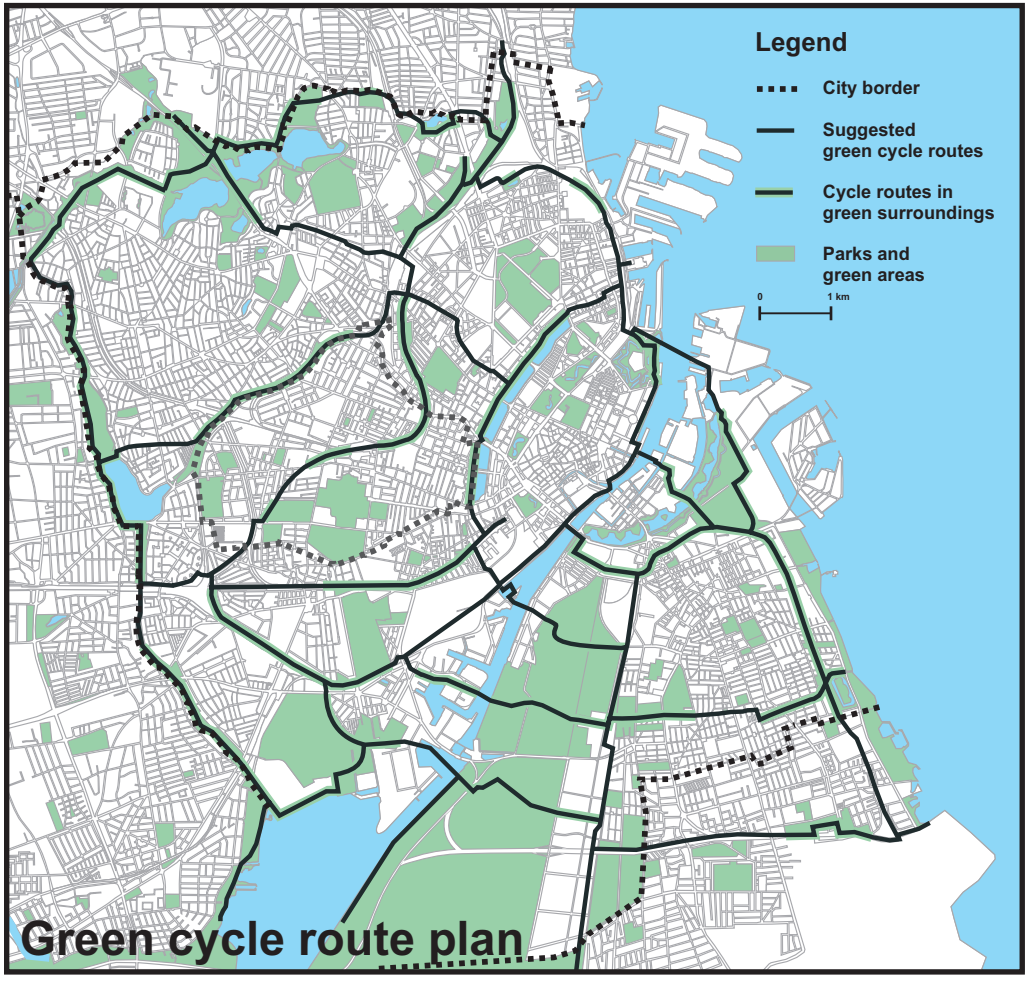
In the entirely new district of Ørestad new cycle routes will be established in connection with the planning of this brand new urban area.

The Proposal for Green Cycle Routes may also be used to select the routes that will be built by planned stages. The plan for building the first green cycle route, the Nørrebro route, was approved by the Municipal Council in 1997 and revised in 2000. The purchase of space from the Danish State Railways received financial support from the Ministry of Transport. The Nørrebro route will pass through Ryparken, Nørrebro, Frederiksberg, Valby and Vigerslev. The first four of the ten stages have been completed.

It is also intended stage-by-stage, to turn the disused railroad track of the old Amager railway into a cycle route. Work on the Amager route was initiated in 2001 when building was being done on the Ny Tøjhus site. Another section has been set up as a temporary walkway. The section past Kløvermarken also received political approval in connection with the culture and sports scheme for the Holmbladsgade district. Further space for this cycle route was secured in connection with building the third stage of the Metro, and the route has also been integrated in the plan for the housing scheme of the Vølund site.

The green cycle routes are coordinated with the main cycle path network within the Greater Copenhagen Area. Future European cycle routes (to Malmø, Elsinore and Berlin) and the existing national routes will be adjusted to the green cycle routes as the occasion arises. Green cycle routes will eventually be signposted in accordance with the new rules for road signage as soon as a major portion of a route has been set up.

Slightly under DKK 5 millions were spent annually on green cycle routes in the period 1997- 99. It is expected that completion of the network will take many years. The cost of realizing the green cycle route plan is estimated at around DKK ½ billion.



Improving cycling conditions in the City Centre

Cycling conditions in the City Centre will be improved by building cycle tracks and reinforced cycle lanes along the major roads. Cycle link-ups for through cycle traffic will be established in and around the historic city centre. Whenever possible one-way traffic restrictions will be removed for cyclists and bicycle parking will be improved.

In the City Centre (the area within the Lakes) cycling conditions are not satisfactory. A long term plan to improve cycling conditions in the City Centre is based on the report *Traffic Calming in the City Centre - After a Harbour Tunnel is Built*. Although the harbour tunnel has not been approved, a significant number of the improvements proposed for cyclists may be carried out.

The first initiative to improve cycling conditions in the City Centre was the pilot project of 1999 using cycle lanes on six major streets. The project was a success and the painted cycle lanes were politically approved for upgrading into reinforced cycle lanes or cycle tracks as part of the *Cycle Track Priority Plan*. The first street was consequently upgraded in 2001.

The next phase was to remove most of the remaining one-way restrictions for cyclists in the historic city centre and to establish 40 km/hour speed zones. Building and signing are expected to be carried out in 2002.

Cycle link-ups will be established through and around the historic part of the city centre, which approximately covers 1 km^2. Cycle link-ups are designed with special regard to pedestrian interests. State- of- the-art cycle routes will therefore not be built in the oldest part of town.

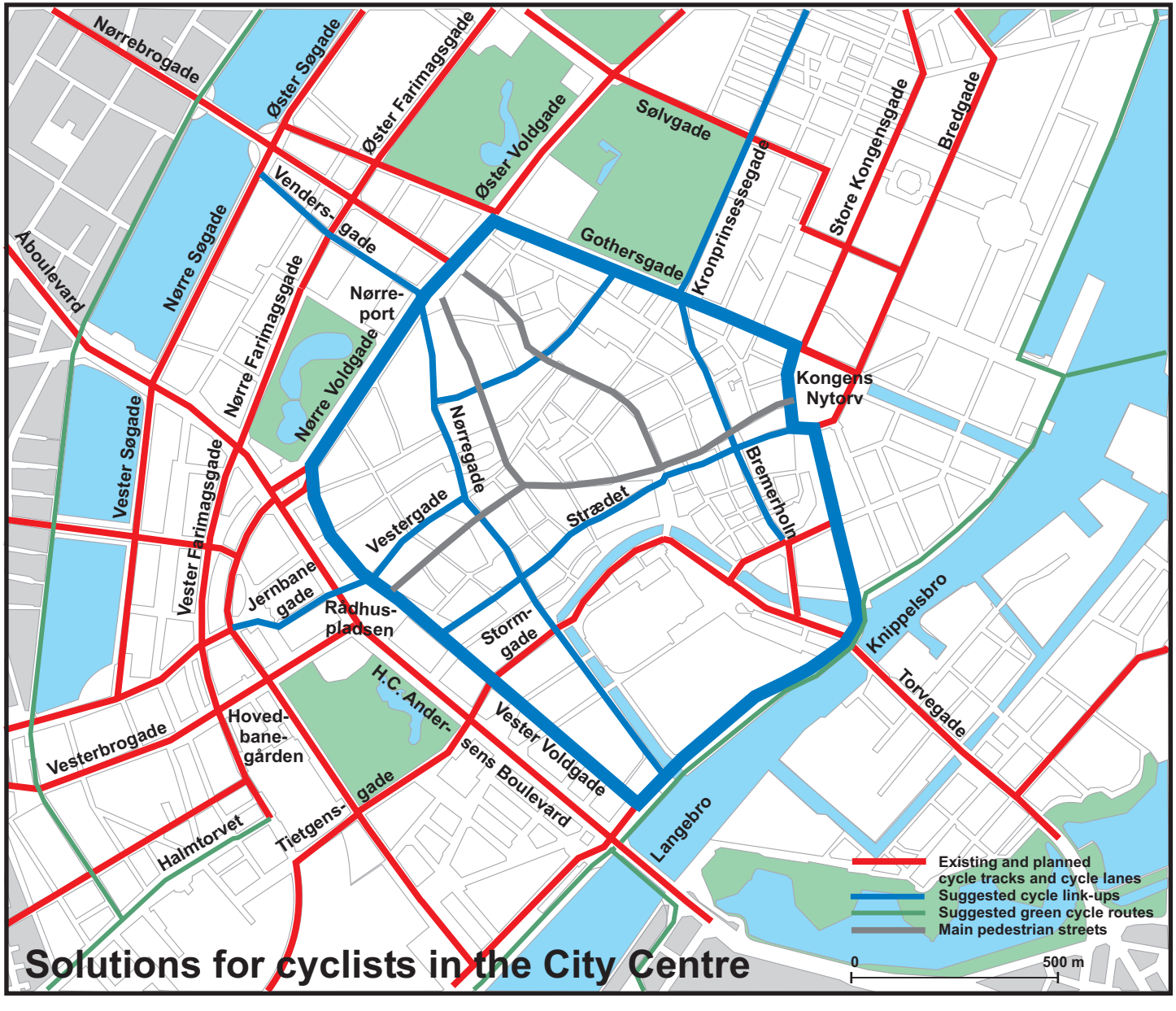
In practice, a cycle link-up for through cycle traffic already exists in the historic city centre, Nørregade. Strædet is another future cycle link-up. In the Farvergade section of Strædet, in connection with the removal of one way restrictions for cyclists, a short cycle lane against the one-way traffic in the direction of the Town Hall Square (Rådhuspladsen) will be established. When a similar cycle lane against the one-way traffic in Lille Kongensgade towards Kgs.Nytorv is established, it will be possible to cycle in both directions between Town Hall Square and Kgs. Nytorv, parallel to Strøget.

A third cycle link-up projected for Vestergade is awaiting major roadwork and road reconstruction. The cycle link-up will give cyclists direct access to Gammeltorv from Town Hall Square.

The final link-up in the historic city centre is projected for the so-called Bremerholm line, i.e. the streets that continue more or less in a straight line into Bremerholm. There are also plans for establishing a cycle ring around the historic city centre. The only part of this scheme which is missing is the short section down Gothersgade, which is one way regulated from Kgs. Nytorv. One possibility is to establish cycle tracks or lanes against the one-way traffic in Gothersgade and along the Bremerholm line. Another is to turn the section of Gothersgade mentioned above into a street with two way traffic for buses and bicycles and limited access for cars, and entirely remove buses from the Bremerholm line. Bremerholm would thereby become a two way street for cars and bicycles, and cycle tracks would be built on it.

Kronprinsessegade, Vendersgade and Stockholmsgade in the City Centre might later be turned into cycle link-ups in connection with other link-ups through the historic city centre.

Cycling improvements in the historic part of town will be followed up by a campaign in 2002.


Nørrebrogade
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Nørre Farimagsgade
Nørre Voldgade
Nørre-port
Aboulevard
Vester Søgade
Vester Farimagsgade
Nørregade
Kongens Nytorv
Bremerholm
Strædet
Vestergade
Jernbane-gade
Rådhus-pladsen
Storm-gade
Knippelsbro
Torvegade
H.C. Anders-ens Boulevard
Vester Voldgade
Hoved-bane-gården
Vesterbrogade
Tietgens-gade
Halmtorvet
Langebro
Existing and planned cycle tracks and cycle lanes
Suggested cycle link-ups
Suggested green cycle routes
Main pedestrian streets
0
500 m
Solutions for cyclists in the City Centre

Combining cycling and public transport

Bicycle parking at terminals will be improved since adequate bicycle parking facilities are a prerequisite for an effective combination of cycling and public transport. Improvements of bicycle parking facilities at stations and terminals will be planned jointly by Copenhagen Transport, (the city bus system), and the Danish State Railways. An action plan for improved bicycle parking facilities at stations and terminals is to be drawn up.

A number of transport needs cannot be covered by cycling or public transport alone since neither can offer a sufficiently flexible transport solution on its own. Proposals are set forth in the *City Plan 2001* which would make it easier to combine cycling with public transport, thus providing a realistic alternative to private cars.

The Copenhagen Transport *Public Transport Plan* (1998) takes a highly favourable view of combining cycling and public transport and targets cyclists as potential customers to a greater extent than in the past. This has resulted in the removal of most restrictions applying to bicycles on commuter trains. There are still some restrictions applying to rush hours. However, the most recent development is that bicycles are now allowed on commuter trains in rush hours when travelling in the opposite direction to the main traffic. As more and more commuter trains of the new type are acquired bicycles will eventually be allowed on the train at all hours of the day. Bicycles will be permitted on the new Metro around the clock.

Great importance is also attached to improving bicycle parking facilities at terminals. Covered, locked bicycle parking facilities will be set up at all the new circle line stations. Bicycle parking facilities are also projected for the coming Metro stations.

In future bicycle parking facilities at train stations will have to meet more stringent requirements. The Danish State Railways' objective for the suburban train system is that 25% of the parking spaces at stations should be lockable and 50% should be covered. The rest will be ordinary bicycle racks. In recent years the Danish State Railways suburban trains have improved bicycle parking facilities at a number of stations.

The cycle centres at Østerport station and Copenhagen Central Station, modelled on a Dutch system, were the first initiatives for improving facilities for cycle commuters. These centres provide covered and locked bicycle parking. You either buy a ticket or subscribe. The affiliated cycle shops provide repair service. The cycle centre capacity is not fully exploited, perhaps because Copenhageners are reluctant to pay for bicycle parking.

Bicycle parking has improved in recent years at the Copenhagen Transport bus terminal at the Town Hall Square (Jernbanegade), at Vesterport Station (where a cycle track has also been built), at the Central Station in connection with a new bus terminal in Bernstorffsgade and at Nørrebro Station.

Bicycle parking in front of the Central station and in Reventlowsgade is chaotic. However, the station has set up double-decker racks. Other stations could also use a bicyle parking overhaul. An action plan to improve bicycle parking facilities and terminals is to be drawn up, according to the *Traffic Improvement Plan*. In the *Bicycle Account* cyclists have expressed great dissatisfaction with the situation.

Improvements in bicycle parking facilities at stations and terminals are planned jointly by the City of Copenhagen, Copenhagen Transport and the Danish State Railways. Each authority is in charge of and finances the bicycle parking spaces which it owns. However they have a joint interest in providing satisfactory facilities for cyclists and in a number of cases have shared costs.

Bicycle parking

Only just over one third of the cyclists are satisfied with opportunities for bicycle parking in town, according to the *Bicycle Account*. An action plan will be drawn up to ensure adequate bicycle parking facilities. The plan will treat bicycle parking in a number of contexts:

- In connection with public transport
- At homes and at workplaces
- At shops and shopping centres
- On streets in general

Bicycle parking at homes and workplaces is a private affair which is nevertheless also of significant public interest. The City has increasingly given permission in residential areas to discontinue parking spaces for cars in order to establish bicycle parking. The bicycle racks in the streets are paid for by house owners, housing associations, etc.

Bicycle parking in the streets is especially popular in the densely populated residential areas surrounding the City Centre. The central library in Krystalgade, however, is a noteable example of the fact that this model also works well at institutions frequented by a large public.

The City allows shops in shopping streets to set up cycle racks on the pavement if there is room.

At large shopping centres the City is responsible for setting standards for sufficient bicycle parking space, on a par with parking spaces for cars. There is no numerical foundation for assessing the demand for bicycle parking spaces, the lack of which is keenly felt in community development planning.

There is a great demand for ordinary street parking for bicycles, particularly in the densely populated urban areas.

It was not until 2001 that a survey was made of the extent of bicycle parking in the historic city centre - it was found that there was a total of roughly 2,900 places.

In connection with the rule forbidding parking closer than 10 m from the street corners, a new scheme for bicycle parking in the historic city centre was devised. Expanded bicycle parking facilities were set up on the street corners along the pedestrian high street, Strøget, and on the street corners of other pedestrian streets. In 2002 roughly 400 new supplementary spaces will be established. There will be an immediate demand for a few hundred additional spaces in the area. Add to this places with special needs, such as Amagertorv, Købmagergade at the entrance to Illum's department store, the entrance to Strøget at the Town Hall Square and a number of educational institutions.

In 2002 a survey will be carried out to define the demand for bicycle parking in Copenhagen. As a kick off, around 500 bicycle rack spaces will already be set up in the densely populated city areas in 2002.

Copenhagen can find inspiration to improve bicycle parking in other Danish cities and abroad. In Odense (the National Cycle City of Denmark) the goal is to have empty bicycle parking spaces so that people can see there is room for their bicycle, too. In Malmö cycle parking has been established in shopping streets. In Bremen the same administration handles both car and bicycle parking.

Car parking systems don't work without constant supervision, and neither does bicycle parking. Broken or disused bicycles take up unnecessary space and give cycling a bad name. An effective system to remove broken down bicycles should therefore be introduced.

An action plan for bicycle parking will be drawn up. The plan will include bicycle parking in all contexts, including at homes and workplaces, shops, shopping centres and malls and city streets. Bicycle parking at stations and terminals is treated under the headline "Combining cycling and public transport".

Improved signal intersections

A systematic effort will be made to improve cyclist safety, sense of security and ease of passage at signal intersections by means of withdrawn stoplines for cars, white and blue marked crossings and pre-green traffic signals for cyclists, etc. The impact of the proposed alterations may be increased by campaigns.

The City of Copenhagen, like most other municipalities, has not achieved its objectives with regard to significantly reducing the number of cyclist casualties. Improving cyclist safety is an important element of the *Traffic Safety Plan for Copenhagen* since two of the five focus areas are "cyclist casualties" and "casualties at intersections". As from 2003 there will be city funds available for a serious effort to reduce cyclist casualties, as well as other traffic accidents.

Most cyclist casualties occur at major intersections. There are two relatively cheap ways to improve intersection safety: set-back stop lines for cars and white or blue marked crossings for cyclists.

Set-back stop lines are established by placing the stop line for cars approx. 4 m from the pedestrian crossing. This makes it possible for lorry drivers to see cyclists waiting at the stop line and also makes it easier for all motorists to see cyclists.

Blue marked crossings make it clear that cyclists have the right of way and clearly indicate the cyclist's way through the intersection. Some crossings are provided with slightly less visible markings in the form of white squares.

In the late 1990s initiatives were taken to move back stoplines at intersections in connection with renewal of the traffic markings or other road work. Since only funds for operational expenditures were available, progress was slow.

In order to achieve quicker results the *Traffic Improvement Plan* earmarked DKK 0.5 million annually for marked crossings and set-back stoplines for the years 2000-2003. The result of these efforts could be clearly seen in city traffic in the fall of 2001.

It will be possible to continue intersection improvements as from 2003 due to new appropriations in connection with the *Traffic Safety Plan for Copenhagen*.

In Copenhagen there are two fundamentally different types of cycle track design at signal intersections. One type continues all the way up to the intersection, the other type stops at a distance from the intersection. Experience shows that the shortened type of cycle track results in the fewest casualties, whereas cyclists feel more secure on the type that continues all the way up to the intersection. Both types may be supplemented with a blue marked crossing, which significantly improves safety. Set-back stop lines for cars only make sense when the cycle track continues all the way to the intersection. Withdrawn stop lines for cars provide an extra safety bonus by giving cyclists a head-start when the light turns green.

Shortened cycle tracks have the capacity of handling the largest volume of motor traffic. An improved variant of the shortened cycle track is projected which will modify the shortened cycle tracks whenever possible by providing them with a narrow cycle lane all the way up to the intersection, while maintaining a separate lane for cars making right hand turns. It would seem that this solution will meet requirements for cyclist safety as well as cyclist sense of security although experience with this variant is limited as yet.

Efforts are thus being made to find intersection solutions which are not only safe, but also make cyclists feel secure.

Better cycle track maintenance

In the most recent *Bicycle Account for 2000* cyclists continued to express their dissatisfaction with cycle track maintenance - and also with maintenance of streets without cycle tracks, for that matter.

It is likely that just a few potholes or a small section in poor condition will affect cyclist perception of the maintenance of much larger sections and thus contribute to a negative impression in the whole.

The results of a registration of the state of cycle tracks, carried out in 1996, are as follows:

Good standard: 82%
Acceptable: 13%
Poor: 5%

In 2000 the Roads and Parks Department estimated that the surface of 10% of the tracks was clearly unacceptable. An extra appropriation was granted to bring things up to standard, based on cyclist dissatisfaction. In addition to the DKK 5 million normally available for cycle track maintenance, an extra DKK 2.5 million were allocated in 2000 and an extra 7.5 million in 2001. It is estimated that with this extra sum of DKK 10 million it will be possible to replace virtually all uneven sections with an asphalt surface as smooth as the sitting-room carpet. In 2002 DKK 6.6 million will be spent on repairs and new surfaces. If the surface is to be renewed every 15 years, the amount necessary for annual maintenance will be DKK 8 million. This will ensure that a high standard can be continually upheld.

Through a post card survey cyclists had an influence on the sections to be improved. In 2001 around 4,500 questionnaire post cards were distributed to cyclists. 15% of these were returned. Cyclists could either declare themselves satisfied with maintenance or they could point to three cycle track sections which they felt ought to be improved. All the cycle tracks and a number of the carriageways which five or more cyclists rated unsatisfactory were repaired in 2001. The remaining sections that cyclists pointed out have high priority in the renovation plan of 2002. Potholes have been repaired and many sections of cycle track have been provided with new surfaces.

A complete survey of the standard of city cycle track maintenance is projected for 2001 by means of a measuring device (the comfort meter). It will then be possible to follow future developments and the results will be used to define priorities, thereby ensuring that a high standard can continually be maintained. The cycle policy goal is that cycle track surfaces deemed unsatisfactory shall not exceed 5%, measured by the comfort meter mounted on a registering bicycle.

On side-streets and by-roads cycle tracks traditionally terminate in a (level) kerb, but in recent years new tracks have been laid out without the kerb, thereby improving cycling comfort. When cycle tracks are renovated the existing kerb across the cycle track is removed before applying the new surface.

When new cycle tracks are being laid out or existing ones are being totally renovated, for technical reasons several months may pass before the final surface is laid down. Cyclists are informed by markings painted directly on the asphalt, that the surfaces are temporary and that the current surface is not the final standard. Such information encourages cyclists to accept the inconvenience.

The strategy to improve cycle track surfaces makes no distinction between cycle track maintenance and intersection maintenance. An extra appropriation was granted in 2000-2002 to upgrade the cycle track maintenance standard to a reasonable level. This will be done by improving a number of small sections all over the city. Cyclists have a say in the sections they think ought to be improved.

Better cycle track cleaning

An action plan to improve cycle track cleaning will be drawn up. For example, roughly 50 km of cycle tracks along shopping streets and past places of entertainment also ought to be swept on weekends. Snow clearance will be stepped up so that virtually all cycle tracks will be cleared before the onset of the morning rush hour.

Cycle tracks along the major thoroughfares are cleaned in principle every weekday. The Roads and Parks Department sets the standard and is in charge of inspection and the work is contracted out to a municipal organization.

According to the *City Plan 2001* cycle tracks are to be made more passable for cyclists by better cleaning and snow clearance, among other things.

In some areas, such as shopping streets and around places of entertainment, the standard of cleanliness leaves a great deal to be desired. A systematic survey was carried out and a new cleaning strategy is on the way. This will mean that the cycle tracks along the main arterial thoroughfares will be swept more frequently in order to remove broken glass and other rubbish on Saturday and Sunday mornings. The problematic sections are estimated at around 50 km. Since existing sweepers will be used, this will only mean increased operational expenditures. Altogether, the annual expenditure to clean the cycle tracks would amount to DKK 5 million.

Snow clearance of Copenhagen cycle tracks is divided into 15 routes of approx. 20 km each with an estimated clearance time of approx. five hours. Snow clearance and measures to prevent slippery road surfaces are initiated at the onset of the first snow or as soon as the roads get slippery. However, depending on the amount of snowfall, it is not always possible to have all cycle tracks cleared by 7.30 am.

The snow clearance standard could be significantly improved by adding 5 new routes thereby making it possible to clear a larger portion of the cycle tracks before 7.30 am. This would involve a non-recurrent expenditure to purchase materiel and a rise in operational expenditures of some DKK 1 million per year. Altogether, the annual expenditures for snow clearance would amount to DKK 4.2 million.

Campaigns and information

Ever since 1995 a number of cycling promotion campaigns have been carried out by the City of Copenhagen, including the winter cycling and health campaign as well as the company bike scheme in co-ordination with the Copenhagen Health and Care Administration.

The "We bike to work" campaign, which was introduced in 1996, will be continued as an annual event in co-operation with the Danish Cyclist Federation. There has been a growing interest in the campaign, which in 2001 had over 15,000 participants in the City of Copenhagen. An annual newsletter about Copenhagen cycling is sent out on the occasion of this campaign.

Other on-going promotional initiatives include the *Bicycle Account* and the map *Cycling in Copenhagen*.

In 2000 and 2001 the City organized an Environmental Transportation Week. Citizen proposals were tried out, including ideas about new cycle tracks. These were established on a preliminary basis as painted cycle lanes. Families were encouraged in pilot projects to change their traffic habits and use their bicycles instead of their cars. In 2001 the environmental transportation week concluded with a "car free" weekend, during which very few private cars were allowed into the City Centre.

Increasingly, firms are feeling responsible for how their employees transport themselves to work and are consequently taking an interest in transport schemes and in improving conditions for cyclists by providing covered bicycle parking and bathing facilities, company bikes, etc. To encourage this growing interest the "We bike to work" campaign" chose a "Cycle Company of the Year" in 1998 and 2000.

Cyclists have been called upon on several occasions to point out cycle tracks with potholes and uneven surfaces. They have also been involved in assessing specific new projects, such as the cycle lanes in the City Centre and the "discount cycle route" through the Nørrebro district.

Despite these initiatives, it is difficult to reach a large public with cycling information. Few cyclists have an opinion at all about City information and of these roughly the same number is satisfied as dissatisfied.

There is therefore good reason to develop new campaigns and promotional techniques. It might be a good idea to put more focus on specific target groups, e.g. immigrants who probably cycle less than other Copenhageners. According to the *City Plan*, the city should provide more information about cycling in Copenhagen. For example campaigns informing the public on changes in city traffic, new cycle routes and other initiatives could be introduced. These could include highlighting that cycling in the historic city centre has been made easier.

Municipal cycling information is also provided in pilot projects involving company and commuter bikes. The City Bike scheme continues to prove its commercial worth as an advertisement for Copenhagen as a major tourist city.

The budget for cycling promotion campaigns and information is a little under DKK 1 million annually, including English language versions of the material describing Copenhagen as a city for cyclists.

In addition there are traffic safety campaigns carried out by the Traffic Safety Council of the Greater Copenhagen Area, of which the City of Copenhagen is a member.

Cycling promotion campaigns will continue to be an integral part of the City's strategies with regard to cycling. The "We bike to work" campaign, will be upheld as an annual event. New cycling promotion campaigns will be developed continually. Information about what the City is doing to promote cycling is provided in the Bicycle Account and the map Cycling in Copenhagen etc.


København

Impact and Assessment

Impact of focus areas

It is not possible to state in definite terms the impact of individual focus areas on bicycle traffic volume as a whole. The Danish Road Directory, however, has estimated the impact of a number of focus areas to be between 5% and 20%. The increase in cycle tracks and cycle routes are expected to have a major impact, whereas improved bicycle parking facilities are expected to have a minor impact.

Substantial synergies can be realised by carrying out improvements in several areas at once although it is not possible to predict these in advance.

Goal Realization

Cycle policy goals are to be realized over a 11 year period (in accordance with the *City Plan*' s long term perspective.)

Whenever possible the year 2000 is taken as the starting point and in every new *Bicycle Account* an account is given of how well the city is realizing its goals. This will make it possible to continually re-adjust the focus areas and perhaps devise new ones.

- **The proportion of people who cycle to workplaces in Copenhagen shall increase from 34% to 40%.**
  This figure indicates the proportion of the workforce who cycle to workplaces within the City of Copenhagen. It is already included as a key figure in the Bicycle Account. 34% refers to 1999 since the figure for 2000 was not available at the time of publication.

- **Cyclist risk of being injured or killed shall be reduced by 50%.**
  The individual cyclist's risk – or rather the risk per cycled kilometre – is calculated by comparing the casualty figures registered by the Police with the Roads and Parks Departments calculation of kilometres cycled.
  Police registration of serious casualties (including deaths) for the years 1998-2000 has been corrected by 15% in order to compensate for the fact that

concussions were erroneously not included. The starting point for measuring goal realization is 1998 and not 2000 since it was considered desirable to have the same starting point as the Traffic Safety Plan for Copenhagen. The number of kilometres cycled is calculated by the Roads and Parks Department on the basis of a traffic census. The number of kilometres cycled is the sum of the number of kilometres cycled on major roads (which has already been calculated) and the number of kilometres cycled on by-roads (a method to calculate this is not yet available).

- **The proportion of Copenhagen cyclists who feel safe cycling in town shall increase from 57% to 80%.**
  The proportion who feel safe cycling is arrived at by representative telephone interviews with Copenhagen cyclists in connection with the Bicycle Account. In 2000 57% felt safe and 24% fairly safe. Only those who feel safe without any reservations are included in this goal.

- **Cyclist travelling speed on trips of over 5 km shall increase by 10%.**
  A data base will be established making it possible to follow developments in cyclist door-to-door travelling speed.

- **Cycling comfort shall be improved so that cycle track surfaces deemed unsatisfactory shall not exceed 5%.**
  The condition of cycle tracks is registered annually by a specially equipped bicycle.

The Bicycle Account will be used to assess City cycle planning and to follow up on goals. This may eventually lead to adjustment of focus areas.

A necessary condition for achieving the cycle policy goals is that the objective set forth in the *Traffic and Environment Plan*, stating that motor traffic may not increase, is fulfilled. It is estimated that the more restricted parking system for cars in the densely populated residential areas and improved cycling conditions in the City Centre will encourage more commuters to cycle.

The Bicycle Account

The world's first *Bicycle Account* was published by the City of Copenhagen in 1996. It treated 1995 and since then bicycle accounts have been published for 1996, 1998 and 2000. The plan is to publish a bicycle account every two years, ie the *Bicycle Account for 2002* will be published in 2003.

The *Bicycle Account* contains key figures and cyclist ratings. In addition, in every new issue a number of current issues are discussed.

The key figures of the *Bicycle Account* provide an appraisal of the conditions which cyclists regard as the most essential (defined in collaboration with cyclist focus groups on the occasion of the first Bicycle Account). Over the years, however, a couple of key figures have been replaced by others.

Bicycle account for:	**2000**	**1998**	**1996**	**1995**
Number of kilometres cycled, major roads (million km)	0,96	0,84	0,85	0,73
Number of kilometres driven by car, major roads (million km)	4,43	4,28	4,05	3,92
Percentage who cycle to work (%)	34	30	30	31
Cycle tracks (km)	307	302	294	293
Cycle lanes (km)	10	6	-	-
Green cycle paths (km)	43	42	41	41
Cycle track maintenance appropriations (DKK million)	9,1	5,3	4,7	3,9
Serious cyclist casualties	168	197	252	231
Signal intersections with cyclist priority (% of intersections)	28	26	24	23
Bicycle messengers, (number of trips)	877.000	984.100	664.800	539.200

Key Figures:
The figures for number of kilometres cycled and number of kilometres driven by car are not directly comparable at the present time since the number of kilometres has only been calculated for major roads. The percentage of those who cycle to work refers to 1999. However, serious casualties have been updated in relation to the *Bicycle Account* so the figure shown refers to 2000. Green cycle paths include green cycle routes as well as other green link-ups.

Bicycle account for:	2000	1998	1996	1995
Copenhagen as a city for cycling	8	8	7	6
Cyclist sense of security in traffic	8	8	8	6
Length and width of cycle tracks	6	6	6	6
Cycle track maintenance	4	5	5	2
Road maintenance	2	3	2	2
Feasibility of combining cycling and public transport	5	4	5	4
Bicycle parking in town	4	3	4	4
Municipal information on traffic planning	3	3	3	2

Cyclist ratings "little cyclists" (up to 10):
No survey was made in 2000 of what Copenhageners thought about the City bike, but in previous years the City Bike rated 7 or 8 little cyclists. Nor was Copenhagen air included. It rated 4-6 little cyclists formerly.

The second section of the *Bicycle Account* reflects cyclist attitudes and was arrived at by a representative telephone interview survey carried out by a consulting firm. Cyclist response gives the City a better foundation for selecting focus areas.

Cyclist ratings are expressed in a point system depicted graphically as little cyclists - the more little cyclists on a scale of 10 the better.

There are observable trends in the four *Bicycle Accounts* published up to now. Fairly high - and indeed rising - ratings are awarded to Copenhagen as a city for cycling and to cyclist sense of security. Cyclist attitudes to the length and width of cycle tracks remains unchanged, all in all. However, underlying the rating is a rising satisfaction with the length of cycle tracks and a falling satisfaction with their width. Nor are cyclists more kindly disposed when it comes to cycle track and road maintenance. Municipal information on traffic planning is still not satisfactory. Cyclists also give low ratings to bicycle parking whereas the feasibility of combining cycling and public transport is rated slightly higher.

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