An outline of the spatial development plans connecting networks of traffic, transport, enterprise and people
Disclaimer
This brochure explains the planning documents which are subject to public consultation: the draft route plan, draft zoning plan and the environmental impact statement. Although it has been compiled with the utmost care, no rights may be derived from its contents. Full information is to be found in the official reports.
THE ZUIDASDOK PROJECT IS INTENDED TO ENSURE THE LONG-TERM ACCESSIBILITY OF THE ZUIDAS DISTRICT AND THE NORTHERN PART OF THE RANDSTAD CONURBATION.

The project involves expanding and upgrading Amsterdam Zuid station, widening the A10 motorway and redesigning the junctions at De Nieuwe Meer and Amstel. A section of the motorway is to be diverted underground, beneath the central area of Zuidas. Public areas will be restructured. The overall objective is to vastly improve traffic flow and allow new urban development. The project is scheduled for completion in 2028.

Zuidas is the Netherlands’ international business centre. It lies close to Schiphol Airport and is within minutes of Amsterdam’s city centre. The district has known strong economic and spatial development for several years. Various sectors, including high-rise office buildings.

In terms of passenger numbers, Amsterdam Zuid is already the fastest-growing station in the Netherlands. It can only become even busier in future. Not only will there be more mainline rail services, but Amsterdam Zuid is a terminus of the new Noord/Zuid metro line, now nearing completion. It will also be the starting point of a new rapid tram service to replace the current light rail service (line 51) to Amstelveen. In short, Amsterdam Zuid is set to become one of the most important stations in the country. However, there is simply not enough room to lay new tracks, build larger platforms or create more convenient entrances and exits. The station is bounded on either side by the carriageways of the A10, Amsterdam’s southern orbital road, beyond which is a series of high-rise office buildings.

The A10, and particularly the section between the Amstel and De Nieuwe Meer junctions, is one of the busiest roads in the Netherlands. This route is the gateway to the entire region. The accessibility of both the Zuidas district and the northern part of the Randstad depends on a good, safe flow of traffic on

will create space in which to rise to those challenges. The proposed solutions are themselves complex, demanding a thorough approach to ensure proper integration. All parties are therefore working closely together to ensure the success of Zuidasdok.

Following an intensive preparatory process, the three main planning documents are now available for inspection: the draft route plan, the draft zoning plan and the environmental impact statement. They have been published to support the public consultation process, in which all responses and comments will be given the fullest consideration prior to the finalisation of the plans.

THIS BROCHURE

This brochure summarises the main elements of the three reports. It explains what the Zuidasdok project entails and its consequences for the environment. Separate chapters are devoted to the public transport terminal, traffic and accessibility, spatial assimilation, noise, air quality, water management and public safety. An outline schedule is also given: when will work begin, how will it proceed and how will it affect local residents?

To identify the environmental consequences of the Zuidasdok plan, the environmental impact statement compares the situation in 2030 following completion of the project to the autonomous situation (if the project does not proceed). This is the only way in which to arrive at a full and fair assessment.

Further information is available from the various project offices and on several websites, including www.zuidasdok.nl. A public exhibition is to be held in late March 2015 (see ‘Towards a route plan and zoning plan’ below). Project staff will maintain close contact with local residents and representatives of the business community.

ZUIDASDOk AT A GLANCE

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A JOINT APPROACH

To achieve the objectives as quickly as possible, Rijkswaterstaat (the national department of public works), ProRail and the City of Amsterdam are working closely together. They develop Zuidas jointly, taking the measures necessary to improve accessibility and quality of life. In mid-2012, following a careful study of all alternatives and consultation with the national, regional and local authorities, the Minister for Infrastructure and the Environment approved the draft proposals set out in the official planning documents.

ZUIDAS IN 2030

The Zuidas project will create space for the expansion of Amsterdam Zuid station, improve traffic flow on the A10 motorway and, because the road will pass beneath the central zone of Zuidas, will reduce traffic noise and air pollution. Road safety will also be greatly improved, with more room for cyclists and pedestrians.

AMSTERDAM ZUID STATION

By 2030, Amsterdam Zuid will be the main interchange for passengers travelling to and from the northern part of the Randstad by rail, metro, bus or tram. It will be one of the largest stations in the country and a main terminus for both domestic rail services and the new Noord/Zuid metro line, connecting to the city centre with a journey time of just eight minutes. Although passenger numbers will continue to increase, everyone will be able to find their way through the station quickly and easily. Platforms will be some three metres wider than they are today, and there will be a new canopy roof covering the entire station. The existing station underpass, the Minerva passage, will be wider and slightly shorter to enhance both convenience and safety. The proposed metro station layout is clear and intuitive. In the new situation, metro passengers will find their platforms on the western side of Minerva passage. A second underpass near Benjamin Brittenstraat – the Britten passage – helps to ensure that foot traffic is evenly distributed and prevents any perception of overcrowding. Both underpasses this six-kilometre stretch of national motorway. Due to the ongoing increase in traffic volume, however, this can no longer be guaranteed. It is expected that the road will have reached and passed full capacity by 2020: just five years from today. Not taking action is not an option.

The station, the A10 and the nearby buildings, streets and parks form the Zuidas district of Amsterdam, an area of huge importance to the national economy. Zuidas exerts an almost magnetic attraction, drawing business investment, new residents and visitors alike, but its burgeoning popularity comes at a price: accessibility and quality of life are under increasing strain.

The Zuidas project offers solutions. It will create the space needed for the further development of Zuidas, and particularly its central zone, into a truly dynamic district of international allure. It will widen the gateway to the region so that traffic can once again flow freely. It will allow the development of a larger, better Amsterdam Zuid station serving rail and metro passengers – and with tram and bus services stopping within metres of the platforms, the station will become a true multimodal public transport terminal.

Amsterdam Zuid station will become the key link in a tight-knit and extremely efficient transport network. The A10 is to be widened along the crucial six-kilometre stretch between the Amstel and De Nieuwe Meer junctions. Local and through traffic will be separated, greatly improving both traffic flow and safety.

In the central zone of Zuidas, the A10 is to pass through an underground tunnel (or to be more accurate two tunnels, one for each direction) of approximately one kilometre in length. Above ground, this will create the space needed for the expansion of Amsterdam Zuid station, new public amenities, and logical routes which allow public transport, cyclists and pedestrians to move around quickly and easily. With the A10 underground, the road will no longer be the barrier which has split the district in two for so long. There will be a significant reduction in traffic noise and air pollution. In short, the quality of the human environment will be vastly improved.
are attractively designed, with inviting shops and catering facilities to seduce passers-by. With less distance to walk, transferring from one form of transport to another is far more convenient.

Transit to local and regional transport is extremely easy. The tram stops are located nearby on the southern side of Schwartzenburgweg, while the bus station is on the northern side of Matthijs Vermeulenaan. This area, to the east of the station, also has a taxi rank and a passenger drop-off point (‘Kiss & Ride’). Cycle routes extend almost to the station entrances, and there is parking space for no fewer than 11,000 bicycles: 8,500 more than today.

A10 The section of the A10 motorway between the Amstel and De Nieuwe Meer junctions – approximately six kilometres – is to be widened. It will then have six lanes in each direction rather than the current four. To improve traffic flow, local traffic is separated from through traffic between both junctions. The four inside lanes in each direction have a speed limit of 100 km/h, while the two parallel outside lanes have a limit of 80 km/h and are used by traffic entering or leaving Amsterdam itself. This section of the motorway will therefore have a total of twelve lanes in the configuration 2-4-2-2.

PUBLIC SPACES The A10 will pass through an underground tunnel of approximately one kilometre in length, between Begraafplaats Buitenveldert (the cemetery) and Beatrixpark. Above the tunnel at ground level it will be relatively quiet, with much less traffic noise. The completion of the tunnel will create some 120,000 m² of space which will be put to good use. Not only will there be new bus and tram stops, taxi ranks and bicycle storage facilities, the entire look and feel of the district will be vastly improved once the barrier created by the A10 has been removed. A new pattern of streets, open spaces, cycle paths and pedestrian routes will emerge, and there will be numerous new commercial and public amenities.

SUSTAINABLE URBAN DEVELOPMENT

The Zuidas project provides an excellent basis for sustainable urban development. With the A10 motorway underground, the north-south connecting routes will be shorter and new public space will be created on the tunnel roof. The barrier which splits the district in two will be largely removed. Zuidas will then become even more attractive for cyclists and pedestrians. There will be significantly less traffic noise in the central zone, while the widening of the A10 will improve traffic flow and shorten journey times.

Options for further development are to be retained. Under the current plans, space has been reserved for two additional rail tracks and further expansion of the public transport network, should this become desirable. The extension of the Noord/Zuid line to Schiphol Airport will remain possible.

Close attention is to be devoted to the spatial quality of the area surrounding Zuidas. The tunnel entrances will be banked and grassed, while the visible parts of the structure will also be ‘greened’ wherever possible. New and attractive water features are included in the overall design. Sustainable urban development is seen as crucial to the future of a district such as this. Zuidas is already a international top location with a good mix of functions, including housing, business accommodation and amenities (shops, two universities and a major hospital). At the same time, Zuidas is very much a work in progress which will become even more vibrant and attractive by the year.

WORK IN PROGRESS

Zuidas is a relatively small but very dynamic district. It has just 1,100 residents but they are joined by some 30,000 people who work here every day. Both figures will rise significantly in the years to come. The companies and organisations which have made Zuidas their base are extremely diverse. They include VU University Amsterdam and its teaching hospital VU University Medical Center, Inholland University of Applied Sciences, the Amsterdam RAI convention centre, the World Trade Center, several sports clubs and the European headquarters of various multinationals.

It is of course important that construction work should not inconvenience residents, companies or other users to an unacceptable degree. Unfortunately, some disruption is inevitable. Zuidas, however, is a major project which will take some ten years to complete. The development of the Zuidas district as a whole will continue unabated during this period. It is impossible to promise “you won’t notice anything at all” since that is clearly not the case. The nature, degree and duration of the inconvenience will vary from location to location. During the tendering negotiations, contractors are asked to propose creative ways to limit the nuisance of their work, since the accessibility and quality of life at Zuidas must be maintained to the greatest extent possible. Once the work has been completed, the benefits will be clear. Zuidas will then be at the centre of various networks: traffic, transport, enterprise and people.

PUBLIC SERVICE The City of Amsterdam and the Zuidas Project Organisation wish to be as accessible as possible for anyone who has questions, comments or complaints about the project. They have therefore decided to organise their communications activities jointly, and will take a proactive approach in informing, involving and serving the public by means of a single front office.

PROCESS AND DECISION-MAKING

FIRST-PHASE: SITUATION STUDIES The first phase of the Zuidas project involved a study of the current and target situations. Various alternatives were identified and eventually narrowed down to the final preferred option. Having reached agreement, the stakeholders signed the formal Bestuursovereenkomst (Administrative Agreement) on 9 July 2012. This formed the basis of the Structuurvisie (Structural Concept), which establishes the spatial framework for the development of Zuidas. It was then possible to refine and elaborate the plans to arrive at three planning documents which are now subject to public consultation: the draft route plan, the draft zoning plan and the environmental impact statement.

SECOND PHASE: PLAN DEVELOPMENT The project is currently in the second phase known as ‘plan development’. This phase began in 2013 and will continue until 2016, during which time the draft route plan and zoning plan are produced and made available for discussion. The decision to hold a full environmental impact statement was made by the Minister for Infrastructure and Environment in 2013. This must also be made available for public inspection and consultation.

A separate document, Advies Reikwijdte en Detailniveau Zuidas (Advisory on Scope and Detailing of Zuidasok) sets out the various variations, the environmental aspects which must be taken into account, and the level of

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TOWARDS A ROUTE PLAN AND ZONING PLAN

The route plan for the Zuidas project sets out all necessary modifications to the A10 motorway and the Amstel and De Nieuwe Meer junctions, including the (spatial) assimilation measures. The zoning plan provides the legislative and urban planning framework for the construction of the new public transport terminal and the structuring of the public area above the tunnels. The environmental consequences of the various changes are described in the environmental impact statement. The route plan and the environmental impact statement are produced under the responsibility of the Minister for Infrastructure and the Environment, while the zoning plan must be approved by Amsterdam City Council.

The full text of the three main planning documents and the draft decision with regard to permissible noise levels can be found on the following websites (in Dutch):

- www.platformparticipatie.nl/zuidasdek;
- www.amsterdam.nl/zuidas/zuidasdek;
- www.ruimtelijkeplannen.nl (draft zoning plan and environmental impact statement only; reference number NL005110363K144028PGST-O001).

Copies of the documents are also available for inspection at the following locations (during office hours):

- Ministry of Infrastructure and the Environment, Plesmanweg 1-6, The Hague
- Stadsdeel Amsterdam (City Hall) Information Desk, Amstel 1, Amsterdam
- Stadsdeel Zuid, President Kennedylaan 503, Amsterdam
- Stadsdeel Nieuw-West, Osdorpplein 1000, Amsterdam
- Stadsdeel Oost, Oranje-Vrijstaatplein 2, Amsterdam
- Gemeentegebouw Diemen, D.J. den Hertoglaan 1, Diemen
- Gemeentegebouw Ouderkerk, Oosterpark 1, Ouderkerk aan de Amstel

Everyone can comment on the contents of the draft route plan, the draft zoning plan and/or the environmental impact statement. Although the draft decision with regard to permissible noise levels is also open to consultation, only those with a direct interest are invited to respond.

If you wish to submit a written comment, the procedure is as follows.

- If your comment relates to the draft route plan, please write to: Directeur Ruimte en Duurzaamheid, P.O. Box 2758, 1000 CT Amsterdam.
- If your comment refers to the draft zoning plan, please write to: Directeur Ruimte en Duurzaamheid, P.O. Box 2758, 1000 CT Amsterdam.

Your letter will be referred to the Municipal Executive.

Your comment will be acknowledged in writing as soon as possible.

PLANNING FROM 2015 ONWARDS

According to the current schedule, the entire Zuidas project is to be completed no later than 2028. The preparations will continue for approximately two years. The construction work is set to commence in 2017.
You can also express your opinion in person:
• during the information fair to be held March 23, 2015. Your comments will be noted and a written version presented for your approval.
• by contacting the Zuidasdoek Project Organisation, tel. +31 20 333 9930.

WHAT HAPPENS NEXT?
The comments received during the public consultation round, together with various advisory reports (including that of the Commission for Environmental Impact Reporting) will be taken into account when finalising the route plan, the zoning plan and the amendment to permissible noise levels. This is expected to take place in 2016. In the interests of transparency, a Nota van Beantwoording (Accountability Statement) is then issued, setting out the degree to which opinions expressed during the consultation process have prompted any amendments to the draft documents.

Even when the planning documents are finalised, it remains possible to lodge an objection. In principle, only those who made their opinion known during the public consultation are entitled to do so, but exceptions are made if it can be shown that the interested party was unable to do so at the time. This would apply if the contents of the final route plan, zoning plan or noise level permit vary from those of the draft documents to a significant degree.

ANY QUESTIONS?
For further information, see www.zuidasdoek.nl. If you have any questions, please contact the Zuidasdoek Project Organisation, tel. +31 20 333 9930 (during office hours) or email info@zuidasdoek.nl.
The public transport terminal

AMSTERDAM ZUID STATION IS TO BECOME THE SECOND GATEWAY TO AMSTERDAM.

Within a few years, Amsterdam Zuid station will offer capacity and convenience on a par with the very largest stations in the Netherlands. It is to be entirely renovated and redesigned. The result will be a modern transport hub, with wider platforms, a new roof, a wider underpass (the existing Minerva passage) and a brand new underpass: the Britten passage. Although spacious, the station will be compact enough to ensure both convenience and safety, with a contemporary and efficient look and feel. As the A10 motorway disappears underground, Amsterdam Zuid station will take its place as connecting element of the district.

GROWTH IN PASSENGER NUMBERS

Amsterdam Zuid is already a very busy station. During peak hours, passengers jostle for space on the platforms. Passenger numbers are forecast to rise significantly in future, not only due to the growth of Zuidas itself but because new rail services are being introduced. The new Noord/Zuid metro line opens in 2017 and the current light rail service (line 51) between Amsterdam Central Station and Amstelveen is to be replaced by a rapid tram service linking Amstelveen and Amsterdam Zuid, from where passengers can continue their journey. Various tram and bus services, both local and regional, are being rerouted to include Amsterdam Zuid. In short, Amsterdam Zuid is set to become the second gateway to Amsterdam alongside Central Station.

Today’s Amsterdam Zuid station lacks the capacity to accommodate the expected increase in passenger numbers. A significant expansion is required. At the same time, it must be made more attractive to passengers and other users. It should become a meeting place and a convenient link between Gustav Mahlerplein and Zuidas.

QUICK AND CONVENIENT ONWARD TRAVEL

A one-kilometre section of the A10 is to be moved underground. On the roof of the new road tunnels there will be enough space to create a full-scale public transport terminal where all modalities – trains, buses, trams and taxis – converge. It will be possible to locate bus and tram stops within metres of the rail and metro platforms, together with bicycle storage facilities, taxi ranks and a ‘Kiss & Ride’ drop-off point. Passengers will be able to transfer from one mode of transport to another quickly and conveniently.

This will be a public transport terminal to rival any, but it will not be a grand and imposing station in the traditional style. The new terminal will form an integrated part of its surroundings, becoming the dynamic centre of Zuidas. The rail and metro station with its two underpasses will be the centre of it all. Tram stops are to be sited on the southwest of the station, along Schönberglaan, while bus stops will be on the northwestern side. All can be accessed directly from the station via the new Britten passage. The distance between the platform and onward transport will be greatly reduced.

The upgraded station will have two underpasses to accommodate the higher number of passengers: the existing Minerva passage, which is to be widened, and the new Britten passage. The metro platforms, currently to the east of Minerva Passage, will get a more central location between the two underpasses.

The new station layout will ensure that passenger flows are more evenly distributed throughout the station, and that passengers can transfer from metro to train (or vice versa) more quickly. There will be two access points on every platform. The Minerva and Britten passages will provide platform access by stairs, escalator and lift to reduce congestion both in the underpasses themselves and at platform level. The Minerva passage will continue to provide a north-south pedestrian route; cycling is not permitted for safety reasons.

THE UNDERPASSES AND THEIR AMENITIES

Minerva passage is to be widened. There will be a greater number of shops, service points and other outlets to make the passenger’s journey more interesting. The new Britten passage will have similar amenities. The overall design of the terminal will reflect the international allure and green appearance of the Zuidas district. The underpasses will be spacious, orderly and well-lit in the interest of (social) safety. The station will also provide far more parking facilities for bicycles: most will be covered and some will be staffed.

CONSTRUCTION

Expanding and upgrading a busy station is a lengthy and complex project which calls for many different activities, some undertaken at the same time. The station must remain fully operational throughout. The contractor must find ways in which to minimise inconvenience to users, but this does not mean that the work will go entirely unnoticed. There will be periods during which passengers must make a detour to reach the platform and some platforms will be closed altogether. Some services will run less frequently and in certain periods tracks will be taken out of service. Everything will be done to prevent joint suspension of rail and metro services.

Everything possible will be done to minimise inconvenience to passengers. The new bicycle storage facilities are already under construction so that they will be available during the renovations. The main work will be conducted in phases, probably beginning with the widening of the platforms and the construction of the new Britten passage. The upgrading of Minerva passage will then follow. Once the tunnels have been completed and the existing embankment alongside the A10 has been removed, it will be possible to site the new bus and tram stops.

SUMMARY

The Zuidas project will transform Amsterdam Zuid station into:

• a modern public transport terminal, with adequate capacity yet compact enough to allow passengers to transfer quickly and conveniently between all modes of transport;
• a safe and pleasant area for passengers and passers-by, in the very centre of Zuidas, with two spacious underpasses and parking facilities for bicycles;
• a modern complex which reflects the international standing and green character of the Zuidas district.
Traffic and accessibility

THE ZUIDASDOK PROJECT WILL GREATLY IMPROVE THE ACCESSIBILITY OF AMSTERDAM AND ITS SURROUNDING REGION.

However, not all problems will be solved in 2030. The road network will remain susceptible to certain disruptions.

GROWTH IN TRAFFIC VOLUME NECESSITATES ACTION
The number of vehicles using the A10 motorway will continue to increase. This is particularly true in and around Zuidas, where several routes and traffic flows converge. Doing nothing is not an option. Before long, the A10 would face gridlock and Amsterdam would become inaccessible from the south. It is essential that traffic flow is improved and this is the key aim of the proposed modifications to the infrastructure. Zuidasdok will serve to make the entire road network around Amsterdam more robust. Local traffic is to be separated from through traffic between the Amstel and De Nieuwe Meer junctions. A six-kilometre stretch of road will be widened. In the centre of Zuidas, the A10 will pass through underground tunnels approximately one kilometre in length. The two motorway junctions and various connections with local roads are to be restructured to optimise traffic flow. The effects of these measures will not only be seen locally but much farther afield. The implications of the Zuidasdok project are therefore described in the broader context of the Amsterdam metropolitan region.

ACCESSIBILITY OF ZUIDAS AND THE AMSTERDAM REGION
A section of the A10 is to be widened, with six lanes in each direction rather than the current four, and the road will pass beneath the central zone of Zuidas through tunnels. There will be two main tunnel structures, one in each direction, and each structure will have two tubes. The tunnels will be approximately one kilometre in length, running between Begraafplaats Buitenveldert (cemetery) and Beatrixpark. Through traffic will be separated from local traffic along the entire section between the Amstel and De Nieuwe Meer junctions (see illustration on page 18). The four inner lanes will be used by through traffic (speed limit 100 km/h) and the two outside lanes (80 km/h) by traffic with a local destination. On reaching either of the junctions, drivers must select the appropriate lane. Separating traffic in this way will reduce the need to change lanes later, thus improving both traffic flow and safety. As traffic on this section of the A10 progresses more smoothly, so will that on the entire Amsterdam orbital road and connecting routes, thus improving the accessibility of the region as a whole. There will be less congestion and fewer traffic jams.
TRAFFIC FLOW ON THE MAIN ROAD NETWORK. The Zuidas project will improve traffic flow on the A10. Compared to a situation in which the project would not be executed, there will be a marked difference along the entire stretch of the motorway between the Amstel and De Nieuwe Meer junctions. When vehicles do not need to change lanes so often (or at all), they can move more fluidly. Traffic flow can be expressed as the ‘I/C ratio’ (see insert). On this part of the A10, the I/C ratio will be less than 0.8 even during peak hours. This means that the likelihood of congestion is low. During the morning rush hour, the northern carriageway at the De Nieuwe Meer will remain susceptible to some congestion. However, the parallel lanes for local traffic will allow better access to the local road network. Overall, in 2030 the motorway will therefore be able to cope with a higher volume of traffic. Nevertheless, the network as a whole will remain susceptible to disruptions in certain circumstances. The illustrations below show the situation in a typical evening rush hour in 2030. On the left we see what will happen if the Zuidas project does not go ahead; on the right the situation is shown following its completion. The morning rush hour is broadly comparable, although the effect of Zuidas is not quite so marked.

GROWTH IN TRAFFIC VOLUME. Traffic volume on the A10 will have increased significantly by 2030. A far greater number of vehicles of all types (cars, trucks, buses) will be using both the main carriageway and the parallel lanes in both directions. The Zuidas project will allow the A10 to absorb the increase, thus reducing the likelihood of congestion. This will largely be due to two key measures: increasing the capacity of the road, and separating through traffic from local traffic.

IMPROVING CONNECTIONS BETWEEN THE LOCAL AND NATIONAL ROAD NETWORKS. The I/C ratio has also been used to examine traffic throughflow on the local road network, i.e. the secondary roads into and out of the city itself. To gain a more complete picture, researchers also considered the lost time per kilometre and the throughflow at the major junctions in the city. It is clear that the junctions at Amstelveenseweg (S109) and Europaboulevard (S109) will see an increase in traffic volume. Measures are therefore to be taken at these junctions and along their approach roads to improve the throughflow of local traffic. Again, it is important to note that the Zuidas project will not solve all problems. However, it will help to prevent any new problems developing between now and 2030, which is clearly a point in its favour. Moreover, Zuidas will greatly improve the throughflow of traffic between the local and national road networks, particularly in the evening rush-hour period.

ROBUSTNESS Separating through traffic from local traffic will make the entire road network less susceptible to disruption. An incident on the parallel lane will not affect traffic throughflow on the main carriageway, and vice versa. The increased capacity will also make the network more robust. Put simply, the road will be able to accommodate a greater number of vehicles. Following the modifications, the A10 will also serve as an alternative route if the A9 at Amstelveen is partially or entirely closed off. This too will increase the robustness of the network as a whole.

SUMMARY: The Zuidas project will increase the capacity of the A10 and improve traffic flow. Even so, there may be certain locations at which road capacity remains inadequate even after completion of the project. This is due to the projected increase in traffic volume. The road network in and around Zuidas will therefore remain somewhat vulnerable. However, if the Zuidas project does not proceed, the likely result will be gridlock on the A10 whereas upon Amsterdam would be inaccessible from the south.

Despite the forecast increase in traffic volume, the Zuidas project will provide:

- better accessibility throughout the region;
- better flow of traffic on the main arterial routes;
- a more robust network;
- better connections between the national and local road networks.
Spatial assimilation

ZUIDASDOK WILL CREATE SPACE AND OPPORTUNITIES FOR AREA DEVELOPMENT, BUT THE DEVELOPMENT OF ZUIDASDOK ITSELF WILL DEMAND SPACE.

One important challenge is to ensure that the wider A10 blends well into the limited space of its surroundings: in planning terms it must be spatially assimilated. This is not a concern in the central zone of Zuidas, where the road passes through underground tunnels. The roofs of those tunnels provide a significant area of new space which can be designed and structured from scratch.

ZUIDASDOK AS A ‘GREEN CORRIDOR’. The widening of the A10 motorway necessitates the removal of trees and shrubs along the embankment. There are some points at which it will not be possible to replace the embankment due to lack of space. There will be retaining walls instead. Overall, greenery will be brought back, but in a different way. The intention is that Zuidas should have a distinctly ‘green’ character. Wherever technically possible and permitted, trees will be planted alongside the roads. The A10 will present a green face on both sides – quite literally, since the vertical walls will also have plants over their entire height, either growing from the ground up or actually on the wall itself. The illustration below offers an impression of the final result. The verges, reservations and embankments will have small groups of trees, arranged to create the appearance of a contiguous landscape: a ‘green corridor’.

NOISE BARRIERS. Given the form of the infrastructure, greenery is important in the interests of visual assimilation. Because the road is raised, its supporting structure and the noise barriers alongside would dominate the view from adjacent areas unless they are designed and sited with care. Large noise barriers also obscure the view from the car, train or metro. Partly for this reason, there will be barriers both between the carriageways and alongside the roads. By having a greater number of smaller noise barriers, it becomes possible to retain the visual relationships between the road and its surroundings. The barriers height varies from one to three metres. Higher barriers are to be placed in the verges between the main carriageway and the parallel road. They will mostly be between two and four metres in height, but there will also be a few up to eight metres. They will have greenery on the outward (city-facing) side so that they blend in with embankments and vertical walls. The possibility of installing transparent barriers alongside the flyovers and bridges (Amstelveenseweg, Europaboulevard, Amstel and Schinkel) is being explored.

FLYOVERS. The widening of the A10 will require additional bridges and flyovers. The underpasses at Europaboulevard, Amstelveenseweg, Piet Kranenbergpad, De Schinkel and alongside the Amstel will be longer than in the current situation. Each underpass takes road users under two or more flyovers or bridges, both road and rail. The extended underpasses must be designed in such a way as to ensure that the A10, although wider, is seen as far less of a barrier.

The space beneath the road itself must be attractive, safe and uncluttered. Conformity of design is important in this respect. This will be achieved by basing the design of the new flyovers as closely as possible on the current situation. Their supports, for example, will be aligned with the current supports. Each will be as slender as technically possible. Ceiling heights must be similar or higher than in the current situation. Artificial lighting will be used to create the impression of continuity and to emphasize the cohesion with the open spaces beyond. All underpasses will have the same design approach.

Although the underpasses which are outside the central zone of Zuidas must be extended, those under the public transport terminal, Beethovenstraat and Parnassusweg can remain relatively short, since the A10 is to be moved outward (city-facing) side so that they blend in with embankments and vertical walls. There will also be a few of up to eight metres. They will have greenery on the outward (city-facing) side so that they blend in with embankments and vertical walls. The possibility of installing transparent barriers alongside the flyovers and bridges (Amstelveenseweg, Europaboulevard, Amstel and Schinkel) is being explored.

PUBLIC AREAS ABOVE THE TUNNELS. The space above the tunnels, together with the adjacent streets and squares, will form a contiguous area with very little traffic. Here, the public domain is to be designed in such a way as to provide a welcoming and attractive oasis of calm. Paving, street furniture, greenery and all other components will be carefully coordinated and of high quality. The central zone of Zuidas, on the roof of the tunnel itself, will have ample trees.

Visually, all public space in this area will give the impression of being a single, integrated whole. There will be a ‘Zuidas floor’ which seamlessly joins all the spatial components. This ‘floor’ will have an attractive design, but it will not have a strikingly different or unconventional design signature. The central area will form a neutral and natural connection between the adjacent areas with their great diversity of buildings and amenities.

Many different transport modalities and passenger flows will converge on the station forecourts. It is important that the various components of the spatial design (tram stops, the turning loop for trams, passenger information system, station roofs or canopies, trees, etc.) are sited in such a way as to facilitate the passenger’s orientation, and that logical walking routes are created. Barriers and obstacles, physical or visual, are to be avoided. In a setting such
as this, with so many high-rise buildings, trees are essential to ensure the attractiveness of the location and to create a pleasant microclimate. Various species will be planted at several points, the choice of tree will be based on considerations such as the degree of shelter or shade required, the quality of the location, and the effect on the visual relationships between the various elements. It is of course important to maintain the overall cohesion of the area.

The tunnel’s service buildings will be pavilion-like in form, as inconspicuous as possible and without a clear front or back. They will blend into their surroundings, which means that the service buildings on the eastern side, close to Beatrixpark and the football grounds used by AFC, will form an intrinsic part of the green landscape, as will the eastern end of the tunnel roof. The service buildings to the west will form part of a more urban setting, in which large buildings such as the VU University complex and the Amsterdam Law Courts dominate. The service roads and parking spaces for service vehicles will also be designed to blend into their surroundings.

CYCLISTS All the existing cycle routes which pass under the A10 are to be maintained in order to keep the cycle network intact. There will be four new connections, as shown in the illustration below. They are:
- an underpass close to Beatrixpark;
- on the south side of the Schinkel bridge, between Amstelveenseweg and Rekenweg;
- on the southern and western side of the Law Courts complex, between Parnassiusweg and F. Roeskestraat;
- to the south of Beatrixpark, providing access to Beethovenstraat.

Zuidas should be a particularly attractive area for cyclists: open, green and safe. Close attention will therefore be devoted to these aspects when siting cycle paths and designing their immediate surroundings. Careful consideration must also be given to the choice of materials for any noise barriers alongside the cycle paths. There will be ample parking facilities for cyclists on all sides of the new public transport terminal, with capacity in keeping with demand: the busiest approach route leads to the largest cycle parking area. According to current plans, Amsterdam Zuid station is to have a total of 11,000 bicycle parking spaces in 2030. However, the option of increasing even this vast number if necessary will be kept open.

SUMMARY: The Zuidas project will ensure careful assimilation of the A10 and will achieve greater spatial quality through:
- giving the motorway the appearance of a ‘green corridor’ when viewed from either side;
- making all underpasses safer and more attractive;
- structuring the public area above the tunnels in an attractive way;
- creating a single, contiguous ‘Zuidas floor’ throughout the central zone, thus creating a seamless connection between the various areas of Zuid as a whole;
- making the district more attractive for cyclists.
Noise

WITH THE A10 MOTORWAY PASSING BENEATH THE CENTRAL ZONE OF ZUIDAS, TRAFFIC NOISE IN THE AREA WILL BE GREATLY REDUCED.

This means that more high-quality housing can be built. Elsewhere, measures will be taken to ensure that the widening of the road does not cause any increase in noise nuisance.

NOISE LEVEL ANALYSIS The A10 motorway is, of course, not the only source of noise in the district. The analysis of the current and future situations therefore examined various aspects. Traffic on local roads contributes to overall noise levels, as do passing trains, metros and trams. Zuidas is still under development and construction work is another source of noise. The study therefore examined all sources, the combination of which determines the acoustic climate.

SILENT ASPHALT AND NOISE BARRIERS The Zuidas project includes widening the A10 by two additional lanes in each direction, whereupon it can accommodate a greater volume of traffic. Outside the tunnels this will lead to more traffic noise. To compensate this increase, a dual layer of very porous asphalt will be laid. This is again more silent than a single layer of very porous asphalt.

Noise barriers are also to be installed. There will be several different types of baffle, depending on the precise location. Between the main carriageway and the outside (parallel) lanes there will be higher barriers, while those on the verges alongside the road will be somewhat lower. Barriers along the central reservations will be anything between one and eight metres in height, depending on the precise location and acoustic requirements. The highest barriers will be used only in the proximity of the VU University Medical Center. Most barriers on the central reservations will be between two and four metres in height, while those on the roadside verges will be between one and three metres. The advantage of having higher barriers in the central reservation is that all others can be somewhat smaller. The combined effect will be to offset any increase in noise levels, which will never be higher than they are today. In fact, there are several locations at which they will be significantly lower.

INSULATION Residential property and certain other types of building are subject to legislative norms which set maximum permissible noise levels (from nearby roads or railways, for example). The noise level measured inside the building, as experienced by its users or residents, is known as the interior value. Eleven noise-sensitive buildings in Zuidas are to be closely monitored to ensure that noise levels do not exceed the permissible interior values. The monitoring will begin once the route plan has been finalised. If the interior values do exceed the norms at any time, immediate measures will be taken to rectify the situation for all affected buildings.

NON-SENSITIVE BUILDINGS Some types of building and public amenity are classified as ‘non-noise-sensitive’ whereby less stringent noise norms apply. They include playgrounds, offices, sports facilities and hotels, for example. Once the Zuidas project has been completed and all necessary noise reduction measures are in place, most of these locations will experience no increase in noise levels, and may even experience a decrease. A few may find that noise levels increase slightly: they are listed in the Draft route plan.

TRAFFIC NOISE The modifications to the local road network will not lead to any increase in traffic noise. However, the proposed changes to tram and metro routes may result in a slight increase in noise levels (in the order of a few decibels) for an extremely small number of noise-sensitive buildings.

SUMMARY: The Zuidas project will not cause traffic noise to exceed the existing norms. The overall effects will be mostly positive:

• Moving the A10 motorway underground in the central zone of Zuidas will result in a significant reduction in traffic noise.
• Elsewhere, an extensive package of measures, including a double layer of very porous asphalt and noise barriers, will be applied to offset the negative effects of widening the A10 and the increase in traffic volume. As a result, far fewer people in the district will experience any (serious) noise nuisance.
• One of the side effects of lower noise levels will be that there will be more opportunities for residential development in the Zuidas district.
• The planned modifications to the local road network will not increase traffic noise within the Zuidas district.
The air we breathe is made up of various gases and microscopic particles known as particulate matter. Some of these substances, including the emissions resulting from the combustion of fossil fuels, are hazardous to health. Various parameters are applied when measuring air quality. The concentrations of PM10, PM2.5 and nitrogen dioxide (NO2) provide a good indication of the quality of exterior air.

The terms ‘fine particulate matter’ (PM10) and ‘ultra-fine particular matter’ (PM2.5) do not refer to a specific substance but to any form of small, airborne particle. The subscripted figure indicates the maximum diameter of the particle in micrometres. One micrometre (also known as a micron) is the millionth part of one metre, or one thousandth of one millimetre. PM10 therefore refers to particles which are less than 10 micrometres in diameter.

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AIR QUALITY

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NATIONAL NORMS

Air quality is governed by national and European norms. The methods by which compliance with those norms is assessed, and the measures to be taken to ensure ongoing compliance, are established by law. They also form the basis of the National Air Quality Cooperative Programme (NSL), in which central government and local authorities have joined forces to improve air quality and reduce pollution in the interests of public health. The NSL provides a package of measures intended to ensure that the Netherlands meets all European norms and targets. The effects of spatial developments for which the formal planning decisions are made during the lifetime of the NSL must be taken into account. Such developments are then designated ‘NSL projects’, of which Zuidasdok is one. The NSL programme includes annual monitoring. If the findings suggest that the norms have been exceeded, or are likely to be exceeded, additional measures must be taken, as prescribed by the NSL. In short, a system is in place to ensure that the Zuidasdok project does not and cannot lead to any breach of current or future norms. There are several substances for which the maximum permitted airborne concentration is 40 µg/m³. Even immediately alongside the very busiest roads, concentrations are expected to remain below 35 µg/m³, while those at a greater distance will be even lower. Most of the immediate area of Zuidasdok will show values of below 25 µg/m³. Concentrations of PM10 will be even lower and those of PM2.5 will never exceed the maximum limit of 25 µg/m³.

Zuidasdok An outline of the spatial development plans

AIR QUALITY

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Nitrogen dioxide (NO2) is a gas produced when burning fossil fuels (as in the internal combustion engine). The level of NO2 is a good proxy indicator for all exhaust gases produced by motorised vehicles.
EFFECTS ON HOMES AND OTHER SENSITIVE BUILDINGS: Researchers have analysed how the tunnel and the increase in traffic volume will affect air quality in residents’ homes and in other locations which are sensitive to air pollution, such as schools and care institutions. This study examined no fewer than 67,000 locations, including those which have yet to be built. The conclusion is that in over 99.5% of cases, the increase or decrease in the concentrations of airborne pollutants will be no greater than 1.2 µg/m³. This is classified as not statistically significant.

Particular attention was paid to emissions from buses. There will be a greater number of buses on the roads and their routes are to be altered, resulting in an increase in the number of bus movements within the Zuidas district. However, the effect in terms of air quality will be negligible.

MEASURES: The Zuidasdok project includes various measures to reduce traffic noise and improve traffic flow. These measures will have a positive effect on air quality, and in combination with those prescribed by the National Air Quality Cooperative Programme (NSL) will ensure that the legislative norms are never exceeded, and that the concentrations of airborne pollutants remain as low as possible.

SUMMARY:

- The Zuidasdok project falls within the National Air Quality Cooperative Programme (NSL), which ensures ongoing compliance with the legislative norms.
- The project will cause little or no deterioration in air quality compared to the situation in 2030 if the project does not proceed. Local differences in air quality, whether positive or negative, are so slight as to be deemed not statistically significant.
- Following completion of Zuidasdok, the average concentrations of PM₁₀ and NO₂ will be lower than 25 µg/m³ in most parts of the district. The exception is a very small area alongside the A10 and its busier access roads. Even here, concentrations will be below 35 µg/m³, well within the legal limit of 40 µg/m³.
Water

A MAJOR CONSTRUCTION PLAN SUCH AS ZUIDASDOK WILL INEVITABLY HAVE CONSEQUENCES FOR THE WATER SYSTEM. ANY NEGATIVE IMPACT WILL BE FULLY COMPENSATED.

Other Zuidas plans have been considered as well, in order to create a robust and future-proof water system.

ZuidasDok is a large and complex project. It is possible that the various activities disrupt the balance of the current water system. Some watercourses will be filled up, the asphalt-covered surface will increase. Civil engineering structures such as tunnels and retaining walls can interrupt or divert groundwater flows. Several studies have been undertaken to identify all possible consequences of the ZuidasDok project in terms of groundwater, surface water, drainage and flood safety. These studies include the Zuidas district and its direct environment. The researchers also took into account the effects of other development plans which may affect the water system, either individually or in combination. Water managers are working closely alongside the City of Amsterdam and the ZuidasDok Project Organisation to create an effective integrated water system for the entire region.

GROUNDWATER One of the first construction works on the A10 motorway is the sinking of retaining walls along the entire section between the Amstel and the Schinkel. As a result, groundwater will not drain so readily into the various surrounding watercourses. Special drainage pipes set into the embankment will prevent water nuisance. Similar pipes will be installed to ensure effective drainage below flyovers and bridges, including those at Amstelveenseweg and Europaboulevard. Elsewhere, new bodies of water will be created. Potential locations include the southern side of Begraafplaats Buitenveldert (the cemetery) and to the north of the football grounds used by AFC.

The studies reveal that the construction of the tunnels will not result in any rise in the level of groundwater. The effect of the tunnel construction on groundwater at the northern side of the A10 has been subject of extended study. The results show no difference in effect with or without a possible new canal parallel to the Prinses Irenestraat.

Some nearby buildings have a GSHP (ground source heat pump) climate control system which employs an underground heat exchanger in contact with subterranean groundwater to extract or dissipate heat. Because the ground sources are very deep (between 60 and 120 metres below the surface), these systems will be unaffected by ZuidasDok.

As the tunnels are being excavated, it will be necessary to handle the water in the pit. Exactly how this is to be achieved will be decided by the contractor. If the dry construction pit (cofferdam) approach is adopted, the water must be pumped out. There is a risk of leaks, as experienced during the construction of the Noord/Zuid metro line. In Zuidas, the risk of damage to buildings is low, since the piles of the buildings closest to the tunnel are far deeper than the required cofferdam, which will extend only eleven metres below the surface. This is a fundamental difference between ZuidasDok and the Noord/Zuid line.

SURFACE WATER A large section of the Spoornagelsloot to the south of the A10 is to be filled up. On the same side near the Amstel junction, the watercourse between the motorway and the cycle path will also be filled in. The modifications to the road will increase the surface area covered by asphalt by some 15%. It therefore becomes necessary to create new canals, ponds and small lakes to accommodate the extra run-off. Most will be outside the plan area itself, and their locations will be decided in consultation with the City of Amsterdam. The intention is that there should be new bodies of water alongside the football grounds used by AFC, in Beatrixpark and to the south of Begraafplaats Buitenveldert. There will also be an underground water reservoir beneath Gustav Mahlerplein.

To further improve drainage and ensure a balanced water system, a culvert is to be constructed between the body of water to the south of Begraafplaats Buitenveldert and that just to the north of the VU University Medical Center. This will connect and combine the two water systems. Practical reasons aside, this measure will enhance the spatial quality of the area.

RAINWATER Rainwater falling on the road surface will be diverted into the local water system via a standard drainage system. This run-off water is always slightly contaminated after contact with the road surface. There will therefore be special filters through which it passes before being discharged into the surface water. The filters will be installed alongside the ponds and lakes at Beatrixpark, Begraafplaats Buitenveldert and near the KPN building.

FLOOD SAFETY Tunnels of approximately one kilometre in length are to be constructed on either side of Amsterdam Zuid station. Where the northern tunnel is to be sunk, there is currently an underground flood barrier which separates the Amstelandboezem to the north and the Binnenrijks Buitenveldertse polder to the south. When the tunnel is built, the northern retaining wall of the tunnel will serve as a new flood defence, guaranteeing the safety of the district.

SUMMARY: The plans for the ZuidasDok project:
• will ensure an integrated and robust water system throughout the Zuidas district and beyond;
• avoid any negative effects for groundwater or surface water;
• guarantee safety by replacing the existing flood barrier.
Safety

SAFETY IS OF PARAMOUNT IMPORTANCE WITHIN THE ZUIDASDOK PROJECT. CLOSE ATTENTION IS THEREFORE DEVOTED TO VARIOUS ASPECTS OF SAFETY.

The most important aspects are external safety (protection against hazardous substances), tunnel safety, road safety and social safety. Each has been subject to a separate study as part of the environmental impact statement and when preparing the route plan and zoning plan. The four aspects have also been considered interdependence, resulting in the Integrated Safety Plan which forms an appendix to the route plan and zoning plan.

TUNNEL SAFETY

Strict rules will be put in place to ensure safety in the tunnels. A tunnel is a closed, confined space which encases the road. The advantages include reduced traffic noise and air pollution at ground level. However, an accident underground can have far more serious consequences than one in the open air, particularly if it involves fire or the release of hazardous substances. Neither people nor fumes can quickly escape from a tunnel.

The tunnels through which the A10 motorway will run are classified as Category C. This means that vehicles transporting some hazardous substances – notably LPG – are excluded altogether. At present, there is no restriction on the transport of LPG on the A10. (Road tankers carrying petroleum and diesel oil however are permitted to use a Category C tunnel.)

The designs for the Zuidasdok tunnels have been subject to thorough scrutiny, to ensure that all safety requirements are met.

EXTERNAL SAFETY

The completion of the Zuidasdok project will result in a slight decrease in the "group risk" on the A10 itself. There will however be a higher group risk on the A9 through Amstelveen because it will be used by vehicles carrying hazardous substances which are not permitted in the tunnels. Overall, Zuidasdok will therefore not impose external safety. Because the public transport terminal will be immediately above the tunnels, the impact of accidents involving the release of hazardous substances will be limited. (LPG will not be permitted in the tunnels at all.) Studies confirm that both the group risk and the individual risk will remain within the norms.

ROAD SAFETY

Because local traffic will be separated from through traffic along a six-kilometre section of the A10, there will be far less movement ("weaving") between lanes. This will reduce the likelihood of lane departure accidents. Moreover, compared to the autonomous situation in 2030 (if the Zuidasdok project does not proceed), there will be less congestion and fewer traffic jams, which reduces the likelihood of rear-end collisions.

Just as there will be an increase in traffic volume on the motorway, the number of passengers using Amsterdam Zuid station will continue to grow. Nevertheless, safety in and around the new public transport terminal will improve. Following the widening of Minerva passage and construction of the new Britten passage, the station will have a greater number of stairs and lifts, and twice as many exits. Increased capacity will reduce the likelihood of congestion, while pedestrian routes will be clearer. Because the bus station will be on the opposite side of the station to the tram stops, passenger flows will be more evenly distributed. This too enhances safety.

SOCIAL SAFETY

Everyone in Zuidas, whether residents or visitors, must feel safe at all times. The aspects which contribute to social safety have been subject to considerable research. They are:

- Visibility and transparency: people like to be able to see all parts of an area, and to know that they can be seen by others.
- Simplicity: roads, paths and other (pedestrian) routes must be logical and intuitive, so that people can readily assess the situation and find their way with ease.
- Accessibility: open spaces should be readily accessible to the public, but at the same time measures must be taken to prevent improper use, nuisance and vandalism.
- Attractiveness: whether a public space is seen as attractive and welcoming is largely a question of its design and layout. Is it aesthetically pleasing? Does it offer some useful amenity or facility? Visibility and accessibility also play a part, as do good management and maintenance.

The environmental impact statement gives attention to social safety and the findings are positive. The new Britten passage will ensure better distribution of footfall throughout the station area while also adding to its vibrancy and attractiveness. The more spacious Minerva passage will have improved lighting and more open sight lines. The shops and other outlets will increase its attractiveness, and their presence (as well as that of their staff and customers) will improve social control. With the A10 moved underground, the spatial quality of the public area all around the terminal will be greatly enhanced.

There will be more space in which to create safe routes for cyclists and pedestrians. The relocation of the bus stops and tram stops is also seen as a positive development, serving to establish clear and logical pedestrian routes which make transferring between various modes of transport both more convenient and safer.

Social safety in underpasses is an aspect to which particular attention must be paid given the restricted sightlines. It is possible that the perception of social safety in the Parnassusweg underpass will decline slightly since it will be used with ease. Social safety in the new cycle underpass close to Antonio Vividstraat is also a matter of concern. Effective design, including the use of vandal-proof materials and good lighting, will help to overcome potential problems.

Another aspect to which attention must be paid is social safety during the construction phase. At various times, the work will involve obstructions to sight lines, cluttered pathways, narrower walking routes, detours through temporary underpasses, spatial restrictions, fewer amenities, less social control (while the shops are being relocated, for example), lower lighting levels and fewer escape routes. This less attractive environment, although temporary, can seriously detract from the perception of safety among passengers and other users. In addition to the firm requirements stipulated by the contract itself, construction companies will be encouraged to devise ways to ensure that the area remains as ‘liveable’ as possible.

SUMMARY:

The Zuidasdok project plans include measures to ensure:

- full compliance with all safety requirements (both in terms of individual and group risk);
- the safety of the tunnels (Category C);
- improved road safety on the A10 motorway;
- a general perception of (social) safety throughout the Zuidasdok district.
CONSTRUCTION OF ZUIDASDOK IS SCHEDULED TO COMMENCE IN 2017. THE PROJECT WILL TAKE APPROXIMATELY TEN YEARS TO COMPLETE.

Zuidasdok is an extremely complex construction project which involves many activities. However, the available building space is limited. As a result, there is likely to be inconvenience over a relatively long period. Both the nature and frequency of nuisance will vary over time, gradually declining as the project progresses. Most construction work will take place within the central zone of Zuidas, and it is here that users are likely to experience most nuisance as the tunnels are excavated. This is expected to take between three and five years, during which time there will be a relatively large number of lorries in the district, either delivering materials or removing the excavated soil.

Elsewhere, the widening of the A10 and its embankment will cause inconvenience to road users, as will the construction of new civil engineering structures (bridges and flyovers) at the Amstel and De Nieuwe Meer junctions. The tunnels will be opened to traffic after approximately eight years; the acoustic situation will then significantly improve. The construction of the public transport terminal will however continue and may account for some noise nuisance. The station is to remain open throughout the project, although suspensions to train services will be inevitable.

CONSTRUCTION SITES

To ensure full compliance with the requirements of the Routing Decision, it will be necessary to have a number of service roads and (closed) construction sites which are used on only a temporary basis. During the widening of the A10, for example, there will be storage depots and temporary service roads at various points along the road, while some of the carriageway lanes must then be diverted. Near the entrances of the tunnels, for example close to Beetpark, there will be a need for construction sites. The areas which are most suitable for this purpose include those near the junctions, bridges and flyovers.

LIMITING NUISANCE

The Zuidas district must continue to function effectively throughout the project. Construction work should cause as little inconvenience as possible to residents, businesses and other users. At the same time, the planned development of the Zuidas district must continue, whereby it gradually grows to become a fully integrated part of the city and surrounding region. The implementation of the Zuidasdok project has been planned in such a way as to ensure that Zuidas continues to be seen and experienced as a complete city in every phase. This entails working with respect for the district. Contractors are expected to understand local people and act accordingly. Needless to say, they are also bound by legislative requirements, while the contract itself will include further restrictions. During the tendering phase, bidders will be invited to propose creative solutions.

PHASING:

1. widening of the embankment along the A10 to accommodate the additional lanes
2. excavation of tunnels and construction of bridges and flyovers
3. removal of the Amstelveenboog to make way for a new tram connection serving Amstelveen
4. construction of the new Britten passage under Amsterdam Zuid station
5. remodelling of Amsterdam Zuid station to include widening of Minerva passage
6. opening of the new A10, including tunnels
7. removal of the old A10
8. opening of the new Amsterdam Zuid public transport terminal
9. restructuring of the public areas, including tram stops, bus station and bicycle parking facilities

* The precise phasing will be determined by the contractor.
whereby they can minimize the inconvenience caused by their activities. Some additional measures may be required: encouraging motorists to leave their cars in favour of the bicycle, for example, or organising alternative transport when rail or metro services are suspended. Given the complexity of the project and the space constraints, it is not possible to avoid nuisance or inconvenience altogether. However, every possible measure will be taken to minimise the adverse effects.

**ACCESSIBILITY**  The accessibility of Zuidas is already under strain, which is one of the main reasons for undertaking the Zuidas project. During the construction work it will be impossible to keep all roads open at all times. There will be temporary closures affecting parts of both the main road network (motorways) and the local network. There will also be some disruptions to public transport services. The intention is that the A10 should remain open. Any lane closures will be of short duration and during off-peak periods (e.g. night and weekends). However, it will be necessary to divert lanes and they will be narrower at certain times. This will reduce overall road capacity and necessitate lowering the speed limit.

The A10 is to pass underground in an area bounded by Schönberglaan, Matthijs Vermeulenpad, Beethovenstraat and Parnassusweg. During the construction of the tunnels there will be some disruption to traffic on Beethovenstraat and Parnassusweg, which will not be fully accessible at all times. The intention is that the two roads will never be closed at the same time. There will also be brief periods during which Amstelveenseweg and Europaboulevard are (partially) closed, for example at night or during weekends. All buildings will remain accessible. If it proves necessary to close an access way completely, there will be full consultation with the direct stakeholders beforehand.

**CYCLISTS**  The A10 is to have additional bridges over the Amstel (alongside Rozenoordbrug) and Schinkel (alongside Schinkelbrug), as well as new flyovers and underpasses at Amstelveenseweg, Europaboulevard and Piet Kranenbergpad. Space is required for their construction, which entails the possible closure of the cycle paths. In some cases it is not possible to provide a nearby alternative, which means that cyclists must take a different route. Following completion of the project there will be new cycle paths and bridges, providing a safer and more convenient network.

Cycle paths must also be closed where the support structures of the A10 are to be widened. In some cases, the cycle path on one side of the road will then be used by cyclists in both directions. Amsterdam Zuid station will remain fully accessible to cyclists at all times. Some parking facilities have to be removed, but others will open before work commences. The new cycle garage under Gustav Mahlerplein is one example.

**PUBLIC TRANSPORT TERMINAL**  The extension and upgrading of Amsterdam Zuid station is an extensive project in its own right. A new underpass – the Britten passage – is to be constructed and the existing Minerva passage is to be widened. The metro platforms, currently sited on the eastern side of the central axis, are to be moved to the western side, and there will be an additional platform serving the new Noord/Zuid line. The Britten passage will be completed before work on Minerva passage begins.

All rail and metro platforms are to be widened and this entails relocating the tracks themselves. This will inevitably lead to service cancellations. They will be scheduled for weekends and holiday periods in order to minimise inconvenience to passengers. In principle, rail and metro services will not be suspended at the same time: one or the other will remain available. Replacement bus services will be provided where necessary.

There will be periods during which the regular access routes to the station are closed. Detours will be kept as short as possible: the station must remain accessible at all times.

**NOISE AND VIBRATIONS**  Any construction work causes noise and vibrations, especially during the installation of foundation piles and deep sheet pile walls. A large number of foundation piles must be driven into the ground to support the tunnels, bridges and flyovers. The noise and vibration levels caused by such work are subject to strict legal limits, and the contractor will also be expected to observe a number of additional requirements.

To ensure good accessibility by day, it will sometimes be necessary to work at night. This may result in some noise nuisance.

**SAFETY**  Stringent requirements are in place to ensure safety at all times. The emergency services will be consulted at various stages of the planning process and all permit applications are subject to a full safety assessment.

**MEASURES**  Various additional measures will be taken to minimise the negative impact of the construction work. These measures address all aspects of accessibility, noise, air quality, social safety, sustainability and climate, water, soil quality, landscape, cultural history, spatial quality, archaeology and nature. Comprehensive information can be found in the environmental impact statement.
Zuidasdoek: An outline of the spatial development plans
This guide is intended to help you understand their contents. Because the route plan and zoning plan have yet to be finalised, both are termed ‘draft’ at this stage. Following the consultation process, they will be amended as necessary and approved by the relevant authority, whereupon the word ‘draft’ will cease to apply.

DRAFT ROUTE PLAN The route plan provides the legislative and spatial planning framework for the modifications to the A10 motorway (including the construction of the tunnels) and the junctions at De Nieuwe Meer and Amstel. It consists of three parts:
- the text of the decision which when finalised will have the status of a government directive;
- maps showing the proposed situation;
- explanatory notes and appendices.

The maps show the planned modifications at each of the various locations. These are the measures that will actually be implemented. The size and location of construction sites and depots will be determined in consultation with the contractor.

The route plan includes a written description of the project and the measures which are to be taken to minimise or offset any negative effects. In some cases, the measures are described in general terms and will be refined by the contractor at a later date. In other cases, the measures are described in detail and must be implemented precisely as set out in the route plan. This applies for example to the measures intended to restrict noise nuisance.

There are explanatory notes to accompany each aspect of the plans, setting out expected effects of the measures and why a particular measure has been adopted in preference to an alternative.

DRAFT ZONING PLAN The zoning plan for the tunnel area includes two spatial functions, one on top of the other. First the tunnels will be constructed. This is described in the draft route plan. Then the open space on top of the tunnels will be organised. The latter is described in the zoning plan. Therefore the zoning plan contains mainly information about the new public transport terminal and its surrounding area.

This plan is also in three parts:
- the Programme of Requirements;
- visualisation;
- explanatory notes.

The ‘requirements’ section sets out the functions that are to be incorporated in the spatial design. The visualisation shows where each of those functions is to be located, and the volume of each, i.e. the space that it will take up.

DRAFT DECISION ON AMENDMENT OF PERMISSIBLE NOISE LEVELS The relocation of tram lines in the immediate vicinity of Amsterdam Zuid station requires an amendment to the maximum permissible noise levels, further to the provisions of the Wet Geluidshinder (Noise Nuisance Act).

LANDSCAPE PLAN The Landscape Plan describes the proposed spatial assimilation measures. The main measures relate to the conservation or replacement of grass, shrubs and trees, watercourses, recreational routes and nature. All should form a cohesive entity, reinforcing each other wherever possible. The intention is to maximise the spatial quality of the project as a whole, with each component blending seamlessly into its setting.

ENVIRONMENTAL IMPACT STATEMENT To arrive at the best possible project plan, several alternative scenarios were examined. They vary in terms of the manner in which the A10, tunnels and public transport terminal can be constructed and assimilated into the wider setting. The environmental impact of each scenario was examined in detail during the environmental impact statement. The final report of the assessment contains information on each of these scenarios and it formed the basis for the plans as described in the draft route plan and zoning plan.

The final report also includes a number of appendices, each of which presents the detailed findings on one specific aspect. The report itself forms an appendix to the draft route plan and draft zoning plan, with which it should be read in combination.

The aspects examined in the environmental impact statement are:
- accessibility (road traffic, public transport, cyclists and pedestrians);
- road safety;
- quality of the human environment (noise, vibrations, air quality, external safety, social safety);
- climate and sustainability (soil and water);
- landscape, spatial quality, cultural history, archeology, nature and ecology;
- effects during project implementation.

WHAT YOU WILL NOT FIND IN THE PLANNING DOCUMENTS The documents do not include detailed information about the final form of the project, how the various components are to be constructed or precisely how long it will take to do so. This is because the project mandators have opted for a Design and Construct contract form. Based on the programme of requirements and process agreements, interested parties will be invited to bid for the project, which must of course be completed in the manner prescribed by the route plan and zoning plan, as well as any other additional requirements established by the project contract. That contract will be awarded to the bidder with the most effective plan.

To ensure that the tendering process is as fair as possible, details of the bids will not be made public until the contract has been awarded. Only then will further information about the final design, the construction methods, phasing and completion schedule become available.
Glossary

AUTONOMOUS SITUATION The situation in 2030 if the Zuidasdok project does not proceed.

DRAFT ZONING PLAN See zoning plan.

DRAFT ROUTE PLAN See route plan.

ENVIRONMENTAL IMPACT ASSESSMENT Studies to determine the environmental implications of a decision, made prior to the finalisation of that decision.

ENVIRONMENTAL IMPACT STATEMENT The final report in which the results of all components of the environmental impact statement are combined. The final report for the Zuidasdok project has several appendices which present the detailed results of the various study aspects.

INTER-DISTRICT CONNECTION A connection between two districts or neighbourhoods.

PUBLIC TRANSPORT TERMINAL (OVT) A hub at which various forms of public transport – train, metro, tram and bus – converge, with associated facilities such as parking space for cars and bicycles, taxi ranks and catering outlets.

RESPONSE Any comment, opinion or objection to the contents of the planning documents made by a stakeholder or member of the public. All responses are acknowledged and their contents taken into consideration during the final decision-making process.

RETAINING WALL A concrete or steel wall which prevents any movement of the soil beneath.

ROUTE PLAN The document which describes the modifications to the A10 motorway and the junctions at Amstel and De Nieuwe Meer, together with their spatial assimilation. The route plan is approved and finalised by the Minister of Infrastructure and the Environment, who will first take careful note of the various official advisories and any responses or objections from stakeholders and the general public.

STAKEHOLDER Any person or organisation whose interests are directly affected by a decision.

ZUIDASDOK PLAN AREA The area covered by the various planning documents, i.e. as defined by the draft route plan (Zuidas and A10 between the Amstel and De Nieuwe Meer junctions) and the draft zoning plan (the central zone of Zuidas).

ZONING PLAN The document establishing the legal and spatial planning framework for the construction of the new public transport terminal and the structuring of the public area above the tunnels. The zoning plan requires the final approval of Amsterdam City Council, which will first take careful note of the various official advisories and any responses or objections from stakeholders and the general public.

ZUIDASDOK STUDY AREA The area in which the effects of the Zuidasdok project have been examined. There are certain aspects for which the study area extends much farther than the plan area. The study area for accessibility and traffic management, for example, is the entire Amsterdam metropolitan region.