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Title: **Amsterdam's Zuidas: A New Urban Landscape**

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Mr. de Bruijn has repeatedly demonstrated his interest and skill as an architect in complex and delicate processes. His most significant projects include the government building Jakob-Kaiser-Haus in Berlin, the renovation and new construction of the Dutch Lower House of Parliament in The Hague, and the Concertgebouw venue in Amsterdam. As a designer and urban planner, he is playing a major role in developing the Zuidas area, as well as rebuilding the Roombeek district of Enschede after the fireworks disaster.

He has lectured at the Twente University of Technology, Delft University of Technology, and University of Amsterdam. He is a member of the Royal Institute of Dutch Architects (Bond Nederlandse Architecten) and Architektenkammer Berlin, and is an honorary member of the German Institute of Architects (Bund Deutscher Architekten).

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## **Amsterdam's Zuidas: A New Urban Landscape**

Globalization and rising mobility are causing significant changes of emphasis in the Dutch urban landscape. The individual cities of Amsterdam, Rotterdam, The Hague, and Utrecht are increasingly merging into an urban network that is frequently referred to as the "Deltametropolis." A good situation, excellent connections, tight communications, favorable climate, well-educated workforce, and international orientation furnish the Deltametropolis a powerful position for global activity.

In order to reinforce its competitive position, there is the ambition to turn the Deltametropolis into a clearly recognizable identity. The best opportunity to realize this ambition is the Zuidas. This new hyper-urban development, encompassing 32 billion square feet (3 million square meters), lies five minutes away from Amsterdam and Schiphol airport, at an infrastructural hub where local, national, and international lines meet.

High-density, multipurpose use of space and far-reaching function intermingling (43% working space, 43% residential space, and 14% facilities) will be applied as instruments in the Zuidas. This generates a lively urban environment with an abundance of social and cultural stimuli. Sustainability is also an important factor. This can be realized by intermingling functions to guarantee a liveable area in the long term and creating flexibility to allow an interchange of residential and office functions.

The potential of the Zuidas rises above the local scale, as it can supplement business activity on the supranational level. The Zuidas can be a metaphor of modern society, an open society founded on local values, and one that can stand its ground in a global context, offering opportunities to play a vital role in this world.

## AMSTERDAM'S ZUIDAS: A NEW URBAN LANDSCAPE

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### Abstract

The Zuidas is a zone on the southern flank of Amsterdam, only six minutes from Amsterdam's Schiphol Airport. Shifting the heavy bundle of infrastructure below ground creates a development location here that is of equal size to La Défense or the Docklands. The Zuidas is destined to become the hyper-urban center of an urban conglomeration with seven million inhabitants, a conglomeration that includes cities such as Rotterdam and The Hague as well as Amsterdam.

The Zuidas must become an animated and dynamic city district, with a classic street layout, a construction density that is unprecedented for the Netherlands, and a robust mix of functions as the most important ingredients. There will be offices, public amenities and, above all, also a large number of dwellings, of which a considerable portion will be in the subsidized sector. A fine-grained structure must ensure that variety is also present on a smaller scale.

Sustainability is a factor of prime importance in the development of the Zuidas. For example, the new buildings will be designed in such a manner that they will be able to fulfill different functions in the future: offices can be converted into residential property, and vice versa. The pursuit of sustainability is also evident in the careful handling of limited resources, such as space and energy. Shifting the infrastructure underground makes an intensive form of dual land use perfectly feasible. A communal, district-wide system of heat and cold storage will result in substantial reductions in energy consumption.

Despite the high density, water and greenery are guiding principles in this urban design.

## AMSTERDAM'S ZUIDAS: A NEW URBAN LANDSCAPE

Even for someone who has never been to Amsterdam, the Zuidas (South Axis) will have something familiar about it. Development sites of this kind can, after all, be found in almost every big city: these districts still usually attracted precious little interest a quarter of a century ago, but the unprecedented strengths of their strategic positions – which springs from their having been opened up and made accessible through the development of infrastructure – has been discovered in the meantime. For business space and offices they are the favorite places for new branches. Construction activity is therefore feverish at such locations. But despite all this vital dynamism, it is rare for their typical urban qualities to be exploited to best effect. The infrastructure from which these areas derive their vitality, simultaneously throws up big considerable barriers – physical and mental. The architecture is generally anonymous, large-scale and mono-functional. The character of the public space more closely resembles a residual space. This also applies for the Zuidas, at least as far as its current state is concerned. Over the coming years, however, all the stops are to be pulled out, in order to transform it into a distinctive urban landscape. In other words, a fully fledged city district that is enduring and sustainable, because it lives up to the fundamental and abiding qualities of urban life.

Fig. 1. The Zuidas, existing situation



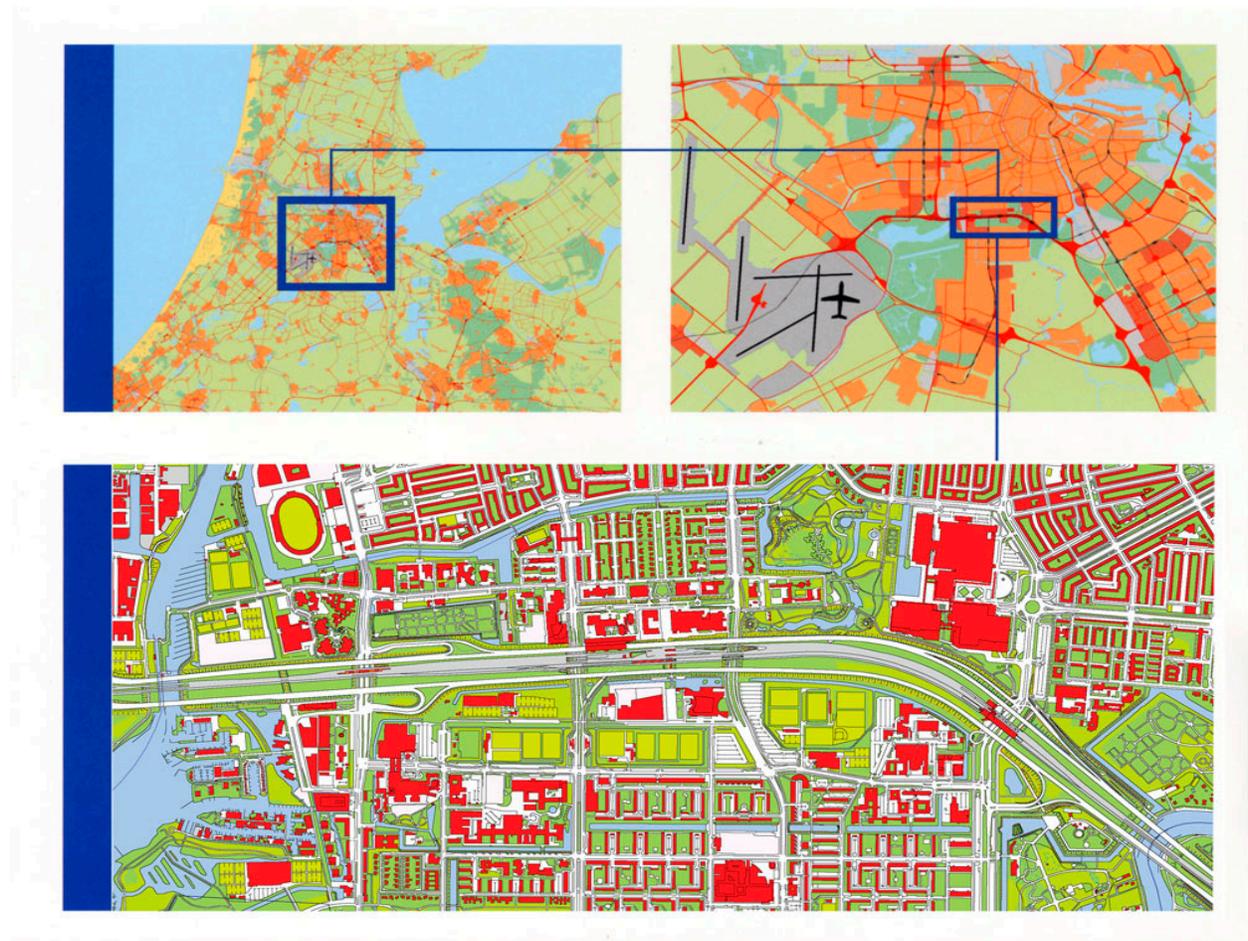
**Exceptional accessibility**

The area known as the Zuidas marks the transition between the pre- and the post-Second World War construction in the south of Amsterdam. At the moment this boundary is primarily evident as a wide bundle of infrastructure: a six-lane motorway, a railway line and a metro line. This infrastructure means that the accessibility of the Zuidas is second to none. Schiphol, Europe's fourth biggest airport, is seven kilometers away – a distance that takes less than six minutes to cover with a high-frequency rail link. From 2007, the station that stands at the heart of the Zuidas will serve as the terminus for the high-speed international trains. These HSL trains will then connect with Rotterdam in less than half an hour, with Brussels in an hour and a half, and with Paris in three hours. There are to be rapid and direct rail links with important urban centers in Germany as well. The year 2011 will also see the completion of a new metro line, providing a direct link between the Zuidas and Amsterdam city center.

### Hyper-urban center of an urban conglomeration

The Zuidas has the potential to develop into the *hyper-urban* center of an urban conglomeration much bigger than just Amsterdam and its suburbs. This urban conglomeration used to be known as the "Randstad," literally "edge city" - the urban development concentrated at the cutting edge between the continental plateau and the Atlantic Ocean – but nowadays this conglomeration is increasingly referred to as the Delta Metropolis. This is because the area occupies a large portion of the delta of the arterial Rhine and Maas rivers, and the region increasingly functions as a unified and interconnected metropolitan system.

Fig. 2 The Zuidas in Amsterdam



The seven million inhabitants of the Delta Metropolis live and work in towns and cities large and small, with each city displaying its own particular profile. Besides being the country's capital city, Amsterdam is also the cultural and economic powerhouse of the Netherlands. Fifty kilometers to the south, The Hague serves as the seat of government, home to the national parliament, and also to important international institutions, such as the International Court of Justice. Rotterdam – 20 kilometers further south - boasts the second largest seaport in the world. The university cities of Utrecht, Leiden and Delft are important knowledge hubs.

### **The strengths and renown of Amsterdam**

Thanks to its strategic geographical position, the Zuidas has close ties with the other hubs in the Delta Metropolis. At the same time, it capitalizes on Amsterdam's strengths and renown. This combination is the fountainhead for the ambition to establish the Zuidas as the hyper-urban center of the Delta Metropolis.

### **Shifting infrastructure underground**

Leading international corporations and institutions have already chosen to move their headquarters to the Zuidas. But to reiterate, this does not automatically establish a sustainable and attractive urban landscape. That calls for a radical and far-reaching transformation, in which two interventions are pivotal: the abolition of the nuisance and the barrier effect of the infrastructure, and a vigorous densification of construction. The bundle of heavy infrastructure will be shifted underground over a distance of 1.4 kilometers. Releasing an enormous amount of space above the infrastructure, this area will be developed in densities that are unprecedented for the Netherlands: with approximately three million square meters of floor area, the Zuidas will be of a similar scale to La Défense in Paris and the Docklands in London.

Fig. 3: Infrastructure shifted underground



## Sustainable - in every sense

The most important task in the Zuidas is to establish an explicitly urban and sustainable city-center milieu – “sustainable” in the everyday sense of long-lasting: from keeping the impact on the environment to a minimum to establishing the best conditions for sustainable and equitable social relations; from the use of sustainable materials to buildings and spaces that are so flexible they can adapt to various forms of use and function, with the only certainty being that these will definitely change over the course of time.

## The antithesis of the gated community

When establishing a new city area where urbanity and sustainability are the leading priorities, it is, in the first place, about one of the most important qualities of the city: everyone is welcome there. For as long as cities have existed, they have been the meeting place of rich and poor, of native and immigrant, of conservative and progressive, of artists, students and the homeless. The city is the ideal habitat for a tolerant and open society to thrive: it is the antithesis of the gated community, in other words. That tolerance has, of course, come under pressure since September 11, 2001. But when it has really mattered, both New York and – more recently - London have demonstrated that self-confident cities do not give up their openness and tolerance easily.

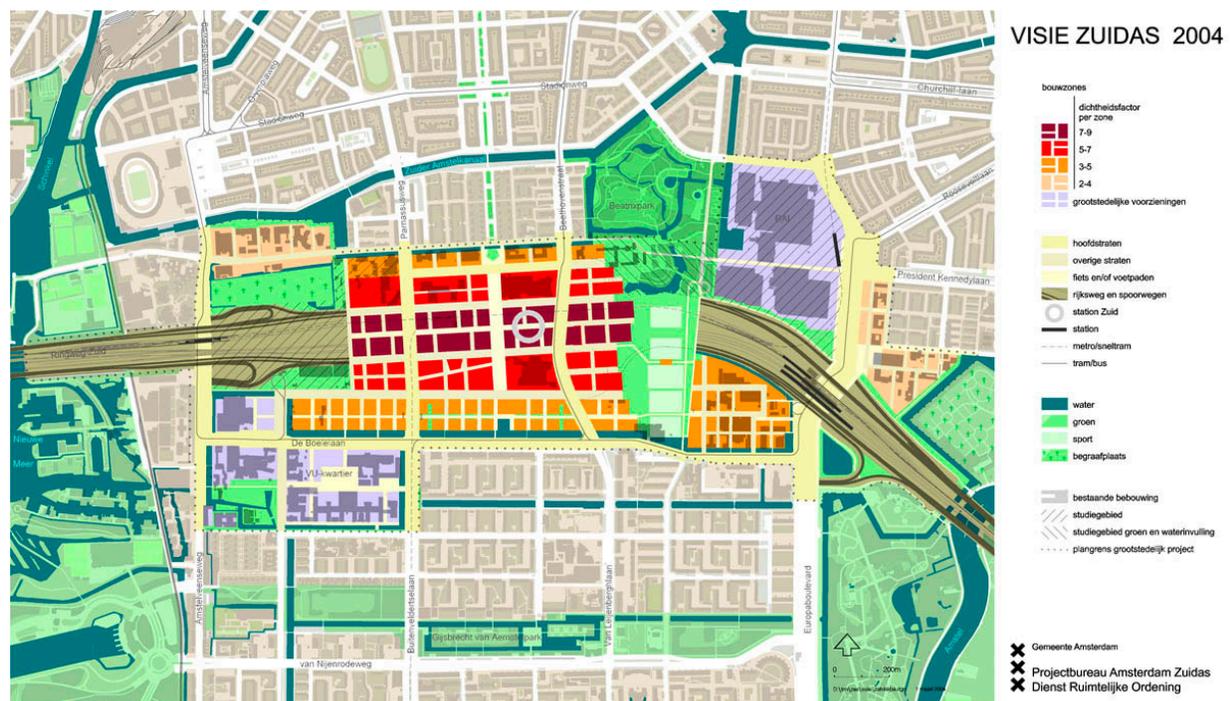
## Urban interactions

It is people who breathe life into open and tolerant cities. However, prior to this, it is the urban planners and the architects who mould the physical urban landscape that establishes the conditions to facilitate this. Concentrating on the Zuidas, the recurring question is therefore: How can the urban landscape that is being built there also truly generate this urban condition of interactions, along with the added value that these encounters entail?

## Two tasks: the physical space and the program

In the end it boils down to two tasks. The first relates to the physical urban space. This must be so congenial, varied and attractive that it is space where people want to spend time - and therefore more than just a circulation space. The second task is rooted in the program. This must give this whole array of people a reason to come and visit the new piece of city in large numbers.

Fig. 4: Urban Plan Zuidas 2004



### **Many different forms of use**

Experience has shown us that the public space in the city functions best if it invites as many different forms of use as possible. The answer is no enclaves that are tailored to just one function, certainly no covered shopping malls, and preferably not too many pedestrian streets that banish other kinds of traffic. As the norm, motorized traffic will be able to use most of the streets in the Zuidas. However, a wide, green esplanade is planned at the heart of the Zuidas, a plaza that will primarily be the domain of the pedestrian. Rather than making some overawing statement, this esplanade must be inviting and varied. This means our thinking is not focused on creating a single, contiguous open space, but sooner on establishing a succession of intimate squares and gardens, each with a specific design and atmosphere.

### **A classic grid**

Otherwise, the Zuidas will have a structure that is as classical as it is tried and tested, with a rectangular grid of streets that defines the architectural blocks. The street profiles have been predetermined, just like the standard construction height of 30 meters. Accents are indeed permitted at various spots in the form of high-rise buildings up to 100 meters tall.

### **Connecting with existing neighborhoods**

The street pattern provides a natural dovetailing with the existing city districts that border on the Zuidas. Dating from before the Second World War, the city district to the north is structured by an urban plan devised by the architect Berlage. Its structure and architecture is monumental, with perimeter blocks and conscientiously designed public space, with streets wide and narrow, axes, squares and public gardens. To the south of the Zuidas lies a residential area from the 1950s and '60s, to an urban design that contrasts somewhat with the plan by Berlage. In line with the modern insights from the heyday of the CIAM, here there are no internalized urban blocks. Instead there is a much more relaxed placement of individual residential buildings in a spacious, green setting.

### **Mondrian's *Victory Boogie Woogie***

Discussing the context for the Zuidas conjures up an association that at first sight does not seem terribly obvious: the painting *Victory Boogie Woogie* that Mondrian made during the final years of his life, spent in his adopted New York. The canvas could be seen as a synthesis of earlier periods in Mondrian's career, which does, incidentally, display parallels with the development of urban planning. (Alongside music, the city was an important source of inspiration for Mondrian.) The rigor of Mondrian's sharply defined fields of color in his earlier work could be compared with Berlage's perimeter blocks, in the same way his classically minimalist work found a later pendant in the *plan libre* of modern urban planning. In its apotheosis, *Victory Boogie Woogie*, both tendencies are reconciled, just as two outlooks in the history of urban planning are reconciled as overlapping layers in the design of the Zuidas.

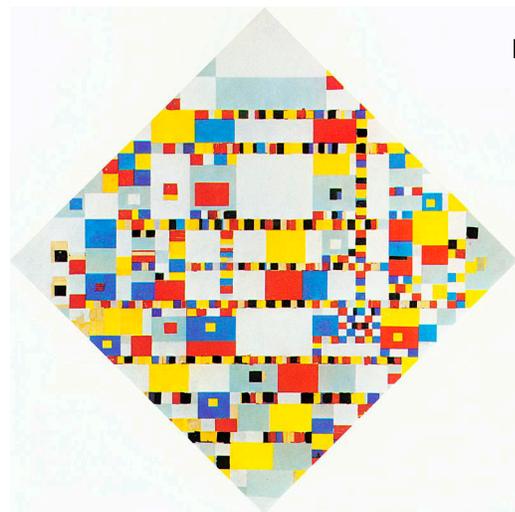


Fig. 5: Victory Boogie Woogie, Piet Mondriaan, 1942 - 43

### **The Zuidas as a link**

The Zuidas therefore forms the link between these highly diverse city districts to the north and south, both literally and figuratively. This is primarily achieved by connecting the urban fabric to the structure of these existing city districts as precisely as possible. In construction height and density, the plan also attempts to achieve gradual transitions to the adjoining neighborhoods. The cityscape of the Zuidas will also unite characteristics of both city districts. With its urban profiles and uninterrupted street elevations, the kinship of the Zuidas with the pre-war city of Berlage is most pronounced at street level. Conversely, the skyline of buildings that exceed the standard height of 30 meters will have the looser organization that is typical of urban planning after the Second World War.

### **An urban 'pressure cooker'**

As mentioned, the physical urban space cannot thrive without an intensive program that feeds this space with people and activities. And not just during the working day, but also in the evening and at weekends. A rigorous mix of functions is prerequisite for the urban 'pressure cooker' that induces and propels economic, cultural and social development.

### **The station as generator**

The most important contribution to that pressure cooker comes from the station, which lies at the center of the Zuidas and - as the terminus for international high-speed trains - will at least match Amsterdam's Central Station in importance. The station will ensure a continuous stream of people of an unprecedented diversity - from school kids from the suburbs to VIP passengers arriving on the high-speed train from Paris. It goes without saying that the density will be highest around the station - both in program and in construction.

### **A whole array of visitors**

With the station as a solid programmatic basis, the rest of the program strives to establish a bond to the new city district among as many people as possible. The duration and intensity of that bonding will vary greatly. It will be most intense for the 15,000 to 20,000 people who actually live in the Zuidas. The estimated 60,000 people who will work there come a close second. And then there are the visitors - to the shops, the theaters and the museums that are planned for the Zuidas. Last but not least, the most fleeting passers-by will be people traveling through - even though the Zuidas only serves a transit function for them, they will inject the new city district with an energetic charge.

### **A broad and varied program**

All components of the program will be aimed at as broad a variety of groups as possible. The Zuidas will attract the most exclusive boutiques in the Netherlands, but also shops for everyday purchases. There must be employment opportunities for all income classes. Perhaps the most important aspect is that residential space accounts for about half of the construction program. The new residents will also be a reflection of the desired diversity. This means there will not only be owner-occupied and rental apartments for the top end of the market, but also a substantial proportion of residential property in the social rental sector for people with lower incomes.

### **A fine-grained urbanity**

Such a highly varied program has an impact on the construction methodology. One aspect of this is essential: development using only large-scale architectural units *must* be avoided in the Zuidas. A fine-grained structure is the only way to attain variation in form and function on a smaller scale as well. Striving after a fine-grained urbanity is perhaps the most important mission. It takes considerable effort to convince developers and investors of this. As we are well aware, these parties tend to demand the construction of ever-bigger units, motivated by financial considerations. They must be convinced that in the longer term it is in their own interest for the city in which they are investing to become a vital entity and that the finely meshed structure is essential to this. It is, moreover, a precondition for variety in economic activity - and thus for economic sustainability. Smaller enterprises that wish to lease a small amount of floor space for rents that are within reach must also be able to find accommodation in the Zuidas. What's more, that fine-grained structure opens the door to small-scale, private commissioners. Experience has taught us that private commissioners - entrepreneurs or enterprises that are also the eventual users of the building

– results in a higher construction quality than commissions from project developers, which are building property for a market of users as yet unknown.

### **Public functions in a two-story plinth**

Both ingredients of sustainable urbanity – the physical space and the program – are brought together in the task of making the streets in the Zuidas come to life. New York shows us what is needed, the necessary ingredients. By no means the least important factor in the force of attraction of the streets of Manhattan is their street-level plinths – often two stories high – with intensive public functions. Exactly the same thing is being aspired to in the Zuidas: streets with a succession of shops and restaurants occupying the street-level plinth, but also activities that are less commercially driven, such as a museum or a library.

### **Functionally adaptable buildings**

Sustainability means that a city is able to keep on changing. That also applies for its buildings, which must be able to accommodate new functions over the course of time. Amsterdam, with its classic canal-side mansions, presents what is perhaps the best possible example of buildings that can adapt to different functions almost effortlessly. Architecturally and in their dimensions, the buildings in the Zuidas must be designed in such a way that office buildings can potentially be transformed into residential buildings at a later date - and vice versa. This also means that the dwellings will enjoy extra high ceilings, which can only be considered a plus for living comfort.

### **Environmental sustainability**

Sustainability and long-term thinking means that we must deal with the resources that are available to us in a measured manner. This applies, among other things, for energy consumption, the use of land, and urban ecology. In all these fields, the Zuidas is being developed in line with a decidedly social accountability. No one, for that matter, is under the illusion that the construction of a new city district is feasible without placing an even greater burden on the environment. Urban activities inevitably result in more traffic and greater energy consumption. There are, however, steps that we can take to keep the environmental impact within specified limits.

### **Efficient use of land**

Let us begin with the use of land. Building an entire city district over and across a wide bundle of infrastructure realizes something approaching the ultimate form of dual land use. The combination of residential and business functions in the Zuidas also leads to savings in the development's footprint and land use. Since there will be roughly similar flows of traffic in both directions during rush hours (people who live in the Zuidas often work elsewhere - and vice versa) the transport systems will be utilized much more efficiently. And there is a better control of emissions, because through traffic passes the Zuidas via a tunnel.

### **Heat storage and cold storage**

Energy efficiency will be achieved by installing a system of heat and cold storage for the whole of the Zuidas. Not far from the Zuidas there is a lake, and its deeper reaches will be used to store the coolness of winter until the summer. In addition, natural water reservoirs deep in the ground will be used to maintain the temperature of warm as well as cold water for months on end.

### **Water management**

Measures are being implemented in the Zuidas to ensure improved water management, too. In a densely built urban area there are only a few possibilities for temporarily storing water during the peak loads caused by heavy rainfall. Even though different kinds of water elements will be integrated in the public space, it will also be necessary to keep these peak levels in check. This can, for example, be achieved by covering the rooftops of buildings with greenery, so that a downpour of rain is prevented from entering the drainage system at full speed – “dosing” the flow with a greater regularity.

### **Communication with the environs**

A final form of durability is social sustainability. In the same way as the Zuidas has to establish relations with the existing city in its urban layout, it must also – from the very outset – establish relations with social and civic structures. For the surroundings, the development of the Zuidas is an intervention on an unprecedented scale, for which enforcement or imposition is out of the question. Ongoing communication

with residents, institutions and businesses in the environs is therefore an important, indispensable component of the development process.

### **A city for future generations**

The task of establishing an urban landscape permeated with sustainability in the Zuidas cannot be produced by means of off-the-peg formulae. What precedes this, in the preparatory work, is in part derived from the specific qualities and situation of the Zuidas in Amsterdam. A district elsewhere will, to a certain degree, demand other solutions. All the same, Amsterdam's Zuidas does make it clear that the instruments of urban planning and program can make an important contribution to that sustainability. And that in the end, all of this primarily has its origins in a position, an angle of approach: we do not merely wish to build a city for the clients of today, but first and foremost for the society to which that city will eventually belong – for a great many generations to come.