

MODERN

TATE

GLOBAL CITIES

20 JUNE – 27 AUGUST 2007



FOREWORD

Like other global cities, London and its cultural institutions build on the social and intellectual capital generated by the flows of people and ideas that constitute city life. Tate Modern, as a building and an institution, is inextricably linked to London's changing urban culture.

Global Cities is the second exhibition staged in the Turbine Hall that takes inspiration from the effect of architecture and urbanism on our contemporary world, through the exhibition's focus on the ever-changing cultural, social and economic forces that give shape to our cities.

It is significant that the critical issues addressed by *Global Cities* have attracted very generous sponsorship and support from Land Securities, Savills and Derwent London. Charles Rifkind played a crucial role in securing these sponsorships.

I would especially like to thank Davide Croff and La Biennale di Venezia for their creative partnership.

I am also greatly indebted to Ricky Burdett, the Director of the 10th International Architecture Exhibition, for his aspiration and desire to collaborate with Tate to produce this new site-specific exhibition for the Turbine Hall.

I should also like to thank the whole team at Tate Modern for working so imaginatively to adapt the exhibition for London. The team, led by Sheena Wagstaff, Chief Curator, has included Sarah Ichioka and November Paynter, Consultant Curators, Kathy Noble, Assistant Curator, Achim Borchardt-Hume and Stuart Comer, Curators, and Phil Monk, Art Installation Manager.

SIR NICHOLAS SEROTA

SPONSOR'S STATEMENT

Land Securities is proud to sponsor *Global Cities*.

As the UK's leading property company, the regeneration of cities lies at the very heart of our business.

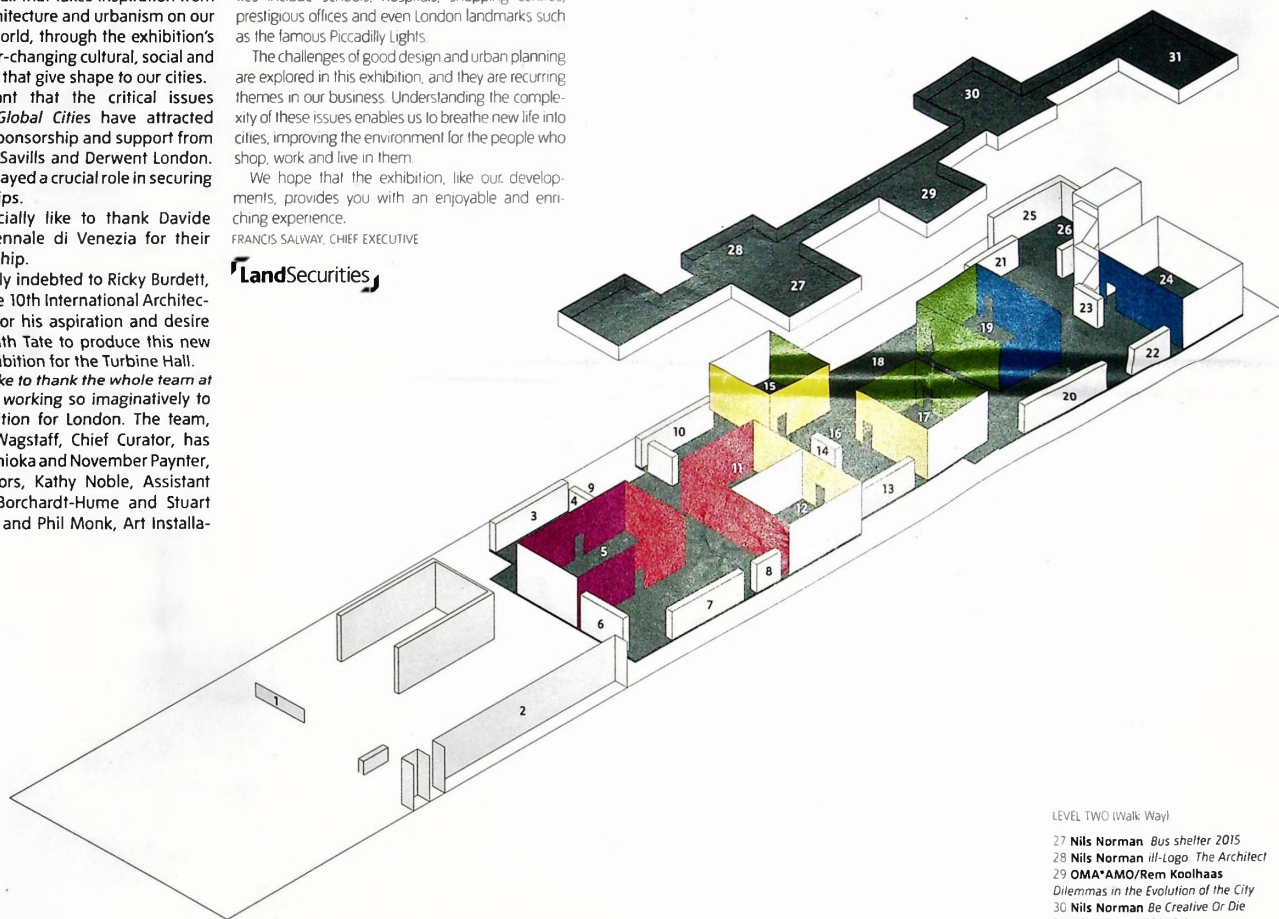
We own or manage 80 million square feet of office, retail and public service buildings from Aberdeen to Portsmouth and from Cardiff to Norwich. Our properties include schools, hospitals, shopping centres, prestigious offices and even London landmarks such as the famous Piccadilly Lights.

The challenges of good design and urban planning are explored in this exhibition, and they are recurring themes in our business. Understanding the complexity of these issues enables us to breathe new life into cities, improving the environment for the people who shop, work and live in them.

We hope that the exhibition, like our developments, provides you with an enjoyable and enriching experience.

FRANCIS SALWAY, CHIEF EXECUTIVE

LandSecurities



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INTRODUCTION

More than 50% of us now live in cities and, according to the United Nations, this number is set to rise to 75% by 2050. A century ago only 10% of the planet's population lived in cities.

It is vital that we understand the impact of this urban growth on people and the environment, as the links between architecture and society become both more complex and more fragile. How we - as architects and citizens, artists and policy-makers - choose to shape our cities, buildings and public spaces will determine how we respond to a range of problems. These include environmental challenges such as the escalating effects of climate change, as well as addressing the human rights, justice and dignity of the billions of people who are moving to cities in search of work and opportunity.

Global Cities encourages us to take account of the scale and pace of this change and consider its consequences on the way we live and the decisions we take. It examines the social and spatial conditions in ten large, dynamic cities spread across the globe: Cairo, Istanbul, Johannesburg, London, Los Angeles, Mexico City, Mumbai, Sao Paulo, Shanghai and Tokyo. Drawing on comparative socio-economic and geographic data originally assembled for the 10th Venice Architecture Biennale, the exhibition explores these cities through five thematic lenses: size, speed, form, density and diversity.

To complement this material, the *Global Cities* exhibition at Tate Modern incorporates a range of existing films, videos and photographs by artists who come from, or have a relationship with, one or more of the ten focus cities. The artworks offer both intense and intimate interpretations of the cities in which we live. By exploring the resonances between our individual experiences of everyday life and our physical environment, the exhibition challenges us to think again about the connections between art, architecture and society at the heart of the contemporary city.

As *Global Cities* takes place in a museum at the heart of one of the focus cities, the exhibition uses London as a touchstone for comparison. Artists and architects Nigel Coates, Zaha Hadid & Patrik Schumacher, Fritz Haeg, Nils Norman, OMA*AMO/Rem Koolhaas and Richard Wentworth have been commissioned to produce new pieces exploring the social, cultural and physical dimensions of London in order to question and respond to specific issues such as sustainability, public space and social inclusion. The exhibition aims to raise awareness of these issues, at the global and human scale, and to stress that the shape of our cities will determine the future of the planet.

CURATORS: RICKY BURDETT, DIRECTOR, 10TH INTERNATIONAL ARCHITECTURE EXHIBITION, LA BIENNALE DI VENEZIA AND SHEENA WAGSTAFF, CHIEF CURATOR, TATE MODERN
CONSULTANT CURATORS: SARAH ICHIOKA AND NOVEMBER PRINTER
ASSISTANT CURATOR: KATHY NOBLE
PROJECT ADVISERS: ACHIM BORCHARDT, HUME, CURATOR, MODERN AND CONTEMPORARY ART AND STUART COMER, CURATOR, FILM, TATE MODERN
EXHIBITION DESIGN AND ART DIRECTION: WILLIAM RUSSELL AND ANGUS HYLAND, PENTACORAL
CITY DATA ANALYSIS: URBAN AGE, LONDON SCHOOL OF ECONOMICS AND DEUTSCHE BANK'S ALFRED HERRHAUSEN SOCIETY
CITY DATA COORDINATOR: BRUNO MOSER, LSE

THIS EXHIBITION BUILDS UPON CORE MATERIAL DEVELOPED FOR *CITIES, ARCHITECTURE AND SOCIETY*, THE 10TH INTERNATIONAL ARCHITECTURE EXHIBITION OF LA BIENNALE DI VENEZIA HELD IN 2005

VIDEO INSTALLATIONS



Neutral, *Global Cities in a Changing World* 2007

Neutral: Christian Grou born 1969

Born Romania, works London

Tapio Snellman born 1969

Born Finland, works London

Global Cities in a Changing World 2007

Video installation

Running time: 4 minutes

Eva Koch born 1953

Born Denmark, works Denmark

Crowds 1997

Video installation

Running time: 4 minutes 17 seconds

Courtesy the artist, Galerie Asbaek and

Galeria Magda Bellotti

Chowpatty beach during the Ganesh Festival
rehangar Surabhee image on front and
back cover!

SIZE

Cities are increasingly at the centre of global flows of people, capital, culture and information. Over the last 30 years their role as financial command centres has expanded, creating a new type of sprawling, often multi-centred, urban agglomeration.

There are now over 20 mega-city regions with more than ten million people. There are also nearly 450 city regions with over one million residents. Together they house more than one billion people in a relatively small surface of the earth. As they expand even further, into urbanised regions of over 50 million inhabitants, their footprint will have a direct impact on climate change and the ecological balance of the planet, as well as on the lives of existing and new city dwellers.

This section explores some of the most populous city regions of the world – the greater Tokyo area (the largest urban region in the world today), and the expanding metropolitan zones of Mexico City and Sao Paulo. Each city displays different spatial characteristics and varying levels of success

in managing urban change through governance and policies to contain sprawl. Some of these policies, such as London's Green Belt, established by Patrick Abercrombie in 1943, can have a lasting impact on the city's ecology and liveability.

TOKYO

Tokyo, the largest city in the world and the only mega-city in a developed economy, expanded dramatically after the Second World War. Over 40% of the city is built on landfill encroaching on Tokyo Bay to accommodate this growth. However, given Japan's low demographic dynamism and the policies to curb Tokyo's growth, the city will grow at a relatively modest pace. Like many other cities in Japan, Tokyo is prone to earthquakes and flooding.

Home to a relatively wealthy and homogenous population, the city is composed of narrow building plots, closely-packed commercial districts, such as Shibuya, Shinjuku, Ginza or the new centre at Roppongi Hills. The Greater Tokyo area in the Kanto region now accommodates over 34 million people in a consistently dense and multi-centred urban

region that is well served by an integrated system of trains, underground and buses, used by nearly 80% of daily commuters.

Despite its scale and complexity Tokyo provides a highly efficient urban model and is now seeking to make more of its assets by creating denser clusters of development near the centre and regenerating its under-used waterfront along Tokyo Bay. The Governor of Tokyo is one of the most powerful figures in the Japanese administration and Tokyo receives more national fiscal resources than it contributes.

MEXICO CITY

Sprawling across a high plateau framed by mountains and volcanoes, Mexico City has expanded tenfold in both population and area since 1940. With a population of 18 million plus, the city region generates nearly a quarter of Mexico's wealth, attracting people – many of them young – from the rest of the country to the Aztecs' original 'floating city'.

The region faces a major challenge in co-ordinating services and infrastructure across the admin-

istrative boundaries of the two separate governing entities that make up Mexico City's wider metropolitan area – the Federal District and the State of Mexico. Its central tree-lined boulevards and security-guarded shops and offices contrast with the continuous spread of informal housing that clings to the steep hills and extends outwards to the horizon.

The income gap between rich and poor remains wide, and a high crime rate dominates, with security a prime concern alongside pollution and traffic congestion, exacerbated by car-oriented policy and investment, in a city where petrol is cheaper than bottled water. Fear has motivated the presence of security forces and the construction of gated residential and commercial compounds across the city.

The new city mayor is now pushing for more co-ordinated governance to control sprawl, revitalising its historic centre, introducing more sustainable transport, and starting to tackle its acute water shortage and the crumbling urban fabric that reflects decades of unstructured growth and poor resource management.



SAO PAULO

Sao Paulo is Brazil's largest and richest city, with a metropolitan region the size of Los Angeles or Shanghai. Its population has nearly doubled in the past 45 years, and growth in the last decade was 9.2%. As the country's financial capital, with a constituency the size of some European countries, Sao Paulo plays a key role in national politics.

A continuous, dense city that spreads out into the tropical vegetation of the Tietê river valley, Sao Paulo's boundaries are in a state of constant flux as it expands outwards from its emptying historic core to a disparate periphery, with poor *favelas* (squatter settlements) close to the exclusive high-rises of the rich.

Today six million cars operate on Sao Paulo's streets and a thousand new cars are registered every day. Just under half of daily journeys are by public bus, while just over half are by private car. Long commute times (four-hour journeys for residents of some outlying districts) and vehicle pollution are major issues, yet investment in other modes of public transport, such as the metro, has been minimal.

The invasion and contamination of the city's watershed by informal housing – whose poor occupants cannot access adequate and affordable housing within the existing city fabric – threatens the provision of drinking water and viability of the sewage system for the wider city region.

ARTWORKS



Naoya Hatakeyama born 1958
Born Japan, works Japan

Tokyo / Mori Building 2003

Photographs

Commissioned by the Canadian Centre for Architecture (CCA), Montreal
Courtesy the artist, Taka Ishii Gallery, Tokyo and the Canadian Centre for Architecture (CCA), Montreal

Scott Peterman born 1968

Born USA, works USA

Ecalaepec 2006

Photograph

Courtesy the artist and Miller Block Gallery, Boston, USA

Naoya Hatakeyama, Tokyo /
Mori Building #2 2003 (left)

Mexico City, Mexico 1999, Armin Linke
Courtesy of Galleria Massimo de
Carlo (below)





SPEED

The speed with which many of the world's cities are growing affects their social and physical structure dramatically. The five cities featured in this section - Cairo, Istanbul, London, Los Angeles and Shanghai - are experiencing growth at a different pace, and absorbing it in different manners: some are growing upwards, others are growing outwards.

The speed of urban change is fuelled by natural increase as well as rural-to-urban migration, with people flocking to cities in search of jobs and social opportunities. Some cities, like London, are managing this change with planned strategies for growth. Others are overtaken by informal development processes that completely transform their scale, texture and character.

In many cases, the social and urban landscapes of these cities are being rapidly transformed by the speculative commercial development of business parks, commercial districts, shopping malls and housing enclaves. These changes directly affect the lives of existing communities and new city residents; the way in which they are managed is central to the creation of more balanced and inclusive cities in the twenty-first century.

SHANGHAI

According to the United Nations, Shanghai is the eighth fastest-growing city in the world, adding 29.4 new residents each hour. The city lies at the intersection of global trading routes at the heart of the Yangtze river delta, one of world's fastest-growing regions. Its metropolitan region holds over 18 million inhabitants, a number increased mainly by rural Chinese migrants attracted by its economic potential and rampant construction activity.

Shanghai's sustained and substantial economic growth (the current annual economic growth rate of 10% is projected to continue for at least another decade) has produced a landscape of dramatic vertical and horizontal expansion. The city's public and private sectors are closely meshed, and it continues to build themed satellite towns and construct hundreds of new subway stations. The demand for residential space is fuelled by speculative development as well as residents' needs; in 1985 the average dwelling size was 12 square metres - the size of a small car. It is now over 40 square metres; still small by most North American and European standards.

Shanghai's economy is modernising as well as growing: approximately half of the labour force work in the service sector, while 36% are employed in industry - about three times the number in western global cities like London. Shanghai is also investing heavily in expanding its road capacity and public transport infrastructure. Currently a quarter of daily commuters use some form of public transport, with over half of Shanghai residents either walking or cycling to work. While an annual limit has been set on car sales, bicycles are targeted as an impediment to traffic flow, threatening this older and more sustainable form of transport.

CAIRO

Cairo is one of the world's oldest continually-inhabited cities, centred on the river Nile and its fertile basin surrounded by desert. It is an intense palimpsest of overlapping cultures and civilizations,

each of which has left its mark on the city's built heritage. The population totals 7.8 million, with almost 15 million in the greater metropolitan area; non-official figures approach 18 million. Cairo's population grew by about 890% in the past century, fuelled partly by an influx from rural areas. Current growth is calmer: 15% in the past decade. Cairo is the fifteenth fastest-growing city in the world and the third fastest in Africa, after Lagos and Kinshasa.

60% of the city's residents live in unlicensed housing, some up to 14 storeys high, but many have access to modern facilities - water, gas and electricity. 100,000 people inhabit Cairo's City of the Dead, whose small courtyard buildings, mosques and tombs provide makeshift shelter for new immigrants. The site has been occupied by the poor for several hundred years.

To redirect urban growth, Cairo's government has fostered the development of several satellite cities in desert areas poorly served by public transport. But despite heavy promotion over three decades, by 1996 the total population of these new towns was less than Greater Cairo's growth in just six months.

ISTANBUL

Istanbul is the eighteenth fastest-growing city in the world, adding 19 new residents each hour. With 9.8 million inhabitants, the ancient but rapidly growing city is the largest within its young country. Istanbul straddles the Asian and European continents, with an extensive waterfront on both sides of the Bosphorus. The city grew by around 900% in the past 50 years, 27% in the last decade. Further growth of 1.5 million people is projected in the next decade.

With the recent infusion of global capital and culture, the city is engaging in large infrastructure schemes. These include the Marmaray rail-tube tunnel linking its two halves, and controversial programmes for renovating its urban core and redeveloping its waterfront.

Industry is no longer the principal cog in Istanbul's economy, but it employs a third of the city's population; significantly, a third of Turkey's manufacturing plants are still in Istanbul. As industries move to the outskirts of the city, many redundant industrial areas (especially along Istanbul's extensive waterfronts) have become sites for the development of cultural institutions and facilities. This is particularly true of its Asian side; until recently, such resources have been concentrated in the historic western peninsula.

LONDON

With a population of 7.5 million, London is growing again after a period of decline. This growth is moderate compared with the other cities in this section. London is the 360th fastest-growing city in the world, adding only 2.3 new residents an hour (less than one-tenth of Shanghai's rate).

London reached its peak of 8.6 million people in 1939, but declined during the 1970s and 80s. 600,000 more inhabitants are projected in the coming decade. The planning decision to contain this growth within the existing city boundary is driving a period of intense inner city development. Housing and offices are being constructed at higher densities on available urban land - much of it on redundant industrial or 'brownfield' sites along the river Thames.

London lies at the heart of south-east England;

its regional hinterland contains 17 million people. London itself is the UK's economic powerhouse, with a GDP equivalent to that of Switzerland; over 80% of its work-force are employed in services. But London's wealth belies the levels of poverty in inner city areas. High housing costs in relation to income mean that over half the children in some central areas live below the national poverty line.

PROJECT: CONGESTION CHARGE

Congestion charging is a daily fee for driving a vehicle on public roads within a designated zone (an oval-shaped 2.2 square kilometres of central London) during weekday peak hours. The scheme is enforced by computer-linked licence plate recognition cameras.

The scheme has generally been a success, despite continued opposition from central London businesses, who claim the charge has negatively affected their trade. The charge was increased from £5 to £8 in 2005 and a westward expansion of the regulated zone was implemented in early 2007.

The congestion charge has reduced car-use within the zone by over 25% (compared with pre-charging peak-hour levels). Bus passenger numbers have nearly doubled since 2003. Profits are ploughed back into public transport and public space improvements.

CLIENT: TRANSPORT FOR LONDON, MAYOR OF LONDON PHASE ONE 2003, PHASE TWO 2007

LOS ANGELES

Los Angeles is a city of suburbs at the heart of a wider agglomeration of over 16 million people; it is the second largest metropolitan region in the USA after New York. The city is growing at a rate of 10.1 people per hour - half the number of Cairo, but nearly five times that of London. Its Long Beach agglomeration is 52nd fastest-growing in the world.

LA's urban growth is driven by a strong economy, based on a high industrial and port activity as well as the media and film industries. The city has grown horizontally, at relatively low residential densities, a collection of suburbs consisting mostly of detached single family homes. Recent immigration and geographic limits to expansion are causing pressure to accommodate more people within its boundaries. In contrast to the image of a lush city on the Californian coast, many communities in Los Angeles (particularly in the south) are deprived of open space. Only 10% of the city is allocated to green open spaces, primarily large parks away from higher density urban centres.

Private cars remain the prevalent transport mode; public transport serves only 10% of daily journeys. Inadequate public transport provision has clear social-justice implications: Los Angeles's poor residents rely on the bus system. But the city is investing in its public transport infrastructure: bus rapid transit, light rail and subway. In addition, it is strengthening a freight rail link along the Alameda corridor, connecting the region's two ports with its downtown area. Prominent public buildings built over the past ten years form a new civic focus in the central city; plans are underway to regenerate the downtown district.

ARTWORKS



Osman Bozkurt, *Auto - Park / The Highway Parks of Istanbul* 2003

Yang Zhenzhong born 1968

Born China, works China

Let's Pull 2002

Video installation

Running time: 14 minutes 29 seconds

Courtesy the artist and

ShanghaiART Gallery

Andreas Gursky born 1955

Born Germany, works Germany

Los Angeles 1999

Photograph

Collection Glenn Scott Wright

Courtesy Victoria Miro Gallery

Maha Maamoun born 1972

Born Egypt, works Egypt

DOMESTIC TOURISM 2005

Garden, Felluca, Cairo at Night

and *Beach*

Lightboxes

Courtesy the artist

Osman Bozkurt born 1970

Born Turkey, works Turkey

Auto - Park / The Highway Parks

of Istanbul 2003

Video

Running time: 15 minutes 50 seconds

Courtesy the artist

Shanghai, Olivo Barbieri, Courtesy of
Start, Venice opposite page

FORM

ARTWORKS



Laurence Bonvin, *On the Edges of Paradise* 2005-6

Francis Alys born 1959
Born Belgium, works Mexico
and London
RAILINGS 2004
Sample 1, *Onslow Gardens, Park
Crescent, Fitzroy Square*
Video installation
Total running time: 10 minutes 44
seconds
Tale

Huseyin Alptekin born 1957
Born Turkey, works Turkey
INCIDENTS 2005-7
Incident-s Istanbul
Running time: 10 minutes 33 seconds
Incident-s Bombay
Running time: 8 minutes 5 seconds
Video installation
Courtesy the artist

Atelier Bow Wow:
Yoshiharu Tsukamoto born 1965 and
Momoyo Kaijima born 1969
Born Japan, work Japan
World Cup Flux 2002-6
Video
Running time: 3 minutes 31 seconds
Courtesy the artists

Eva Koch born 1953
Born Denmark, works Denmark
NoMad 1998
Video
Running time: 1 minute 42 seconds
Courtesy the artist, Galerie Asbaek and
Galerie Magda Bellotti

Laurence Bonvin born 1967
Born Switzerland, works Switzerland
and Germany
COMMUNITY 2005-6
*On the Edges of Paradise and Istanbul
Peripheral*
Photographs
Courtesy the artist

QuickBird satellite images of Istanbul,
Johannesburg, Mumbai, Tokyo and London
© DigitalGlobe distributed with exclusive right
for Europe by Telepaizin (opposite page)

This section provides an overview of the distinctly different urban forms of five cities: Istanbul, Johannesburg, London, Mumbai, and Tokyo. Satellite photographs (right) illustrate the diversity and complexity of human impact on these cities, as physically manifest in street widths, block and plot sizes and distribution of open green spaces.

All five cities contain centrally-planned zones, but each also contains areas that have grown informally and organically. These physical structures have arisen to accommodate each city's geographical and environmental conditions, (rivers, coastlines, mountains, orientation, etc), as well as its cultural, social and economic systems. Urban form - the DNA of the city - bears the imprint of the flows and forces that shape our daily lives.

Given the complex and locally-specific relationships between urban form and city life, architects and city planners face many challenges in trying to bring about positive change within cities of this size and history. These include the task of providing adequate infrastructure for the large number of informal settlements that have arisen in cities like Mumbai; protecting Tokyo from multiple potential natural disasters; and filling in the large areas that are London's legacy from redundant infrastructure and industries. Many cities are being assailed by homogeneous, globalised international models which take no account of their particular, individual structures. The lasting success of planning policies and future developments may depend on the sensitivity of such interventions within the grain of their urban DNA.

ISTANBUL

Istanbul is the largest city in the Balkan region. It is an ancient, but rapidly-growing city that straddles Asia and Europe along the Bosphorus strait. 95% of Istanbul is urbanised, mainly in response to overwhelming housing demand from inward migration. The formal city covers 1,839 km², an area slightly larger than London but with 30% more people. But its informal bounds are ever-expanding as the city grapples with a combination of suburban sprawl and increased inner-city living.

In past decades pressing urban needs have often been met through informal means. This is particularly true of the housing sector, where *gecekondu* ('built overnight') squatter settlements on the city's edges have been legitimised. In contrast, more recent residential developments take the form of gated communities.

Istanbul's metropolitan government has recently acknowledged the need for more comprehensive planning by establishing an urban planning department. The intention is to put in place a structured process of project negotiation as well as more efficient administration of public works projects.

Co-ordinating transport is another key challenge. Over two-thirds of daily journeys in Istanbul are made on an already over-burdened public transport system; under a third are conducted by private car. Public transport infrastructure struggles under the weight of an ever-expanding population. Nevertheless, public policy has had some success in encouraging car-free travel alternatives, and improvements to the current transport system are planned, includ-

ing a new tunnel beneath the Bosphorus strait linking train networks on both continents.

JOHANNESBURG

Johannesburg is South Africa's largest city, with a population of about 3.2 million people at the centre of Gauteng, one of Africa's most rapidly urbanising regions. The city is relatively dispersed and has a poor public transport system. Attempts to dismantle the social and spatial legacy of apartheid are underway, but elements of an unjust geography are resurfacing. Unregulated settlement and increased crime have driven jobs and people out to the suburbs, creating a hole at the city's heart around Hillbrow, now inhabited principally by immigrants from other African states.

The financial and corporate centre has moved from the modernist downtown core to the shapeless suburbs of Sandton and Rosebank. Within this area's shopping centres, walled hotels, and businesses and residential complexes warded by security gates, cameras and guards, a range of social groups gather to conduct business and socialise.

Only three kilometres away, the former apartheid ghettos of Alexandra and Soweto house hundreds of thousands in substandard conditions. Informal settlements with high levels of social disadvantage are growing along the city fringes, as new residents struggle to obtain other forms of shelter and face arduous journeys to work on informal public transport systems. But Soweto now has tarmacked streets and basic services, including schools and shopping malls. And since 1994, the new South African government has planned almost two million low-cost homes under the Reconstruction and Development Programme.

LONDON

London's organic urban form covers an area of 1,572 square kilometres - double the size of New York City, but with a similar population of 7.5 million inhabitants. Its irregularity reflects many aspects of its history: these include Britain's island status, which meant London needed no defensive barriers, the presence of many urban villages, the destruction caused by Second World War bombings and, more recently, the fragmented nature of its local government.

Compared to any other global mega-city, a very large amount of London's surface is given over to domestic gardens, parks and open areas, making it a relatively low density city. London's central and western zones are denser and more continuous while its eastern fringes are more fragmented and open as the river Thames approaches the North Sea.

As the mercantile hub of the historic British Empire, London's port stretched eastwards along the Thames to the open sea, remaining active until the 1970s. This means much of the city's available land, derelict for decades, is concentrated in East London, host to some of the city's most disadvantaged communities and now the site for new transport and housing projects, including the London 2012 Olympics.

Also ripe for development are London's existing transport interchanges - King's Cross, Paddington Station, Stratford - and redundant industrial sites - Battersea Power Station, White City, Greenwich Peninsula and the Lower Lea Valley. These are being developed by the private sector in response to demand for new housing and commercial facilities.

Since 2000, after 15 years without metropolitan

governance, London has had an elected Mayor and assembly to discuss citywide issues and to set metropolitan policy. The Greater London Authority improves coordination between the city's 33 boroughs, focusing on economic growth, housing, social inclusion and upgrading urban and natural environments.

MUMBAI

Mumbai (Bombay) is India's most populous city, over 18 million people live and work in its wider metropolitan region, tightly-packed on a thin stretch of land between the Arabian Sea and the Gulf of Mumbai. Built on seven small islands progressively linked by land reclaimed from the sea, Mumbai's growth has, until recently, been constrained by its physical geography. The city has grown along corridors created by an extensive suburban railway, though residential development often consists of slum settlements crowding dangerously close to the tracks.

The population increased tenfold last century, but sustained immigration and a high birth rate is set to produce a 20% growth in the next decade. More than half the city's population lives in slums (a figure roughly equivalent to the population of London). Rapid urbanisation has produced poverty, poor health and employment instability. Lack of investment in transport, sanitation and housing means that Mumbai is fast approaching breaking point.

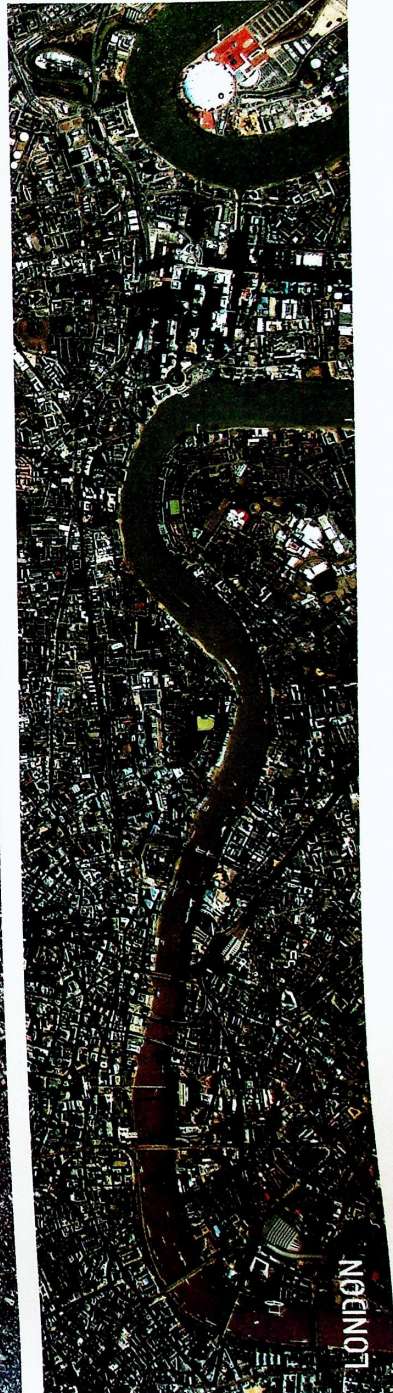
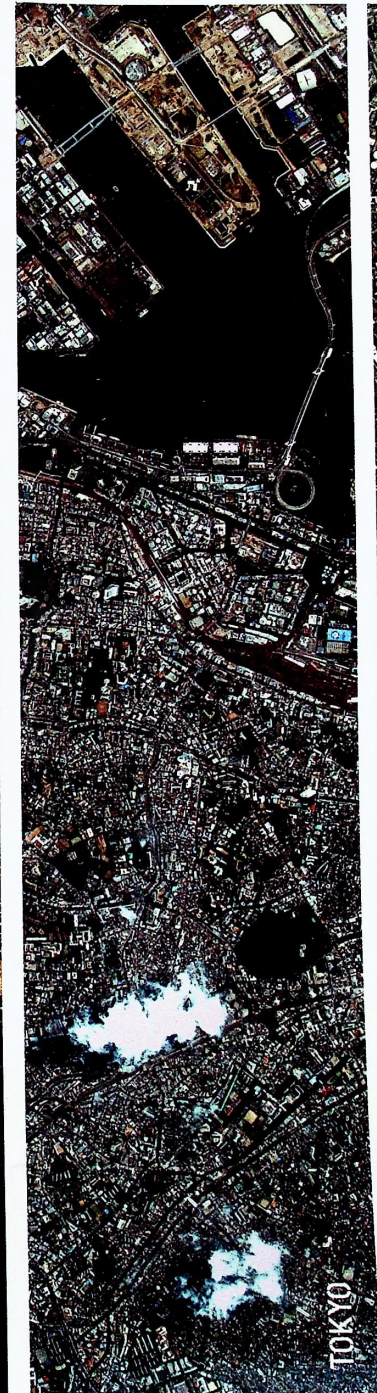
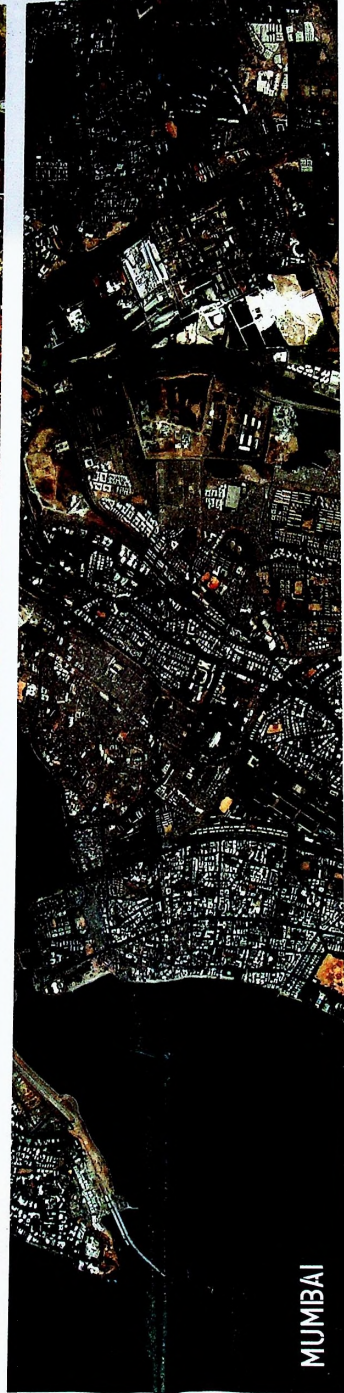
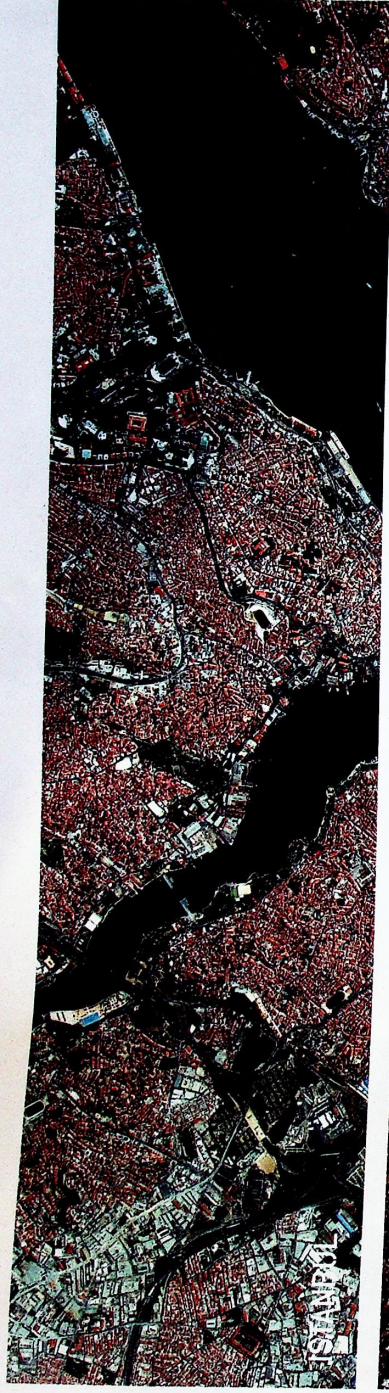
Solutions to such major urban issues are needed urgently. However, Mumbai is currently controlled by the state of Maharashtra and Indian central government, and as such suffers from a decision-making system that lacks the knowledge and power to implement changes sensitive to local needs.

TOKYO

Tokyo's population grew dramatically in the twentieth century. The largest urban region in the world has evolved as a series of continuous medium-density suburbs, connected to employment and commercial centres by a very efficient system of underground and railway lines. Nearly four out of five daily journeys in Tokyo are made on the city's comprehensive public transport network. To accommodate this growth, Tokyo Bay has been progressively infilled to create land for more offices and housing.

The city's population is spread relatively evenly; it does not have a significant high-density residential inner core. Less than 5% of Tokyo's total surface is green space. Policies to curb the city's growth mean that the city is not expected to gain a significant number of residents in the future, its challenge is to produce a more sustainable and pleasant environment for its millions of current residents.

Tokyo's development has been driven by its disaster-prone environmental landscape. Japan experiences around 27 typhoons per year. Tokyo is prone to earthquakes and floods, a problem exacerbated by the fact that half of central Tokyo is built on low-lying landfill sites. This means the city has always considered its extensive waterfront from the point of view of disaster-prevention, rather than as a recreational asset. This strategy is being reversed as Tokyo addresses its next stage of urban development.



DENSITY

Density – the number of people living in a given area, usually expressed as people per square kilometre – is at the centre of public debate on the future growth of cities. Used as a planning tool, awareness of density can help to curtail over-development and overcrowding, or ensure that scarce urban land is not under-used, especially in areas with good public transport and social amenities. High density does not mean high-rise; large numbers of people can be accommodated in five- or six-storey buildings arranged in a compact and efficient manner, creating congenial places for living.

Good design can produce desirable neighbourhoods in cities across the world by balancing dense development with access to open space and good transport. Dense urban environments can create sustainable cities; more dispersed developments use up more land and need more infrastructure – water, gas, electricity, roads – with negative impacts on the environment. High density housing can be associated with poverty and overcrowding, especially in the slums of developing countries. However, good design can produce desirable neighbourhoods in cities across the world by balancing dense development with access to open space and good transport – as evident in some of the most successful neighbourhoods in London, Paris and New York.

The four models shown in this section compare, at the same scale, the number of people living within the administrative boundaries of four of the ten cities featured in the exhibition. The peaks show the highest residential densities, with the largest number of people concentrated in a square kilometre. They range from the high-density of Cairo and Mumbai to the more dispersed, but bounded London (contained by the Green Belt) and the sprawling Mexico City.

MEXICO CITY

Residential density: 5,800 people per km²
(London 4,500 people per km²)

Located on a high plateau, with few geographic boundaries to curb its growth, Mexico City has developed as a low-rise, sprawling city, the central Federal District's residential density is about 5,800 people per km², slightly higher than the relatively low density of London. But it has some denser areas: wealthier parts in the south, east and the historic centre, as well as less affluent areas such as the urbanised north.

The suburban sprawl continues to develop, fuelled by low-cost mortgages, cheap petrol and a lax regulatory framework. The municipal government has tried to re-shape the fragmented city by luring residents back into the historic centre, whose population had decreased by 40% between 1970 and 1995. But certain programmes intended to bring more people into the city centre have had the unintended effect of pricing out some residents, forcing them into the surrounding State of Mexico.

PROJECT: BRAZIL 44

The current regeneration of Mexico City's historic centre involves revitalising historic structures as well as creating and upgrading commercial buildings and infrastructure. Brazil 44 is part of a federal government initiative

in partnership with the Junta de Andalucía of Spain, aimed at improving housing conditions for the poor in the historic centre. The project's name is taken from the address of an existing dwelling, which is being revitalized to include live housing areas with retail space on the ground floor. Its aim is to provide public space for communal living desperately needed by Mexico City's many inhabitants.

ARCHITECT: JAVIER SANCHEZ / INELUBERA + SANCHEZ CLIENT: INSTITUTO NACIONAL DE LA VIVIENDA EXPECTED CONSTRUCTION: 2007

PROJECT: EL FARO DE ORIENTE

El FARO (La Fábrica de Artes y Oficios) de Oriente, or 'lighthouse of the east' is a community cultural centre in the borough of Ixtapalapa, on the eastern edges of Mexico City. Ixtapalapa is one of the city's most populated and violent zones, with inadequate amenities and poor urban infrastructure.

The building was originally designed as government offices, but local officials re-appropriated it as a community arts centre, with studios, galleries, libraries and performance space. The project involves extending the public space surrounding the building to create an outdoor amphitheatre for large-scale performances, gatherings and activities, to provide a cultural oasis in this industrial desert environment.

CLIENT: EL FABRICA DE ARTES Y OFICIOS ARCHITECT: ALBERTO KALACH / TALLER DE ARQUITECTURA X COMPLETION DATE: 2000

CAIRO

Residential density: 36,500 people per km²
(London 4,500 people per km²)

Cairo has a high residential density, approximately nine times that of London. Desert conditions limit the amount of habitable land in Egypt, so half its inhabitants live within a 100 kilometre radius of Cairo. Its dynamic informal economy is a magnet for people who continue to flow to Cairo's already congested neighbourhoods. As a result, the many people attracted to the city have difficulty finding affordable housing.

The Nile Valley frames the overall metropolitan development of Cairo. The most dense urban areas lie along a corridor stretching north east from the river, and in parts of Giza, west of the Nile. Open public space is scarce; as a result, Cairo's citizens have co-opted some unexpected parts of the city for use as social space, including using the multi-lane bridges over the Nile for evening picnics.

PROJECT: AL-AZHAR PARK

By the mid-1990s Cairo had one of the lowest ratios of green space per inhabitant in the world, at only one square metre per resident it fell far below the World Health Organisation's recommended eight square metres per person. Al-Azhar Park was one solution to the problems of these extreme population pressures.

Designed to rehabilitate one of Cairo's poorest and most populous areas, the park was created by the Aga Khan Trust for Culture on a 30-hectare site used as a dump for over 500 years. Mosques, palaces and historic houses are being restored alongside initiatives to provide residents with apprenticeships, employment, health centres and women's associations.

ARCHITECT/PLANNER: HISTORIC CITIES SUPPORT PROGRAMME (HCSP), SASAKI ASSOCIATES, SITE INTERNATIONAL CLIENT: GOVERNORATE OF CAIRO COMPLETION DATE: 2004

LONDON

Residential density: 4,500 people per km²

Greater London – the area within the M25 ring road – has a residential density of over 4,500 people per km² – only a quarter of the average density of Tokyo. Almost half (46%) of Greater London consists of open and recreational space, including the royal parks. Some of the most dense and affluent neighbourhoods are composed of townhouses or mansion blocks designed around landscaped squares (some still in private ownership) in Chelsea, Earl's Court and Lancaster Gate. Most of London's housing stock is made up of two- and three-storey terraced housing with small gardens.

The city's 'urban villages' – such as Hampstead, Greenwich and Chiswick – create clusters of higher-density development near transport hubs. Now that London's Green Belt, established in 1943, has been reconfirmed as an urban growth boundary, the city must become denser rather than more dispersed. High-rise, high density office and residential complexes have developed around existing and new transport centres, particularly along the river Thames, including London Bridge, Bermondsey and Canary Wharf. The emerging shape of the city's skyline is an ongoing focus of debate, with new clusters of taller buildings being planned in the financial district of the City of London and around transport hubs such as Victoria and London Bridge stations.

PROJECT: LONDON 2012 OLYMPIC AND PARALYMPIC GAMES AND REGENERATION OF THE LOWER LEA VALLEY

The Lower Lea Valley is a derelict area of East London which is being transformed in preparation for the 2012 Olympic and Paralympic Games. The project will regenerate one of poorest parts of the UK, and is concentrated around a new 500-acre park, the Stratford City development and the new Stratford International Station, where high-speed trains from the Channel Tunnel will arrive.

The Olympic Park, Olympic Stadium, Aquatics Centre and Velodrome will be permanent structures. All other, temporary, sports venues will be replaced by a mix of 9,000 private and affordable housing units, office space and community facilities.

CLIENT: OLYMPIC DELIVERY AUTHORITY ARCHITECTS: EDRAW ALLIES & MORRISON AND FOREIGN OFFICE ARCHITECTS AND HOK SPORT DATES: 2003-ONGOING

MUMBAI

Residential density: 34,000 people per km²
(London 4,500 people per km²)

The city of Mumbai (Bombay) covers 438 km² of Salsette Island, although almost a fifth of this area is occupied by Borivali National Park. This means the urban areas are condensed into about 350 km², with a high gross residential density, about seven times the density of London. About half the population lives in makeshift shacks with no sewers or water. Urban housing is cramped and expensive, and open public space is limited – only 1% of the city's area – and often poorly-maintained.

Mumbai's more affluent classes live in a corridor stretching along the city's north-south axis. Taller residential structures are surrounded by densely-packed, low rise slum buildings. As the city diversifies from its core industries, former mill areas and docklands offer the potential to produce affordable housing and accessible public spaces, but given current development trends, are likely to become exclusive office and

residential zones.

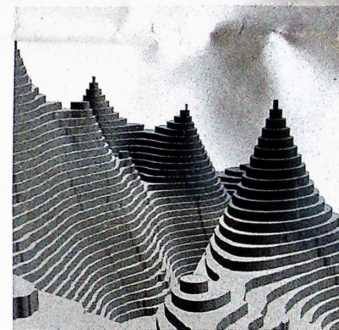
Lack of investment means urban infrastructure cannot meet the demands of a growing population. 85% of residents (the equivalent of the population of Norway) use public transport every day. Train carriages are regularly filled well beyond their intended capacity. Mumbai is a city where the vast majority of people still walk to work, reflecting the strong link between the location of informal housing and workplaces.

PROJECT: CHIKHALWADI SANITATION PROJECT

Mumbai lacks sanitation facilities for about half its population. The absence of running water and sewerage connections is unacceptable and potentially life-threatening. Children in slums cannot compete in the long queues for scarce municipal toilets; they defecate outside their homes.

The Chikhalwadi Sanitation Project consists of community toilet blocks designed, constructed and maintained by collectives. They include separate spaces for men, women and children. Capital finance for construction comes from the state or municipalities, who also have to ensure that water and electricity are provided to the blocks.

ARCHITECT: VISTAR ARCHITECTS AND PLANNERS CLIENT: SPARC COMPLETION DATE: 2004



ARTWORKS

Melanie Smith born 1965

Born Britain, works Mexico

Tiangus II 2002

Video installation

Running time: 5 minutes 15 seconds

Courtesy the artist and Galeria OMR

Mexico

Hala Elkoussy 1974

Born Egypt, works the Netherlands and Egypt

Peripheral Stories 2005

Video

Running time: 20 minutes

Courtesy the artist

Paromita Vohra born 1969

Born India, works India

Q2P 2006

Video

Running time: 53 minutes

Courtesy the artist

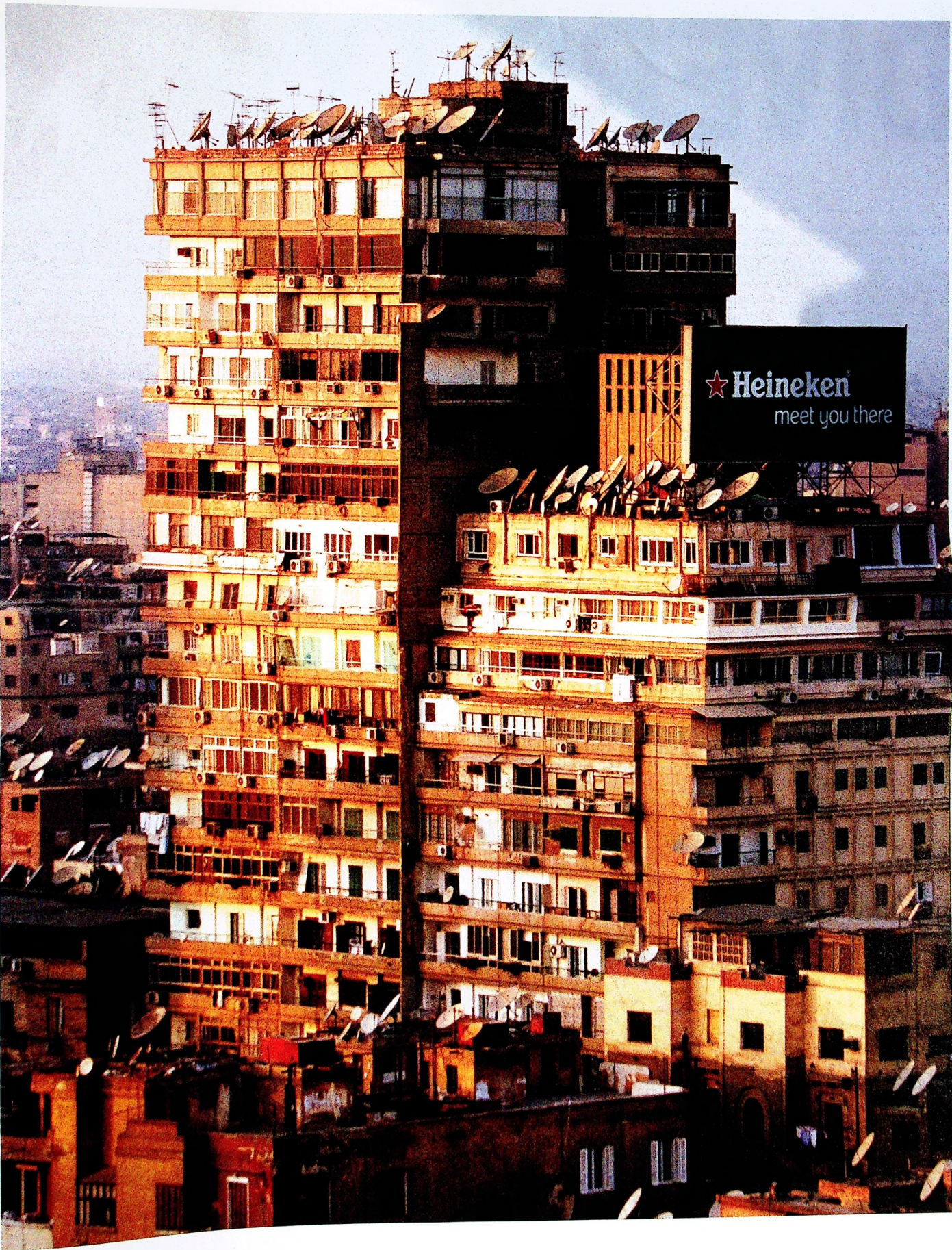
Pipers Models

Density Models (Cairo, London, Mexico)

City, Mumbai 2007

Timber kindly provided by Latham plc

Cairo: Heiner H. Schmitt & (opposite page)



★ Heineken
meet you there

DIVERSITY

In an urban context, diversity - the level of variety within a city - is usually interpreted as its ethnic and racial composition. But diversity has a much broader range of indicators: the spread of ages and incomes, education levels, the range of employment sectors, and people born in the city versus newcomers.

When cities grow to accommodate new people they test the human capacity for co-existence, whether the newcomers are from outlying rural areas or the other side of the world. Diversity can affect a city's social cohesion in different ways. It can foster a degree of integration amongst people from diverse backgrounds, celebrating tolerance and co-existence. On the other hand, it can equally engender segregation, with diverse groups coexisting separately, leading to a potential for social conflict and confrontation.

Urban segregation can take various physical forms, from fortified residential districts to business enclaves; while urban integration can foster vibrant and mixed quarters, catering to the cultural, social and economic needs of particular constituencies. Better integrated cities are designed around shared facilities, such as public parks or accessible public trans-

port systems, and a more continuous urban grain that connects rather than separates communities. A variety of different patterns are examined here, with reference to five of the exhibition's ten cities: Johannesburg, London, Los Angeles, Sao Paulo and Shanghai.

JOHANNESBURG

Johannesburg's multi-ethnic population comprises 73% black African, 16% white, 6% mixed race and 4% Indian or Asian. Since the end of apartheid in 1994 Johannesburg has grown by 4% a year. In recent years there has been an increase in immigration from the rest of the continent to South Africa, particularly to Johannesburg. This has visibly affected many dimensions of city life, including its economy, housing and infrastructure demands, and social integration - with various outcomes.

Johannesburg's history of racial separation is still reflected in its social geography. Whites (a demographic minority) tend to occupy the northern leafy suburbs, where they are being joined by an emerging black middle class. Less affluent black Africans, traditionally relegated to townships, and migrants from elsewhere on the continent have moved into the now-deprived downtown area.

Crime, the ongoing rampant HIV/AIDS epidemic

and a lack of safe public transport are key concerns. Life expectancy is notably low: only 4% of residents reach 65 and the average age for a male is 52 years. Almost one in three is under 20. Currently one household in five has no income, unemployment hovers around 600,000 people.

PROJECT: FARADAY STATION PRECINCT

The Faraday Station Precinct is the hub of a new integrated transport system for a population previously badly served by the city's social and physical infrastructure. The precinct, built above an existing commuter rail system, incorporates formal taxi ranks for the otherwise unregulated long distance and local minibuses which provide the cheapest mode of transport. It is also notable for providing safer, more formalised facilities for herb sellers and healers using traditional medicines or multi.

DESIGNERS: ALBONICA SAKO; MZUMARA ARCHITECTS & URBAN DESIGNERS, WITH IMAA ARCHITECTS. CLIENTS: CITY OF JOHANNESBURG AND THE JOHANNESBURG DEVELOPMENT AGENCY. COMPLETION DATE: 2003.

LONDON

Much of London's recent growth is due to international inward migration, which partially counterbalances the numbers of mostly British-born households leaving the city. 95% of those moving to

London since 1995 were born outside the UK.

Nearly a third of London's residents are from non-white minority ethnic communities. Concentrations are found in three regions: south of the river Thames in Lambeth, Southwark and Croydon, along a corridor from the East End to East Ham, and to the west and north-west. In some areas, ethnic minorities make up over half the population.

London is the UK's economic powerhouse, with global importance as a finance and business centre; nearly 90% of its residents work in services. But its wealth belies the levels of poverty in its inner city areas, where social housing is concentrated, and 'key workers' struggle to find affordable accommodation near their workplaces.

LOS ANGELES

Los Angeles is a 'minority majority' metropolis. Half its residents are Latinos (three times the US average), and over 10% of Asian descent. Only 30% identify themselves as Anglophone white. About 40% were born outside the United States - nearly four times the national average.

Some of the city's ethnic groups congregate in specific sections of the city such as Korea Town, Boyle Heights (Chicanos) and Glendale (Armenians), but most neighbourhoods host a mix of races. The city's



political representation reflects this diversity, though some friction remains.

Los Angeles is home to some of the wealthiest people in the world, but more than 20% of its families live in poverty. Most workers are employed in business and services, but Los Angeles also maintains a solid industrial base. The unemployed tend to congregate in former industrial areas, with newer concentrations emerging in aging suburbs and high-growth peripheral areas.

SAO PAULO

Sao Paulo is ethnically diverse and young: 66% of its population is under 20. The city has remained multicultural since the nineteenth century, when the region's coffee plantations attracted workers from Spain, Portugal and Japan. Many residents are of mixed ethnic origins; descendants of migrants from many parts of the world. It is said that Sao Paulo is the largest Japanese city outside Japan, the largest Portuguese city outside Portugal, the largest Spanish city outside Spain, and the largest Lebanese city outside Lebanon. More recent migrants from Brazil's poorest north-east regions form a large proportion of the city's low-paid service workers.

Sao Paulo is prosperous compared to the rest of Brazil, but poverty, unemployment and crime

remain major challenges. In contrast, the city's wealthy population is reflected by its more than 1,000 private helicopters, a rate of ownership similar to New York City and Tokyo.

The population of the central district has declined steadily since the 1970s. Despite ambitious revitalisation plans, wealthy residents and businesses still move out. The population is growing most in peripheral areas with the poorest infrastructure.

PROJECT: 100 NEW SCHOOLS FOR SAO PAULO

In 2000, the school attendance rate of 11-14 year olds in peripheral urban neighbourhoods of Sao Paulo State was roughly 20%. A lack of school facilities compounded the problem.

The initiative to erect 100 new schools is a direct response to this challenge. The same construction guidelines apply to every site: a high-quality design, simple pre-fabricated structures and durable materials. Projects have low costs and short turn-around times.

Beyond its educational role, the scheme has also provided after-hours, multi-purpose spaces for the local communities. Nearly 30 projects have been completed to date.

ARCHITECTS FOR THREE SELECTED PROJECTS: MMBB ARQUITETOS (CONJUNTO HABITACIONAL CAMPINAS E1 SCHOOL); ESTUDIO 6 ARQUITETOS (JARDIM UNIAKARIMAN/NOACH'S DE CASTRO FERRAZ SCHOOL); SPBR ARQUITETOS (JARDIM ATALIBA LEONILDO PEDRO DE MORAES VICTOR SCHOOL).

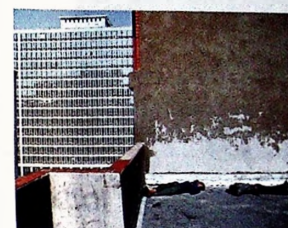
CLIENT: FOUNDATION FOR THE DEVELOPMENT OF EDUCATION (FED) STATE OF SAO PAULO DEPARTMENT OF EDUCATION DATES: 2003 - ONGOING

SHANGHAI

After the homogeneous social levelling of the Mao period, Shanghai has recently become a more diverse society. Only 0.7% of its population was born outside China, but its social mix is deepened by influxes of overseas Chinese, Western and Asian expatriates and domestic economic migrants. Levels of inequality are now as marked as when the city was an international concession before 1941.

Shanghai has a low fertility rate and an aging population; 17% of residents are 65 or older. Its growth is driven by inward migration, particularly from rural areas. This 'floating population' – about 4 million people – helps meet the demand for low-wage labour. But it also tests the city's capacity for social inclusion and integration; 'floating' workers, lacking official status, often live in makeshift accommodation and have only limited access to social services.

ARTWORKS



Guy Tillim, *Al's Tower*, a block of flats on Harrow Road, Berea overlooking the Ponte building. The roof of Sherwood Heights, 5mtr Street, from the series *Joburg* 2004.

Kendell Geers born 1968

Born South Africa, works Belgium
Suburbia 1999
Photographs
Courtesy the artist, Stephen Friedman Gallery and Galleria Continua

Guy Tillim born 1962

Born South Africa, works South Africa
Joburg 2004
Photographs
Courtesy the artist and Michael Stevenson Gallery, Cape Town

Dryden Goodwin born 1971

Born UK, works UK
Reveal 2003
Running time: 15 minutes
Courtesy the artist and Stephen Friedman Gallery

Francesco Jodice born 1967

Born Italy, works Italy
Sao Paulo - Citytellers 2006
Video
Running time: 48 minutes
Courtesy the artist

Dean Sameshima born 1971

Born US, works US
Wonderland 1996-7
Photographs
Collection of Javier and Carlos Andres Peres, Los Angeles and Andorra
Courtesy Alison Jacques Gallery, London and Peres Projects, Los Angeles Berlin

Andreas Gursky born 1955

Born Germany, works Germany
Copan 2002
Photograph
Courtesy Monika Sprüth Philomene Magers, Cologne Munich London

Love in Paraisópolis (swimming pools) 2005, Luiz Arthur Lerao Vieira (left)



COMMISSIONS

FRITZ HAEG



Edible Estates regional prototype garden #4, London UK
Fritz Haeg's *Edible Estates* project began in 2005 as a scheme to replace American front lawns with edible landscapes. He has adapted this approach for *Global Cities* by looking at the history of the lawn in England, comparing lawn use in inner city London with that in Los Angeles.

Bankside is one of London's least green areas, the few open spaces it does provide remain heavily polluted by the effects of past industrialisation. The site Haeg chose for his London *Edible Estate* is just such a place: a triangle of lawn on the junction of Lancaster Street and Webber Street beside Brookwood House, a local council housing block, in Southwark, on the south bank of the Thames.

Haeg and his volunteers worked in collaboration with Bankside Open Spaces Trust and the residents of Brookwood House over the long weekend 25–28 May 2007 to design and plant a garden composed of only edible plants. Vines and beans give height to the garden, while mounded beds separate the plants from the contaminated soil. Haeg invites us to explore our relationship with food production and with our neighbouring urban green spaces. In addition, the *Edible Estates* Research Station in the *Global Cities* exhibition provides information for others wanting to create their own edible gardens.

Fritz Haeg (born 1969 USA) established the Fritz Haeg Studio in 1995 in New York City before moving his practice to Los Angeles in 1999. He founded Sundown Schoolhouse in 2006 as an alternative education environment, and is collaborating with venues across America including The Whitney Museum, New York and MOCA, LA.

ARCHITECT: FRITZ HAEG, **PROJECT TEAM:** JACINTO ASTIAZARÁI, MATTHEW AU AND HEIKO PRIGGE, **SUPPORT:** BANKSIDE OPEN SPACES TRUST AND BETTER BANKSIDE

NIGEL COATES



Mixtacity

The Thames Gateway – an area of land stretching 40 miles (60 km) eastwards from East London on both sides of the river Thames – has been designated a national priority for urban regeneration.

Mixtacity is a newly-commissioned installation by Nigel Coates which explores the area's potential to accommodate the complex range of cultures, ethnic ties and lifestyle choices of its future inhabitants. Some 160,000 new homes are planned for the area; what will this mean for the architecture of the city? How will the Gateway appear to up to a million anticipated newcomers?

Coates' installation takes in the area from Canary Wharf, past the Royal Docks, to Dagenham and Rainham. This is not the entire Gateway zone, but it samples various typical conditions. Like all visions of future architecture, *Mixtacity* uses the illusionist power of the model, a giant 'L' that occupies a corner of *Global Cities*.

Whereas most planning models have a political and economic determinism, this one is driven by an artistic spirit. Its apparently casual juxtapositions are intended to stimulate individual interpretation; it may suggest the kind of common language the Thames Gateway needs for its long-term success.

Nigel Coates (born 1949 UK) trained at the Architectural Association, where he taught from 1978–88. His practice, Branson Coates Architecture, was set up in 1985, and has completed many projects in Europe, Japan and the UK. His publications include Guide to Ecstacy 2003. He is currently head of the Architecture and Interiors Department at the Royal College of Art, London.

ARCHITECT: NIGEL COATES, **PROJECT TEAM:** TOBIAS KLEIN, FERNANDO RIHL, CORY MATEER, TOMAS ALONSON, **COLLABORATING RCA STUDENTS AND STAFF:** ARCHITECTURE – ALICJA BORKOWSKA, FINN WILLIAMS, ROBERTO BOTTAZZI, VEHICLE DESIGN – FLORIAN SEIDL, **SUPPORT:** LONDON THAMES GATEWAY DEVELOPMENT CORPORATION, **MINIATURE LAMPS:** SLAMP SPA ROMA, **CNC MODELS:** RCA RAPIDFORIA

NILS NORMAN

DIG UP YOUR LAWN
PLANT FOR VICTORY

TOGETHER
WE CAN WIN THE
WATER WARS

MAKE A DROUGHT RESISTANT GARDEN
SAVE AND REUSE BATH WATER
HARVEST RAINWATER



Bus shelter 2015: Be Creative Or Die; ill-Logo. The Architect

You will encounter three sets of street furniture on the upper walkway of the exhibition: a bus shelter, a sign with seating and a lamppost. Artist Nils Norman has borrowed them from Transport for London and the London Borough of Southwark for the period of the exhibition. He has embellished each object with further signage systems through which he presents ecological and environmental information as if it were customised, propagandist advertising. Personally, and rather forcefully, they comment on bad urban planning, architecture and street design, as well as capitalism's lack of environmental concern.

The direction signage points out fashionable media classifications of people rather than locations. And the posters that adorn the bus shelter do not promote consumer desirables. Instead they publicise impending environmental disasters and propose micro-solutions for living in a flood zone, making your own diesel and combating West Nile Virus. To complement these proposals, Norman has adapted the roof of the bus shelter to host a drought-resistant garden, formed of Agaves and other plants, an illustration of how the city's green spaces might look in the future, given the onslaught of climate change.

Nils Norman (born 1966 UK) has exhibited internationally and written for various publications. He collaborates with a range of artists and also lectures in Europe and the US. He completed a major design project for the Roskilde Commune in Denmark in 2005 and is now working on a school playground project for the new Golden Lane Campus in East London. His works Ideal City and Fantasy Piccadilly Line commissioned by Platform for Art are currently installed at Piccadilly Circus station and on Piccadilly line trains.

ARTIST: NILS NORMAN, **BUS STOP:** KINDLY LENT BY TRANSPORT FOR LONDON (LONDON BUSES), **TRUEFORM, LAMPPOST, SIGN AND SEATING:** KINDLY LENT BY LONDON BOROUGH OF SOUTHWARK

RICHARD WENTWORTH



Scrape/Scratch/Dig

The monitors which appear in apparently arbitrary positions throughout the exhibition show a work by Richard Wentworth. The siting of the monitors means that the work can be glimpsed, encountered or closely observed from multiple vantage points. But it is never possible to confirm whether all the identical short videos are running simultaneously.

Scrape/Scratch/Dig 2004–7 was originally a component of Wentworth's *An Area of Outstanding Natural Beauty*, a collaboration with Artangel in an abandoned warehouse at Kings Cross, London in 2002. The video features several interesting shots of ways in which cities are set out, regulated and marked. The assumed craft skill of a senior cartographer at the A-Z publishers sits up against the physical assurance of the road-marking crew who pace out the public surfaces of the city. While they define and redefine the man-made ground beneath our feet, the sky (the only 'nature' in the city says Wentworth) is scoured by vapour trails. At the time of *An Area of Outstanding Natural Beauty* the artist remarked 'the density of this condensation is the quickest way to measure the economy of a city'.

Richard Wentworth (born 1947 Samoa) studied at the Royal College of Art, and taught at Goldsmiths College from 1971–87. In 2002 he was made Master of the Ruskin School of Drawing and Fine Art, Oxford University. He exhibits widely at institutions including the Serpentine Gallery, the Whitechapel Art Gallery and the Hayward Gallery in London; the Israel Museum, Jerusalem; the Institute of Contemporary Art, Philadelphia; the Irish Museum of Modern Art, Dublin; the Museum Moderner Kunst Stiftung Ludwig, Vienna; the Musée d'Art Moderne de la Ville de Paris, Paris.

ARTIST: RICHARD WENTWORTH IMAGE IN 2002 RICHARD WENTWORTH WORKED WITH ARTANGEL TO PRODUCE *AN AREA OF OUTSTANDING NATURAL BEAUTY*. AN ABANDONED WAREHOUSE, OPENING DIRECTLY ON TO THE STREET BEHIND KING'S CROSS STATION, WAS CONVERTED TO A 'SPORTS HALL' WHERE VISITORS AND PASSERS-BY COULD SPEND TIME PLAYING TABLE TENNIS. ALTHOUGH THE 15 TABLE TENNIS TABLES DEFINED THE SPACE, NUMEROUS MAPS, GAMES, VIDEOS AND A PANOPTICAL PERISCOPE DISTRACTED THE PLAYERS. THE MATERIAL PROPOSED THAT IT WAS POSSIBLE TO GRASP THE EXPERIENCE OF THE CITY BY MAPS AND STATISTICS, WHEREAS THE AUDIENCE'S ATTENTION WAS, IN FACT, SEDUCTED AND DISTRACTED BY THE VARIETY OF STIMULI. *AN AREA OF OUTSTANDING NATURAL BEAUTY* WAS OPEN FOR THREE MONTHS.

REM KOOLHAAS



Dilemmas in the Evolution of the City

The commission by Rem Koolhaas is shown in a bay off the upper walkway through the Turbine Hall. It is conceived as a public space, surrounded on three sides by high walls which have been fly-posted with powerful and provocative images illustrating 'dilemmas' faced by developing cities.

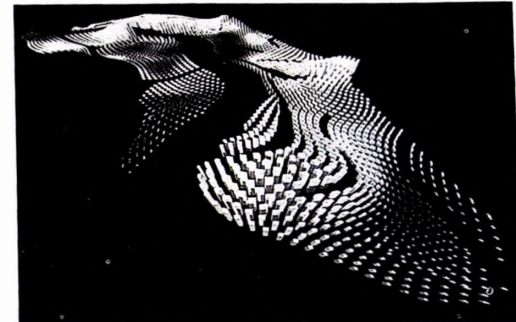
Koolhaas worked on the project with OMA*AMO (Office for Metropolitan Architecture – AMO is the mirror image of OMA), building on OMA's extensive body of international urban research. The 'dilemmas' are presented as the products of two decades of globalisation and privatisation. The project alerts us to the irony that, at the very moment when the majority of people now live in cities, architects are conducting research into the complexities of current conditions, instead of making proposals for action.

The installation uses London and the UK as a point of comparison with international case studies as disparate as Dubai, Singapore and the town of Seaside in Florida. The intention is to provoke debate about preservation and nostalgia, the rise of leisure-oriented cities, and the growing similarities between the approaches and rhetoric of the public and private sectors. Property marketing material is juxtaposed with materials from urban masterplans and political campaigns. OMA*AMO is asking whether the privatisation and surveillance of 'public' spaces is creating exclusive urban environments at exactly the time when British cities have become more ethnically and culturally diverse.

Pritzker prize-winner Rem Koolhaas (born 1944 Netherlands) founded the Office for Metropolitan Architecture in 1975 and has been involved in building and urban planning projects ever since. OMA's recent projects include Casa da Musica (Porto), Seattle Public Library, and H-project (Seoul). Koolhaas is a Professor in Practice at Harvard Graduate School of Design. His publications include *SMLXL* and *Content*.

ARCHITECT: REM KOOLHAAS PROJECT TEAM: REM KOOLHAAS WITH JAN KNIKKER, MIRANDA JOS-SIFIDIS, MOIRA LASCELLES, STEPHAN PETERMANN, SHANNON HARVEY

ZAHA HADID



Form Informing Urbanism - Parametric Urbanism

Architects Zaha Hadid & Patrik Schumacher have chosen the Thames Gateway as a testing ground in which to evolve new ways of approaching large-scale urban developments. The Thames Gateway is an area stretching eastwards from East London on both banks of the river Thames; it has been hailed as Europe's largest urban regeneration project. Driven by architectural rather than town-planning concerns, Hadid and Schumacher have used a series of new and powerful digital design techniques to develop an approach to urban regeneration which they call 'Parametric Urbanism'.

Hadid and Schumacher's project is underpinned by research into the historic permutations of different building types in London and internationally. This information is presented in illustrated bands along the panels in their installation. They examine four main building types: individual villas, high-rise towers, slab-shaped buildings and city-blocks. These can be thought of as points, lines, planes, and volumes. Four rapid prototype models give examples of how each type might be dispersed in a landscape.

Hadid & Schumacher use advanced computer modelling software to project these four building types over a base map of the Thames Gateway. They have adjusted this model to reflect the area's current conditions, and used it to speculate on possible forms of future development. They have tested multiple combinations of the different building types, often fusing them to create hybrid structures. The outcome of these experiments is documented in a large-scale image with a range of striking new forms, and an animated sequence which shows the evolution of an intensely urban pattern across the area.

Zaha Hadid (born 1950 Iraq) became the first woman to be awarded the distinguished Pritzker Prize in 2004. Her built work to date includes the Phaeno Science Center in Wolfsburg, Germany 2005. Her current projects include the Aquatic Centre for the London 2012 Olympic Games, the Sheikh Zayed Bridge in Abu Dhabi and opera houses in Dubai and China.

ARCHITECTS: ZAHA HADID & PATRIK SCHUMACHER. **PROJECT TEAM:** DIMITRIS AKRITOPoulos, NICK ARMITAGE, DANILO ARSIC, LAUREN BARCLAY, EMILY CHANG, KRISTOF CROLLA, BRIAN DALE, DOMINIK DADATSI, EIRINI FOUNTOULAKI, KYUNGUN KIM, KELLY LEE, SHIQU LI, JULIE LUI, THEODORA NIATSOPOULOU, ELENI PAVIDOU, SARA SHEKH AKBARI, HALA SHEKH, CLAUS VOIGTMANN, HANRIET WARDEN, LEO WU.

TALKS & DISCUSSIONS

DEBATE LONDON

Presented by The Architecture Foundation, these debates focus on whether recent architectural innovations have been beneficial to the capital. Speakers include David Adjaye, Zaha Hadid, Sunand Prasad, Ken Livingstone, Richard Rogers and Saskia Sassen.

All tickets £8 (£5 concessions) Booking recommended (fee applies) Turbine Hall

IS LONDON A UNITED CITY?
FRIDAY 22 JUNE, 19.30–21.30

THE 2012 WISHLIST: WHAT KIND OF LONDON DO WE WANT?
SATURDAY 23 JUNE, 19.30–21.30

HOW CAN A BOOMTOWN BE GREEN?
SUNDAY 24 JUNE, 19.30–21.30

CAN LONDON BE BOTH BIG AND BEAUTIFUL?
MONDAY 25 JUNE, 19.30–21.30

For more information please visit www.debatelondon.com

FILMS

PROJECTED CITIES

This series of film and video screenings explores critical perspectives on urban life. The films address themes in the *Global Cities* exhibition and question some of the social and political issues that pervade the urban environment.

All tickets £5 (£4 concessions) Booking recommended
Starr Auditorium

PROJECTED CITIES: EYAL WEIZMAN

SUNDAY 1 JULY, 18.00 PROGRAMME DURATION 70 MIN
Eyal Weizman, a London-based architect and researcher into the politics of settlement in Israel, selects films that explore the topic of 'urbicide': the city as a site of war and destruction.

PROJECTED CITIES: SHAI HEREDIA

SUNDAY 15 JULY, 18.00 PROGRAMME DURATION 90 MIN
Shai Heredia is director of Experimenta, India's international festival for experimental cinema. Heredia's selection includes a documentary about call centres in Mumbai which explores the impact of globalisation.

LONDON

SUNDAY 22 JULY, 13.00 PATRICK KEILLER, UK 1994, 85 MIN

ROBINSON IN SPACE

SUNDAY 22 JULY, 15.00 PATRICK KEILLER, UK 1997, 82 MIN

PROJECTED CITIES: PATRICK KEILLER

SUNDAY 22 JULY, 18.00 PROGRAMME DURATION 90 MIN
Keiller presents material from *Londres*, *Bombay* 2006, his ambitious multi-screen video installation, and *The City of the Future*, his ongoing project researching landscapes in film from the 1880s onwards.

LOS ANGELES PLAYS ITSELF

SATURDAY 4 AUGUST, 17.00 THOM ANDERSEN, USA 2003, 169 MIN

POLLY II: PLAN FOR A REVOLUTION IN DOCKLANDS

SUNDAY 5 AUGUST, 17.00 ANJA KIRSCHNER, UK 2006, 30 MIN

MURAT AND ISMAIL

SATURDAY 11 AUGUST, 15.00 MARIO RIZZI, TURKEY 2005, 58 MIN

COSMOPOLIS

SUNDAY 12 AUGUST, 15.00 OTAVIO CURY, BRAZIL 2005, 55 MIN

For full details visit www.tate.org.uk

For tickets visit www.tate.org.uk/tickets or call 020 7887 8888

YOUNG TATE

GENERATION LONDON

MONDAY 25 JUNE, 13.30–15.30 STARR AUDITORIUM

You get to set the agenda in this lively debate about our capital. This day-long event is your chance to quiz big names from the worlds of architecture, design, politics, business, culture and media. For ages 11–15. Free, booking required. Places are limited.

GENERAL INFORMATION

Photography and mobile phones are not allowed in the exhibition.

EXHIBITION HOURS

20 June – 27 August

Sunday – Thursday 10.00–18.00

Friday and Saturday 10.00–22.00

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