

Tall buildings in the European context

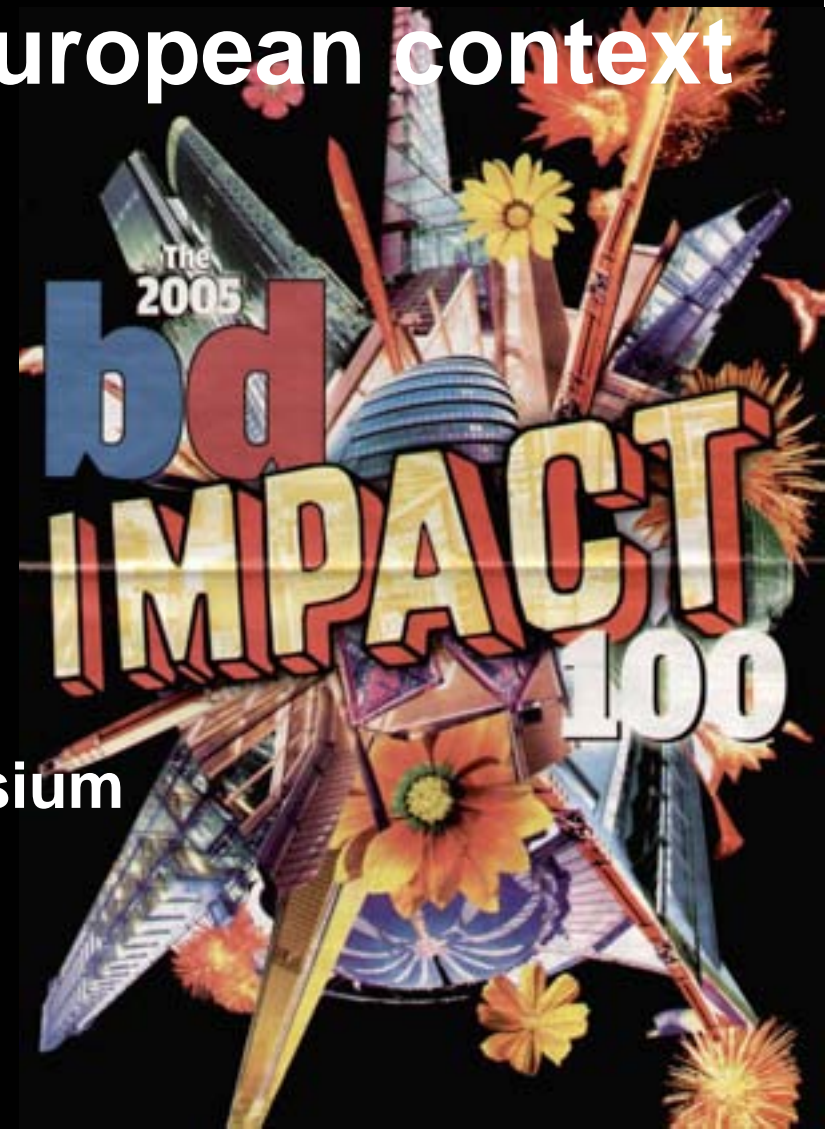
Toronto Higher Learning Symposium

19 October 2006

Lora Nicolaou

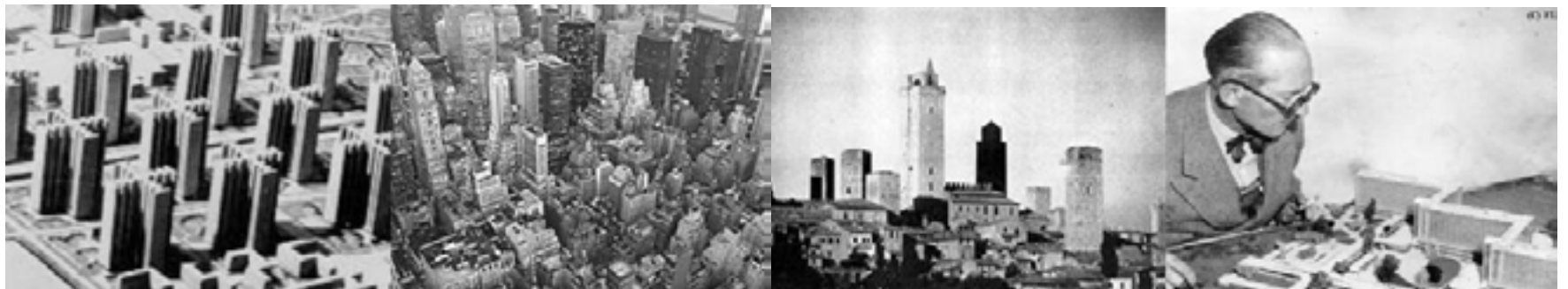
Director of Urban Strategies, DEGW

Head of Research, Urban Renaissance Institute (URI) University of Greenwich



DEGW

Renewed interest.....everywhere!



Little understanding of issues relating to 70's practice

Proposing the **'first generation'** tall building policies

Urban transformations comparable to the 'industrial revolution'

Going tall: drivers for 'change'



1970,s

Markets: demand, supply, property economic

Technologies: innovations, cost implications

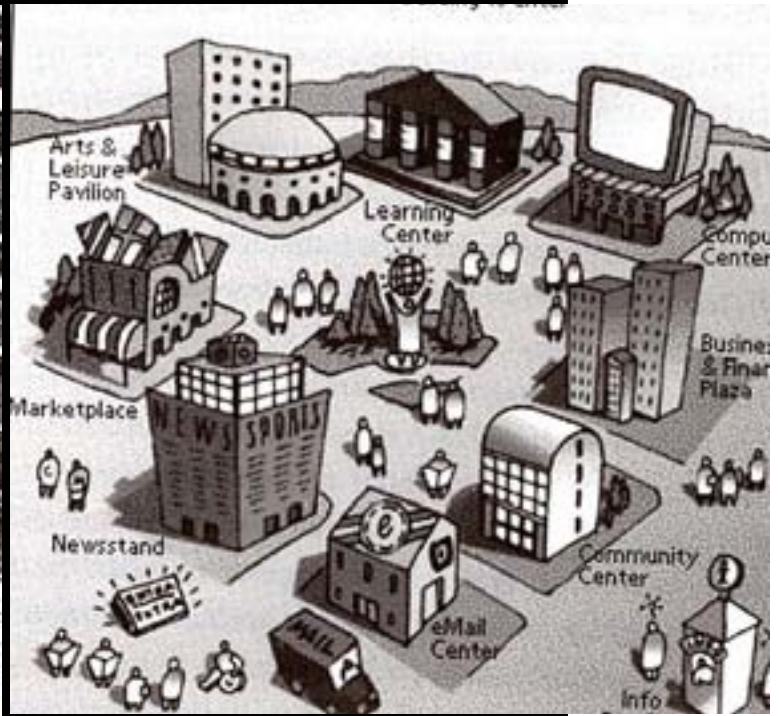
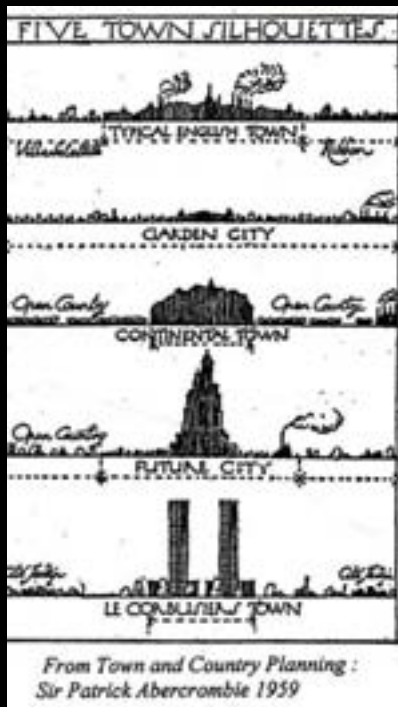
Regulation: planning for sustainability

Design culture: political backing for 'social provision'



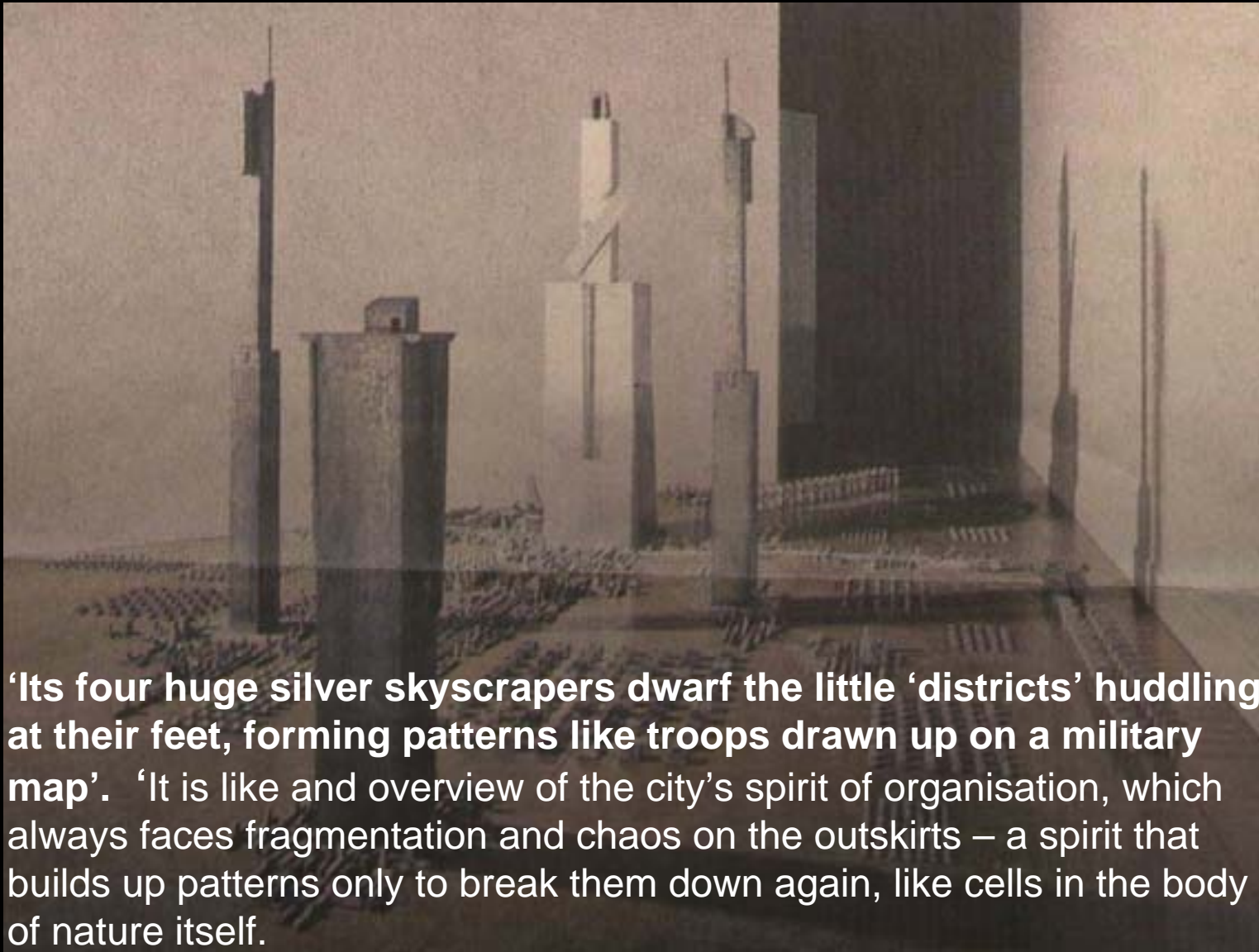
2000

Nature of demand pressure



outside 'Logic of space' and conventional economics

A highly emotive issue



‘Its four huge silver skyscrapers dwarf the little ‘districts’ huddling at their feet, forming patterns like troops drawn up on a military map’. ‘It is like an overview of the city’s spirit of organisation, which always faces fragmentation and chaos on the outskirts – a spirit that builds up patterns only to break them down again, like cells in the body of nature itself.

1 Nature of European policies (London)

2 Strategic considerations, notions: realities & myths

Challenges of cities

1

Nature of European Policies

**Focus on strategic policy conditions
Less on design guidance**

Start to appreciate 'tall' traditions



Rembrandt Tower, Amsterdam

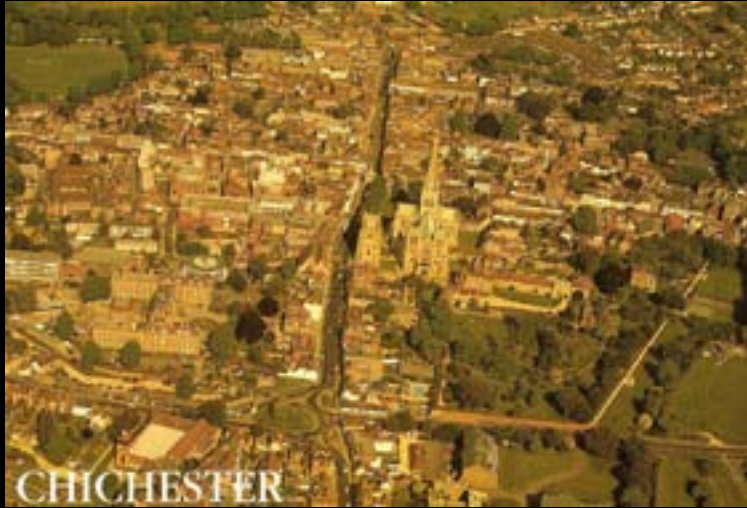


Centre Point, London



First generation of 'heritage' listings

Historic context transformations



Chichester

Constantly changing 'social expressions'
Shape less relevant

A representation of 'common values'
Skyline to regulate city growth



London

Pressure to historic centres



Dublin



Copenhagen

Centralised circulation patterns & infrastructure

Contractions between conservation & economics

Two policy points of view

London Paris



UK/Ireland Europe

criteria based case by case review zoning systems, masterplans

‘Non at all’ or ‘everywhere’

Individually assess or collectively planed

Historic context transformations



Impact on the ground

Post war 'tall' cores



Rotterdam



Frankfurt

Definition of locations

'Loos', objective based guidance regulation

Consolidation, sense of place



Rotterdam



Frankfurt

Frankfurt: More specific place making guidelines

Rotterdam: process based regulatory tools

Rotterdam: process focus D.C.

Debate attributes through expert panels



Innovation

Flexibility

Energy saving

Since of place

Climatic design

Expression

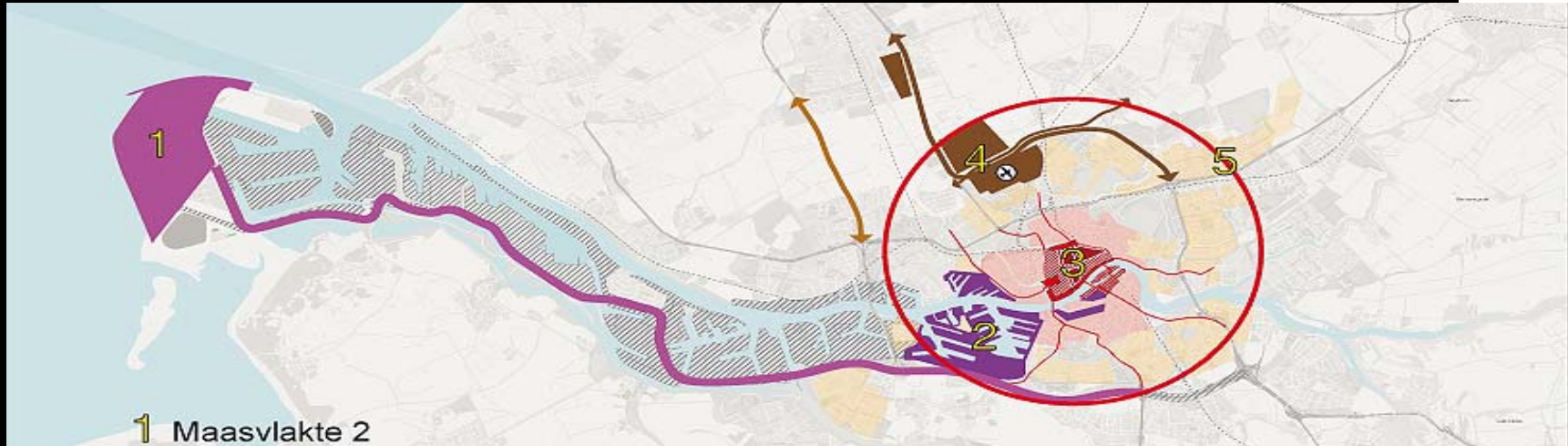
Durability

Built up knowledge & databases

Shape approaches & design ideas up-front

Set preconditions for effective development control

Rotterdam: revisiting role & 'value



Not a new Idea, adopted by others!

Can not afford the 'best of its kind'

Back to the beginning: repositioning Rotterdam

Focus on 'clientele' (knowledge worker)

Comprehensive policies for city growth & renewal

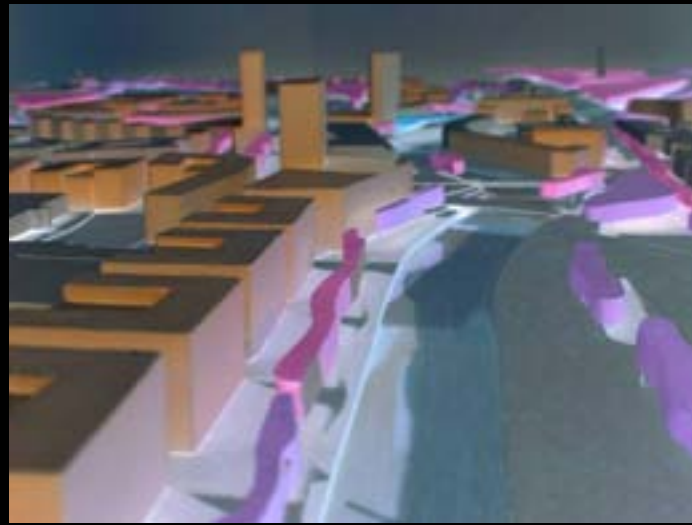
Most other European cities



Rotterdam Station



La Defence



Heuston station, Dublin



Milan

Comprehensive additions of new 'cores'

Smaller cities and towns



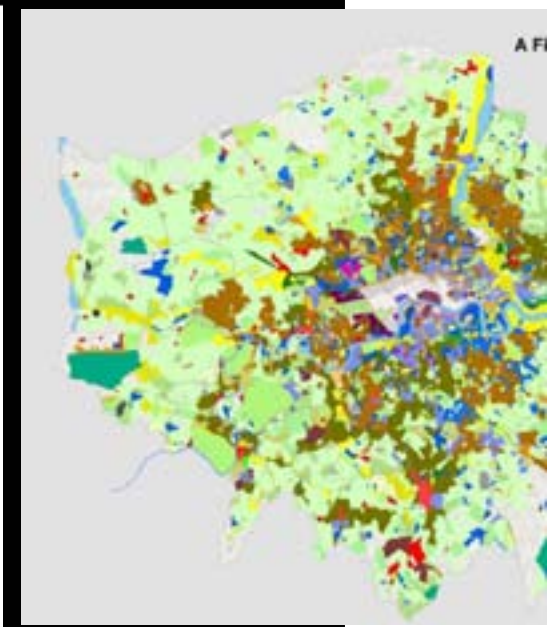
Oldham, Manchester



Hove, Brighton

Single buildings as 'image generators'

London: luck of coordination



London plan: strategic policy objectives

Local plans: undeveloped, diverse, uncoordinated

Non statutory guidance, CABE/EH

PPG1: Statutory views framework

London: polarisation of views

Challenges & perceived conflicts

International image vs. Local distinctiveness

Representing the future vs. Retaining the past

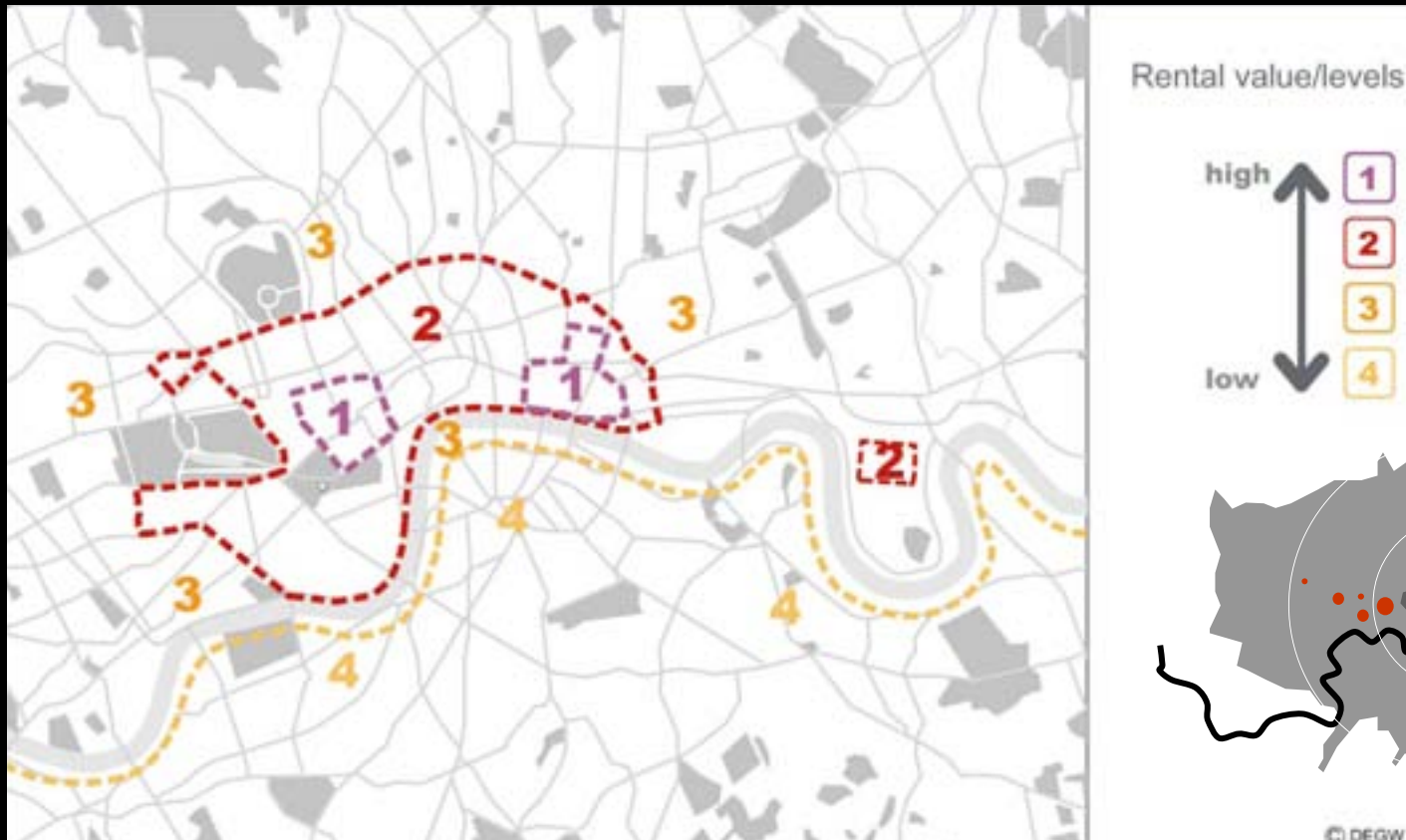
Reflecting diversity vs. Upholding established value

Economic success vs. Quality of life

Centralisation vs. Local control



London: Role of markets



Rental values: shaping the skyline

Predictable commercial but not residential markets

London new generation towers



49 Leadenhall Street



20 Fenchurch street



Blackfriars Bridge – Beetham Tower

Emphasis on 'form' more than 'architecture'

London: changing demand patterns



Vauxhall bridge tower

Unpredictable character of residential tall buildings

London: legibility of the plan



Views: from 'dynamic' to 'pepper potted' skyline

London: local distinctiveness



London, St Paul's from Westminster and Vauxhall bridge



How far before becoming 'anonymous'

London: historic views



London, St Paul's from Waterloo and Tate modern

Preservation of views towards historic landmarks

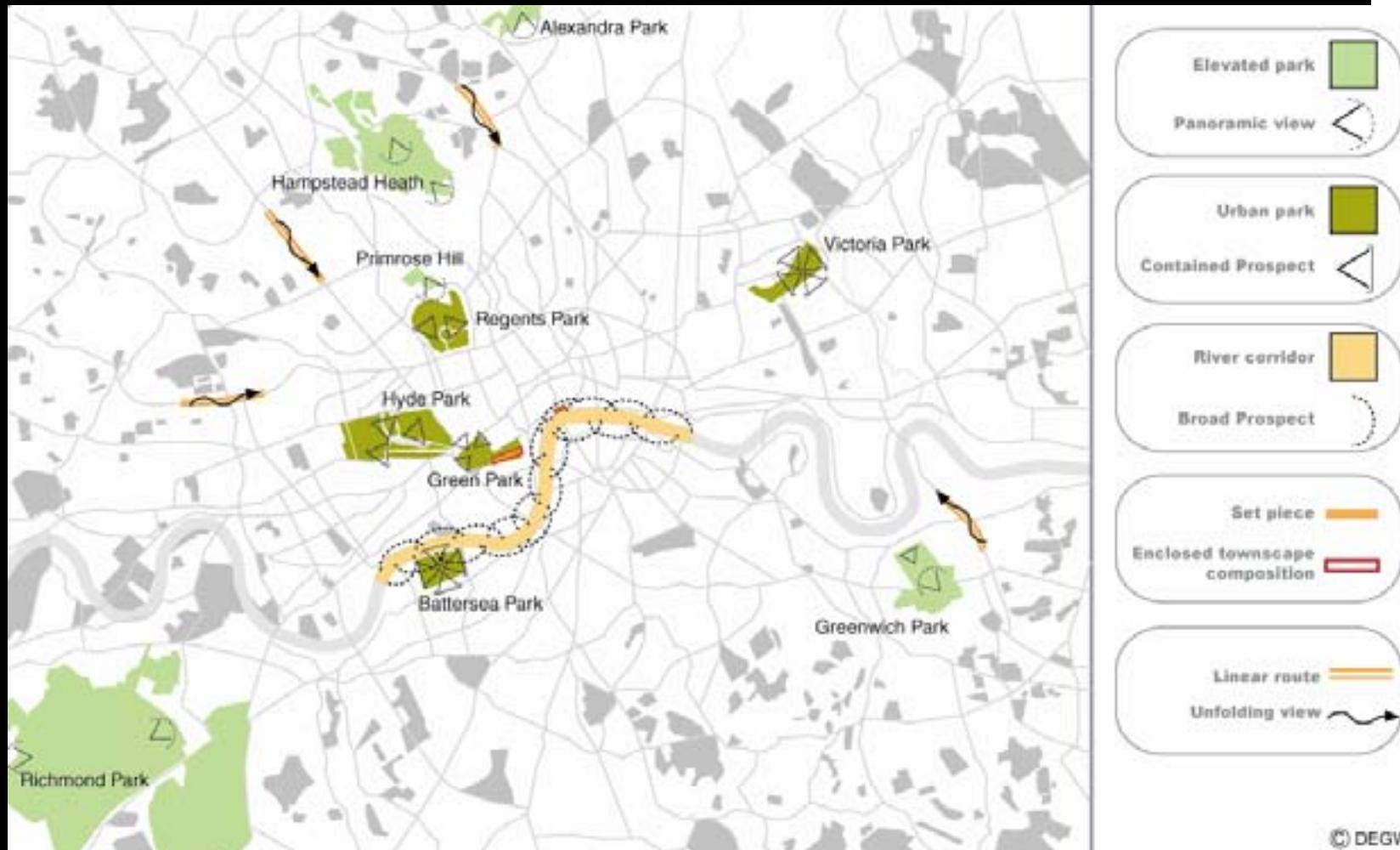
London strategic views



A limited / simplistic tool
Inadequate in achieving its own objectives
Negative impact on local townscapes

Advantage: regulatory clarity

Views management plans



Expanding capability of the 'testing' tool

Views management plans



Primrose Hill View

Viewing place
foreground
middle-ground
skyline configuration
background
landmark objects



consideration of skyline not only historic landmarks

Views management plans

Map VA1 The proposed view protection framework

London River Prospects

- A. Tower Bridge, City Hall
- B. London Bridge
- C. Southwark Bridge
- D. Millennium Bridge
- E. Blackfriars Bridge
- F. Waterloo Bridge
- G. South Bank
- H. Hungerford Bridge
- I. Westminster Bridge
- J. Lambeth Bridge
- K. Victoria Embankment
- L. Jubilee Gardens
- M. Albert Embankment

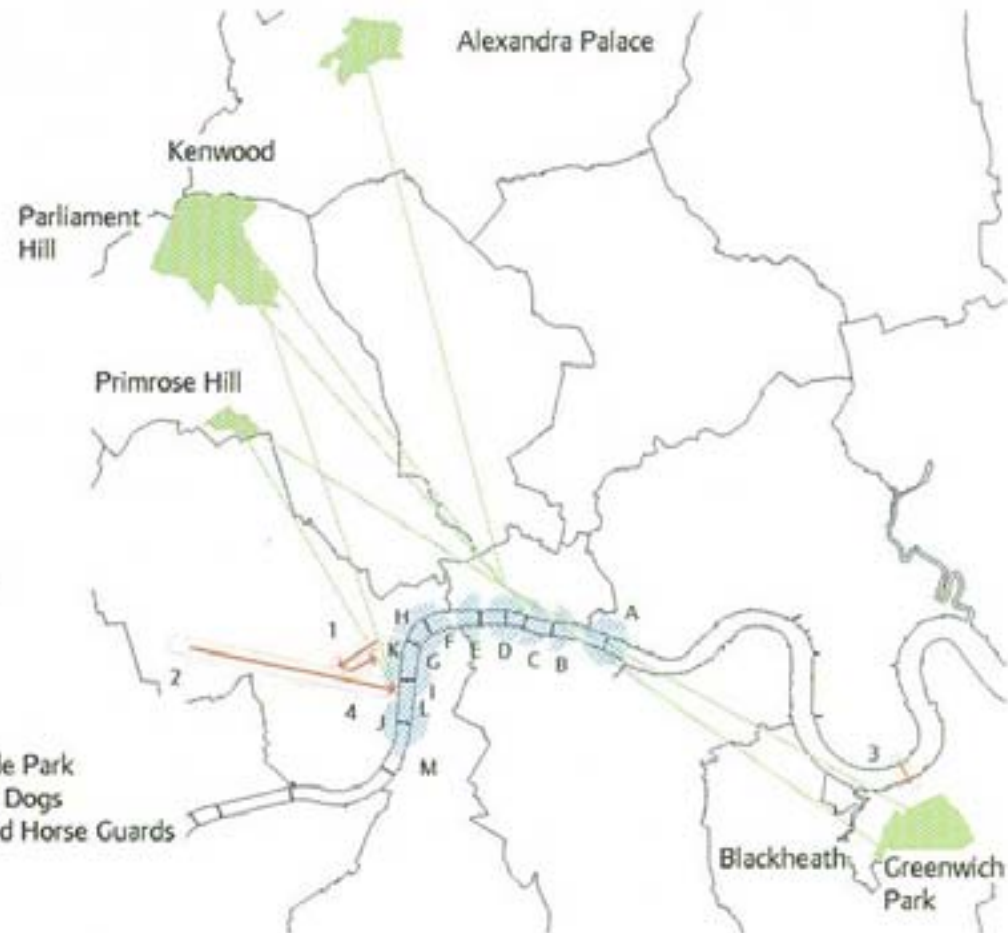
London Panoramas

- Sightline to Landmark Building
- Public Place

Townscape Views

- 1. Buckingham Palace from Mall
- 2. Palace of Westminster from Hyde Park
- 3. Royal Naval College from Isle of Dogs
- 4. St. James's Park to Whitehall and Horse Guards

Source: GLA, 2002



Basis for PPG1: pending

2

Strategic considerations of 'policy frameworks'

Notions: realities & myths

‘Why?’never ‘Why not?’

Potential for changing decisively the nature of
European cities

Place & Time specific

Rotterdam



Dublin



London



Rotterdam: Renewal

How to consolidate and revitalise the central core?

Dublin: City image

Should we built any? How do we celebrate new economic realities?

London: Economics

Do we need high rise to retain our economic positioning?

Dual consideration.....

Positive environmental change

Collective opinions & preferences

‘What?’before deciding the ‘How?’

Nature of place

Aspirations of societies

‘Shape’ or tall development (markets & tenancies)

Groups vs. single taller buildings



High buildings

landmark function
no significant impact on density
difficult to control environ. impact
rely on existing infrastructure
Limitations of ground plans



High clusters

significant increase of density
Bigger capacity - regeneration
pay for added infrastructure
control of environmental impact
own environment & character

Commercial vs. residential



Commercial



Residential

different physical form and architecture
location character and economics
servicing - amenity and transport

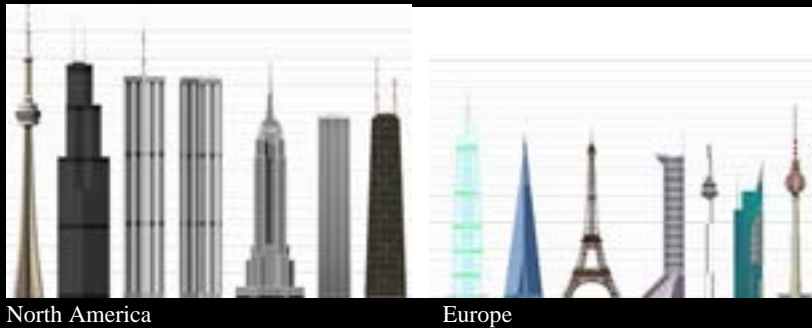
Two very distinctive urban planning elements

How 'high'?



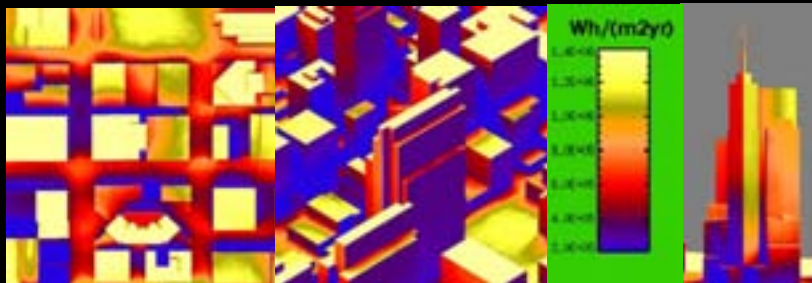
Building construction

Conventional 60m
Alternative vertical circulation 150m
Alternative structural systems 150m+



Markets

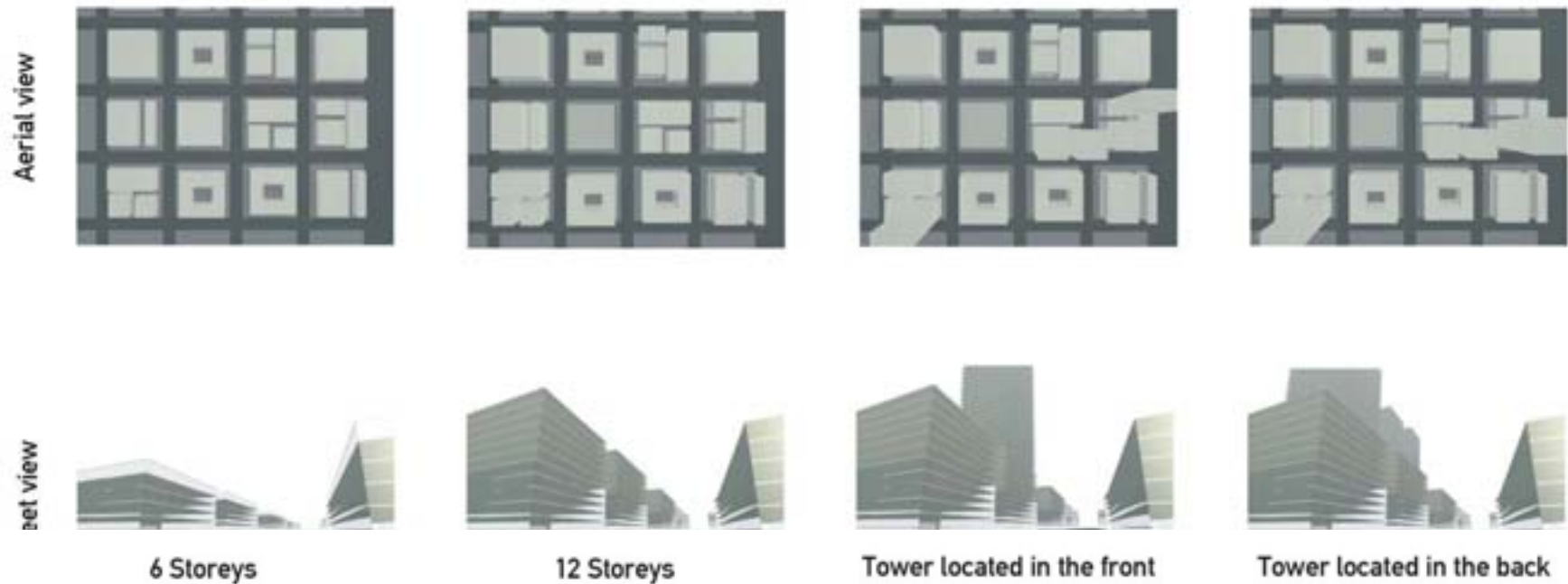
Medway 60m
Sheffield 75m
Dublin 90m
London 250m
KL 350m+



Microclimate

City of London ~150m

How 'high'?



Within existing morphologies: 12-15 storeys - 'groundscapers'
'Absorbed' if well designed with min. impact on character: up to 20 storeys ()
New high rise morphologies or landmarks: 75m+

European Townscapes, design in context

DEGW, Residential density research DDDA

'Realities' or 'Myths'



Why High Rise?

Intensification of space and use

Regeneration of cities and places

Global positioning, change of city image

Diversification of tenancies / sectors

Investment advantages

Desire: pressure by 'stakeholder' groups



Why Not High Rise?

Inefficiency of building type (utilisation)

Energy performance (skyscraper!)

Impact on mix of uses & tenure

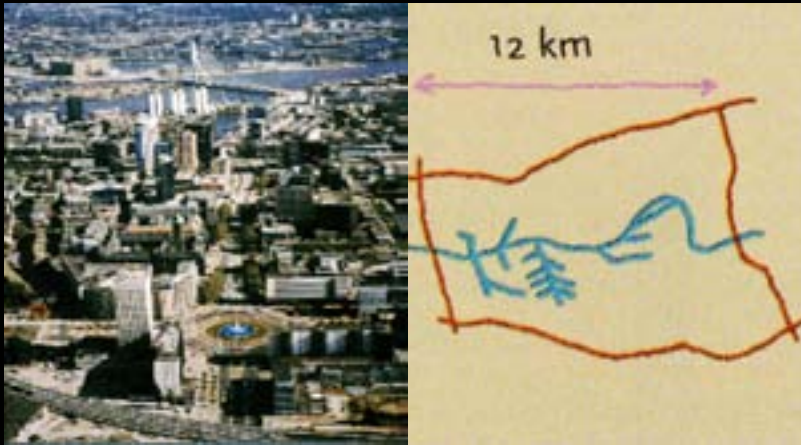
Impact on vitality, and urban character

Lack of flexibility (phasing, relevel. etc)

Narrow sector demand (demographics)

Construction costs and land values

Intensification of the city



Rotterdam centre core : 1:5
The 'ruit': 450,000 inhabitants

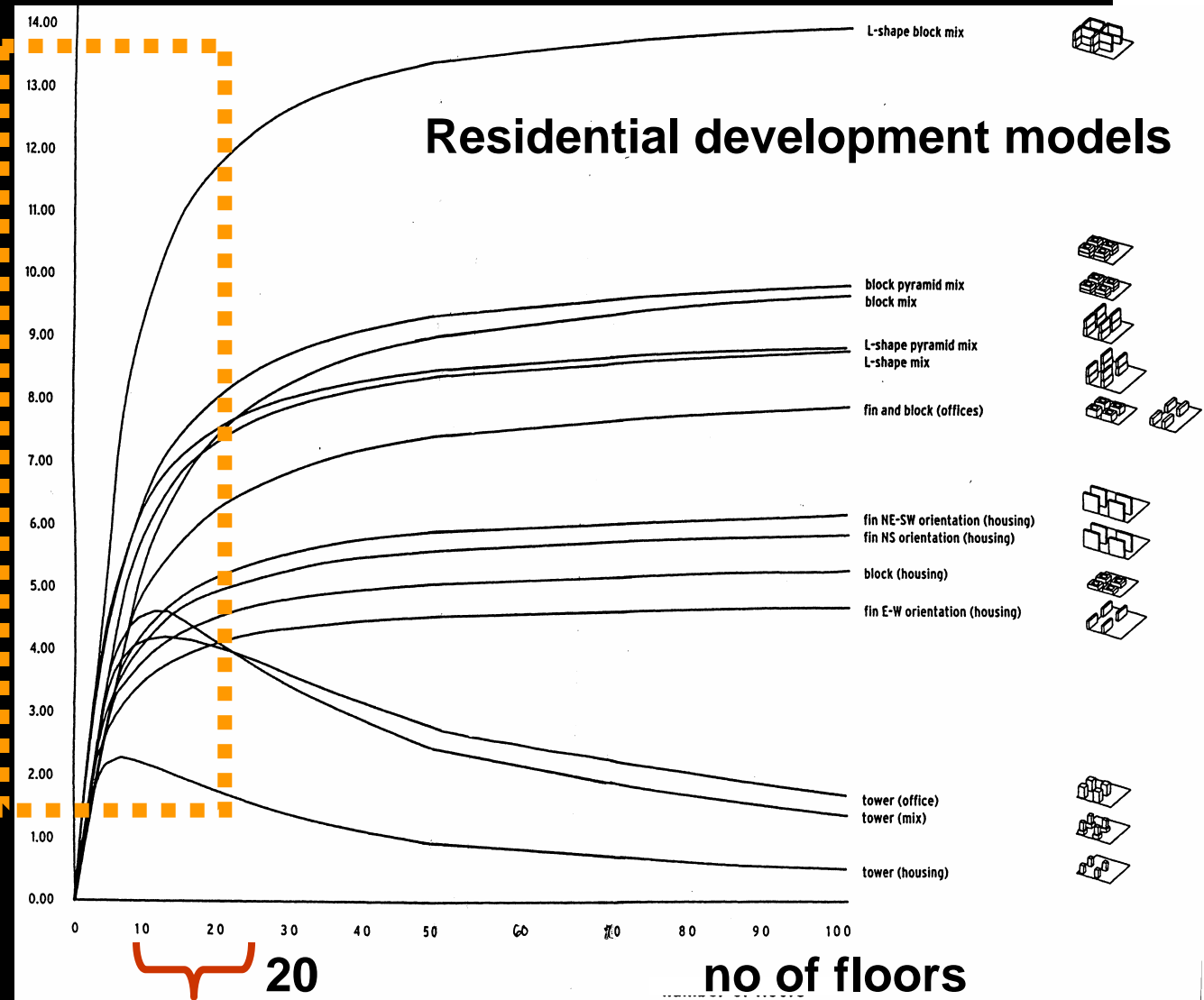


Paris centre core : 1:6
The 'peripherique': 2.3 m inhabitants

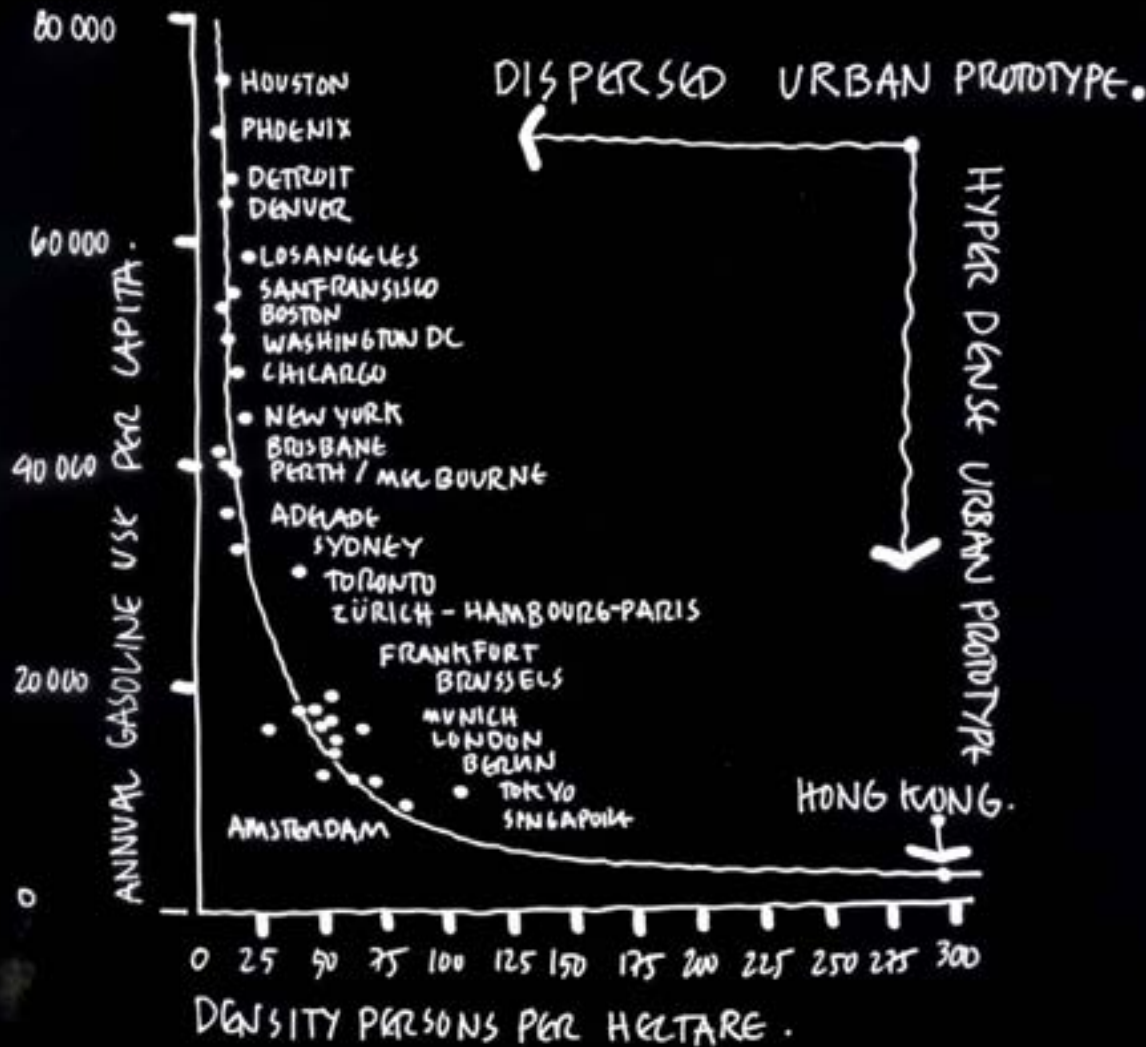
Intensification of new housing

Space density

Thresholds

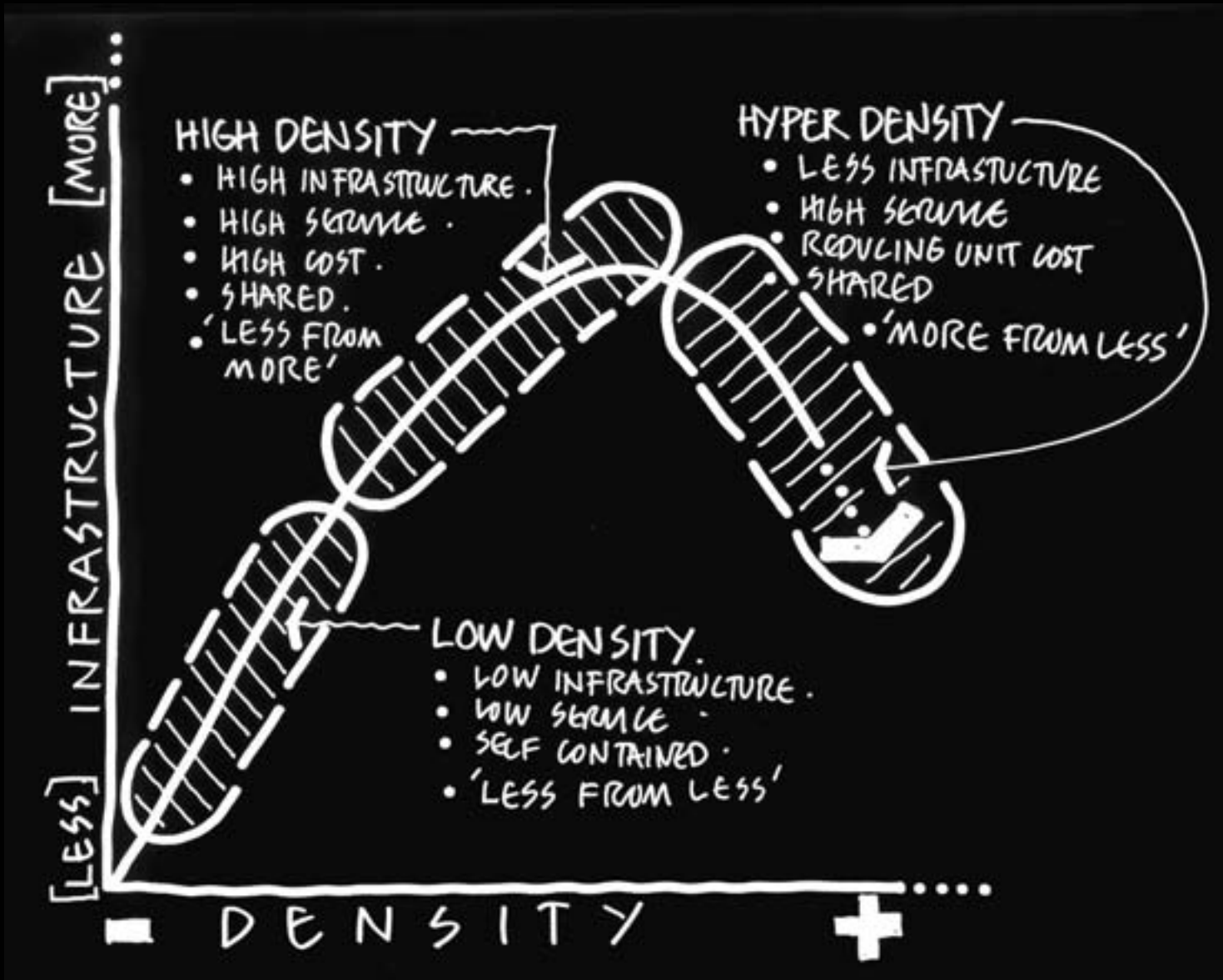


Density & energy consumptions



MORE WITH LESS.

Infrastructure intensity



Regeneration

Successful precedents?



Canary Wharf



Greenwich peninsular



Bradford



Malmo

Large comprehensive redevelopment city sites

Strong city policy and political support

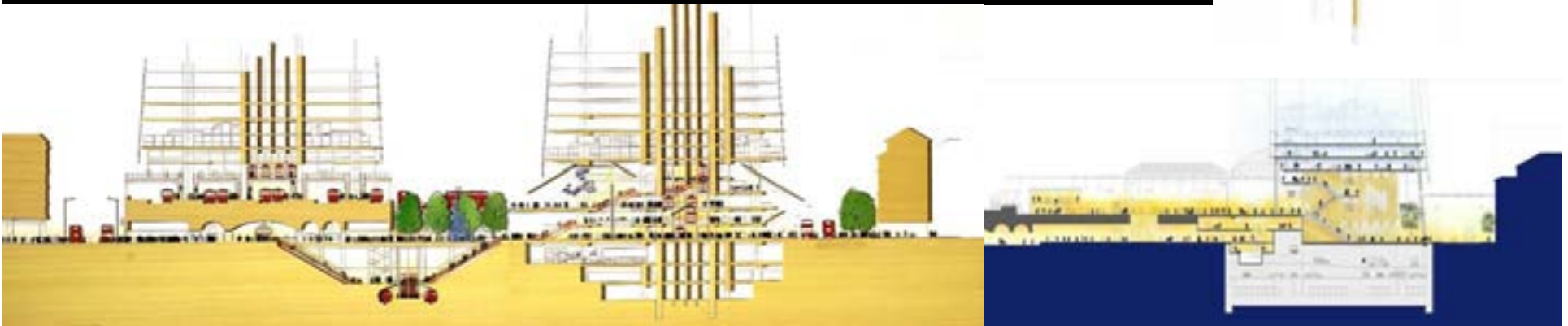
Substantial infrastructure investment

Long term development strategy - 30 years

Landmark conditions only one aspect!

often signposts, more than initiate change

Mix use tall building



Non viable or sensible in majority of places

City profiling and 'branding'

Alternative strategies



London



Rotterdam



Barcelona



Manchester

Capitalise on existing character assets

Contemporary perceptions of 'value' i.e. image value of renewal

Focus on cultural understanding of clientele

Physical, events based, serviced etc.

City profiling and 'branding'

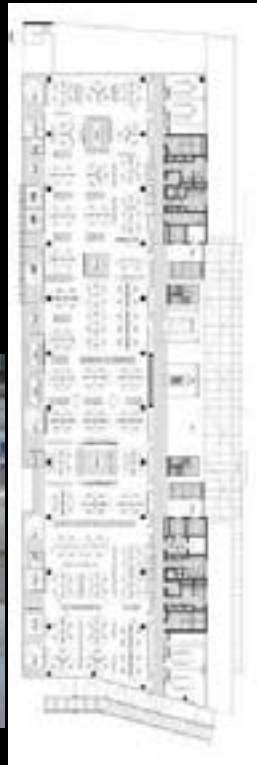


Glasgow learning map & logo



Renewals through Urban Fit-out

Meeting user priorities



30 The Bond, Sydney
Google, Mountain View

Large flexible floor plates, mix of functions, seamless communication
'Branding' shift from the 'outside' to 'inside' of buildings
The building does not contain the organisation any more

Meeting user priorities

Support for distributed working
Looser lease structures

Mixed use

Varied floor plates
Aspect

Vertical circ as experience
Opening up the core
mini atria
major atria

Sustainable design features

Hot spots etc

Value adding services

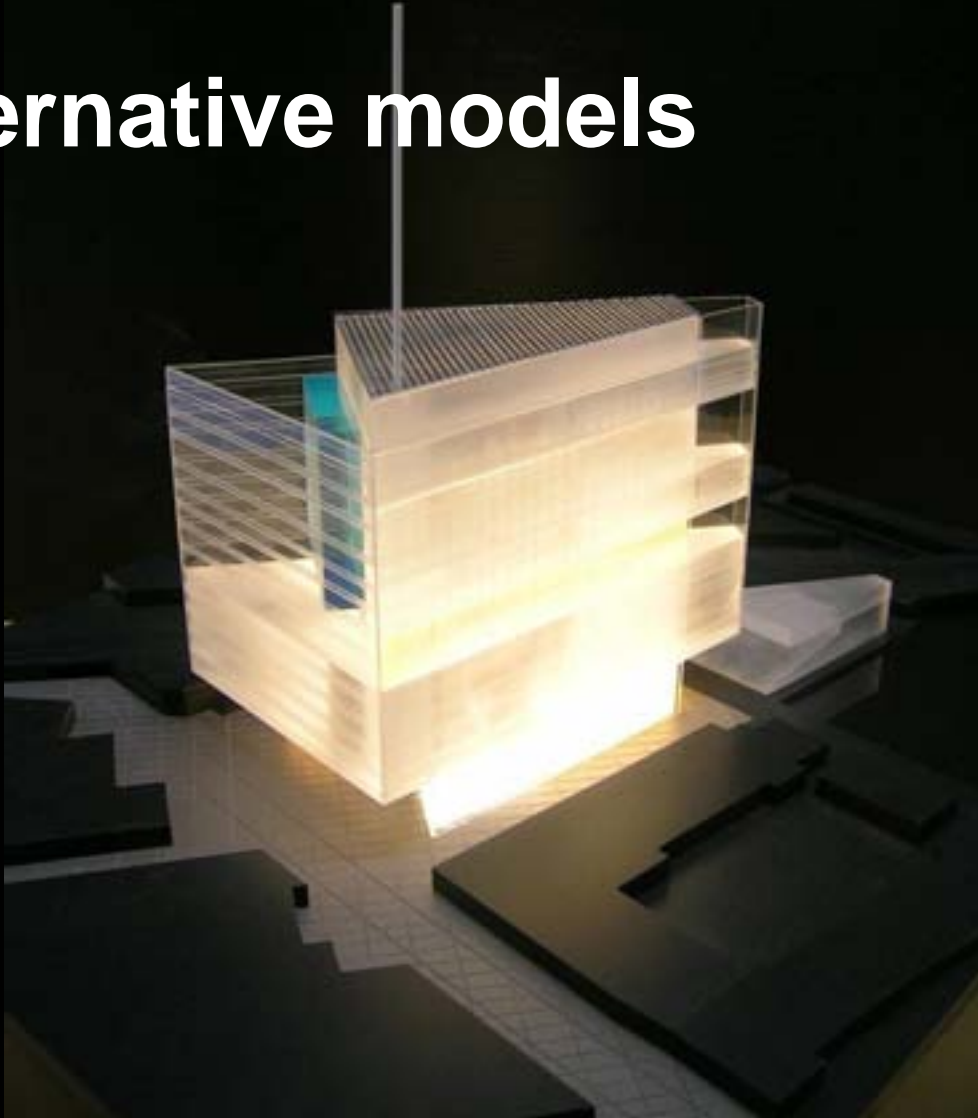
Building as a place
Building as a brand

Enhanced sense of place

	Support for distributed working Looser lease structures	Mixed use	Varied floor plates Aspect	Vertical circ as experience Opening up the core mini atria major atria	Sustainable design features	Hot spots etc	Value adding services	Building as a place Building as a brand	Enhanced sense of place
City Tower									
Heron Tower		○	○ ○ ○	○					
122 Leadenhall St		○ ○	○ ○				○	○	
51 Lime St		○							
London B Tower	○	○ ○					○ ○		
Minerva Tower	○	○	○ ○	○			○		
34 St.Mary's Axe		○ ○	○				○ ○	○	

Commercial demand – changing nature of workplace

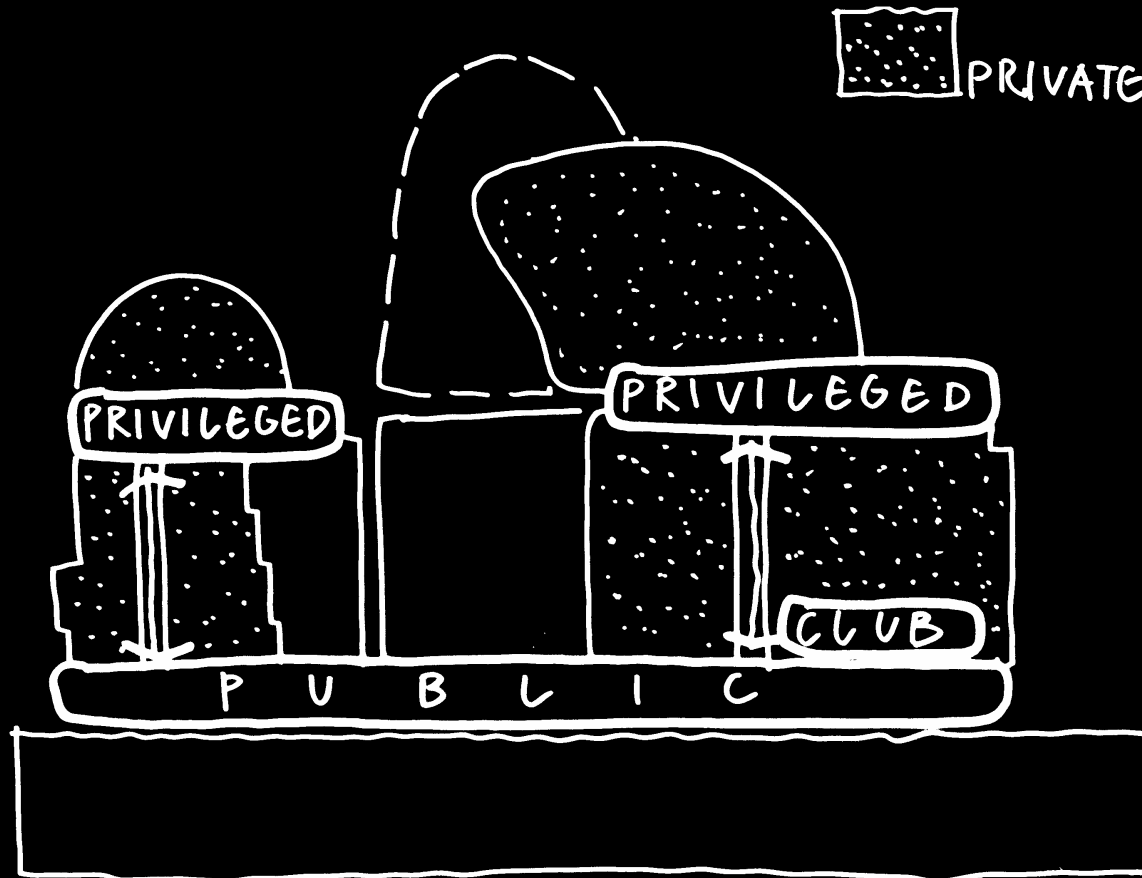
Alternative models



Briefing for new types of taller developments

Nature of 'European' tall building

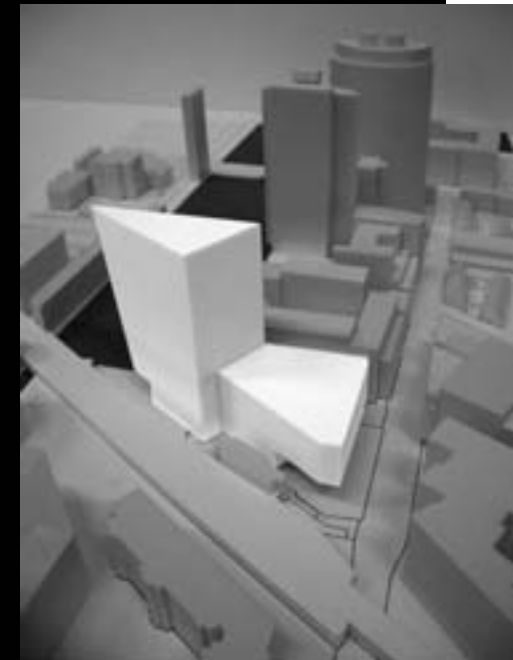
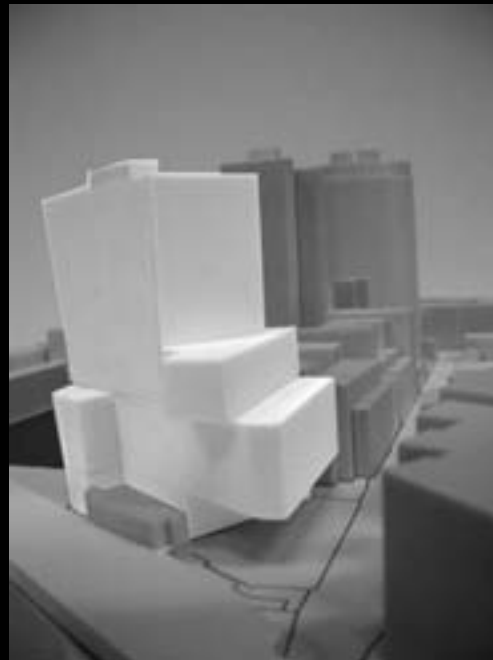
Exploration of new development types



Limited scope of 'the skyscraper'

Alternative building forms

Is there such a thing as 'European High Rise'?



Integration to ground-scapes



3D CITY VIEW 03

Sustainable design

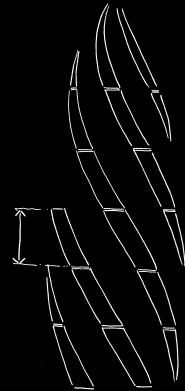


...it is like smoking, it will take 30 years!

Energy performance



Commerzbank, Frankfurt



30 St Mary's Axe, City of London

Better environmental performance -10 years ago

Energy performance



Generating headlines more than reducing emissions

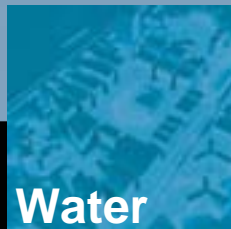
SunTool: environmental performan



- 1. Building properties**
Fabric properties
Construction properties
- 2. Use characteristics**
Compartmentalisation
Occupancy density
Lighting loads
Small power loads
Water consumption
Waste production
- 3. Plant properties**
System types
Performances



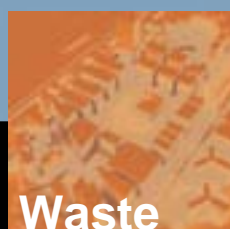
Solar
Design



Water



Energy



Waste

Energy rating certificate, impact on asset value

Energy performance

Worst performance than 10 year ago

Pay 'lip-service' to notions of sustainable design

Did not even begin to discuss urban systems!

Testing tools developing, but underused

Knowledge & attitudes more than cost

Challenges for European cities



**Place specific strategies
About city renewal & effectiveness**

Building type incidental

‘Building height’ more than ‘Tall buildings

Policies: understand value & risk

Collective 'views' across local and strategic policies

Development of planning tools & processes

Building environmental performance central to choices!

Design: interface between architecture & urbanism

End