ARCH 355 URBAN DESIGN PROCESS

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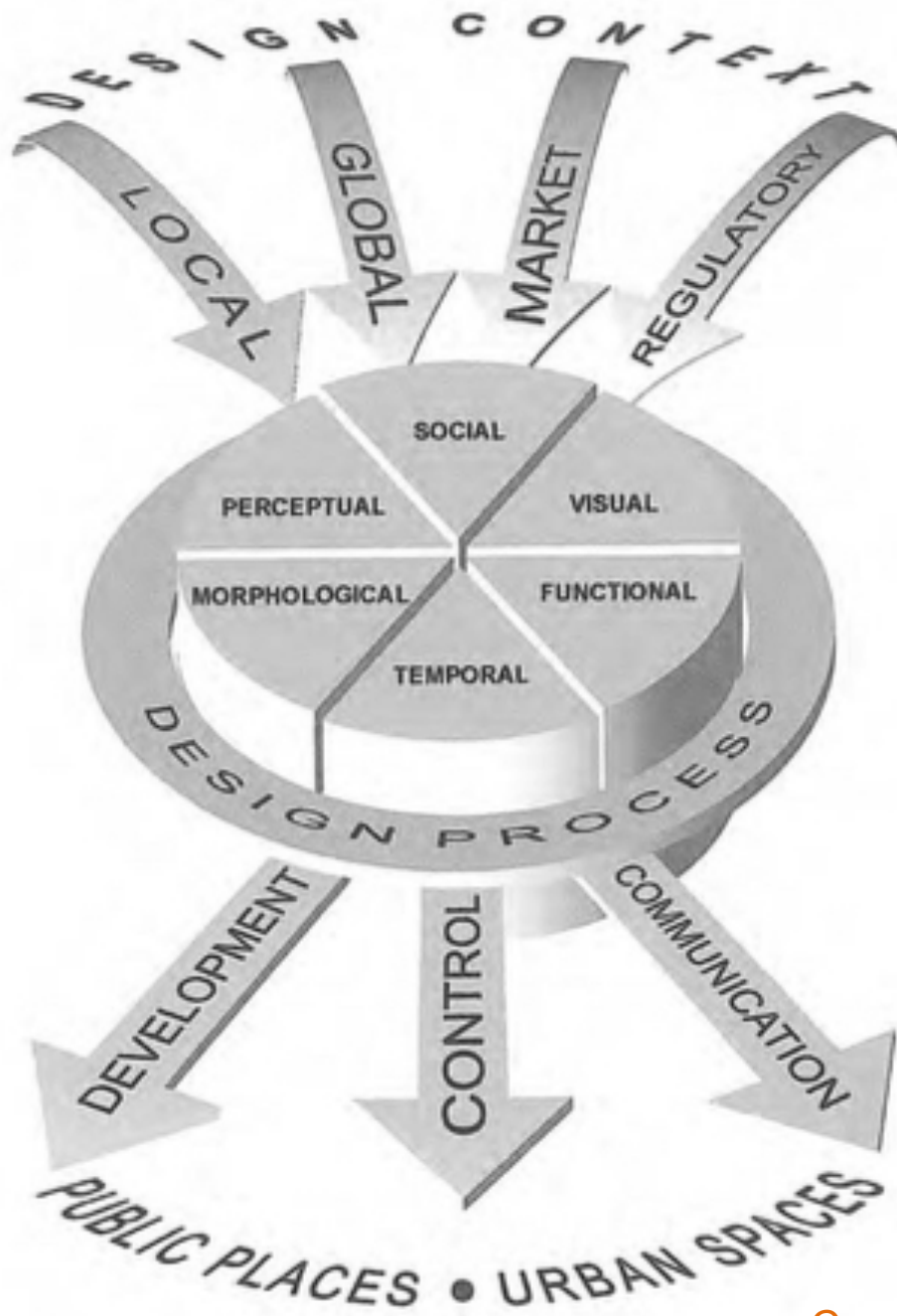September 2017

Textbook of the course

PUBLIC PLACES – URBAN SPACES
The Dimensions of Urban Design

Matthew Carmona,

Tim Heath,

Taner Oc

and

Steven Tiesdell

Architectural Press , 2003

DESIGN CONTEXT

LOCAL · GLOBAL · MARKET · REGULATORY

SOCIAL
PERCEPTUAL · VISUAL
MORPHOLOGICAL · FUNCTIONAL
TEMPORAL

DESIGN PROCESS

DEVELOPMENT · CONTROL · COMMUNICATION

PUBLIC PLACES • URBAN SPACES

Carmona et.al 2003, p.61

PART I

THE CONTEXT FOR URBAN DESIGN

PART I

THE CONTEXT FOR URBAN DESIGN

1. Urban Design Today

Urban Design

"making of places for people"

"the process of making better places for people"

- Stressing that "Urban design is for and about people"

- Emphasizing "the value and significance of 'place

- Recognizing that urban design operates in the 'real' world, with its field of opportunity constrained and bounded by economic(market) and political(regulatory)forces

- Asserting "the importance of design as a process"

Carmona et.al 2003, p.03

What is 'Urban Design' ?

- The term first has started to be used during **1950's** to replace the term '**civic design**' that "focused largely on the siting and design of major civic buildings"

  - Civic building: city halls, opera houses, museums – and their relationship to open spaces.

- Urban Design "has become primarily concerned with the **quality of the public realm** – **both physical and sociocultural** – and the **making of places for people to enjoy and use**".

Carmona et.al 2003, p.3

What is 'Urban Design' ?

URBAN

DESIGN

"**characteristics**
of towns or cities"

+

"**the village and hamlet**"

"**activities as
sketching, planning,
arranging, colouring**
and **pattern making**"

+

"**effective problem
solving** and/or the
processes of delivering
or organising
development"

Carmona et.al 2003, p.3

Place for People

ARCH355 Process of Urban Design

Place for People

ARCH355 Process of Urban Design

Place for People

Place
for
People

ARCH355 Process of Urban Design

What is 'Urban Design' ?

"It is frequently easier to say **what urban design is not**, than to say precisely what it is.

It is not, for example, **architecture**, **civil** or **highway engineering**, **landscape architecture**, **estate management**, or **town planning**."

Gosling and Maitland (1984) describe it as the **'common ground'** between **architecture** and **town planning**
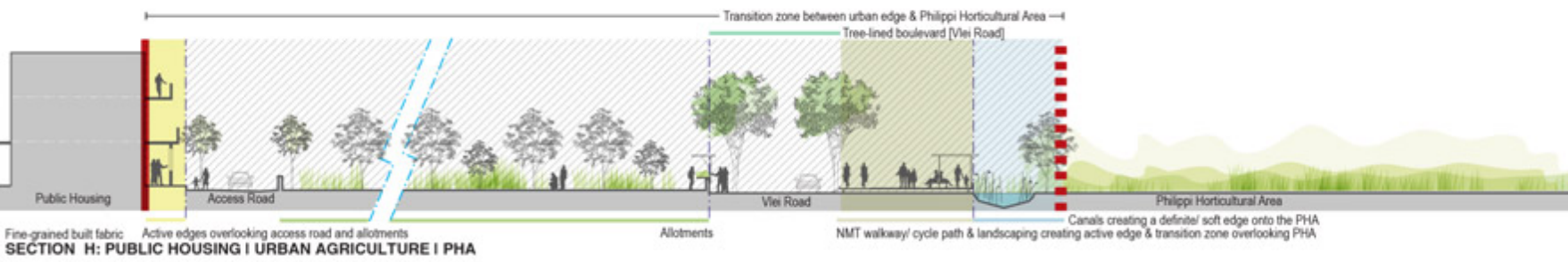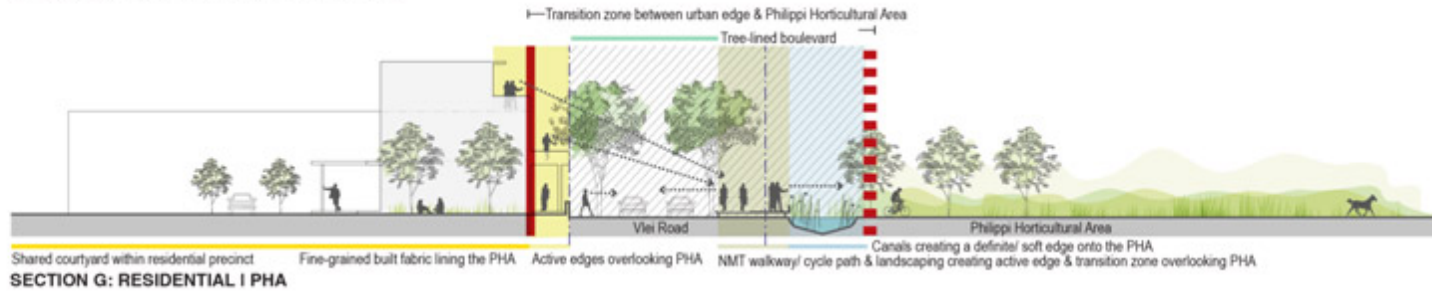
What is 'Urban Design' ?

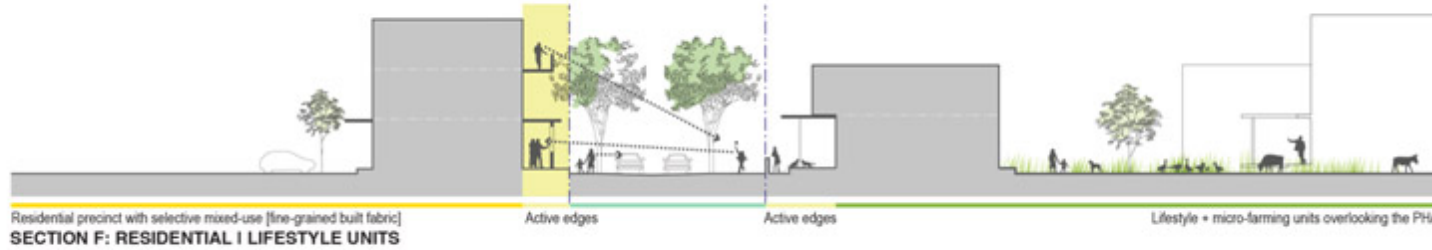UK's Social Science Research Council located
urban design at

"the **interface** between
architecture,
landscape architecture
and
town planning,
drawing on the
design tradition of architecture
and **landscape architecture**,
and the **environmental management**
and **social science tradition of contemporary planning**"

(from Bentley and Butina 1991).

Carmona et.al 2003, p.5

SECTION E: MIXED USE I RESIDENTIAL

Commercial/ residential precinct — Shared entrance fourcourt — Schaap Road — Active edges — Residential precinct with selective mixed-use [fine-grained built fabric]

SECTION F: RESIDENTIAL I LIFESTYLE UNITS

Residential precinct with selective mixed-use [fine-grained built fabric] — Active edges — Active edges — Lifestyle + micro-farming units overlooking the PHA

Transition zone between urban edge & Philippi Horticultural Area
Tree-lined boulevard

SECTION G: RESIDENTIAL I PHA

Shared courtyard within residential precinct — Fine-grained built fabric lining the PHA — Active edges overlooking PHA — Vlei Road — NMT walkway/ cycle path & landscaping creating active edge & transition zone overlooking PHA — Philippi Horticultural Area — Canals creating a definite/ soft edge onto the PHA

Transition zone between urban edge & Philippi Horticultural Area
Tree-lined boulevard [Vlei Road]

SECTION H: PUBLIC HOUSING I URBAN AGRICULTURE I PHA

Public Housing — Fine-grained built fabric — Active edges overlooking access road and allotments — Access Road — Allotments — Vlei Road — NMT walkway/ cycle path & landscaping creating active edge & transition zone overlooking PHA — Philippi Horticultural Area — Canals creating a definite/ soft edge onto the PHA

Urban design: an intermediate scale between planning (the settlement) and architecture (individual buildings).

Source: *http://citythinkspace.com/what-we-do/*

ANIMATION OF THE PUBLIC SPACE
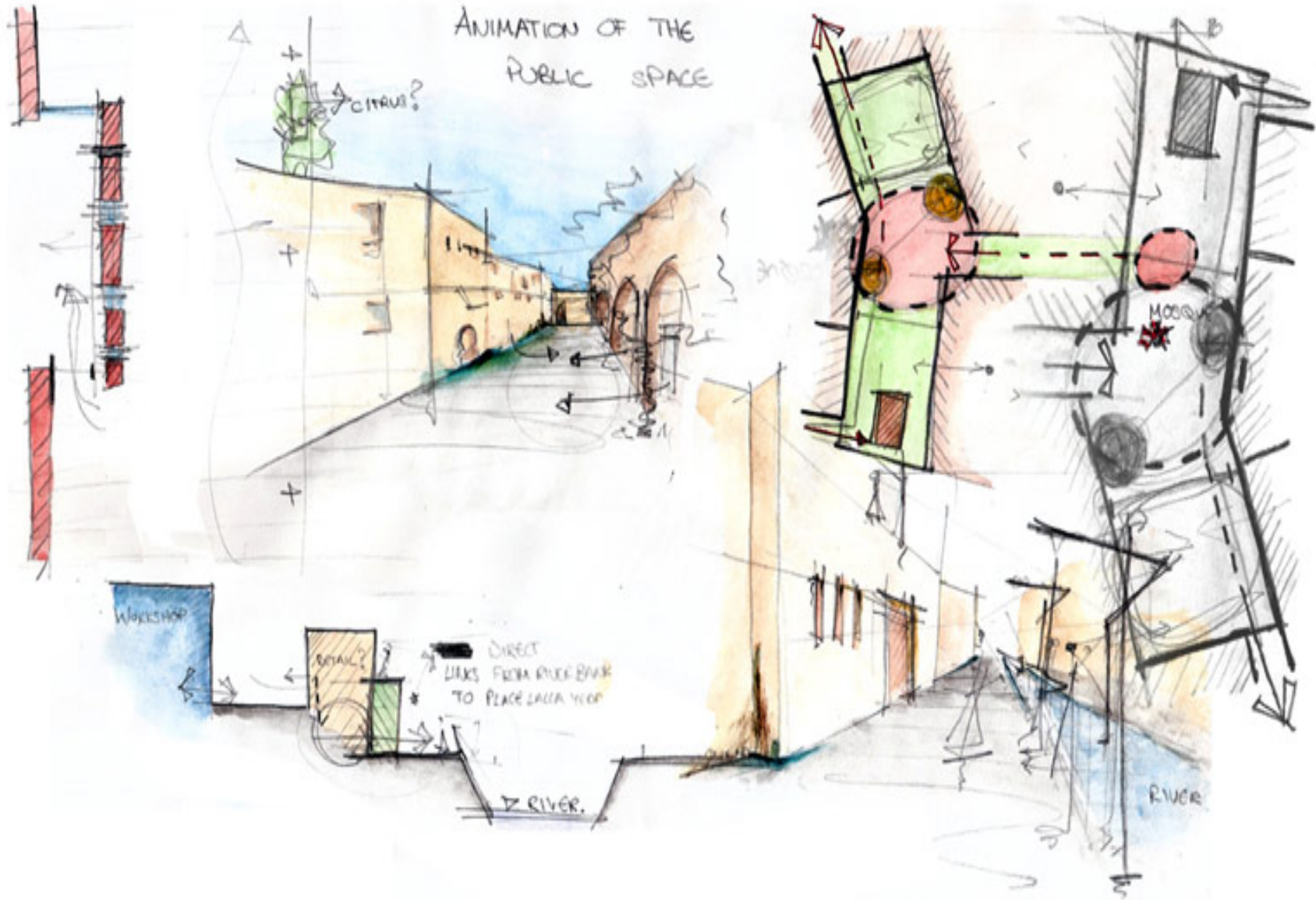
Being aware of the relationship of the parts to the whole, and the whole to the parts

Francis Tibbalds (1992, p. 9) stresses that 'places matter most'

Source: *http://www.placemakers.com/wp-content/uploads/2015/05/Salamanca-3.jpg*

Traditions of thought in urban design

'visual-artistic' tradition

↓

"the **visual qualities** of **buildings** and **space**"

'social usage' tradition

↓

"primarily concerned with the **social qualities of people**, **places** and **activities**"

Carmona et.al 2003, p.6

The Visual-artistic tradition in urban design

"Earlier, more 'architectural' and narrower understanding of urban design"

"Focused on the visual qualities and aesthetic experience of urban spaces, rather than on the cultural, social, economic, political and spatial factors and processes contributing to successful urban places."

Lacking privacy or of opportunities for personalization

Focusing on pictorial composition

The Social usage tradition in urban design

"emphasized the way in which people use and colonise space"

"It encompassed issues of perception and sense of place"

Remember Lynch?

"instead of examining the physical and material form of urban environments, Lynch suggested examining people's perceptions and mental images".

Carmona et.al 2003, p.6

The Making places tradition in urban design

"Over the past twenty years, the concept of urban design that has become dominant is one of **making places for people.**"

This is **'contemporary urban design'** approach

"It focuses on the diversity and activity which help to create successful urban places, and, in particular, on how well the physical milieu supports the functions and activities taking place there."

The Making places tradition in urban design

public face of buildings

the **spaces between frontages**

the **activities** taking place in & between spaces

the **managing** of these **activities**,

all of which are affected by the uses of the
buildings themselves   (Gleave, 1990, p. 64)

Place for People

Source: *http://www.hafencity.com/upload/images/artikel/z_artikel_en_18_8_DSC1022_1200x800.jpg*

Place
for
People

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The Making places tradition in urban design

The Department of Transport, Environment and the Regions and the Commission for Architecture and the Built Environment's definition of urban design

'art of making places for people'

- *the way **places work and matters** (community safety)*
- *how **spaces look***
- *connections between*

    people and places

    movement and urban form,

    nature and the built fabric

- *the **processes** for ensuring successful villages, towns and cities.*

(DETR/CABE, By Design: Urban Design in the Planning System: Towards Better Practice, 2000a, p. 8)

Carmona et.al 2003, p.9

The Making places tradition in urban design

The Department of Transport, Environment and the Regions and the Commission for Architecture and the Built Environment's guide identifies the following **7 objectives of urban design**

Character: a place with its own identity;

Continuity and enclosure: a place where public and private spaces are clearly distinguished;

Quality of the public realm: a place with attractive and successful outdoor areas;

Ease of movement: a place that is easy to get to and move through;

Legibility: a place that has a clear image and is easy to understand;

Adaptability: a place that can change easily;

Diversity: a place with variety and choice.

Urban design frameworks

5 attempts to "identify the desirable qualities of successful urban places and/or 'good' urban form"

- *Kevin Lynch*

- *Allan Jacobs and Donald Appleyard*

- *Responsive Environments*

- *Francis Tibbalds*

- *The Congress for New Urbanism*

Urban design frameworks

Allan Jacobs and Donald Appleyard

Jacobs and Appleyard (Towards an Urban Design Manifesto,1987, pp. 115–16) suggested seven goals that were 'essential for the future of a good urban environment':

1. **Liveability:** A city should be a place where everyone can live in relative comfort.

2. **Identity and control:** People should feel that some part of the environment 'belongs' to them, individually and collectively, whether they own it or not

3. **Access to opportunities, imagination and joy:** People should find the city a place where they can break from traditional moulds, extend their experience, and have fun.

Urban design frameworks

Allan Jacobs and Donald Appleyard

4. Authenticity and meaning: People should be able to understand their (and others') city, its basic layout, public functions and institutions, and the opportunities it offers.

5.Community and public life: Cities should encourage participation of their citizens in community and public life.

6. Urban self-reliance: Increasingly cities will have to become more self-sustaining in their uses of energy and other scarce resources.

7. An environment for all: Good environments should be accessible to all. Every citizen is entitled to a minimal level of environmental liveability, and of identity, control and opportunity.

Urban design frameworks

Allan Jacobs and Donald Appleyard

To achieve these goals, five physical characteristics or 'prerequisites' of a 'sound' urban environment were defined:

1. **Liveable streets and neighbourhoods**

2. A **minimum density** of **residential development** and intensity of **land use**

3. **Integrated activities** – living, working, shopping – in reasonable proximity to each other

4. A manmade environment that **defines public space**, particularly by its buildings (as opposed to buildings that mostly sit in space).

5. Many separate, distinct **buildings with complex arrangements** and **relationships** (as opposed to a few, large buildings).

Urban design frameworks
Responsive Environments

"During the late 1970s and early 1980s, a team at the then **Oxford Polytechnic** formulated an approach to urban design, published as Responsive Environments: A manual for urban designers (Bentley et al., 1985)"

The design of a place, it was argued, affected the choices people could make:

• Where they could and could not go

• The range of uses available

• How easily they could understand what opportunities its offers

• The degree to which they could use a given place for different purposes

• Whether the detailed appearance of the place made them aware of the choice available

• Their choice of sensory experience

• The extent to which they could put their own stamp on a place

Carmona et.al 2003, p. 10

Urban design frameworks

Responsive Environments

7 Key issues making places responsive

Permeability

Variety

Legibility

Robustness

Visual appropriateness

Richness

Personalisation

+ Resource Efficiency + Cleanliness + Biotic Support

(be added to include the ecological impact of urban forms and activity patterns (Bentley, 1990)

Carmona et.al 2003, p. 10

Urban design frameworks

Francis Tibbalds

10 principles developed president of the Royal Town Planning Institute and founder of the UK-based Urban Design Group, Francis Tibbalds (1988b, 1992)

1. consider places before buildings;
2. have the humility to learn from the past and respect your context;
3. encourage the mixing of uses in towns and cities;
4. design on a human scale;
5. encourage the freedom to walk about;
6. cater for all sections of the community and consult with them;
7. build legible (recognisable or understandable) environments;
8. build to last and adapt;
9. avoid change on too great a scale at the same time;
10. with all the means available, promote intricacy, joy and visual delight in the built environment.

The Congress for New Urbanism

Idea of designing "complete neighbourhoods that would be similar to **traditional neighbourhoods**"

Some common principles of the framework is

- **mixed use**

- **environmental sensitivity**

- an internally consistent **hierarchy of architectural building**, and **street types legible edges** and **centres walkability**

- reliance on succinct graphic guidelines in lieu of **traditional zoning codes**

(Kelbaugh, 1997)

Carmona et.al 2003, pp. 10-11

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Urban design frameworks

The Congress for New Urbanism

New Urbanists were 'committed to **re-establishing** the **relationship between the art of building and the making of community**, through **citizen based participatory planning and design**'

They supported the following principles

- **Neighbourhoods** should be **diverse** in use and population

- Communities should be designed for the **pedestrian** and for **transit**, as well as for the **car**.

- Cities and towns should be shaped by **physically defined** and **universally accessible public spaces** and **community institutions**.

- Urban places should be framed by **architecture** and **landscape design** that celebrate local history, climate, ecology and building practice.

Carmona et.al 2003, pp. 10-11

The need for Urban Design

Loukaitou-Sideris ((1996, p. 91) says that focusing on the product rather than the process of urban design, could cause the following 'cracks' of urban quality

- the **gaps in the urban form**, where overall continuity is disrupted

- the **residual spaces left undeveloped**, under- used or deteriorating

- the **physical divides** that purposefully or accidentally **separate social worlds**

- the spaces that development has passed by or where new development creates **fragmentation** and **interruption**.

Urban design aims to reduce poor quality urban environments

Carmona et.al 2003, p.12

Urban Design Practice

Who are the urban designers?

"who take decisions that shape the urban environment,

which includes <u>not just </u>architects,

landscape architects,

planners,

engineers,

and surveyors,

<u>but also </u>developers,

investors,

occupiers,

civil servants,

politicians,

events organisers,

crime and fire prevention officers,

environmental health officials,

and many others.

Types of Urban Design Practice

‘planner/urban designer’ vs **‘architect/urban designer’**

“Research for DETR (2000) identified four types of contemporary urban design practice:

urban development design

design policies, guidance and control

public realm design

community urban design

TABLE 1.1
Types of urban design practice

	PROFESSIONAL DOMAIN	CHARACTERISTICS	ACTIVITIES
URBAN DEVELOPMENT DESIGN	Traditionally domain of architects supported by landscape architects and other designers	Rooted in the development process. Typically applicable at site and neighbourhood scales	Involves *all-of-a-piece* design situations and some *total* design situations
DESIGN POLICIES, GUIDANCE AND CONTROL	Traditionally domain of planners supported by architects, landscape architects, conservation officers and others	The design dimension of the planning process (e.g. primarily response to anticipated effects of urban change on urban design quality, whereby guidance and control are typically applied from *outside* development process). Range of considerations usually wider than concerns of urban development design. Applicable at all scales of urban design	Includes: (i) area appraisals, design strategy and policy formulation; (ii) preparation of supplementary design guidance and briefs, and (iii) exercise of design or 'aesthetic' control
PUBLIC REALM DESIGN	Engineers, planners, architects, landscape architects and others. But frequently unintentional result of unco-ordinated decisions and actions taken by many different parties	Encompasses design of 'capital web' (e.g. roads and streets, footpaths and pavements, car parks, public transport interchanges, parks and other urban spaces). Relevant over range of scales	Includes: (i) design and implementation of specific projects; (ii) production and application of guidelines for design and improvement of a locality; and (iii) ongoing management and maintenance of places, including programming of activities and events
COMMUNITY URBAN DESIGN	No particular profession	Seeks to work *with* and *in* communities developing proposals from grass-roots level. Particularly applicable to neighbourhood scale	Utilises range of approaches and techniques to engage with those who will use the environment

(Source: adapted from University of Reading, 2001).

Carmona et.al 2003, p.17

PART I

THE CONTEXT FOR URBAN DESIGN

2. Urban Change

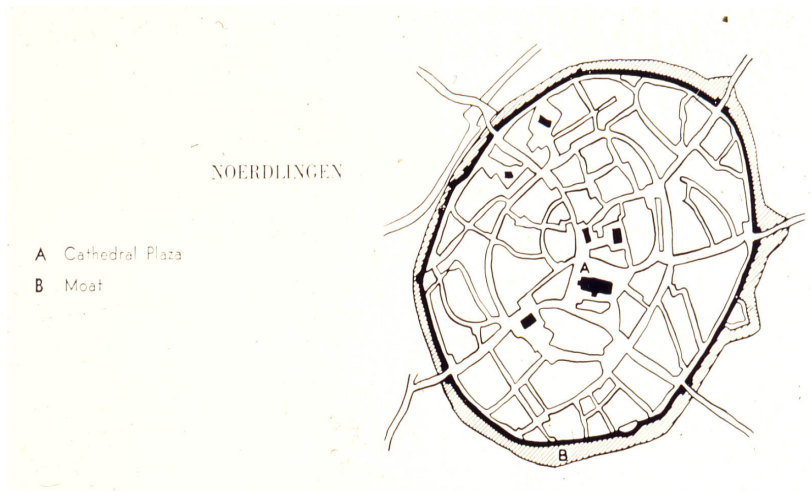Carmona et.al 2003, p.20

Urban Change

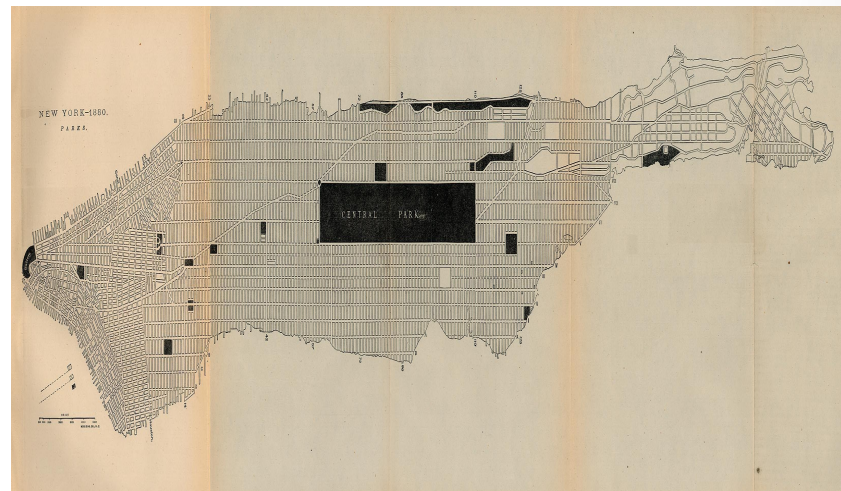Change of the urban environments during the recent years

Focus on **'place'**

(Before) 'traditional' (pre-industrial) cities were divided into the 'organic' and the 'planned'.

Carmona et.al 2003, p.20

Source: *http://aytch.mnsu.edu/URBS110/ Dark%20Ages/Noerdlingen%20Map.jpg*

Source: *http://www.lib.utexas.edu/maps/ historical/new_york_parks_1880.jpg*

Urban Space Design

Mitchell Schwarzer (The Contemporary City in Four Movements, 2000, pp. 129–36) presents a **typology of contemporary urbanisms** as:

1. **Traditional** urbanism

2. **Conceptual** urbanism

3. **Marketplace** urbanism

4. **Social** urbanism

Carmona et.al 2003, p.22

Urban Space Design

1. **Traditional urbanism**

"Looks back 'to an
age of grids,
public squares,
moderately dense housing and pedestrian corridors ".

"attempts to recover what it regards as a more 'authentic' urban
framework."

Urban Space Design

2. Conceptual urbanism

"adopts a more radical attitude, attempting to
'**shake off assumptions of what the city was, is or should be**',

and to appreciate the

'**fluid instabilities**'

of cities as well as their

'**inertia of material residue**'. "

Urban Space Design

3. Marketplace urbanism

characterised by the

'immense financial, technological and political energies'

"Both the scale of suburban development, and the economic power of edge cities, are seen as proof of their **harmony with popular values** . . .

Pragmatism is identified with what sells."

Carmona et.al 2003, p.22

Urban Space Design

4. Social urbanism

critique of most aspects of contemporary US cities, in particular the '**uneven consequences**' of commodity capitalism.

High- lighting areas of the city that '**capital ignores or flees from**',

such areas are seen as an 'indictment against the ongoing denigration of urban life at the hands of unequal capital concentration, relentless business and real-estate competition and ceaseless social movements'.
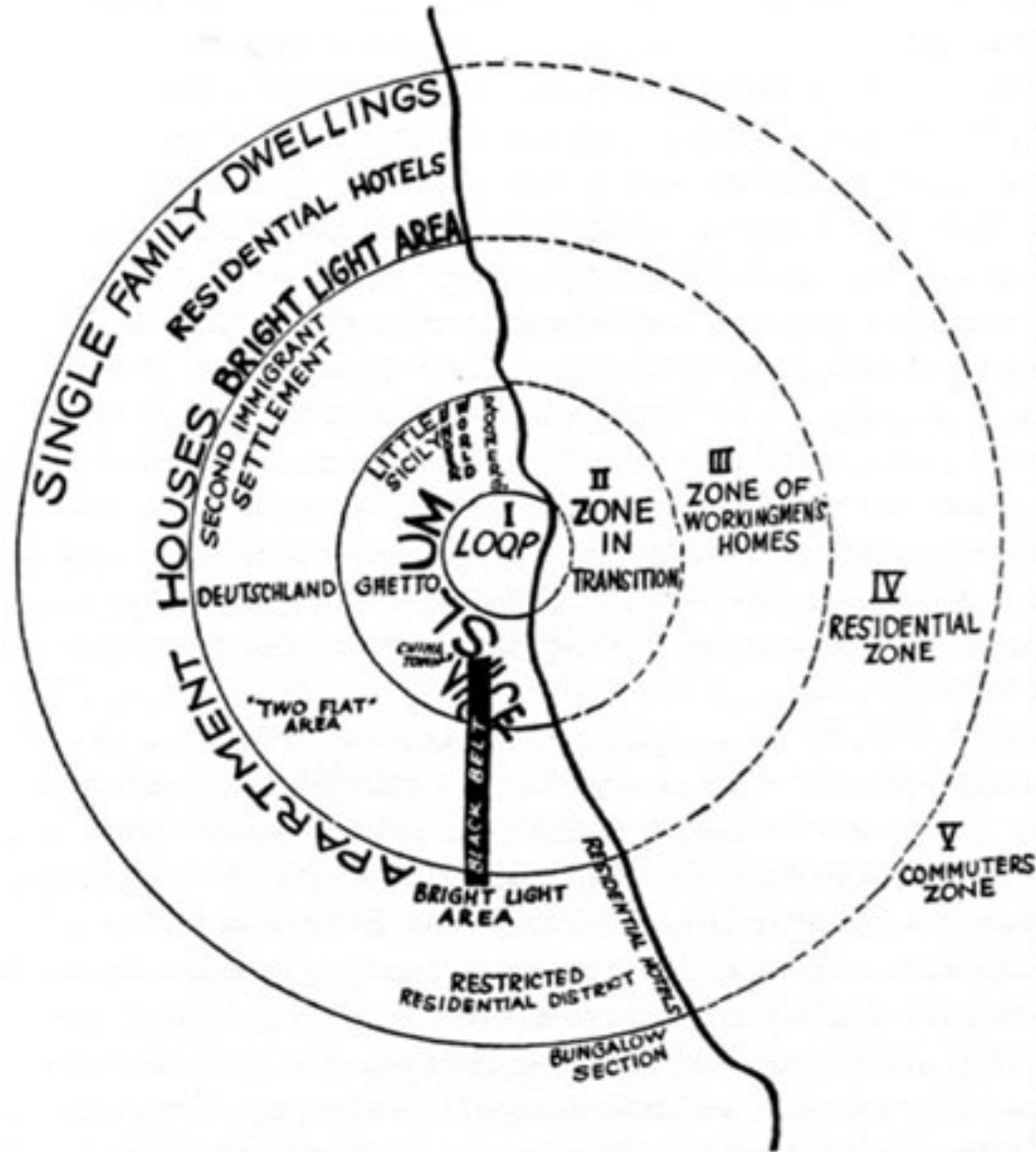
Carmona et.al 2003, p.22

The Industrial City

19th century Industrial Revolution

- steam power
- major social and economical changes
- population increase
- migration of population into towns

'Chicago School' → influential ideas about urban form and structure

Carmona et.al 2003, p.26

The Industrial City

Burgess's Concentric Zone Model (source: Knox and Pinch, 2000, p. 216)

city centre or Central Business District (CBD).

surrounding the centre ring of industry (required a large labour force)

ring of blue-collar and working-class housing.

ring of mainly middle-class suburbs.

Carmona et.al 2003, p.28

Post-Industrial Urban Form

1960s → new urban forms

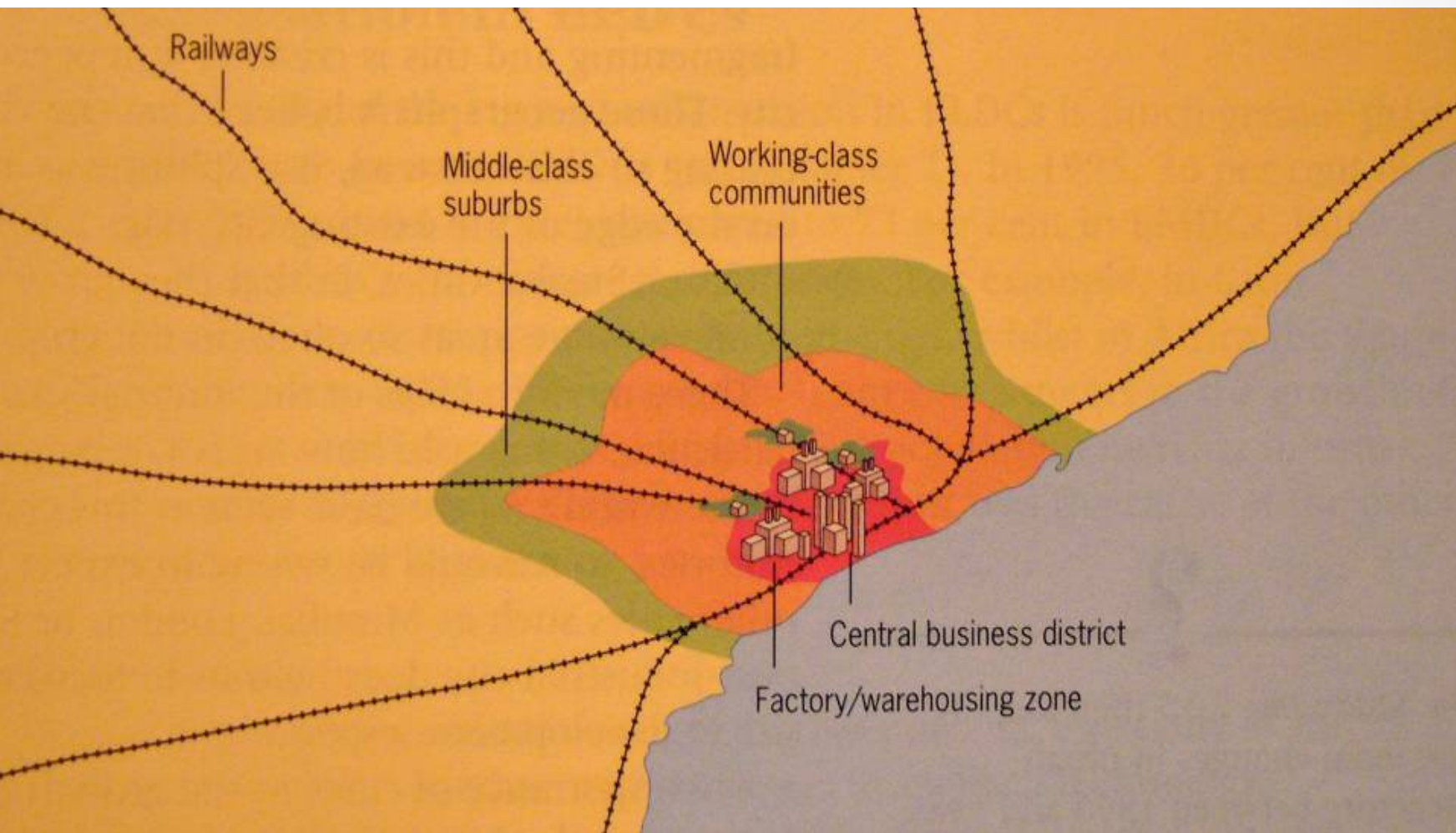"different to modern/industrial cities in their form, pattern of land values, and social geographies"

"mass transport systems broke the necessarily close spatial relation between workplace and residence"

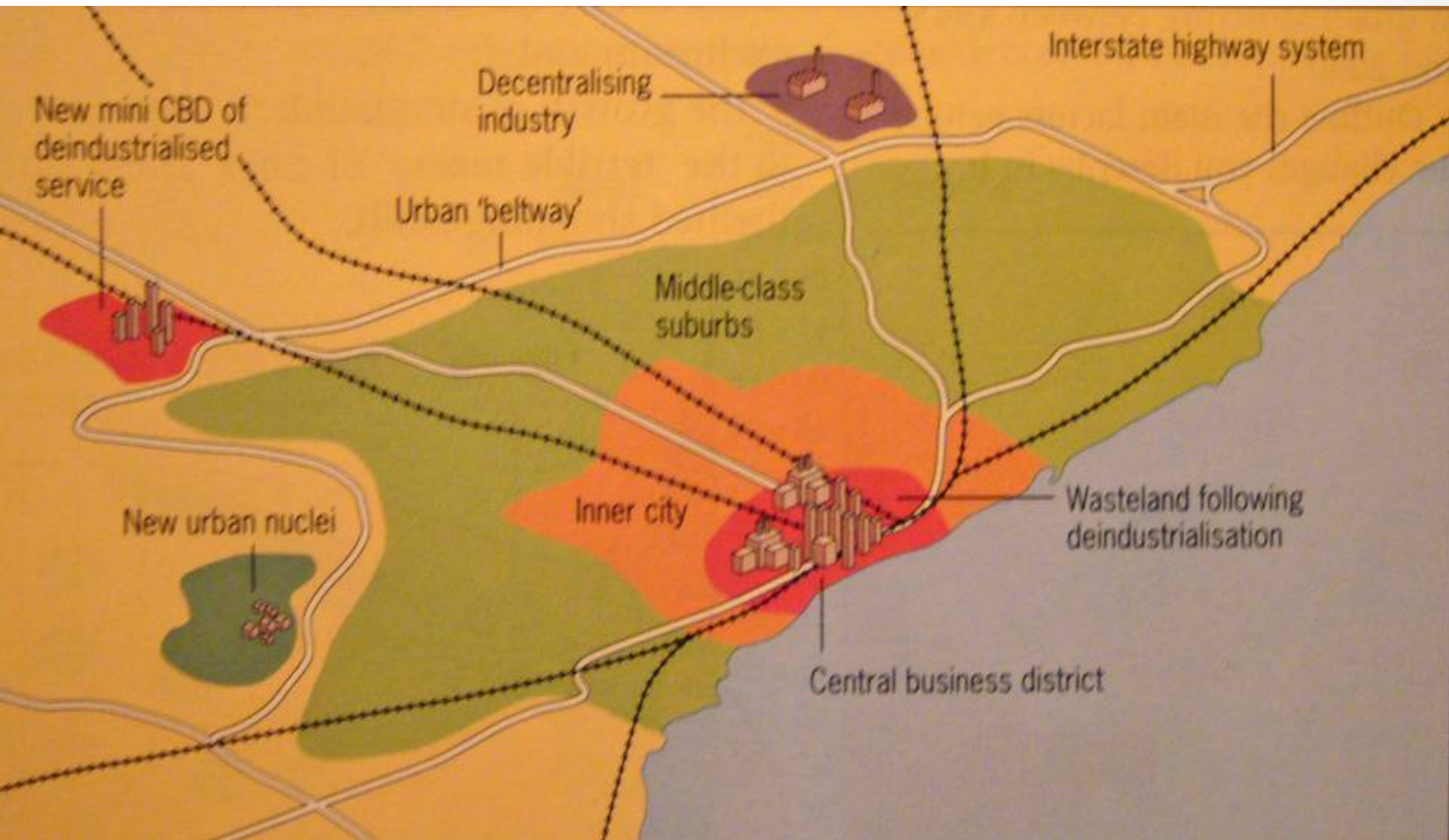"better quality housing, a garden, healthier living conditions, and the social status"

Individual cars → brought freedom ; yet it also brought many problems (at environmental, economic and social levels)
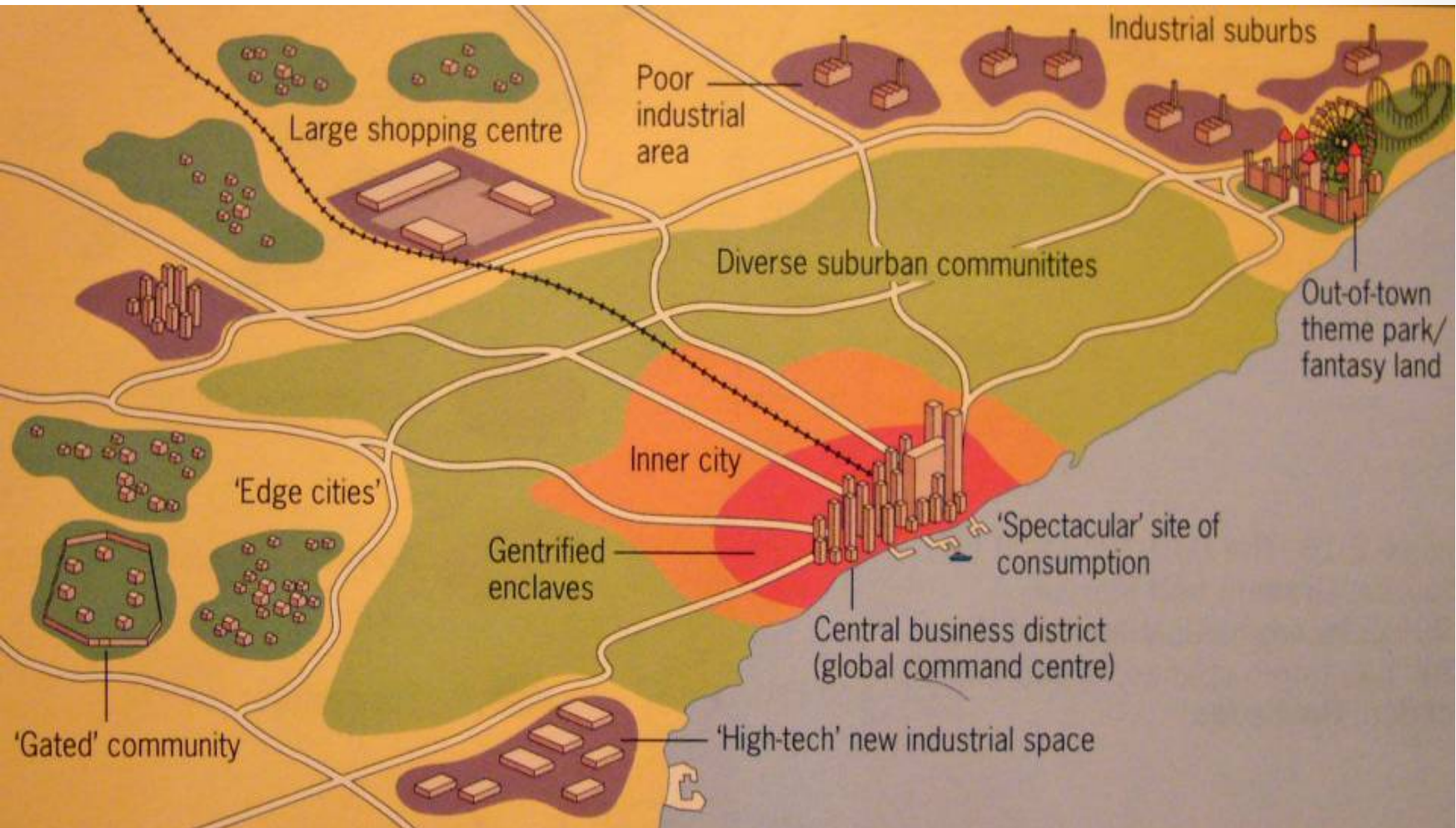
Carmona et.al 2003, p.28

Classic industrial city 1850s

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Industrial city 1945-1975

New mini CBD of deindustrialised service

Decentralising industry

Interstate highway system

Urban 'beltway'

Middle-class suburbs

New urban nuclei

Inner city

Wasteland following deindustrialisation

Central business district

Konx and Pinch 2000 – Urban Social Geography

The post-industrial city

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Informational Age Urban Form

The contemporary restructuring of urban form

Transition from from an industrial to an 'informational' era

electronic communications

possibility of working from home

Environmental sustainability

factors influences urban form : global warming/ pollution (especially from cars), depletion of fossil fuel reserves

reduce travel by facilitating shorter journeys

use of public transport

retention of open space and valued habitats;

encourage traffic calming and walking and cycling

make the provision of amenities and facilities economically viable

enhance social sustainability

encourage social interaction.

Carmona et.al 2003, p.32

PART I

THE CONTEXT FOR URBAN DESIGN

3. Contexts for Urban Design

Contexts for Urban Design

4 contexts will be discussed such as:

The Local Context	The Global Context	The Market Context	The Regulatory Context

Carmona et.al 2003, p.36

Contexts for Urban Design

The Local Context

the site

plus

the area immediately outside its boundaries

"Not all contexts or places require the same degree of 'contextual' response."

"Areas of highly unified character generally require more respectful responses, while areas of low environmental quality offer greater opportunity for the creation of new character."

Carmona et.al 2003, p.36

Contexts for Urban Design

The Local Context

To Lang (1994, p.19), all environments can be conceived of in terms of **4 interlocking components**

1. **Terrestrial environment** – the earth, its structure and processes.

2. **Animate environment** – the living organisms that occupy it.

3. **Social environment** – the relationships among people.

4. **Cultural environment** – the behavioral norms of, and artefacts created by a society.

Carmona et.al 2003, p.36

Terrestrial
Environment

Animated
Environment

Social Environment

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Cultural Environment

Source: *http://chsrentals.com/wp-content/uploads/2015/08/Chinatown.jpg*

ARCH355 Process of Urban Design
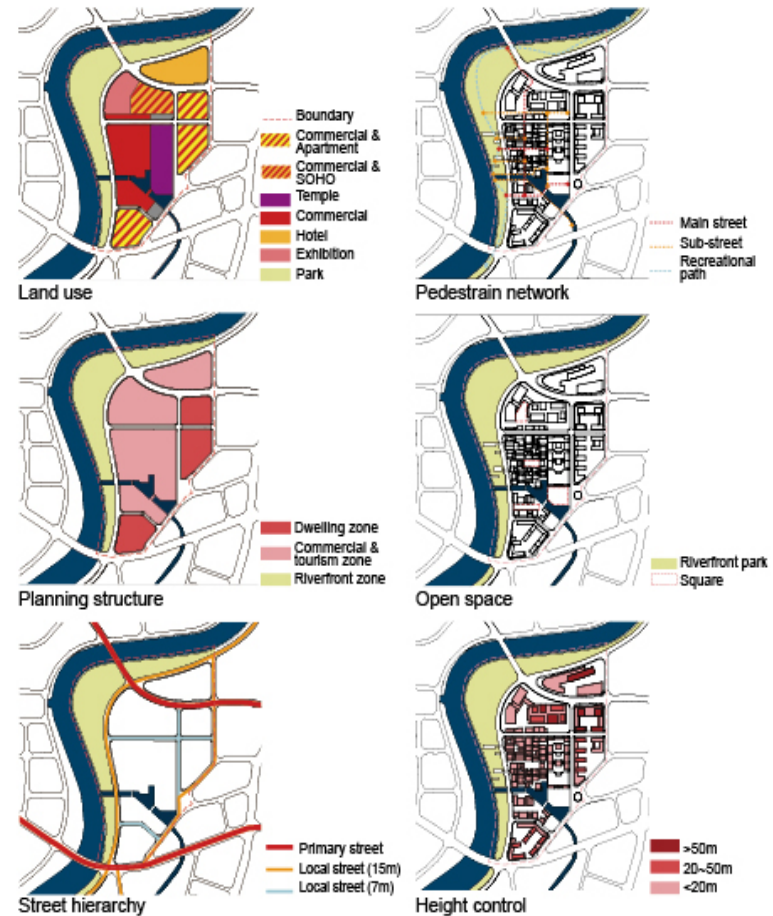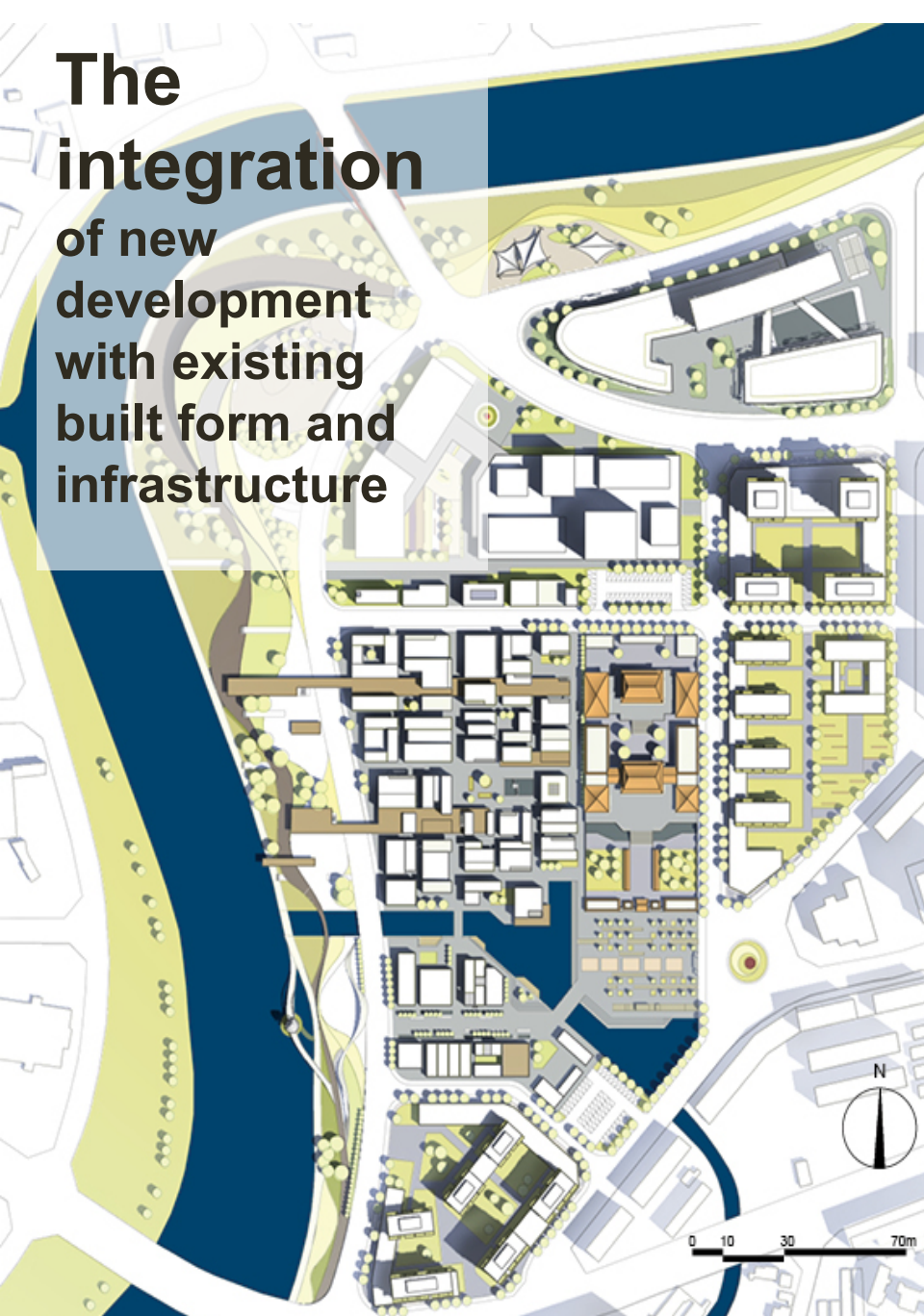
Contexts for Urban Design

The Global Context

"local actions have **global impacts** and consequences, while global actions have **local impacts** and consequences"

Considering

- **The integration of new development with existing built form and infrastructure** (e.g. choice of location/site, use of infrastructure, accessibility by various modes of travel).

- **The range of uses a development contains** (e.g. mixed use, access to facilities/amenities, working from home).

- **Site layout and design** (e.g. density, landscaping/greening, natural habitats, daylight/ sunlight).

- **The design of individual buildings** (e.g. built form, orientation, microclimate, robust buildings, building reuse, and choice of materials).

The integration

of new development with existing built form and infrastructure

Land use
- Boundary
- Commercial & Apartment
- Commercial & SOHO
- Temple
- Commercial
- Hotel
- Exhibition
- Park

Pedestrain network
- Main street
- Sub-street
- Recreational path

Planning structure
- Dwelling zone
- Commercial & tourism zone
- Riverfront zone

Open space
- Riverfront park
- Square

Street hierarchy
- Primary street
- Local street (15m)
- Local street (7m)

Height control
- >50m
- 20~50m
- <20m

0 10   30   70m

N

Master plan

To realize the concept of urban coexistence and lead to the rebirth of community, each components of the site should be arranged in a system. The riverfront area is transformed into a park for travelers while the commercial and residential area lies in the inner part of the site. A road system and pedestrian network can closely connect each area so that the residents and tourists can reach their destination more conveniently.

URBAN SOUTH
MEANWOOD URBAN REGENERATION

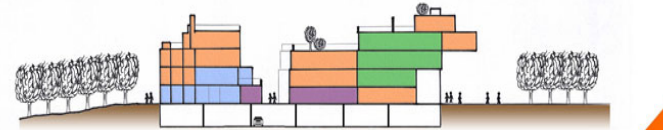"**fantastic** vista's across the new meanwood **urban environment**"

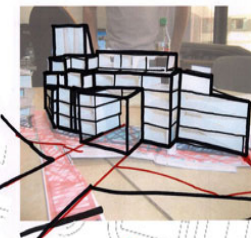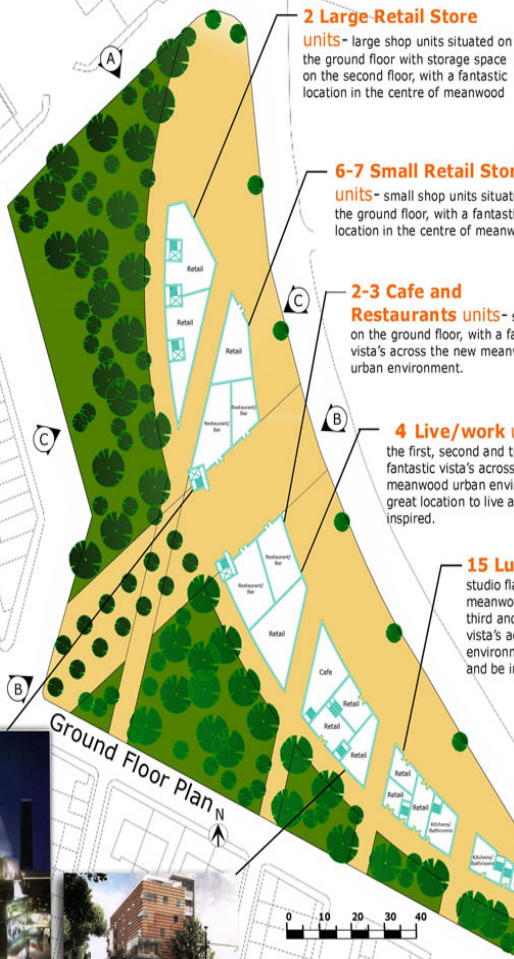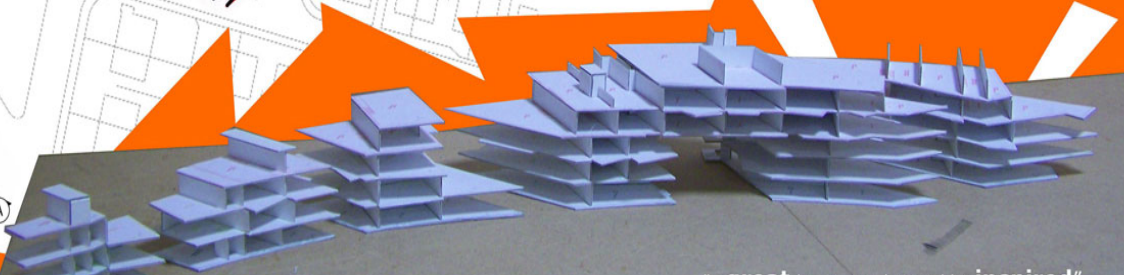**The range** of uses a development contains
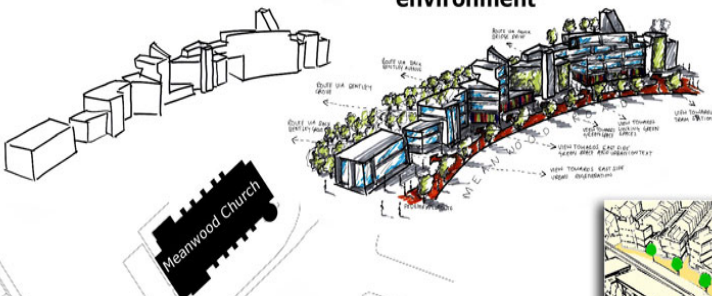
A-A Section

B-B Section

C-C Section

Legend:
- Large Retail
- Small Retail
- Cafe and Restaurants
- Live/Work
- Apartments
- Car Park
- Office Space

2 Large Retail Store units- large shop units situated on the ground floor with storage space on the second floor, with a fantastic location in the centre of meanwood

6-7 Small Retail Store units- small shop units situated on the ground floor, with a fantastic location in the centre of meanwood.

2-3 Cafe and Restaurants units- situated on the ground floor, with a fantastic vista's across the new meanwood urban environment.

4 Live/work units- situated on the first, second and third floors, with a fantastic vista's across the new meanwood urban environment, and a great location to live and work and be inspired.

15 Luxury Apartment units- studio flats for the young professionals in meanwood, situated on the first, second, third and fourth floors, with a fantastic vista's across the new meanwood urban environment, and a great location to live and be inspired.

Ground Floor Plan N

"providing Meanwood with **15 luxury apartments** and **10 live/work** units, **tastefully finished**, in a new **modern town** "

"a **great** location to live and be **inspired**"

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Site layout and **design**

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LEGEND

- General Dynamics
- Retail
- Office /Retail
- Residential / Retail
- Office
- Parking Garage

The design
of individual
buildings

Contexts for Urban Design

The Global Context

Sustainable Urban Design

"The concept of sustainable development includes not only **environmental**, but also **economic** and **social**, sustainability."

Carmona et.al 2003, p.39

economic

SUSTINABLE DEVELOPMENT

environment   social

Three pillars modelof sustainable development Rydin, 2004.
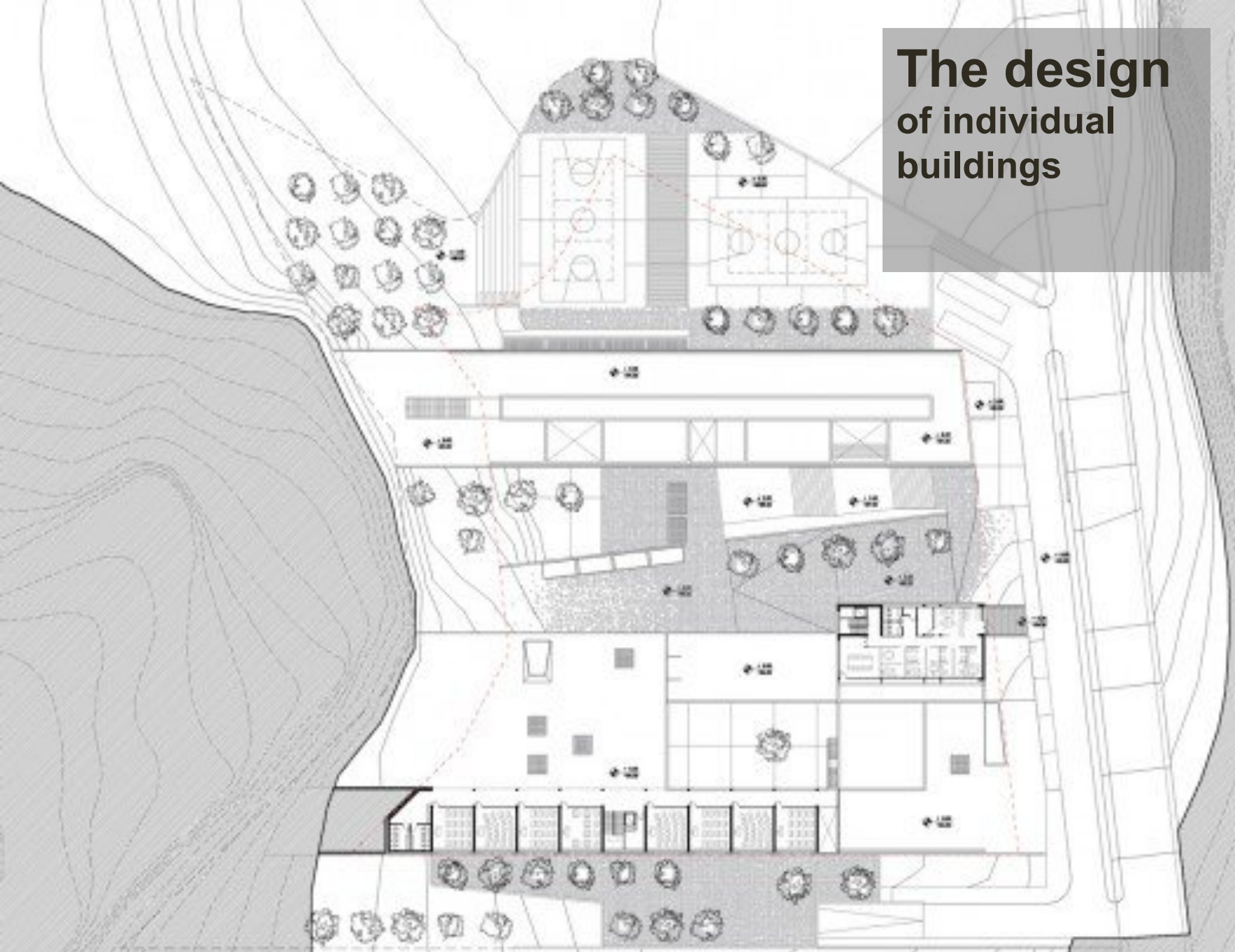
The Global Context

Sustainable Urban Design

Michael Hough (1984)'s **5 ecological design principles**

1. Appreciation of process and change: natural processes are unstoppable, and change is inevitable and not always for the worse.

2. Economy of means: deriving the most from the least effort and energy.

3. Diversity: the basis for environmental and social health.

4. Environmental literacy: the basis for wider understanding of ecological issues.

5. Enhancement of the environment: as a consequence of change, not just as damage limitation.

Carmona et.al 2003, p.39

Sustainable development rests on clear '*principles*' that can be named as

environment

futurity

sustainability

equity

development.

and **participation**
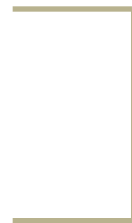
See Carmona et.al 2003, p.44-45

Contexts for Urban Design

The Market Context

Market = Economic

supply   demand

budgetary constraints

"in a market economy, many decisions that have **public consequences** are made in the **private sector**".

"mediated by policy and by regulatory frameworks"

"to operate effectively, **urban design practitioners** need to understand the **financial and economic processes** by which places and developments come about"

Contexts for Urban Design

The Market Context

"Urban development is substantially determined by those in control of – or in control of access to – resources"

Contexts for Urban Design

The Regulatory Context

the '**macro**' regulatory (**governmental**) context

     Public policy

     Urban design policy

     The operation of design control/review

Contexts for Urban Design

The Regulatory Context

The market and state relations

Some basic distinctions

Public sector aims	Private sector aims
development that adds to the local tax base	good return on investment, mediated by considerations of risk and liquidity (the profit margin)
enhancement of long-term investment opportunities in its area of responsibility	investment opportunities, wherever and whenever they arise
enhancement of existing, or creation of a new, high quality environment	a context supportive of the particular development, which will not undermine its asset value for as long as the investment is held
development creating or supporting local jobs and for having a social benefit	basing of investment decisions on local purchasing power and the availability of a ready market
to find opportunities to support public sector services	looking to the cost and availability of financing for development
development to meet local needs	

ARCH355   Process   of   Urban   Design

The Urban Design Process

research and decision-making process

Design
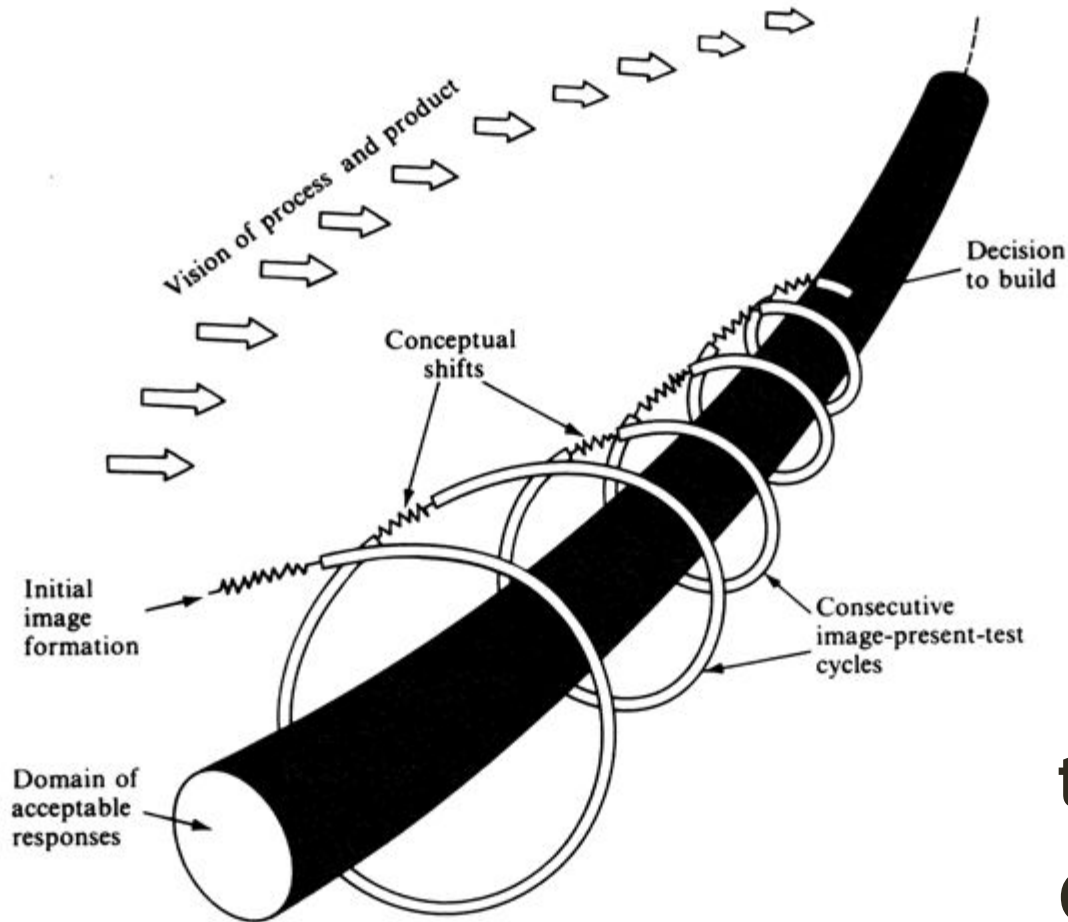
creative

exploratory

problem-solving activity

All design must satisfy certain criteria at the optimum level

Carmona et.al 2003, p.54

The Spiral Model of Zeisel

Vision of process and product

Decision to build

Conceptual shifts

Initial image formation

Consecutive image-present-test cycles

Domain of acceptable responses

Design development spiral

© M. Rauterbe

the
**design
spiral**

The Urban Design Process

4 **key development phases** of the urban design process

1. **brief setting**

2. **Design**

3. **Implementation**

4. **post-implementation review**

Carmona et.al 2003, pp.55-56

The Urban Design Process

In each of the **5 key development phases** of the urban design, "urban designer's thought processes can be disaggregated into a series of thought stages":

- **Setting goals**

- **Analysis**

- **Visioning**

- **Synthesis and prediction**

- **Decision-making**

The Integrated Urban Design Process

Carmona et.al 2003, pp.56