

VITOR OLIVEIRA

FROM READING TO DESIGN

CyNUM SEMINAR 2 . HOME FOR COOPERATION . NICOSIA . 25 APRIL 2017

From reading to design

1. ISUF
2. ISUF Local Networks
3. Advisory Committee on the Future Development of ISUF
4. Research and Practice

1. ISUF

ISUF Annual Conferences

ISUF Annual Conferences

1994 Lausanne	2002 Cernobbio	2010 Hamburg
1995 Lausanne	2003 Trani	2011 Montreal
1999 Lausanne	2004 Glasgow, Newcastle	2012 Delft
1997 Birmingham	2005 London	2013 Brisbane
1998 Versailles	2006 Stockholm	2014 Porto
1999 Florence	2007 Ouro Preto	2015 Rome
2000 Groningen	2008 Artimino	2016 Nanjing
2001 Cincinnati	2009 Guangzhou	2017 Valencia

The journal 'Urban Morphology'

2016 Volume 20.2 – Articles:

Pedestrian accessibility in grid layouts: the role of block, plot and street dimensions

A. Sevtsuk, R. Kalvo and O. Ekmekci

Multi-nuclear growth patterns in a rapidly changing Turkish city: a fringe-belt perspective

T. Ünlü and Yener Baş

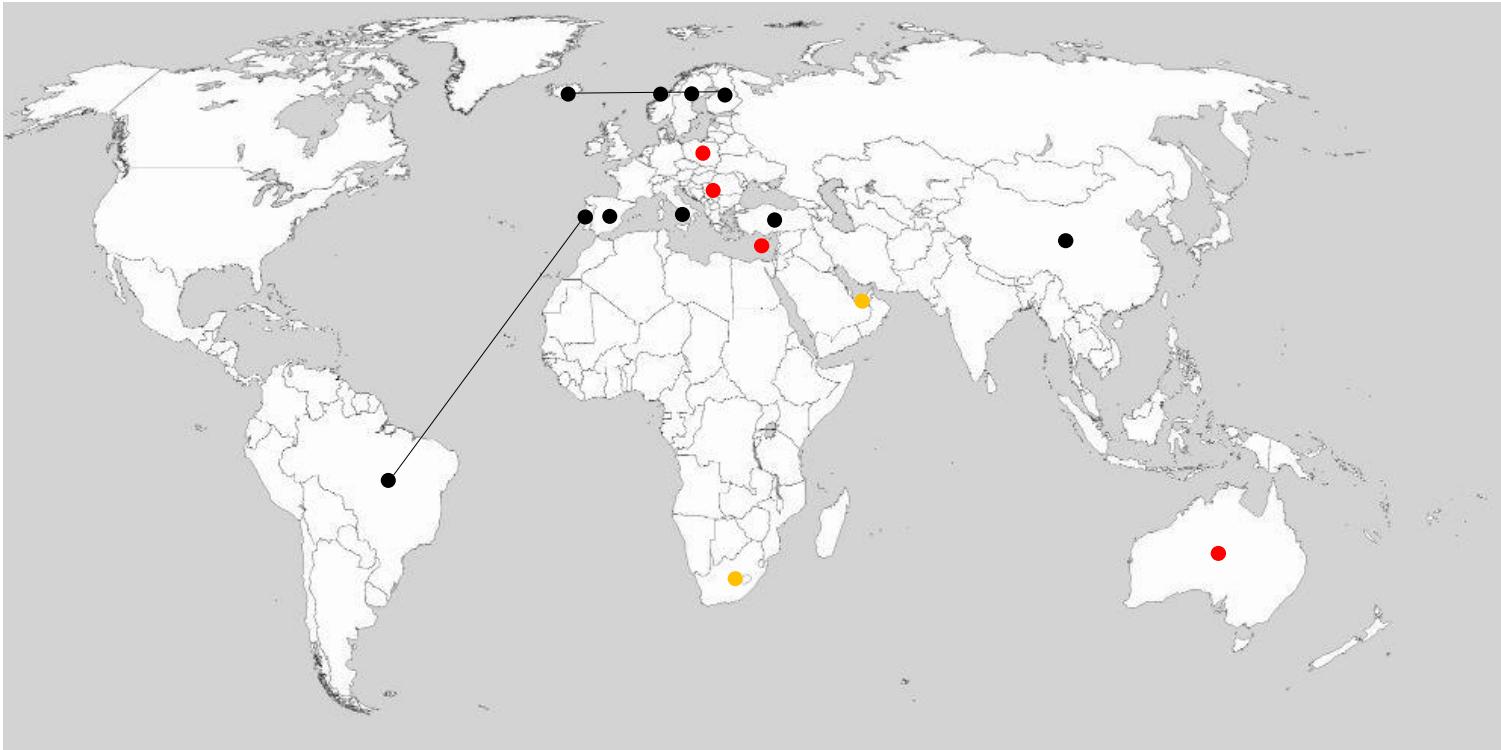
Developments in urban design practice in Montreal: a morphological perspective

F. Racine

Plan analysis of historical cities: a Sino-European comparison

J. W. R. Whitehand, M. P. Conzen and K. Gu

2. ISUF Local Networks



ISUF Local Networks:

established (black): Chinese, Hispanic, Italian, Nordic, Portuguese-speaking and Turkish;

emerging (red): Australasia, Cyprus, Polish and Serbian;

ideas (orange): Arab Gulf and South Africa.

Chinese Network (2013)

Includes 11 universities in China (privileged contacts with three universities outside China).

Inaugural seminar in 2013 in Nanjing University.

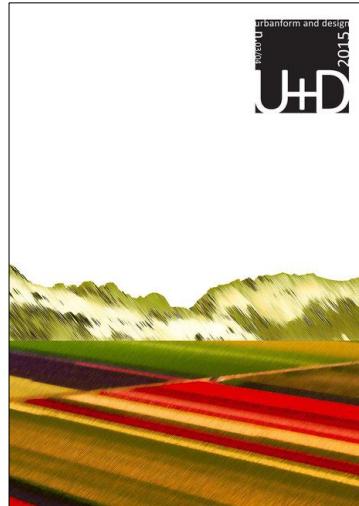
Organization of the ISUF Conference in 2016 (Nanjing).

Hispanic Network (2015)

Includes four universities in Spain.

Inaugural seminar in 2016 in the Universidad de Castilla-La Mancha, Toledo.

Organization of the ISUF Conference in 2017 (Valencia).



ISUF Italy: U+D current issue: 3-4;
ISUF Italy Conference 2014, Rome (photograph: Stefanos Antoniadis).

ISUF Italy (2007, 2014)

<http://www.isufitaly.com/>

Sapienza Università di Roma.

Inaugural conference in 2014 in the Sapienza Università di Roma.

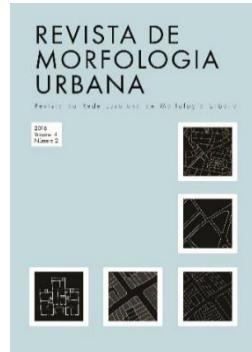
Conferences: Rome 2014, Rome 2017

Organization of the ISUF Conference in 2015 (Rome).

Journal 'UrbanForm and Design U+D': 2014-....

Nordic Network (2006)

Organization of the ISUF Conference in 2006 (Stockholm).



Portuguese-language Network: Revista de Morfologia Urbana 4.2,
Brasilia Conference 2015, Workshop Vila Nova de Cerveira 2016 (photograph: David Viana).

Portuguese-language Network (2010)

<http://pnum.fe.up.pt/pt/>

The PNUM Council and the Editorial Board of the journal include members from 14 universities.

Annual conferences:

Porto 2011, Lisbon 2012, Coimbra 2013, Brasilia 2015, Guimarães 2016, Vitória 2017

Organization of the ISUF Conference in 2014 (Porto).

Journal 'Revista de Morfologia Urbana': 2013-....

Annual workshops: Porto 2015, Vila Nova de Cerveira 2016

Turkish Network (2014)

<https://isufturkey.wordpress.com/>

Includes ten universities in Turkey.

Foundation workshop in 2014 in Mersin University.

Conference: Mersin 2015.

3. Advisory Committee on the Future Development of ISUF

2016, Nanjing – Progress Report
2017, Valencia – Final Report

A focus on the Local Networks.



Nanjing 2016 - ISUF Council discussing the progress report of the Advisory Committee on the Future Development of ISUF (photograph: Youpei Hu).

Research interests shared by different local networks:

from theory to practice

the history of urban form

different approaches and comparative studies

the social use of space

teaching urban morphology

space syntax

typological processes

fringe belts

morphological indicators and sustainability

public space.

4. Research and Practice

4.1. ISUF Task Force on Research and Practice

A report with four recommendations (Samuels, 2013):

- i) the publication of a manifesto or charter (to communicate in a simple and direct way to planning practitioners, what urban morphology has to offer to planning practice);
- ii) the collection of relevant information on how urban morphology is included in different courses within different countries;
- iii) the collection of good practices of how and where urban morphology is being used successfully;
- iv) the preparation of urban morphology manuals.

Draft

The Porto Charter

ISUF seeks:

To promote urban morphology as the study of the physical form of cities.

- a. To demonstrate the relevance of urban morphology at all scales, from the individual building to the metropolitan region.
- b. To facilitate the international dissemination of urban morphological knowledge, techniques and experience.
- c. To promote recognition of the cultural and environmental significance of urban form and the importance of its contribution to social and economic well-being.
- d. To stimulate the interaction of intellectual enquiry and practical activity in endeavours concerned with urban form.
- e. To facilitate communication across the range of professions, disciplines, intellectual traditions, and communities of interest concerned with urban form.
- f. To foster comparative studies and assess the impacts of the transfer of concepts and experience in different environments and societies.
- g. To promote and facilitate the study of urban form in the training of built environment professionals.

Urban morphological curricula in Spanish schools of architecture

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Revised version received 20 April 2015

Abstract. *Urban morphological curricula in recently redesigned programmes in all 33 schools of architecture in Spain are examined. In an international context a comparative study is made of different courses using data available on university websites. Urban morphology is present in most compulsory urban studies modules, but these modules are rarely seen as relevant to architectural programmes and only a very few are fully dedicated to the study of urban form. The weak state of urban morphological curricula in Spanish architectural programmes is revealed. Change is urgently needed to provide future professionals with better knowledge and tools for research and practice.*

Keywords: urban morphological education, architectural education, Spain, European Higher Education Area, study of urban form

The ISUF Task Force on Research and Practice in Urban Morphology recommended that curricula in different countries should be compiled and published (Samuels, 2013, pp. 40-1). This paper is the first systematic attempt to explore on a national scale the place of urban morphology in higher education.

The first objective of creating and developing The European Higher Education Area (EHEA) was to adopt by 2010 a 'system of easily readable and comparable degrees' among the countries involved (European Ministers of Education, 1999). The significance of the present analysis relates not only to the exploration of the Spanish case but, perhaps more importantly, to the methodology that is developed, and its potential transferability to other countries.

In Spain, there is no specific academic degree in urban studies. Instead, several disciplines deal with urban phenomena in general and, on occasion, with urban morphology in particular. Nevertheless, only graduates in architecture or civil engineering

do any kind of planning or *urban work*, no matter the scale. This exclusive right is granted automatically when students graduate in either of these two disciplines.

We believe that those who thereby have the right to develop the urban fabric should have a good background in urban morphology, in the same way that doctors, especially surgeons, should have a good background in human anatomy. The present study of urban morphological curricula in Spain is limited to architectural programmes. It could have included civil engineering but, although historically a number of urban planners have been civil engineers – some of them as well known as Ildefonso Cerdá and Arturo Soria at present it is architects who have the main role in the planning and building of the urban environment. Furthermore, a pilot study has shown that, in Spain, architectural programmes include a higher credit load of urban studies than civil engineering programmes.

Before analysing the place that urban morphology has within architectural curricula,

Urban morphological research and planning practice: a Portuguese assessment

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and

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Revised version received 8 December 2013

Abstract. *This paper assesses the 2006 Plano Director Municipal of Porto, Portugal as a contribution to the ISUF Task Force on Research and Practice in Urban Morphology. It focuses on the application of the urban tissue concept and is in three parts: i) an assessment of the plan and its typological approach; ii) an assessment of the results on the ground; and iii) an assessment of the planning process, developed under the framework of the plan.*

Keywords: *urban morphological research, planning practice, assessment, plans, urban tissue*

Over the last 3 years the relationship between urban morphological research and planning practice has attracted renewed interest internationally. A theme issue of *Built Environment* has focused on 'Urban morphology and design' (see, for example, Çalişkan and Marshall, 2011) and the last volume of *Urban Morphology* included a considerable number of viewpoints on this theme (see, for example, Ding, 2013; Hall, 2013; Scheer, 2013).

Looked at more broadly, this is a theme with a long tradition within the different approaches to the study of urban form. Within the process typological approach, one of the most remarkable cases was developed by Muratori at the end of the 1950s. In 1959, Muratori applied the results from his research on the urban history of Venice (particularly on the three typical systems of tissues that

characterized the Venetian urban fabric over time) in the design competition for the *Barone di San Giuliano* – see Muratori (1959) for his seminal book on the Italian city and Cataldi (1998) and Mareto (2013) for the design process.

Within the historico-geographical approach three concepts have been extensively explored. The concept of the morphological region has been successfully applied in England, namely in a plan for Barni Green (Whitehead, 2009) and in the residential character study of Stratford-upon-Avon (Larkham *et al.*, 2005). Based on similar principles, the concept of urban tissue has been applied in a number of French local plans – including St. Gervais (Samuels, 1999) and Rennes – and in design guides and supplementary planning guidance for some English towns, such as Stratford-

Muratorian urban morphology: the walled city of Ahmedabad

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Revised version received 26 November 2015

Abstract. *This paper investigates the complexity of the urban fabric, from the urban scale to the building and neighbourhood scale, by using the concepts and tools of urban morphology according to the Muratorian School. Specifically, basic concepts such as 'urban polarities', 'routes hierarchical system' and 'building neighbourhood' are used. They are deployed in the walled city of Ahmedabad, India, which has a rich architectural heritage clearly recognizable in Indo-Islamic monuments and particularly in aggregative structures called pols.*

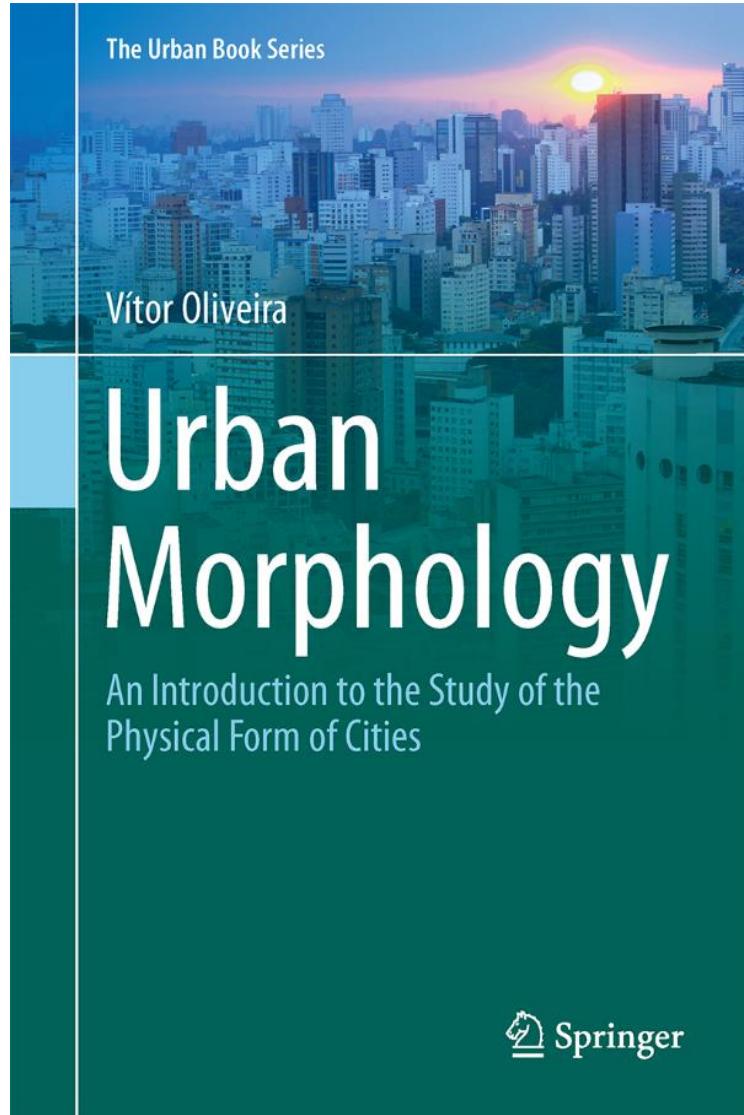
Keywords: *urban morphology, history, pol, urban community, India, Saviero Muratori*

The central concern of this paper is the application to the Indian city of Ahmedabad of a number of concepts and tools of urban morphology that have been developed by the Muratorian School. Though the basic tenets of this School have been promulgated and discussed over several decades, notably within Europe (see, for example, Caniggia and Maffei, 2001), it is nevertheless necessary to begin by setting the specific application undertaken in this paper within its epistemological and methodological context.

Prolegomenon

A city may be considered unitary in its conception, yet infinitely plural in its manifestations.

Yet settlements require some affinity with the environment of which they become part: they require at least a minimal relationship to the territory they occupy – for example to its resources and productive potential. Specific urban histories and identities are the result of the territorial 'readings' of different civilizations over time. Traces of such histories and identities may be recovered and interpreted, becoming interesting communicators of knowledge. They are interesting because they point to the 'structural' substance of the city and its inhabitants. They act as underlying support for urban phenomena in their unfolding, focusing on the logic of formation and transformation of the city rather than on its 'historiography'. They are concerned with the structural evidence of urban fabrics



Handbook of Urban Morphology

Karl Kropf

1. Principles

- 1.1 Core concepts
- 1.2 Origins and approaches
- 1.3 Aspects of urban form
- 1.4 Minimum elements

2. Methods

- 2.1 General methods of analysis

Desktop analysis

- 2.2 Natural environment and site
- 2.3 Growth and transformation
- 2.4 Social and economic context
- 2.5 Control
- 2.6 Route structure
- 2.7 Built form
- 2.8 Use and neighbourhood structure
- 2.9 City image, townscape and open space network

Field survey

- 2.10 Built form
- 2.11 Frontage, access points and boundary types
- 2.12 Use
- 2.13 Perceptual structure, city image elements and townscape
- 2.14 Participation and evaluation

Synthesis

- 2.15 Settlement structure
- 2.16 Composite character, relationships and associations
- 2.17 Interactions, development and evolution
- 2.18 Explanation and integration

3. Applications

- 3.1 Theoretical morphology (Philip Steadman / Berghauer Pont and Haupt)
- 3.2 Energy use (LSE-FIFFR-Rode-Keim / Salat)
- 3.3 Environmental performance/Microclimate (Osmond)
- 3.4 Acoustics (Jian Kang)
- 3.5 Retail environments (Pete Ferguson and Conrad Kickert)
- 3.6 Historical significance and understanding (Nigel Baker, Hereford)
- 3.7 Regeneration plans (Marco Mareto-Nicola Scardignio)
- 3.8 Urban character and neighbourhoods (Gill Thompson, Eline Hansen)
- 3.9 Understanding and planning (Scheer – Northamptonshire Amy Burbidge)
- 3.10 Measures and evaluation (Vitor Oliveira)
- 3.11 Morphological plans (Rennes and Porto)
- 3.12 Morphological masterplan/informal urban form (Marco Mareto et al)
- 3.13 Tissue studies (Richard Hayward)
- 3.14 Design resource (Porta / Tarbutt / Alexander et al / Labraken / Stratford Guide / Bath)

And yet... there is a lot of work to be done!

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**There are many questions that need better answers,
many problems that need better solutions!**

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What is good (or morphologically informed) for me, might not be good for one of my colleagues urban morphologists.

Third
Problem





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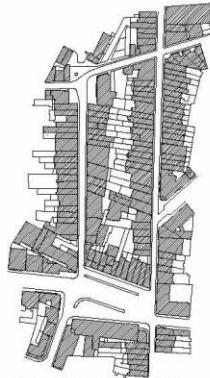


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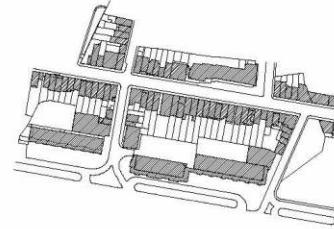
- i. Should we think the municipal/metropolitan mobility needs are far more important than the urban form concerns and not seeing this as problem ('doing nothing')?
- ii. Or should we see it as a problem and think that our morphological knowledge can inform a design action to mitigate it?
- iii. And if so, what kind of action can we develop? Should we promote (building) continuity between both sides of the IRR? Should we look at the IRR as something that was built on a fringe belt and conserve its immediate surroundings as open space (with a function)?



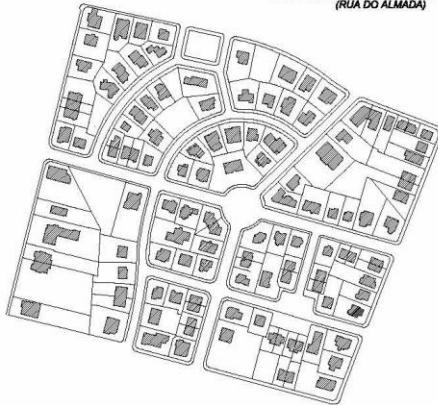
HISTORICAL AREA
(RUA DA BANHARIA)



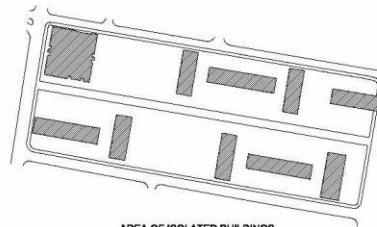
AREA OF CONTINUOUS BUILDING
FRONTAGES AND LARGELY REPLETE PLOTS
(RUA DO ALMADA)



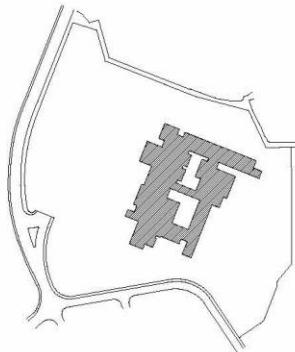
AREA OF CONTINUOUS BUILDING FRONTAGES
AND PLOTS IN THE PROCESS OF REPLETION
(RUA DA CONSTITUIÇÃO)



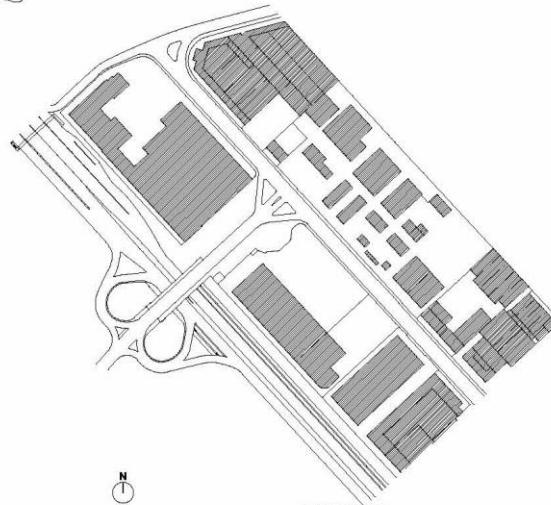
SINGLE-FAMILY HOUSING AREA
(RUA GUERRA JUNQUEIRO)



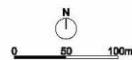
AREA OF ISOLATED BUILDINGS
(ALAMEDA EÇA DE QUEIROZ)

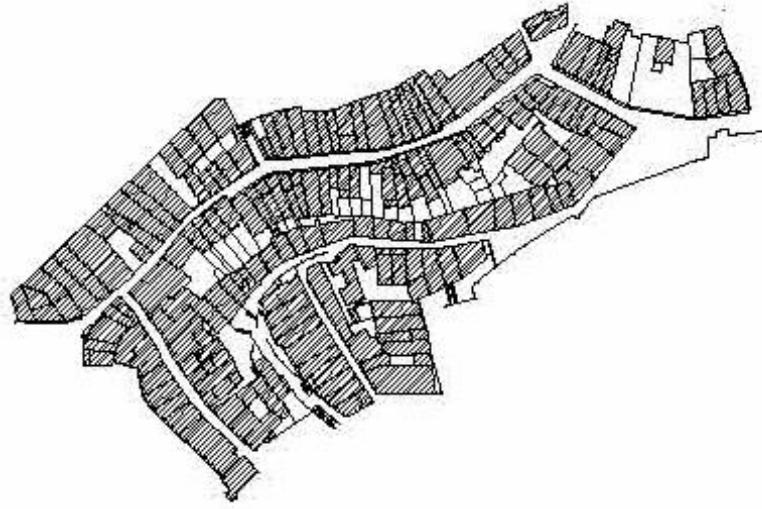


AREA OF PUBLIC SERVICES
(RUA ROBERTO FRIAS)



BUSINESS PARK
(RUA MANUEL PINTO DE AZEVEDO)





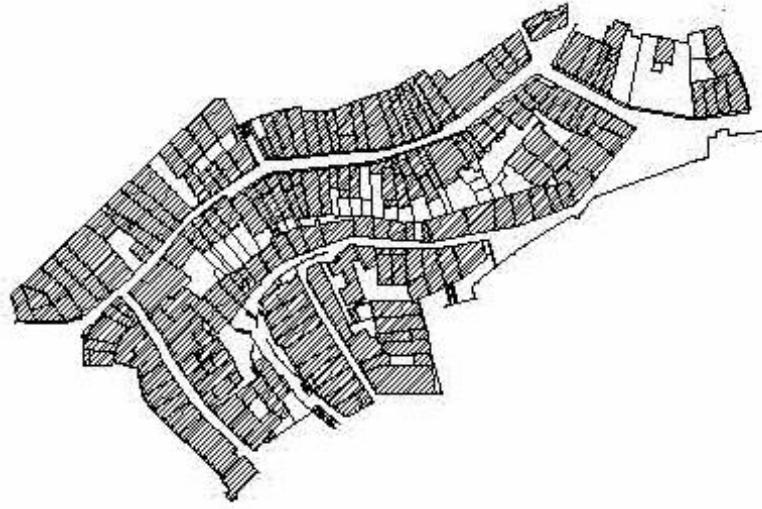
Historical Areas

The **streets** and **plot series** are very irregular.

There is a high **building** density.

Buildings are narrow, normally 3 storeys high, with some as high as 5 storeys.

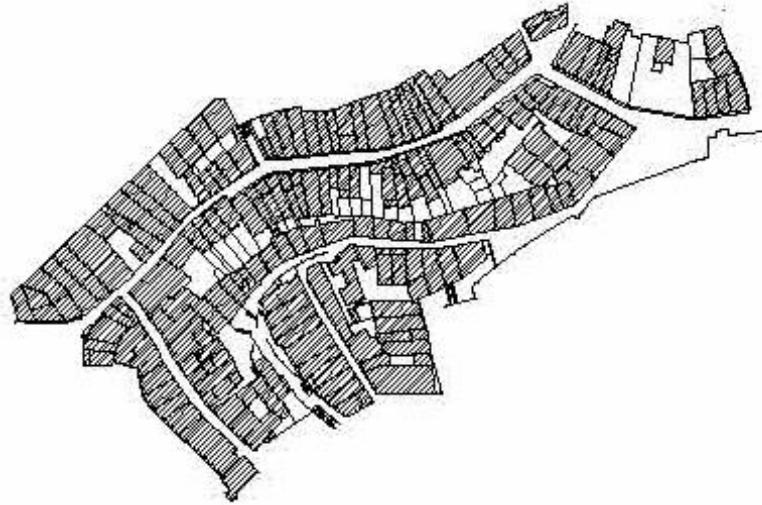
Although buildings are always positioned on the front of the plot, building coverage is very high.



How should we act on this urban tissue?

What should be preserved and what should be changed?

In recent actions the front façades of these buildings have been reconstructed (although many times with new door and window frames), but their interiors have been totally replaced by designs that have no respect for the traditional house types of Porto.



Is it enough for us?

Is it enough for maintain the character of a building and of an urban area?

Or should we preserve more elements of our urban/architectural history?

In the exterior:

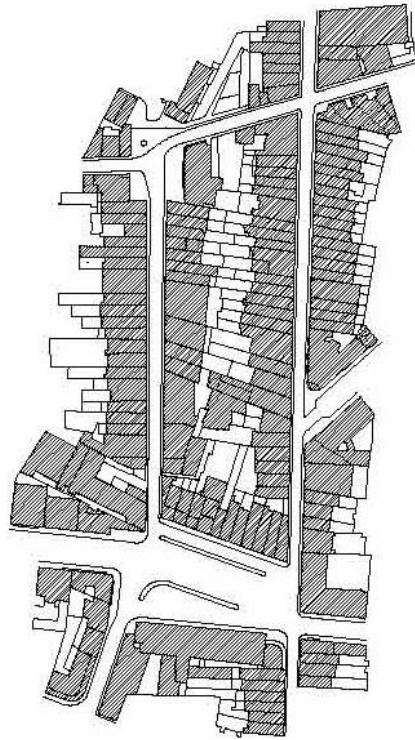
Should the design and materials of door and window frames, in both façades be maintained?

Should the type of roof be maintained?

In the interior:

Should the stair and the overall organization of rooms be maintained?

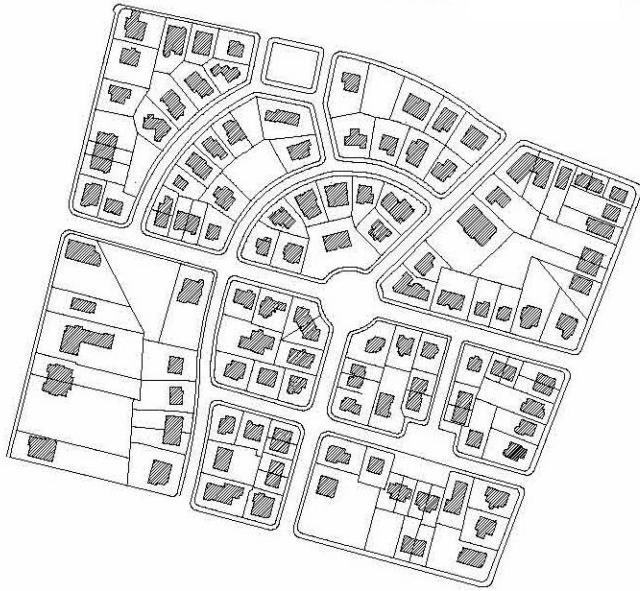
Should some architectural details (in the ceiling, wall or floor) be maintained?



Areas of Continuous Building Frontages and Largely Replete Plots

In this area, **streets** and blocks are regular, the **plot** is normally a rectangle with an average width of 6m and a depth that can attain 100m.

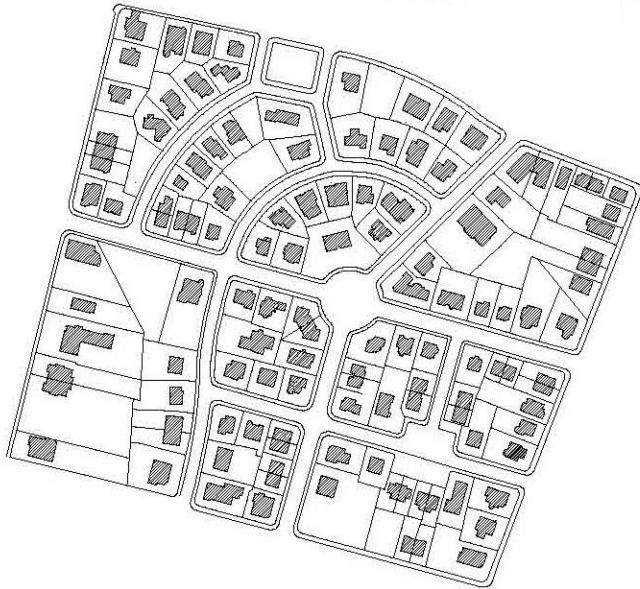
Most of the blocks of this tissue have a continuous commercial use on the ground floor.



Single-Family Housing Areas

Correspond to 2 different types of housing development (of different social status), built in different parts of the city.

Both types created an urban tissue composed of **streets** with a regular pattern, **plots** of different sizes, detached or semi-detached **houses** of 2 or 3 storeys, with gardens or patios.

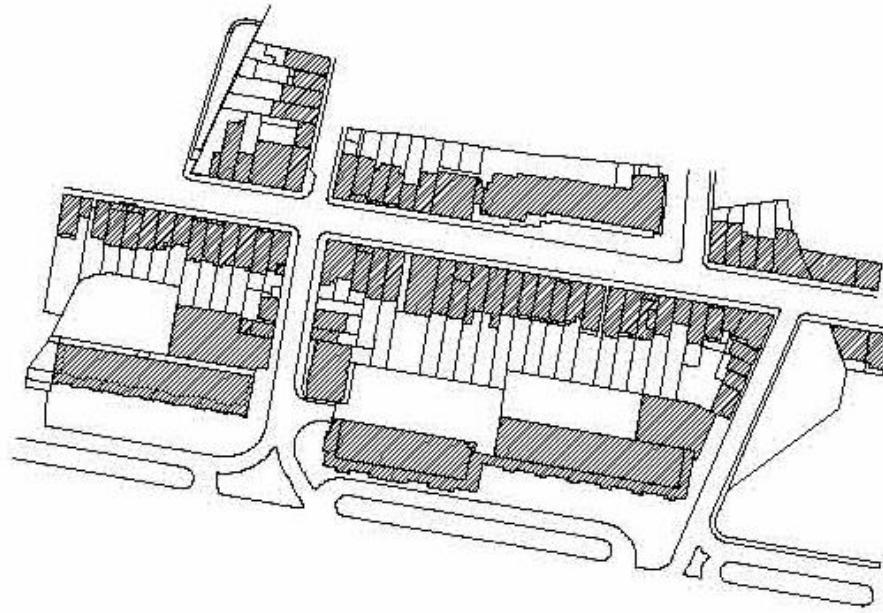


In recent decades there have been substantive changes, including:

- i. the addition of a new building within the plot,
- ii. the increasing in the number of storeys,
- iii. the radical change of architectural style and
- iv. the change of design and materials of some architectural elements.

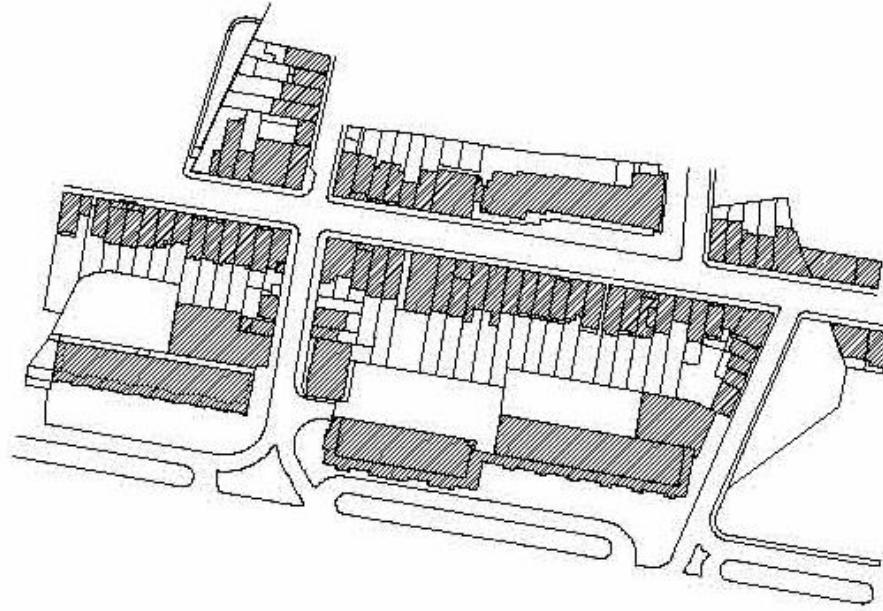
Is that acceptable?

How should we act on this urban tissue?



Areas of Continuous Building Frontages and Plots in the Process of Repletion

Rebuilding in the 20th century, sometimes on a single **plot**, has created large disparities within some **plot series**, because of their excessive height and poor design. In the core areas commercial **uses** tend to be retained on the ground floor, but away from these areas, the ground floor of many buildings is used for warehousing and there have been increases in the coverage of plots.



How should we act on this urban tissue?

Should the new buildings follow the existing alignments of the adjoining buildings? Front and rear alignments?

What should be the maximum (and minimum) height of the new buildings?

Should they have a similar design? Should they have some of the materials used in the adjoining buildings?



Areas of Isolated Buildings

These areas are based on a Modernist model, and also consist of 2 different types of housing development.

Plot ratio was the main criterion used to control this type of development.

In almost all cases this has led to the production of an undefined public space.



How can we deal with this fragmentation?

Should we recover the traditional relation between street and buildings?

Should we promote a continuous building alignment along the street?

Should we offer guidelines on the street section (on the relation between building height and street width)?

Buildings in:

Historical Areas

Single-Family
Housing Areas

Areas of C. B. F.
and Plots in the
Process of
Repletion



Historical Areas



Single-Family Housing Areas



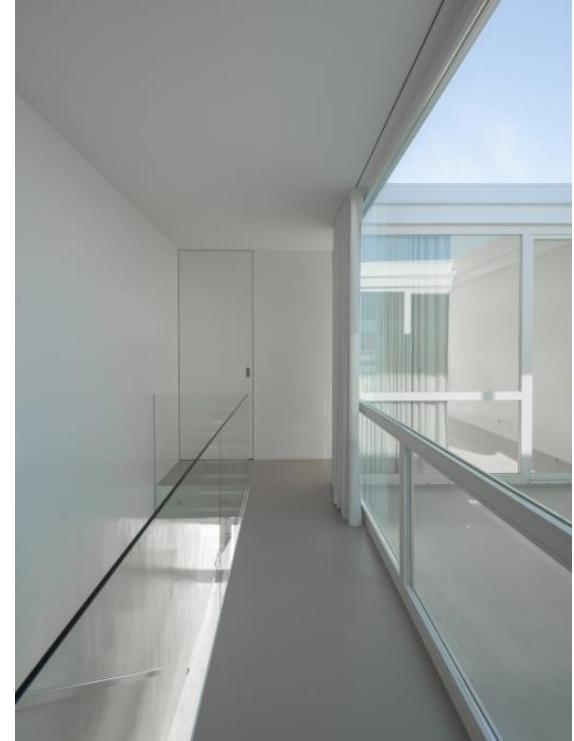
Areas of C. B. F. and Plots in
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