

AoI.DS

AMa

Envitioning San Siro #2

School Of Architecture
Urban Planning
Construction Engineering

Politecnico di Milano

DESIGN STUDIO HANDBOOK

academic year
2018 / 2019

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Studio guide

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San Siro area, Milan

The Studio

The Architecture of Interiors Design Studio is inspired by the ever-increasing number of studies that in Italy and Europe are concerned with the need for an opportunity to intervene on the vast residential property built after WWII and, in particular, on the Social Housing building stock that constitutes for many Countries the most substantial part. This is due the European Energy road map (2012) that has fixed the ambitious goal to cut gas emission by the 85% by 2050, investing large amount of money for retrofitting interventions on public buildings, specially on housing stock. These settlements have been affected - not only in Italy - by the consequences of housing policies and intervention strategies conditioned by the pressing housing crisis and the size of the social housing demand that accompanied the post-war reconstruction. The large high-rise residential complexes that in many cases characterize these areas, which are now often embedded in urban city matrix, are subject to a high degree of social degradation as well as technical and functional (abstract Ricerca PRIN 08 “Edilizia Sociale ad alta densità / High density Social Housing”). Moreover, as Ernesto Antonini, Jacopo Gaspari, Giulia Olivieri have pointed out in their paper (DOI: <http://dx.doi.org/10.13128/Techne-11531>) “Densifying to upgrading: strategies for improving the social housing built stock in Italy” the world economic crisis has further depressed – not only in Italy - the production of social housing but it dramatically increased the demand of affordable rental dwellings. A refurbishment and retrofitting campaign of the social housing stock appears to be as a credible and effective strategy, able to be applied in the short term to bring this gap.

Number of studies carried out on the affordable housing in use allow

to identify three main targets for retrofitting strategies, focusing on the combined reduction of operation & management costs, improvement of the building capacity to meet the user needs and increasing of the exploitation ratio of the assets:

- adapting in size and equipment the apartments to the emerging demand trends, pushed by two social trends: the fast increasing of households of one or two persons (typical Italian and European) and those of five and more (mainly people from extra-EU countries), in spite of the middle size flats that still represent more than half of the social housing offer [the Design Studio adds a third phenomenon typical of metropolitan areas: the request of “Temporary Social Housing” for families and people in temporary need];
- improving functionality and usability performances of the buildings – such as seismic safety, energy efficiency, comfort – focusing also on the significant reduction of operating costs which are often obtainable in parallel;
- intensifying the utilization ratio of the built estate and increasing the settlement density, by the addition of new volumes intended to enlarge the available social housing offer.

#Design urgency

The overwhelming majority of retrofitting interventions does not consider architectural quality neither as an objective nor as an instrument of interventions or as the need for an architectural project, directing this type of interventions to mere technical design. In fact, this process is destroying our urban environments, greatly impoverishing both urban and residential quality by virtue of a quantitative and performative supremacy that sees consumption reduction as the only parameter on which to pay attention, completely ignoring the consequences on inhabited environment (both inside and outside the home).

Minimising energy demand by appropriately manipulating the options offered by the urban design is a crucial step for minimising the entropy production of the neighbourhood (thus the contribution to global warming), but it must be remembered that urban design also affects other aspects of sustainability, such as health, liveability, social inclusion, equity and economics.

Of course the architects have to consider not only energy, but also aesthetics, functionality and economy issues.

The challenge is unprecedented and will require a radical transformation of the methods of designing and building. The reduction of CO2 emissions by reducing energy consumption guaranteeing at the same time the quality of the space (external and internal) is the top priority facing the construction industry today.

#Manifesto

Learning from the past, re-designing for the future: the 50s Milanese school.

Addressing quality:

- on the Interiors (lay-out, typology and materiality)
- on the Façades (as strong urban determinant)
- on the Public Space (the inside/outside relationship on the ground floor)

#Method

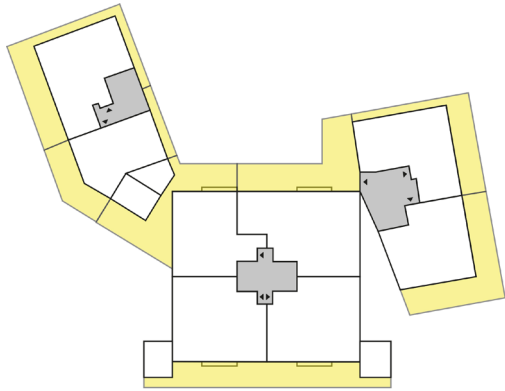
Addressing every building as a “system of ecologies” and not as a simple and autonomous artifact; this means: addressing even the intervention only on the building envelope (the Façade) as a mediator between the Interiors and the Urban Environment; considering the potential empowering consequences on the Interiors; considering the potential empowering consequences on the Urban Environment; considering, whenever possible, the Public Space and its interrelation with the Building (the material Neighborhood); considering, last but not least, the potential empowering consequences on Social cohesion (the immaterial Neighborhood); minimise energy demand in buildings by means of Climate responsive design building whose architectural features are such that they take advantage of local climatic resources to provide an indoor environment which is as comfortable as possible, thus reducing energy consumption due to the need for mechanical heating or cooling; maximise efficiency of energy conversion technologies; fulfil the remaining energy consumption with renewable energy sources.

The calendar in brief

FL: Francesco Leonforte GP: Gennaro Postiglione BB: Barbara Brollo
SS: Sibil Strauli ML: Morning Lecture GL: Guest Lecture FFL: Fabrizio Leonforte Lecture

	#01	Extra Programme	#02	#03
tuesday M (aula B.3.4)	26th February Studio Presentation h. 9:30 GP ML#01 - BB+SS	2nd March Milan 50's architecture city tour	5th March Site Visit	12th March GL#02
tuesday A (aula B.3.4)	Seminar #01 FL+GP		FFL#01 GL#01 ML#02 - BB+SS Work and revision	FFL#02
LAB KICK OFF				
	#04	#05	#06	#07
tuesday M (aula B.3.4)	19th March FIRST DELIVERY SEMINAR (all day)	26th - 27th March Zurich study trip	2nd April FFL#03 ML#03 - GP	9th April FFL#04 ML#04 - GP
tuesday A (aula B.3.4)		Work and revisions	Work and revisions	FFL#05 Work and revisions
FIRST STAGE		SECOND STAGE		

	#08	#09	#10	#11
tuesday M (aula B 3.4)	16th April Conference #01	23th April Easter holidays	30th April MID-TERM SEMINAR (all day)	7th May Work and Revisions (all Day)
tuesday A (aula B.3.4)	Work and revisions			
SECOND STAGE		THIRD STAGE		
	#12	#13	#14	#15
tuesday M & A (aula B.3.4)	14th May Work and Revisions (all Day)	21st May Work and Revisions (all Day) Conference #02	28th May Work and Revisions (all Day)	4th June INSTANT EXHIBITION + PRESENTATIONS WITH GUEST CRITICS
THIRD STAGE				
	#16	#17		
tuesday M & A (aula B.3.4)	18th June (Exam: 1st session)	16th July FINAL EXHIBITION WITH PRESENTATIONS (Exam: 2nd session)		
FOURTH STAGE				



Case study: Housing transformation - Lacaton & Vassal /
de-stu1#AMa-2018 (Buçan Deniz, Gusmini Emanuela, Milewska Kamila)

Stages & deliveries

The Design Studio AMa 2019 is organized in four stages:

FIRST STAGE

Best practices and site analysis

26th February - 19th March 2019

Delivery #01 (First Delivery)

19th March 2019

SECOND STAGE

Preliminary draft (1:500 / 1:200)

19th March - 30th April 2019

Delivery #02 (Mid-Term)

30th April 2019

THIRD STAGE

Draft (1:500 / 1:200 / 1:50)

30th April - 4th June 2019

Delivery #03 (Instant Exhibition)

4th June 2019

FOURTH STAGE

Final design proposal (1:500 / 1:200 / 1:50 / vision / maquette)

4th June - 16th June 2019

Delivery (Final Exhibition and Exams)

16th July 2019

At the end of each stage a delivery of the work in progress will be required, according to contents and formats described in the next pages.

■ FIRST STAGE | Best practices and site analysis

26th February - 19th March 2019

Booklet in A4 (according template) for each of the assigned topics:

- **CS-Milan 50s architecture**
- **San Siro Mapping & Survey**
- **CS-Retrofitting best practice**

For each analysis provide also:

- Climate analysis
- Aspect ratio (S/V) and Window to wall ratio (WWR)
- Envelope's performance - existing building (U-value, Time shift, decrement factor)
- Type of HVAC system installed in the existing building (both for heating and domestic hot water)

■ SECOND STAGE | Preliminary draft

19th March - 30th April 2019

No template

Remember to always work on the three identified themes: The Urban Façade; The Interiors layout; the Ground Floor plan (public/private):

- **layout draft for the Façades:**
(1/200) the whole street
(1/100) the selected building
(1/50) section on the building Façade (tentative materiality)
(1/50) plan of the building Façade (tentative materiality)
- **layout draft for the typical plan:**
(1/50) cluster plan
(1/100) building typical plan
- **layout draft for the ground floor plan:**
(1/500) the whole street
(1/200) the selected building
- **tentative photomontages:**
the building
the street
the dwelling
- Energy demand evaluation of the existing building
- Definition of the energy strategy

- Shadow analysis and solar availability
- Consideration about orientation of spaces according to sun
- Scheme of the area dedicated to RES
- S/V and glazing ratio (WWR)
- Envelope's performance -retrofitted building (U-value, Time shift, decrement factor)
- Consideration about orientation of spaces according to sun
- Scheme of the area dedicated to RES

THIRD STAGE | Draft

■ **30th April - 4th June 2019**

No template

Remember to always work on the three identified themes: the Urban Façade; the Interiors layout; the Ground Floor plan (public/private).

- **Final draft for the Façades:**
(1/500) the whole street axonometry
(1/200) the whole street elevation
(1/100) the selected building elevation
(1/50) section on the building Façade
(1/50) plan of the building Façade
- Final draft for the typical plan:
(1/50) cluster plan
(1/100) building typical plan
- **Final draft for the ground floor plan:**
(1/500) the whole street
(1/200) the selected building
- **Final photomontages: "Proposal strong places"**
the building
the street
the dwelling
- **Booklet (eventually upgraded):**
CS-Retrofitting booklet
CS-Milano 50s booklet - Mapping San Siro Booklet
(one for each selected block and one for the whole neighborhood)
- Detailed envelope evaluation (U-value, Time shift, decrement factor, embodied energy, SHGC, Tv)

- Shading calculation (shading mask)
- Preliminary evaluation of the energy demand
- Schematic drawing of the best technical system, sizing and configuration
- Details of the connection between PV modules and roof (1:2 or 1:5)

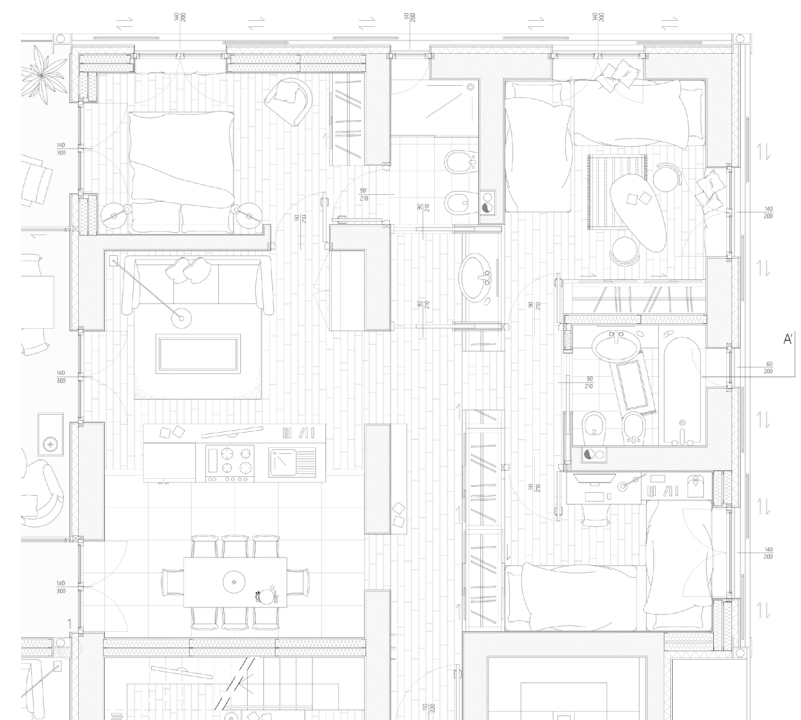
FOURTH STAGE | Final design proposal

4th June - 16th July 2019

All drawings on leporell format (template provided)

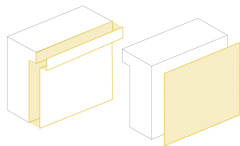
Remember to always work on the three identified themes: the Urban façade; the interiors layout; the ground floor plan (public/private):

- **Final proposal for the Façades:**
 - (1/500) the whole street axonometry
 - (1/200) the whole street elevation
 - (1/100) the selected building elevation
 - (1/50) section on the building Façade
 - (1/50) plan of the building Façade
- **Final proposal for the typical plan:**
 - (1/50) cluster plan
 - (1/100) building floor plan
- **Final proposal for the ground floor plan:**
 - (1/500) the whole street
 - (1/200) the selected building
- **Final photomontages: “Proposal strong places”**
 - the building
 - the street
 - the dwelling
- **Booklet project**
- **Booklet (eventually upgraded)**
 - CS-Retrofitting booklet
 - CS-Milano 50s booklet
 - Mapping San Siro Booklet
 - (one for each selected block and one for the whole neighborhood)
- Detailed evaluation of the energy consumption
- Evaluation of the provided energy by RES (at least 50% of the consumption)
- Details of the connection between PV modules and roof (1:2 or 1:5)



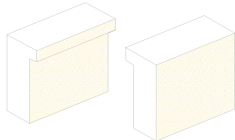
Utopia reloaded: Living San Siro /

de-stu1#AMa-2018 (C.Borri, T. S. Helmer, E. E. Pegiadou)

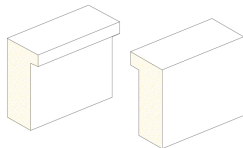


_New glass facades as a buffer zone

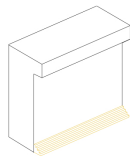
Materials:



_Glass and steel for the renewed north and south facades



_Perforated metal for the renewed east and west facades



_Wooden stairs at the ground floor



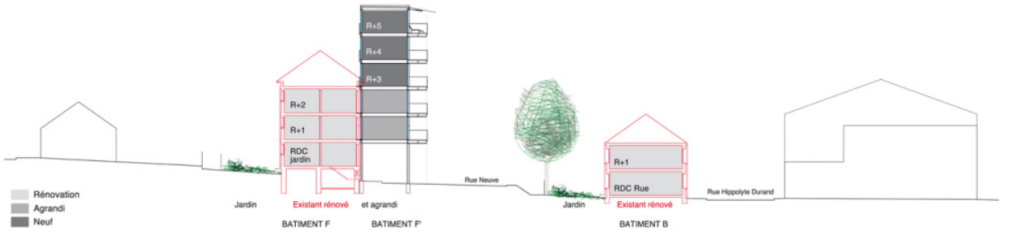
Best Practices

The analysis will investigate these three keywords:

#INTERIOR

#FACADE

#THRESHOLD



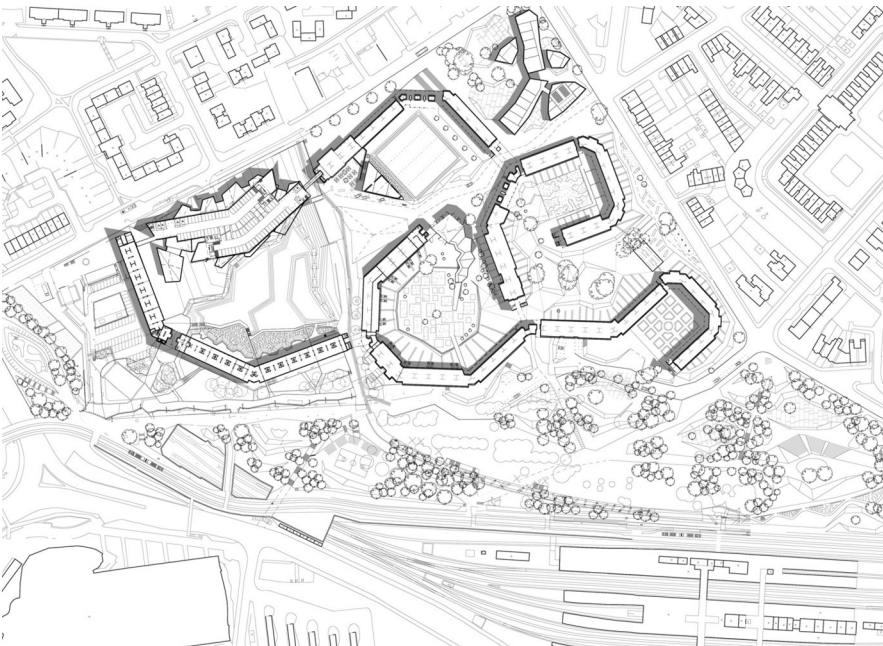
Best practices: retrofitting /
Logements, Saint- Nazaire_Lacaton & Vassal_Saint-Nazaire, France_2004



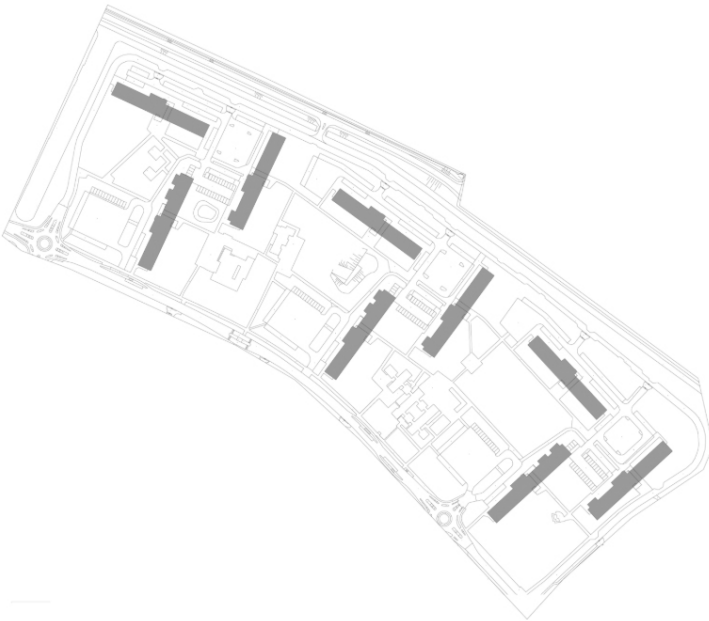
Best practices: retrofitting /
Plus - Les grands ensembles de logements_Lacaton & Vassal_ France_2004



Best practices: retrofitting /
HAB (Haderslev Andelsboligforening)_Haderslev, Denmark_C.F. Moller_ 2006



Best practices: retrofitting /
Park Hill_Sheffield, U.K._Studio Egret West_ 2007



Best practices: retrofitting /
Urban Renewal Europarei_Uithoorn, Netherlands._ Atelier Kempe Thill_ 2007



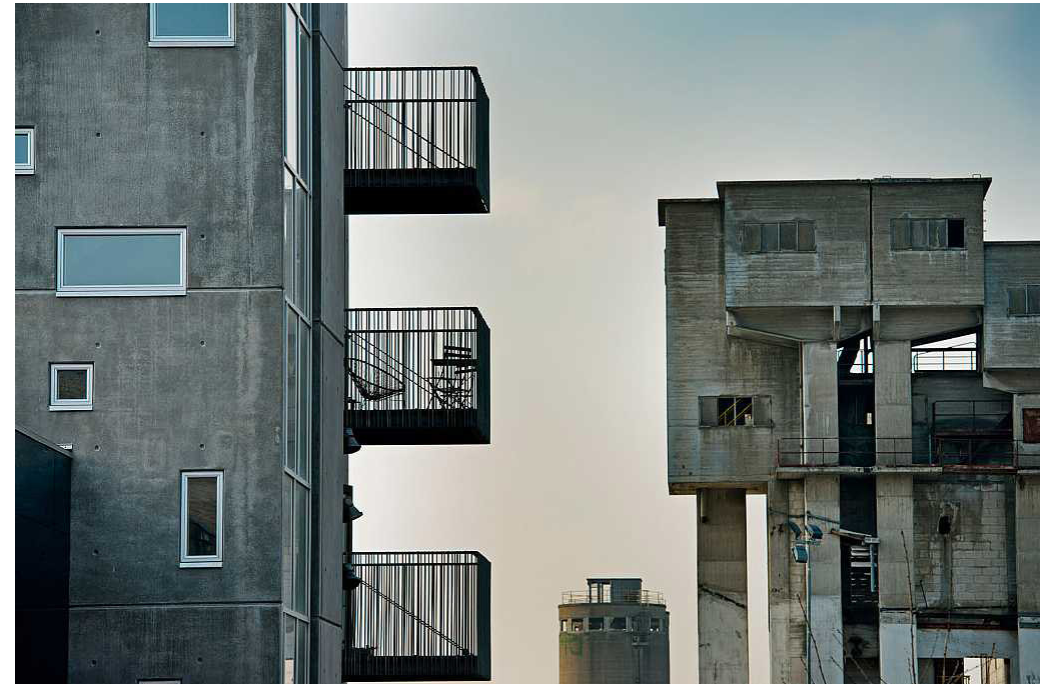
Best practices: retrofitting /
Grenoble Ariquin_Grenoble, France_Lacaton & Vassal_ 2010



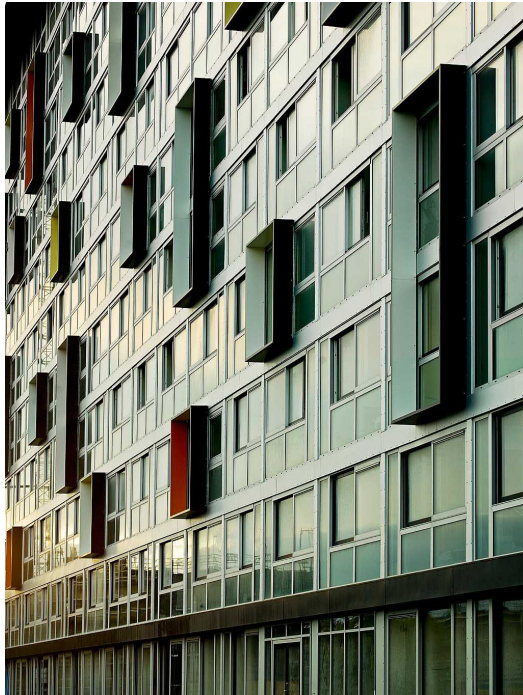
Best practices: retrofitting /
Transformation de la Tour Bois le Prete_Paris, France_Lacaton & Vassal_ 2011



Best practices: retrofitting /
Peau neuve_Paris, France_Atelier Du Pont_ 2013



Best practices: retrofitting /
Henius House_Aalborg, Denmark_C.F. Moller_ 2013



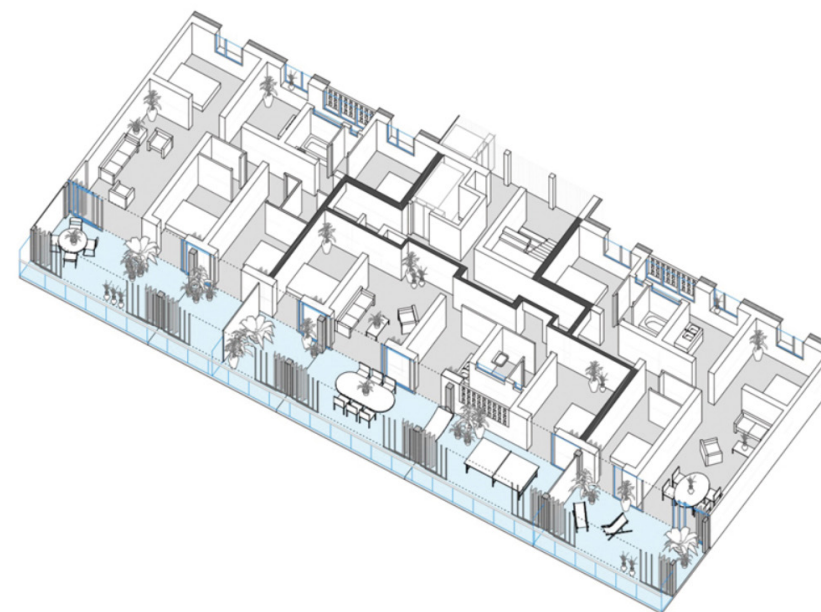
Best practices: retrofitting /
Magisterparken_Aalborg, Denmark_C.F. Moller_ 2015



Best practices: retrofitting /
Transformation d'un immeuble de logements_Saint-Nazaire, France_Lacaton & Vassal_ 2016

**Best practices: retrofitting /**

DeFlat_Kleiburg, 1105 Amsterdam-Zuidoost, The Netherlands_”NL Architects XVW architectuur”_ 2016

**Best practices: retrofitting /**

Transformation de 530 logements_Quartier du Grand Parc, Bordeaux, France_Lacaton & Vassal_ 2016



Best practices: retrofitting /

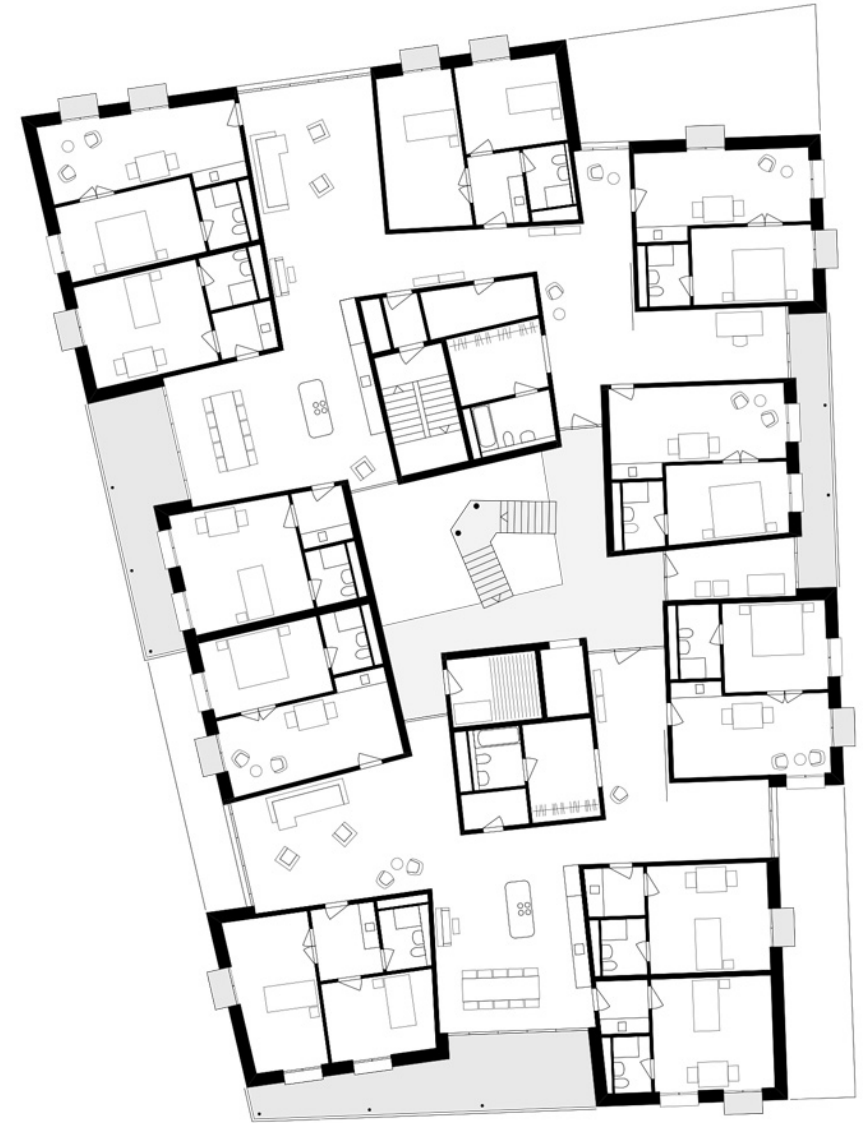
Fittja people's palace_Fittja, Stockholm_Spridd_ 2016



Best practices: housing /

Abitare Milano 1_Via Civitavecchia, Milano_Consalez, Rossi, Vudafieri_ 2005-2010







Best practices: housing /

Abitare Milano 1_Via Gallarate, Milano_MAB architettura_ 2009



Best practices: housing /

Abitare Milano 1_via Ovada, Milano_Cecchi&Lima_ 2005-2009



Best practices: housing /

Abitare Milano 1_via Senigallia, Milano_Dorigati + ODA associati_ 2016



Best practices: housing /

Abitare Milano 2_via degli Appennini, Milano_Macchioni, Clemenz, Candidi_ 2007



Best practices: housing /

Abitare Milano 3_via Voltri, Milano_Cecchi&Lima_ 2006-on going



Best practices: housing /

Abitare Milano 3_via Fratelli Zoia, Mlilano_Gaglio e Mangoni_ 2014



Best practices: housing /

Cenni di cambiamento_via Cenni, Milano_Rossiprodi associati_ 2013



Best practices: housing /

Borgo sostenibile_Borgo Figino, Milano_RSG_ 2015



Best practices: housing /

Residenza temporanea "Porta Palazzo, Luoghi comuni"_Torino_Studio Fagnoni e Associati_ 2009



Best practices: housing /

Residenza temporanea "Sharing Torino"_Torino_Costa & Partners + Melano Associati_ 2011



Best practices: housing /

House-sharing (CLUSTER-WOHNUNGEN)_Zwicky Sud, Zurich_ Kraftwer1_2016



Best practices: housing /

House-sharing (CLUSTER-WOHNUNGEN)_Heizenholz, Zurich_ Kraftwer1_2012



Best practices: housing /

House-sharing (CLUSTER-WOHNUNGEN)_Zoolhaus, Zurich_Kalkbreite_2020



Best practices: housing /

House-sharing (CLUSTER-WOHNUNGEN)_Hunziker Areal, Zurich_Mehr als Wohnen_2015



Best practices: housing /
Wohnhaus 50+_Winterthur_Haerle Hubacher architekten_2010



Best practices: housing /
Carabanchel_Madrid_Dosmasuno arquitectos_2007



Best practices: housing /
Codan Shinonome_Canal Court, Tokyo_Riken Yamamoto_2003



Best practices: housing /
Jianwai project_Beijing_Riken Yamamoto_2005



The working site

San Siro is a complex of public residential buildings of the ALER company (Azienda Lombarda Edilizia Residenziale), built between 1935 and 1947 according to innovative living standards. San Siro has subsequently developed in a way inhomogeneous, becoming a settlement afflicted by a profound physical and social degradation. In fact this area is often called casbah for the very low standard of living.

The economic difficulties of this district caused a sale of the buildings, converting them into private use.

Of the still public housing (23% of which was in the meanwhile sold) not all are used: at the end of 2012 they were 780 apartments vacant in the neighbourhood, due to regulations, procedures or lack of investments that prevent it rapid reactivation (change of assignment, unavailability housing, rents, etc.) against a list waiting for 21 thousand questions in the ranking. Totally there are 6.000 apartments and their hygiene conditions do not comply with the law, in fact an issue of this complex is the structure. A lot of these apartments are not available for disabled people. The apartments in this area are very small (O.U.R.), so the people are basically forced to use the balconies to add space.

Regarding the common areas, both public and private companies have forbidden to use courtyards, in order to maintain respect among the inhabitants.

On the other hand, many courts and houses are inaccessible due to the occupants. In addition, many stores that were thought of as common areas between buildings are almost completely abandoned, but they represent a particularity of the San Siro project so much that they could be reactivated.







Links

Blocks identifications:

<https://drive.google.com/drive/folders/1Dt-NwGIPN1XaaGDPw3wHx0AvObKTD27V?usp=sharing>

Booklet understanding:

<https://drive.google.com/open?id=1M9xLzz2ArEqRpVxV1K5eZCqLsLgKwQsF>

Leporello redrawing:

https://drive.google.com/drive/folders/12z0wgyp_twmoywQ5AYeI8bJVuXHUn9DQ?usp=sharing

Autocad 1:1000 :

<https://drive.google.com/open?id=1gpQMNfTd1-TprlIxm3vbURkYrw8qknqk>

Original drawings:

<https://drive.google.com/open?id=1cDOcoWBPCoViQDBfxI2FbY3yDNd7WlOA>

Reading lists

Readings about retrofitting

<https://drive.google.com/open?id=1-LJqCdXv-Z73RkYzKuleKYepES8iJ54s>

Terri Peters, *Architectural strategies of transformation to modern housing*, Aarhus Architecture School, Aarhus 2015

Luisa Califano, *Le addizioni al costruito nelle strategie di retrofit*, Università degli studi di Napoli, Napoli

Vittorino Belpoliti, Paola Boarin, Pietromaria Davoli, Nicola Marzot, *Costruire nel costruito: il riciclo urbano come strategia di rigenerazione sistemica del tessuto consolidato*

Ernesto Antonini, Jacopo Gaspari, Giulia Olivieri, *Densificare per migliorare: strategie di riqualificazione del parco italiano di edilizia abitativa sociale*

Fernanda Acre, Annemie Wyckmans, *Dwelling renovation and spatial quality: the impact of the dwelling renovation on spatial quality determinants*, Norwegian University of Science and Technology, Trondheim, 2015

Andrea Boeri, Laura Gabrielli, Danila Longo, *Evaluation and feasibility study of retrofitting interventions on social housing in Italy*, Elsevier, Ferrara 2011

Cristiana Cellucci, Michele Di Sivo, *Habitat contemporaneo: flessibilità tecnologica e spaziale*, Franco Angeli, Milano 2016

Cristiana Cellucci, Michele Di Sivo, *Habitat contemporaneo: flessibilità tecnologica e spaziale*, Franco Angeli, Milano 2016

Habito, la ricerca per il futuro dell'abitare

A. Boeri, D. Longo, *High density suburbs redevelopment and social housing retrofitting for cities regeneration*, WIT Press, Bologna 2012

Household composition statistics, Statistic explained, 2017

Alice Pittini, Elsa Laino, *Housing Europe Review 2012*, CECODHAS Housing Europe's Observatory, Brussels 2011

Tom Avermaete, Foreword

Zarch, no. 5 2015, Universidad de Zaragoza

Nordisk Arkitekturforskning 1-2015

Massimo Perriccioli, *RE-Cycling Social Housing*, Clean, Napoli 2015

Massimo Perriccioli, *Re-cycling social housing*, Techne 07-2014, Firenze university press

Lacaton & Vassal, *PLUS - Les grands ensembles de logements - Territoires d'exception*, France 2004

Kartikeya Chhaya, Re-imagining the Million Programme, Strategies to Increase Flexibility in Existing Multi-Family Housing, Master Thesis, Umeå School of Architecture

Stina Rask Jensen, Marie Frier Hvejsel, Poul Henning Kirkegaard, Strange, Anders, Renovation of social housing – a tectonic dialogue between past and present?, Denmark

Francesca Turri, Roberta Perneti, Emanuele Zamperini, Viola Capelletti, Retraining of social housing in Pavia

Paola Ascione, Mariangela Bellomo, Retrofit per la residenza, Clean, Napoli 2012

Andrea Levra Levron, Donatella Marino, Riccardo Pollo, Riqualificazione dell'edilizia residenziale pubblica: indagini sul patrimonio di ATC Torino, Techne 12-2016

Walter Nägeli, Niloufar Kirn Tajeri, Small Interventions: New Ways of Living in Post-war Modernism, Birkhauser, 2016

Deborah Pennestrì, La riqualificazione energetica dell'edilizia sociale nei contesti italiano e olandese, Techne 4-2012, Firenze University press

Stina Rask Jensen, Aliakbar Kamari, Anders Strange, Poul Henning Kirkegaard, Towards a Holistic Approach to Retrofitting: A Critical Review of State-of-the-art Evaluation Methodologies for Architectural Transformation, World Sustainable Built Environment Conference 2017 Hong Kong

E. Capelli, L. Otti, Social housing in Italia, Urbanistica tre, gennaio-marzo 2015

Readings about social aspects

<https://drive.google.com/drive/folders/10suxmfmDEHbUypTQYaWIKJVZu2sw2FKs?usp=sharing>

Maria Vittoria Giuliani, Towards an analysis of mental representations of attachment to the home, Locke Science Publishing Company, Chicago 1991

Henny Coolen, Janine Meesters, Editorial special issue: house, home and dwelling, 2011

David Clapham, Housing Pathways: A Post Modern Analytical Framework, 2010

Massimo Bricocoli, La casa come servizio? Temi e questioni dell'azione pubblica sotto osservazione, Tracce urbane 2017

Shelley Mallett, Understanding home: a critical review of the literature, The Editorial Board of The Sociological Review 2004. Published by Blackwell Publishing, Oxford

Judith Allen, Welfare Regimes, Welfare Systems and Housing in Southern Europe, Routledge 2006

Marisol Garcia, The Breakdown of the Spanish Urban Growth Model: Social and Territorial Effects of the Global Crisis, Blackwell Publishing, Oxford 2010

Massimo Baldini, Teresio Poggio, The Italian housing system and the global financial crisis, Springer Science+Business Media Dordrecht 2013

L. Padovani, Politiche della casa in Italia, tra globalizzazione, un federalismo incerto e pratiche locali, 2011

Marjolijn van der Klis*, Lia Karsten, Commuting partners, dual residences and the meaning of home, Journal of Environmental Psychology 29, 2009

Darja Reuschke, Dwelling conditions and preferences in a multilocal way of life for job reasons, Springer 2012

Daniel R. Meyer, Marcia J. Carlson, Family Complexity: Implications for Policy and Research, Annals, AAPSS, 654, July 2014

Irene Levin, Jan Trost, Living apart together, Routledge, 2008

Massimo Bricocoli, Roberta Cucca, Social mix and housing policy: Local effects of a misleading rhetoric. The case of Milan, Urban Studies, 2016

Marianna Filandri, Sonia Bertolini, Young people and home ownership in Europe, Routledge, 2016

Peter K. Mackie, Young people and housing: identifying the key issues, Routledge, 2016

Kim McKee, Young People, Homeownership and Future Welfare, Routledge, 2012

Rob Rowlands, Craig M. Gurney, Young Peoples? Perceptions of Housing Tenure: A Case Study in the Socialization of Tenure Prejudice, Routledge, 2014

Massimo Bricocoli, Stefania Sabatinelli, House sharing amongst young adults in the context of Mediterranean welfare: the case of Milan, Routledge, 2016

Stephen Green, Lindsey McCarthy, Is sharing the solution? Exploring the opportunities and challenges of privately rented shared accommodation for single people in housing need, People place and policy, 2015

Elizabeth Kenyon, Sue Heath Choosing, This Life: Narratives of Choice amongst House Sharers, Routledge, 2010

Fabio Colombo, Tatiana Saruis, Housing First and the City: How do innovative projects affect local policies and urban space?, 2015

Cameron Parsell, Home is Where the House is: The Meaning of Home for People Sleeping Rough, Routledge, 2012

A. Tosi, Homelessness and the Control of Public Space – Criminalising the Poor?, Feantsa, 2007

Antonio Tosi, Le case dei poveri: ricominciare ad annodare i fili, Triennale Electa, Milano 2008

Teresa June Atkinson, Simon Evans, Robin Darton, Ailsa Cameron, Jeremy Porteus, Randall Smith, Creating the asset base – a review of literature and policy on housing with care, Emerald Group, 2014

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