

HOUSING IN THE RIVERCITY

RETHINKING PLACE AND PROCESS

DANA CUFF & PER-JOHAN DAHL

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PREFACE

The RiverCity Gothenburg Vision is built upon ideals intended to guide the city's growth over the coming decades. Its goals are important as well as inarguable: "Make it easy to live sustainably;" "Embrace the water;" "Build a compact city." Whether called strategies or objectives, such statements represent common ground that serves as a footing for the myriad political, financial, and organizational processes necessary to implement the RiverCity's grand vision.

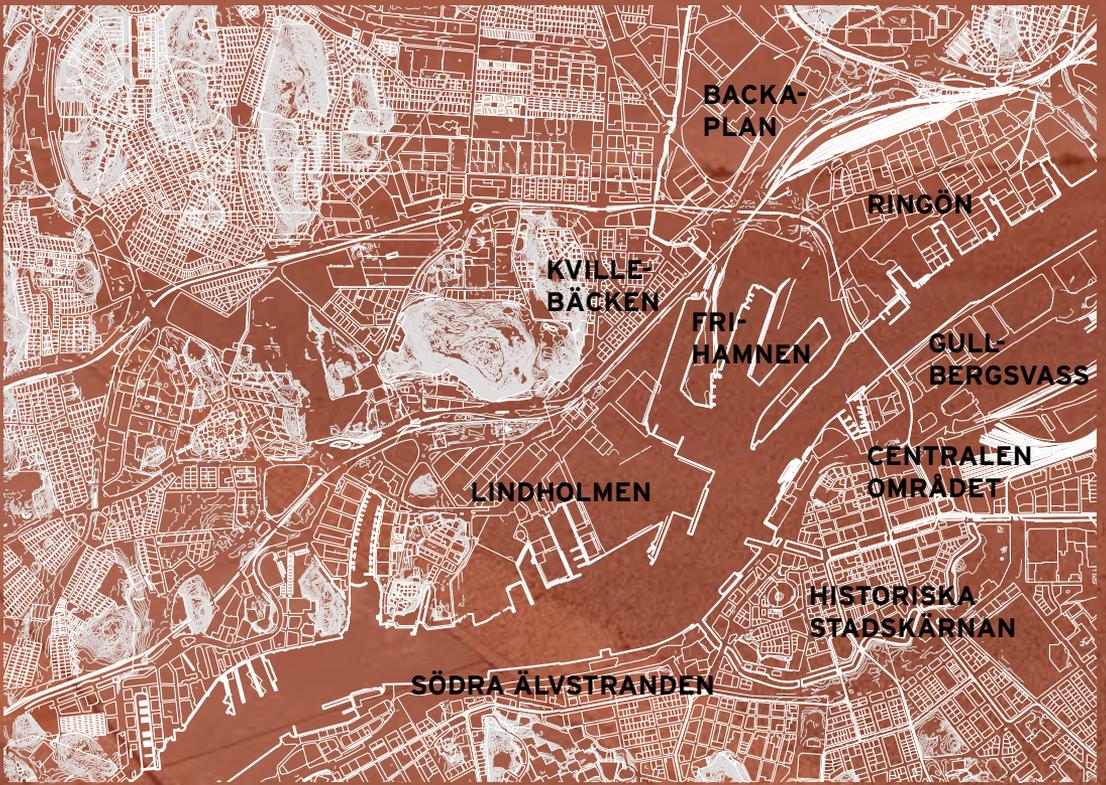
Launched in 2010, the RiverCity Gothenburg Vision is well underway. Building on the waterfront transformation of Eriksberg, which was pursued during the 1990s and into the 2000s, the RiverCity Gothenburg Vision includes the rehabilitation of urban areas, all located with proximity to the banks of the Göta River: Lindholmen, Kvillebäcken, Backaplan, Frihamnen, Ringön, Gullbergsvass, and Södra Älvstranden. Following the redevelopment of Lindholmen and Kvillebäcken, the focus is currently on the neighboring Frihamnen which is why we've chosen to highlight the area in this handbook. Located on the north bank, just across the river from the Gothenburg central station, the development potential of Frihamnen is unparalleled, with extensive piers for waterfront construction, unobstructed views towards the south banks, and instant access to the water. These qualities not only provide a context for original design interventions that can add to Gothenburg's distinctive identity, but also offer lucrative investments in real estate and for new businesses.

As the city gears up for the Jubilee in 2021 and prepares to develop the Frihamnen district, what lessons can be learned from the work thus far? Lindholmen and Kvillebäcken both stand as existing models for future housing developments in Gothenburg. Each is relatively recent and will certainly evolve over the coming years, yet they also embody certain shortcomings that will challenge further RiverCity developments. In fact, the neighborhoods of Lindholmen and Backaplan represent contemporary residential district design in Scandinavia, and stand among a number of recent projects, for example Bo01 in Malmö, Hammarby Sjöstad in Stockholm, Slussholmen and Ørestad in Copenhagen, and Vallastaden which will be partially realized for the forthcoming housing fair, LinköpingsBo2017.

Our research suggests that translating the ideals spelled out in the RiverCity vision has been difficult due to a series of challenges implicit in planning and development processes. These challenges range from site-specific opportunities along the Göta River to the nearly universal complexities of administration and finance. The following pages identify the constellation of challenges for housing development in Gothenburg, emphasizing those that can be feasibly addressed.

We are looking at the future of the RiverCity through an architectural lens: How can the next housing districts be better designed to encourage neighborhoods that are better integrated with their contexts, more sustainable, and more socioeconomically diverse?

1. City of Gothenburg. "RiverCity Gothenburg Vision." Gothenburg, 2012, 46.



Of course, architecture alone cannot deliver such qualities, but it can promote or discourage them. For example, in Kvillebäcken and Backaplan, new development accelerated gentrification, displacing lower income households. At the same time, the high cost to rent or own the new housing built on the northern side of the Göta River prevents economic diversity among new residents. Some critics suggest that architecture is merely a tool of the development machine that uses the veil of “revitalization” to wage battle on the underclasses while turning the city into a global spectacle. We do not deny this phenomenon, but we resist the reduction of design to such a limited role. Particularly with regard to residential districts, architectural and urban design, when paired with political and social policy, can not only be part of but can generate opportunities for more equitable and diverse cities. In Gothenburg, even though these proclaimed goals were not always realized, this does not preclude the possibility of a future success. This handbook, intended for Gothenburg’s civic leaders and decision-makers, demonstrates a range of alternative physical planning and design ideas for residential districts; new policies and public debates must accompany these ideas if Gothenburg is to produce economically diverse, ethnically integrated, and environmentally sound neighborhoods.

This handbook synthesizes two years of research, from 2012-2014, about recent housing in Gothenburg and proximate locations and converts the findings into practical applications that can constructively influence further efforts on the RiverCity Gothenburg Vision, most particularly the Frihamnen development and the various projects initiated prior to the Jubilee. Building new housing in Gothenburg is important, but this is a limited view of the true goal, which is to build new communities that are diverse, green, and vibrant. We offer this handbook as another step toward that ideal for Gothenburg’s RiverCity.

Dana Cuff and Per-Johan Dahl

EXECUTIVE SUMMARY

Proposition 1.

COUNTERACT HOMOGENEOUS HOUSING

Proposition 2.

EXAGGERATE SMALL AND INTRICATE ACTS

Proposition 3.

INVENT PROCESSES FOR DESIGN EVOLUTION

Proposition 4.

DEPLOY DESIGN THINKING

Proposition 5.

OVERCOME BARRIERS WITH HYBRID FORMS

Proposition 6.

TRANSFIGURE THE PERIMETER BLOCK

Proposition 7.

INJECT RADICAL INCREMENTS

Proposition 8.

WEAVE TOGETHER HOUSING AND WATERFRONT

Challenge 1. Housing-Only vs City-Living. New developments construct vast districts overwhelmingly dominated by housing and lacking more heterogeneous, cosmopolitan fabric.

Challenge 2. Regimes of Scale, Bigness. New residential developments are dominated by large builders working on large sites, leading to districts with little attention to diversity and detail.

Challenge 3. Rigid Plans Constrain Long-Term Projects. Because housing developments can take decades to realize, early planning decisions prevent more fluid, responsive processes.

Challenge 4. City Agency Silos vs Blurred Boundaries. Large projects require the participation of many city agencies each of which operates in a silo of counterproductive autonomy.

Challenge 5. Barriers to Connectivity. When efficiency and transit mobility dominate urban planning, the city is full of barriers that interrupt pedestrian circulation, and actual as well as perceived continuity.

Challenge 6. Perimeter Block Default. In much of Scandinavia when high residential densities are desired, the default solution is the perimeter block site plan which creates a monotonous streetscape and predictable connections to the ground plane.

Challenge 7. Master Plans vs Fine Grained Detail. Standard planning for residential districts emphasizes the logic of the site plan but overlooks the potential for catalytic synergies that would add vitality to the neighborhood.

Challenge 8. Indifference Toward the Water. Planning at the water's edge has been passive; the riverfront is taken as static and given; housing addresses the water primarily as a "view;" a pedestrian path is sufficient to address the waterfront.

Response 1. Counteract homogeneous housing with a mixture of housing typologies and land uses.

Response 2. Break down bigness by exaggerating small and intricate acts.

Response 3. Build in agility by breaking projects into smaller phases and encouraging the evaluation of early phases to transform later phases.

Response 4. Deploy design thinking as a means to connect residential projects back to urban and landscape design solutions.

Response 5. To overcome physical impediments between one part of the city and another, create bridges of hybrid form and use.

Response 6. Create mutations to the perimeter block model that offer diversity in terms of unit types, skylines, and connections to the ground.

Response 7. Small scale design solutions must complement large scale planning, with the particular goal of adding "radical increments" to the site.

Response 8. Take an active approach to the boundary between the land and the river, manipulating it, creating varied programs there, investing in a range of connective relationships.



BEYOND CONVENTION: SHAPING PLACES AND PRACTICES

At the start of 2015, the Frihamnen district remained mostly unaffected by the redevelopment processes that strive to transform the former shipyard into a vibrant waterfront community. The vast piers that point toward the south bank either roared with the car-racing speed track or endured in tranquility. This so-called “site” is an historic construction comprised of the durable materials once chosen to fit such shipping and fishing industry needs of freight routes, jetties, dry docks, and warehouses. While the industrial heritage continued to characterize the Frihamnen area in 2014, the introduction of structures for temporary events suggested, however, that new activities are introduced. These include roller derby, gardening, and sailing classes, to name a few, and are intended to build a community that will greatly enhance the vitality of the new development both now and after construction. This creative and intelligent approach to planning a new neighborhood is impressive, and will require follow-through on the part of decision-makers to insure that the emerging community is reflected in the builders’ schemes. It is just one means among many that must be invented and backed by policy to insure the inclusion of households that vary in terms of economic status and ethnicity.

Another important and intelligent variation from traditional planning processes, Gothenburg invented a new form of administration to propel RiverCity redevelopment projects, including Frihamnen. The planning and real estate development functions are combined into one in Älvstranden Utveckling AB, so that economics, politics, design, and strategic planning might be undertaken in a more creative, more coherent manner. By leveraging the land owned by the City, Älvstranden is able to wield some au-



thority over private residential builders in order to negotiate for unconventional solutions. Discarding the master plan as prime tool for use and form distribution, the formation of Älvstranden Utveckling AB and the experimentation with temporary events, for example, point to new practices that challenge the status quo and entrenched bureaucracies. The weight of conventions, however, will require Älvstranden's vigilant administrative oversight at every turn. Our interviews revealed that building companies as well as Gothenburg's Department of City Planning, Parks and Leisure, and Transportation have an over-abundance of both independence and well-established routines. For example, even when the Planning Department desires creative solutions, its in-house capabilities are limited to conventional approaches, it cannot counter the standard approaches toward car-based transportation, and another site is filled with unrelenting perimeter block buildings organized on wide streets, all reproduced unquestioningly. The ability to maintain vigorous supervision will be especially important when the redevelopment processes approach the critical transition between the preparatory land use plan (planprogram) and the detailed development plans (detaljplan).

The critical transition between the preparatory land use plan and more specific plans will shape the first phase of housing development at Frihamnen. At the time of this writing, it appeared that conventional approaches might beat out creative approaches, and that even the community-forming temporary events might be abandoned at the behest of large building companies. At least three factors contribute to the tendency for planning processes to seek their lowest level, and should thus be guarded against: first, the dominance of large building companies that place a high



— Aerial photo of Frihamnen

priority on standard practices; second, the tendency for momentum to carry early conservative decisions through later phases of the project; and third, the complexity of large projects that make specific, creative decisions difficult to extract from the overall process and budget. The momentum implicit in such a process, including the acquisition of land, the drafting of regulations, and the platting of infrastructure, are common to large-scale urban development in market economies where “land is converted to property when ownership comes into play; property is transformed into site when some development is intended.”² Hence the design decisions and the first sites for housing development at Frihamnen were articulated early on in the preparatory land use plan, and will be cast in stone by the time the detailed development plans are created.

2. Dana Cuff. *The Provisional City: Los Angeles Stories of Architecture and Urbanism* (Cambridge, Mass: The MIT Press, 2000), 62.

Along with the determining nature of the planning process, every site implies specific qualities and opportunities for residential building. For Frihamnen, the waterfront presents the greatest opportunities, but two other qualities present challenges that cannot be ignored: the predominance of auto-related infrastructure, and the absence of existing urban fabric. At Frihamnen, the proximity to water, the adaptation to existing industrial conditions, the decisions about existing and proposed infrastructure, and the sensitivity to climatological conditions, in particular sea-level rise, will combine to inform subsequent design practices. Still, however, various universal criteria tend to inform the drafting of documents for land-use distribution, such as established housing typologies, predetermined classifications of site arrangement, and administrative routines in city agencies. To support creative interpretations of the Frihamnen context, the policy documents



SAMMANFATTNING

Visionen anger att Älvstaden ska vara öppen för världen och utvecklas så att den helar staden, möter vattnet och stärker kärnan.

Syftet med programmet är att i form av ett dynamiskt ramverk ange förutsättningar och riktlinjer för hur Frihamnen och delar av Ringön ska utvecklas. Programmet beskriver hur området ska kunna bli en grön, tät och stadsmässig del av innerstaden med arbetsplatser och handel, socialt blandat boende, god kollektivtrafik och en vattennära park. Uppdraget är att redovisa en övergripande struktur och avgränsa och redovisa en första utbyggnadsetapp av bebyggelsen.

En första etapp är föreslagen till området kring den mittersta hamnbassängen. Planen är att det jubileumsåret 2021 ska finnas minst 1000 bostäder i Frihamnen, och att 1000 personer ska jobba i området. 2040 kan motsvarande siffror vara ca 9 000 bostäder och 15 000 arbetsplatser.

Frihamnen knyter samman staden över älven. Ett stadsmässigt stråk längs Hjalmar Brantingsgatan föreslås med hög och tät bebyggelse och en koncentration av handel och kontor men även av bostäder. En kollektivtrafikknutpunkt längs stråket utformas som en tydlig entré till stadsdelen.

Tidig volymstudie som visar intentionerna om en tät och stadsmässig blandad bebyggelse i framtida Frihamnen.

↪ Facsimile of the summary in the preparatory land use plan "Program för Frihamnen och del av Ringön: Inom stadsdelen Lunbyvassen i Göteborg." The summary includes a rendering that visualizes the City's intention to accomplish a dense and mixed-use city district at Frihamnen and a brief description of planning objectives, including the proposed phasing for 2021 (1,000 dwellings and 1,000 work places) and 2040 (9,000 dwellings and 15,000 work places).

While the text announces the objective to draft a dynamic framework for the development of Frihamnen, the rendering announces a rigid urban form solely composed by series of perimeter blocks. The differentiation between built environment and park, which is explicit in the rendering, correlates with a conventional approach to figure-ground urbanism to visualize a static urban space that rather complies with historical references than with contemporary approaches to waterfront development.



Temporary events as place making at Frihamnen.

should stimulate negotiations between the specific qualities of site and the broad criteria of discipline and administration.

The preparatory land use plan determines the direction of later residential development in unexpected ways, its organization based on two-dimensional (at the ground level) land use that is counterintuitively both abstract and highly deterministic. Land use designations tacitly push more intricate program decisions aside. For example, in perimeter block housing, the central courtyard is implicitly designated as open space for the surrounding dwelling units. In turn, the ground floor of the housing is generally closed off from the street, and commercial or retail uses are rarely accommodated at the interior of the block. Imagine instead that the central courtyards were specifically designed as a series of linked public parks, each accommodating different activities compatible with residential development. Current thinking about residential quarters that are vibrant and desirable relies upon program as much as form, on events as well as broader land uses, and on catalytic relationships rather than independent properties.

The formation of alternative uses through temporary events, which has been so successfully practiced at Frihamnen, is expected to stimulate the drafting of programs customized to contemporary lifestyles and economies. When these programs are molded into form through real estate investments, new layers of innovation will be needed to provide solutions in concurrence with contemporary demands. More vibrant residential districts – that is, those open to an economically and culturally diverse population – will materialize when alternative programs are interpreted through alternative built forms and policies.



3. Caleb Garling. "Rem Koolhaas: the Most Important Factor in Building Design is the Age of the Decision Maker," *Vanity Fair* (9 October 2014) <http://www.vanityfair.com/online/daily/2014/10/rem-koolhaas-building-design-age>

Real estate interests tend to aggregate around safe investment plans, producing conventional solutions again and again. The appetite for innovation and thus risk, to paraphrase Rem Koolhaas, must be sustained by the decision-maker.³ The planner has provided the expertise for drafting of the preparatory land use plan at Frihamnen; now the designer must enter the room to challenge normative approaches to the more specific plans and land use distribution. When the risks associated with alternative solutions are processed through design, then the shaping of place and process at Frihamnen may be orchestrated beyond established practices. Hence the following eight propositions as examples for how to defy conformity through design.

The question may arise: What's wrong with conformity? In fact, nothing is wrong if conventional solutions are producing vibrant, green, and diverse residential districts, but this is not the case in Sweden. There is a real need to improve upon the standard approach to new urban housing in Gothenburg, and hence the need to learn from the city's previous experiences as well as from models of vibrant, green, and diverse neighborhoods worldwide.

COUNTERACT HOMOGENEOUS HOUSING

P1

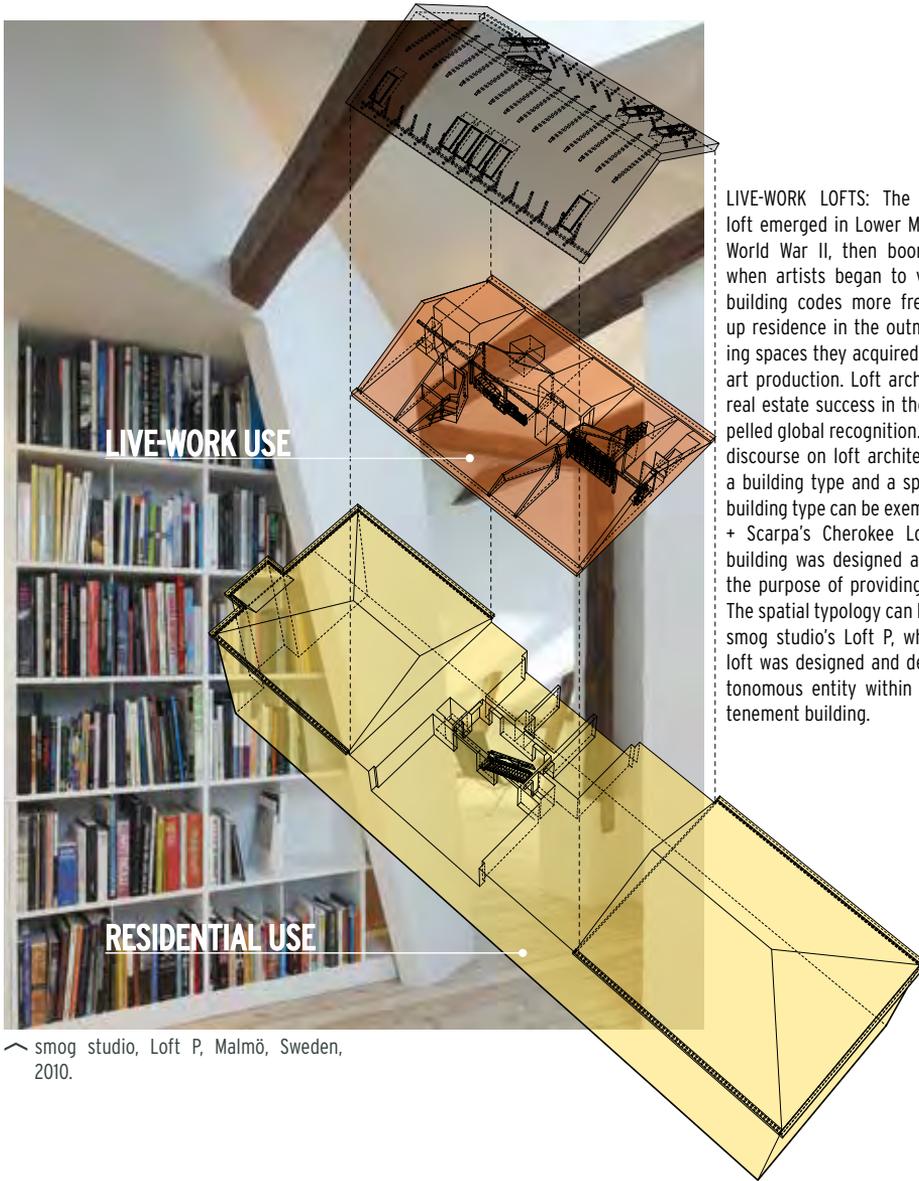
Urban development and redevelopment in Gothenburg and elsewhere is primarily choreographed through the land use segregation practices commonly known as zoning. In order to tackle health crises, in the early twentieth century modern zoning became the primary planning tool used to separate the architectural activities of dwelling, recreation, work, and transportation. When turned into practice, zoning “created a rigid construct that interlocked the relationship between urban form and use,” which catalyzed a standardized catalogue of housing typologies.⁴ While contemporary urban lifestyles tend to challenge the separation of activities, the production of housing continues to comply with the typologies established by zoning practices. As a result, socio-economic demands remain disconnected from the supply of the built environment provided by industry and government. To meet new demands, industry and government at Frihamnen must approach housing typologies with a framework that goes beyond zoning practices. While modern zoning is not the sole reason that new housing districts lack vitality and diversity, it is a primary problem. Past limitations can be partially overcome by new kinds of zoning such as performance zoning or mixed-use and sectional or vertical zoning.⁵

4. Per-Johan Dahl, “Densifying the Suburban Metropolis: Architecture as an Instrument for Urban Planning,” *Nordic Journal of Architectural Research*, no. 2 (2014): 58.

5. New York’s 1961 revision of the zoning ordinance catalyzed various new zoning techniques. One such technique was performance zoning, which differs from conventional zoning because it “does not organize uses into a hierarchy which is then used to protect ‘higher’ uses from ‘lower’ ones. Rather, it imposes minimum levels of ‘performance’ by setting standards which must be met by each land use.” See Lane Kenig. *Performance Zoning*. Washington, D.C.: Planners Press American Planning Association, 1980, 3.

↘ Brooks + Scarpa, Cherokee Lofts, Los Angeles, USA, 2011.

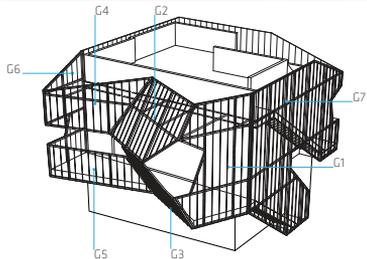




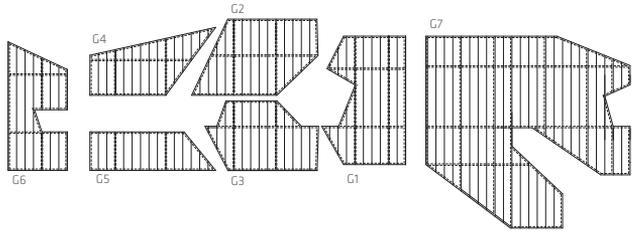
LIVE-WORK LOFTS: The modern live-work loft emerged in Lower Manhattan after the World War II, then boomed in the 1950s, when artists began to violate zoning and building codes more frequently by taking up residence in the outmoded manufacturing spaces they acquired for the purpose of art production. Loft architecture became a real estate success in the 1970s, which propelled global recognition. The contemporary discourse on loft architecture implies both a building type and a spatial typology. The building type can be exemplified with Brooks + Scarpa's Cherokee Lofts, where a loft building was designed and developed with the purpose of providing 12 live-work lofts. The spatial typology can be exemplified with smog studio's Loft P, where one live-work loft was designed and developed as an autonomous entity within the premises of a tenement building.

smog studio, Loft P, Malmö, Sweden, 2010.

There are other means to counteract homogeneous housing that have been tried in Sweden and elsewhere. The first means is based on the design of the property boundaries. When drafting the buildable parcels on a new site, planners can reduce their size in order to attract a variety of builders, and can create odd-shaped parcels so that more intricate solutions are required. The second means is by encouraging post-construction customization, ranging from live-work loft insertions in residential buildings, such as smog studio's Loft P in Malmö, Sweden, to various kinds of add-on components, such as Kevin Daly Architects' accessory unit on top of a garage in Venice, California. The third means is by retaining as much existing fabric on the site as feasible, which then creates a variety of unique site opportunities.

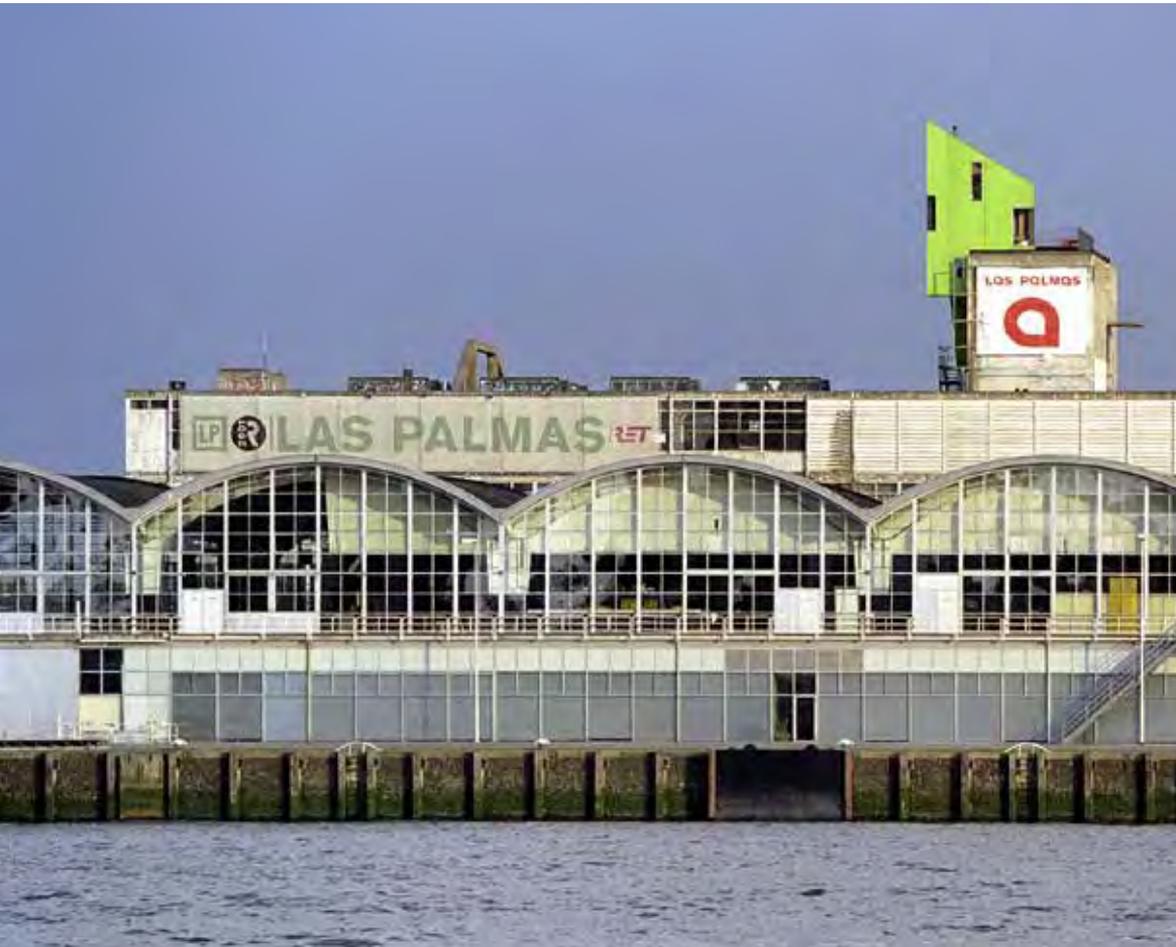


GUEST HOUSE AXONOMETRIC



GUEST HOUSE EXTERIOR PANELS

Kevin Daly Architects, Palms Residence, Venice, CA, USA, 2009.

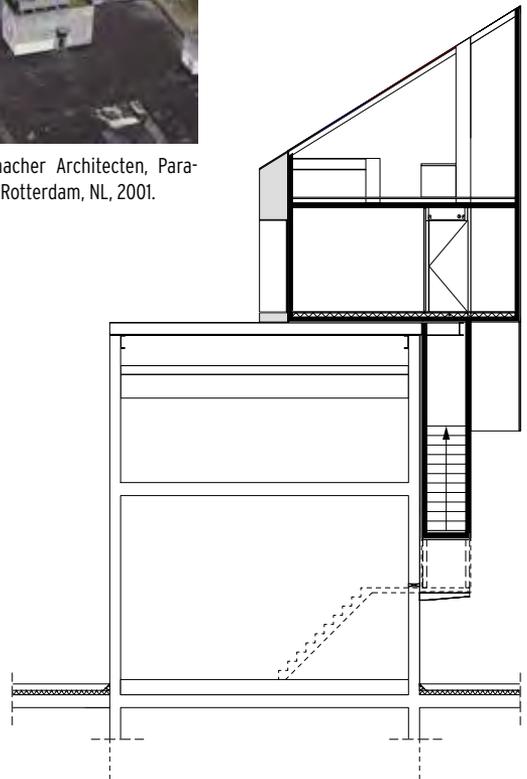




ADD-ON / CLIP-ON: Supports aesthetic and programmatic diversity without compromising the patina and cultural significance of urban districts. Add-on architecture can, for example, use industrial buildings as the foundation for new modes of residential development. Kevin Daly Architects added an accessory unit to the roof of a garage in Venice, California; Kortknie Stuhlmacher Architekten added a pod for hybrid use to the roof of a warehouse in Rotterdam. Both projects show the capacity of add-on architecture to claim underutilized resources for the construction of housing.



◁ Kortknie Stuhlmacher Architekten, Parasite Las Palmas, Rotterdam, NL, 2001.





MICRO SCALES: Building codes in Sweden and elsewhere correlated poor living standards with miniscule floor areas, thus the common aversion to micro-scale developments. New technologies and life styles render the micro unit viable for urban living. Michael Maltzan Architecture's One Santa Fe in Downtown Los Angeles exaggerates the micro and the macro scale in urban construction by wrapping a quantity of micro units with a mammoth building form without compromising intricate public space.



◇ Michael Maltzan Architecture, One Santa Fe, Los Angeles, USA, 2014.



CREATE DIVERSITY WITHIN THE BUILDING ENVELOPE

6. Douglas S. Massey and Nancy A. Denton, "The Dimensions of Residential Segregation," *Social Forces* 67, no. 2 (1988): 282.

7. Julie Satow, "Living in the Mix: Affordable Housing in New York's Luxury Buildings," *The New York Times* August 31, 2014, RE 1.

Residential segregation is the degree to which two or more minority or majority groups "live separately from one another, in different parts of the urban environment."⁶ Minority or majority groups refer to an aggregate of people feasible to single out from the others in society due to physical or cultural characteristics such as income, race, and gender. To counteract residential segregation, the separation of groups must shift towards integration by virtue of sharing a common domestic area. When the domestic area is defined through neighborhood scale, integration may be hampered due to the premises of urban elements, such as infrastructure, public space, or city blocks. To foster greater diversity of occupants, integration at Frihamnen should move from neighborhood to building. While such endeavor rises financial and management challenges, praxis' have been developed and tested. One example can be studied in the West Chelsea districts of New York City, where inclusionary zoning requires the developer to "include a certain number of lower-priced housing units within a market-rate project when building in neighborhoods that have been rezoned to allow for more density" – the lower-priced housing units are distributed through lottery.⁷ By accomplishing a mix of minority and majority groups within the realm of a building envelope, the concept of integration leaves the figure-ground approach to urbanism for a more fine grained distribution of social and cultural diversity.



Teepie Architects, 60 Richmond Housing Cooperative, Toronto, Canada, 2010. The project is sited on a corner lot and shares party walls with neighbors, at ground level the building features public programs (resident owned/operated restaurant and training kitchen) and co-op housing units above, on the sixth floor the building features a three-story void/terrace that supports a vegetable garden





OkiDoki Arkitekter, Master Plan Vallastaden, >
Linköping, Sweden 2013.

P2

EXAGGERATE SMALL AND INTRICATE ACTS

Swedish city agencies are often criticized for ignoring small and independent developers. Indeed, when municipalities allocate land for inner-city development, most parcels tend to be annexed by a handful of developer conglomerates. This procedure goes without saying in Gothenburg as well as in Malmö, Stockholm, and beyond, hence small and independent developers are generally excluded from inner-city development.

Developer conglomerates with a focus on the housing market strive to correlate their business plans with the manifold demands of contemporary consumer groups. Framtiden in Gothenburg, for example, approaches regulatory frameworks, dwelling typologies, and social norms in order to both build and manage multiple residential developments. Framtiden argues that 'volume' is key for cost-efficient development and management, thus their insistence on building large quantities of floor area. Because building height regulations in Swedish cities by tradition are restrictive, vertical distribution of floor area ratio is rarely an alternative; hence the significant quantity of buildings with large footprints in the central areas of Swedish cities. When building footprints are large, the impact of building volumes produces a relentless urban space. As current visions for inner-city development in Sweden - Gothenburg's RiverCity vision included - tend to idealize a fine-grained and mixed-use urbanism, most visions fail realization.

To reduce the size of building footprints in Swedish cities, inner-city development must reconsider height restrictions and include small, independent developers. Such a shift in the conventional practice of inner-city land allocation requires not only the platting of small parcels, but also the drafting of policy that will counteract the aggregation of multiple parcels. Thus, mechanisms are needed within policy documents to hinder profit driven incentives from compromising the realization of small scales.



OkiDoki Arkitekter used planning documents to prevent small and intricate acts from being compromised in subsequent development processes. With their master plan, they platted long and narrow parcels to encourage small and independent developers to participate in the building of Vallastaden in Linköping. Due to the objective of accomplishing aesthetic and social diversity, OkiDoki Arkitekter correlated design strategies with the drafting of development guidelines. Their policy document stated, for example, that properties must be separated by fire resistant shear walls; that every block must include mixed tenures and more than two building types; that every multistory building must include minimum two apartment sizes; that maximum three buildings within one block can be designed by the same architect; and that neighboring buildings should not be designed by the same architect.



INCLUDE INDEPENDENT DEVELOPERS

The combination of an independent developer and a miniscule lot catalyzed innovative architecture in the West Chelsea district of New York City. Developed by Alf Naman and designed by Neil M. Denari of NMDA, HL23 is a condominium tower built on a tricky site and in proximity to the High Line Park. As site constraints and zoning amendments combined to obstruct profitable real estate, NMDA was required to invent a solution that added floor area to the right of way. With a design that amplified building mass without compromising the planning goals to provide public open space, HL23 introduced an unconventional building profile with both literal and formal relationships to the High Line. The high level of risk involved in such project – for the developer as well as for the architect – correlates with the realization of profitable space to signify the rewarding possibilities of small scale developments.

◀ NMDA, HL23, New York, USA, 2012.



INTRODUCE THE DETAIL IN URBAN PROCESSES

Heterogeneous urban form requires multiple levels of detailing. The rich space of Sundspromenaden at Bo01 in Malmö, Sweden, was generated through attention to the tectonics of urban design, and the spatial variety of the Tsim Sha Tsui East Waterfront Podium Garden in Hong Kong was accomplished through elements of courtesy and contrast. As the space of Frihamnen is rather vast, urban redevelopment will proceed in phases and over a significant time period. To safeguard public activity and accessibility during a prolonged development and redevelopment period, miniscule attention to detailing will assist in creating synergies between the subjects of use and the objects of usage.



Architectural Services Department (ArchSD), Tsim Sha Tsui East Waterfront Podium Garden, Hong Kong, 2007.

Jeppe Aagaard Andersen Landscape Architects, Sundspromenaden at Bo01, Malmö, Sweden, 2001.



INVENT PROCESSES FOR DESIGN EVOLUTION

When the RiverCity vision was adopted by the City Council on 11 October 2012, the government of Gothenburg postulated a utopia. Compiled in literary form, the 48-page document that communicates the RiverCity vision deploys drawings, diagrams, maps, collages, and augmented photos to render a spatial narrative for a place to become – a place that Hans Ander and Johan Ekman call den Goda Staden (the Good City), which, thus, postulates a critique of the historically real society.⁸ As the City Council is a political entity in the Swedish planning process, the RiverCity vision became a political document, which verifies its utopian stance.⁹

Following Swedish planning praxis, the RiverCity vision guided the drafting of a preparatory land use plan (planprogram).¹⁰ The Frihamnen district was selected for the first development phase. Involving multiple city agencies as well as the public-private partnership Älvstranden Utveckling AB, the preparatory land use plan became policy through public hearing, which was executed from 4 June to 9 September 2014. Compiled in a 72-page document, the policy that communicates the preparatory land use plan strives to mold the vagueness of utopia into tangible guidelines for city building. Following further public hearings, the policy document will guide the drafting of detailed development plans (detaljplan), which includes, for example, the preparation of land acquisition and the writing of planning regulations.

Utopia has always persisted on political and geographical autonomy. Such autonomy is challenged in the policy document through the planning objectives, which, for example, state that “Frihamnen is strategically important for the northbound expansion of the inner city, which will pursue across the river to connect with Kvillebäcken, Backaplan, Lindholmen, and Ringön.”¹¹ While the planning of infrastructure and parks meet the objectives through implementation of citywide strategies, the building schemes continues to pursue an utopian stance by suggesting self-sufficient guidelines with little, or no, references to the surrounding districts.¹²

The City of Gothenburg verifies in a map from 2013 that Frihamnen is one of eight RiverCity districts. While three districts are considered historical, two – Backaplan and Lindholmen – are recent developments still under construction, and three – Frihamnen, Ringön, and Gullbergsvass – await urban development and renewal. Hence Backaplan and Lindholmen can be regarded as prototypes for RiverCity development; they are feasible to be evaluated before advancing the other districts.

To challenge the utopian stance also for the building schemes at Frihamnen, a component could be included in the detailed development plans that requires urban development and renewal to proceed through evaluation of RiverCity prototypes. Such a feedback loop between the RiverCity’s different development phases, and districts, would facilitate instant improvements concerning spatial configuration, tectonics, and the distribution of program.¹³

8. Hans Ander and Johan Ekman. “Älvstrandsprocessen 2000 - 2010: Från Älvstranden Till Älvstaden.” Gothenburg, 2009, 30. For a characterization of utopia, see Françoise Choay. *The Rule and the Model: On the Theory of Architecture and Urbanism*. Cambridge, Mass: The MIT Press, 1997, 34.

9. Fredric Jameson says that “[u]topia has always been a political issue, an unusual destiny for a literary form: yet just as the literary value of the form is subject to permanent doubt, so also its political status is structurally ambiguous.” See Fredric Jameson. *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*. New York: Verso, 2005, xi.

10. Göteborgs stad Stadsbyggnadskontoret. “Program För Frihamnen och del av Ringön: Inom Stadsdelen Lundbyvassen i Göteborg Programsamråd 4 Juni - 9 September 2014.” Gothenburg, 2014, 8.

11. Ibid.

12. The maps on pages 16, 19-20, and 36 in “Program för Frihamnen och del av Ringön: Inom Stadsdelen Lundbyvassen i Göteborg Programsamråd 4 Juni - 9 September 2014” suggests citywide strategies for infrastructure and parks.

13. The term tectonics is used with reference to Eduard F. Sekler’s scholarship, which clarifies that “structure... is realized through construction and given visual expression through tectonics.” See Eduard F. Sekler, “Structure, Construction, Tectonics,” in *Structure in Art and in Science*, ed Gyorgy Kepes (New York: Braziller, 1965), 92.

REALLY?



WHAT IF WE WOULD LIKE TO OPEN A STOREFRONT HERE?



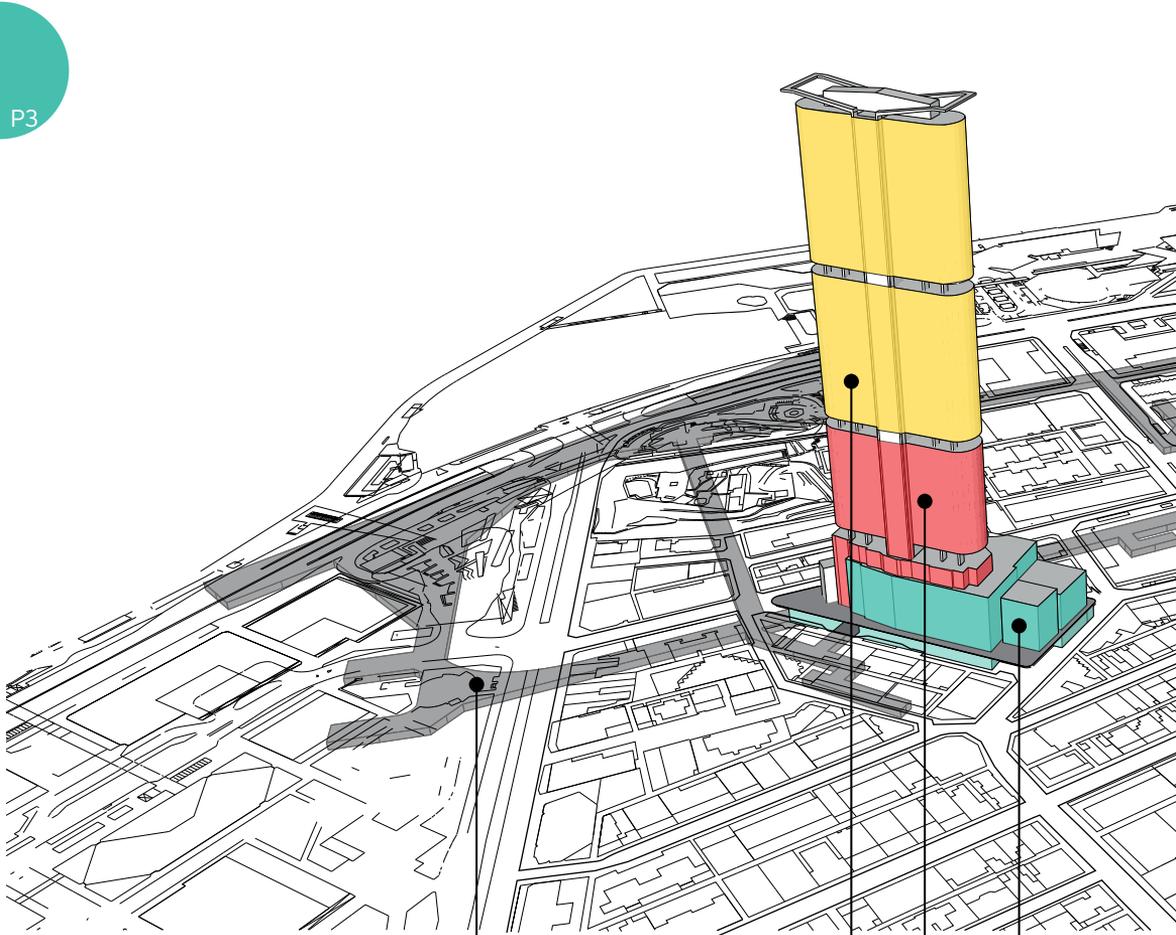
WHAT IF WE WOULD LIKE A CAFE HERE?



^ While a majority of Swedish city agencies, Gothenburg included, continue to proclaim the benefits of convertible floor plans, the tectonics of Backaplan's new housing stock render most adaptability impossible. While some corner spaces have, in a conventional manner, been designed for retail or service, and thus clad with framed walls or fenestration, the majority of space dividers toward the public realm consist of masonry walls. Due to their role as primary structure, masonry walls tend to be utterly expensive, or impossible, to alter; they do not support the adaptability so often asked for by city agencies. Hence, a majority of Backaplan's new ground floor spaces have been straight-jacketed in concurrence with residential use.

ESTABLISH USEPOOLS

Swedish developers tend to focus on one specific market niche, thus the gemeinnützig (Allmännyttan) tends to develop rental units while the corporate sector tends to develop condominium units. This focus on specific market niches obstructs the development of buildings with mixed tenure and mixed use. A new civic function should be added to the planning department or to Älvstranden Utvecklings AB to take responsibility for coordinating the spatial needs of multiple business initiatives. Acting as design management, such agency would serve as usepool for both corporate and non-profit agencies to stimulate development of hybrid buildings.



^ Dennis Lau & Ng Chun Man Architects & Engineers (HK) Ltd, K11, Hong Kong, 2007.

UNDERGROUND CIRCULATION
MTR-STATION TSIM SHA TSUI

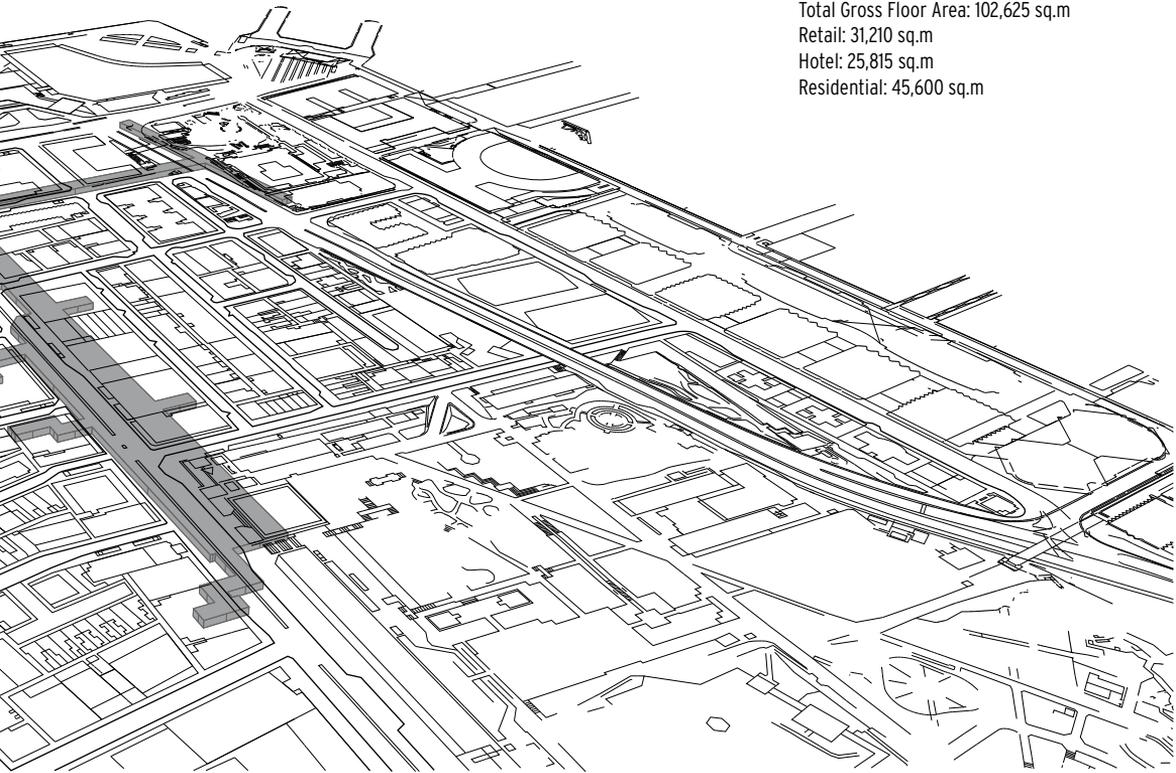
HOTEL
RESIDENTIAL USE
RETAIL



Height: 257 meters
Floors (above ground): 64
Floors (below ground): 4

Retail: B4 – 2/F
Hotel: 3/F – 24/F. No. of rooms: 384
Residential: 27/F – 67/F. No. of units: 345

Site area: 8,299 sq.m
Total Gross Floor Area: 102,625 sq.m
Retail: 31,210 sq.m
Hotel: 25,815 sq.m
Residential: 45,600 sq.m



K11 in Hong Kong exemplifies a building with mixed tenure and mixed use. Located on the Kowloon peninsula, the K11 tower includes retail, hotel, and condominium units; the tower additionally provides direct access to the two MTR stations Tsim Sha Tsui Station and East Tsim Sha Tsui. K11 was jointly-developed by the urban redevelopment agency Urban Renewal Authority (URA) and the New World Development Company Limited (NWD); management includes NWD, Hyatt Regency, and K11 Art Foundation.



“Le Plan Guide” by Alexandre Chemetoff (1999) proposes guidelines for the transformation of Ile de Nantes, France. “Le Plan Guide” defines the master plan and deploys, instead, design interventions to foster an incremental redevelopment of the former shipyard.

DEPLOY DESIGN THINKING

Design can be deployed as a methodology beyond the shaping of form and use, to introduce critical thinking in city agencies. Approaching a problem through design stimulates, for example, the ability to navigate a complex of procedures “while constantly testing alternative configurations in pursuit of a concept worth investing in.”¹⁴

Critical thinking through design has been implemented by civic agencies in other cities, with positive results. One notable case occurred in the late 1960s, when Mayor John Lindsay formed the Urban Design Group (UDG) as an autonomous task force within the New York City Department of City Planning. Comprised of three recent graduates from Yale School of Architecture – Richard Weinstein, Jaquelin Robertson, and Jonathan Barnett – the UDG became the interface between the Mayor’s office and the New York City Planning Commission. Approaching urban development through design instead of planning, the UDG proved to be skillful in navigating the relationships between politics, law, and implementation. The intention of UDG was not to replace planning, but to serve as an intellectual and critical component feasible to challenge, and update, rigid routines and entrenched bureaucracies. Operating with shared responsibilities to the Mayor’s office and the New York City Planning Commission, the UDG attained sufficient power to develop new interconnections between the city agencies and the private sector. With a focus on implementation rather than administration, the UDG introduced creativity in the regulation of buildings and cities.

The UDG example points to design as a methodology for activating synergies between planning objectives and the demands of private stakeholders. Similar tendencies can be detected in an European context through, for example, Alexandre Chemetoff’s Plan Guide for the transformation of Ile de Nantes in France and Okidoki’s design of Vallastaden at Linköping – design was used

14. Christoph Meinel and Larry Leifer, “Design Thinking Research,” in *Design Thinking Research: Measuring Performance in Context*, ed. Hasso Plattner, Christoph Meinel, and Larry Leifer (Heidelberg: Springer, 2012), 1.

OVERCOME BARRIERS WITH HYBRID FORMS

Urban connectivity is often obstructed by vectors of mobility. Indeed, linear patterns of transportation arteries tend to cut through city districts, leaving gashes of land and infrastructure that combine to produce barriers in the urban landscape. The focus on traffic planning that has been cultivated in the City of Gothenburg has generated a complex of infrastructure, where transportation patterns and safety aspects have combined to produce the primary locus for urban planning and construction. As a result, pedestrians, bicycles, and sometimes even local auto traffic are blocked by the wider infrastructural systems. Thus the large amount of barriers in Gothenburg, with the 155, including the junction with E6/76, obstructing connectivity in the River-City. To overcome barriers, city agencies tend to approach urban forms through networks of overpasses and subways. While these networks successfully connect specific nodes in the urban landscape, they generally fail to accommodate armatures for spatial perception and navigation. To accomplish both connected spaces and perceptual continuity, city agencies ought to approach hybrid forms, where “[I]and forms, water forms, built forms, programs, and infrastructure collude to produce” topological constructs.¹⁶ Thom Mayne states that “[a]ll networks are incorporated into the design [of hybrid forms], no longer privileging built form over all else.”¹⁷ Merging the disciplinary aptitudes of architecture and landscape architecture, the introduction of hybrid forms would enhance connectivity in the RiverCity by reconnecting Frihamnen with Kvillebäcken, while introducing armatures for spatial perception and navigation and providing new programs for leisure and commerce; adding value through design.

Architecture, landscape architecture, and engineering combine to produce hybrid forms in urban landscapes. Weiss / Manfredi deploys a series of oblique constructs to overcome a wide array of infrastructural barriers in Seattle, USA. Perkins+Will creates a second layer of urban space in Chicago, where forms are shaped through the premises of light and ventilation to generate new spatial experiences for persons on foot and in automobiles.

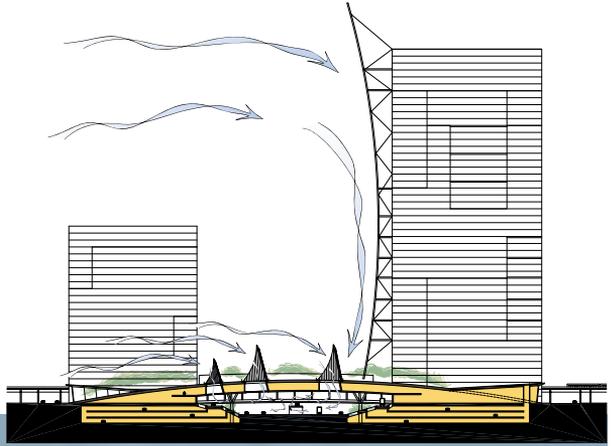
16. Thom Mayne, “Combinatory Urbanism: The Complex Behavior of Collective Form,” in *Combinatory Urbanism: The Complex Behavior of Collective Form*, ed. Stephanie Rigolot (Culver City, CA: Stray Dog Café, 2011), 43.

17. *Ibid.*, 44.

Weiss / Manfredi, Seattle Art Museum: Olympic Sculpture Park, Seattle, USA, 2007. The Olympic Sculpture Park reconnects the city on one side of the railroad tracks, by creating a landscape bridge to Elliot Bay on the other side.



> Perkins+Will, Kennedy Green Corridor,
West Loop Park, Chicago, USA, unbuilt.

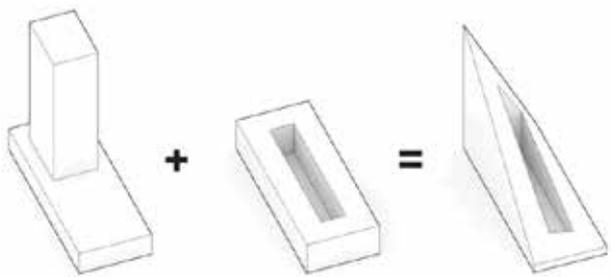


TRANSFIGURE THE PERIMETER BLOCK

Urban housing in Gothenburg, as well as in the rest of Sweden, is primarily developed through an orthodox distribution of perimeter blocks. Qualities generated from this strategy include the implementation of high densities, the equal distribution of semi-private open spaces, and the explicit division between building and city. The conventional perimeter block, however, creates certain problems: the production of homogeneous city districts with monotonous architecture; a harsh and generally unpleasant boundary with the city street; and a strict “interior” open space that belongs to all and yet none of the surrounding apartments. In order to maintain the positive qualities of perimeter block urbanism while stimulating the production of heterogeneous urban form, the perimeter block can be fused with unorthodox building types.

PERIMETER BLOCK + SKYSCRAPER
BIG | BJARKE INGELS GROUP
PYRAMID W57, NEW YORK, USA (ONGOING)

BIG | Bjarke Ingels Group's W57 tower in New York City exemplifies the fusion of perimeter block and skyscraper. Applying the European perimeter block typology to Manhattan's grid, BIG | Bjarke Ingels Group deployed the features of skyscraper architecture to create an original building form. The semi-private open space that occupies the core of perimeter block typology was reconceptualized through architectural design, which fostered an oblique-shaped building that maximizes the influx of daylight and orchestrates multiple views toward Hudson River.

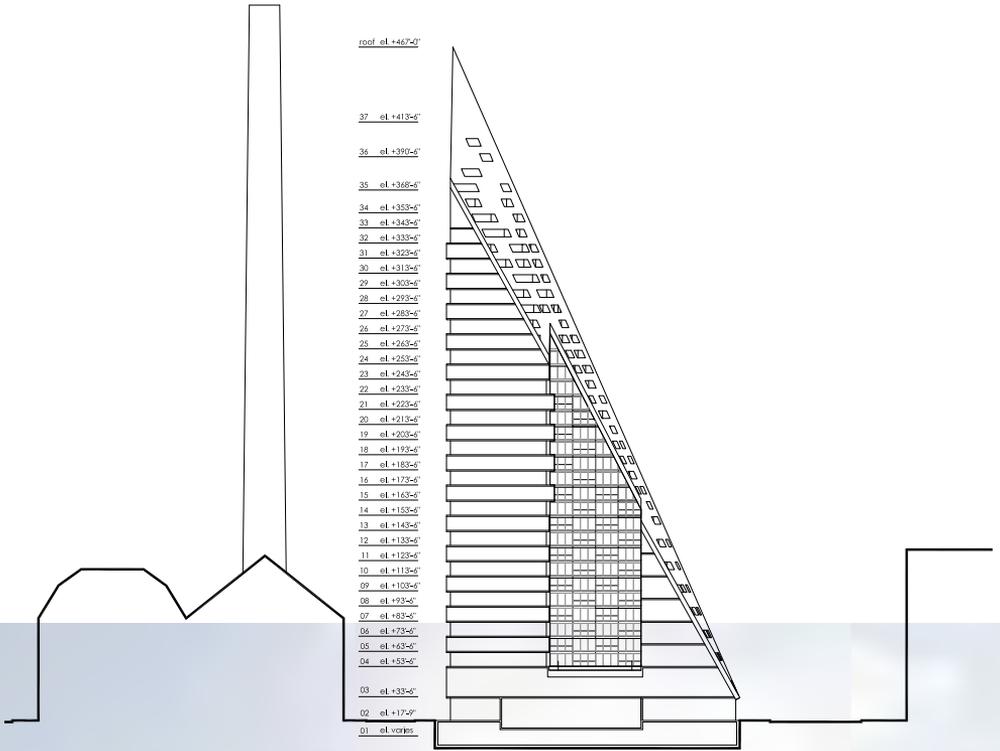


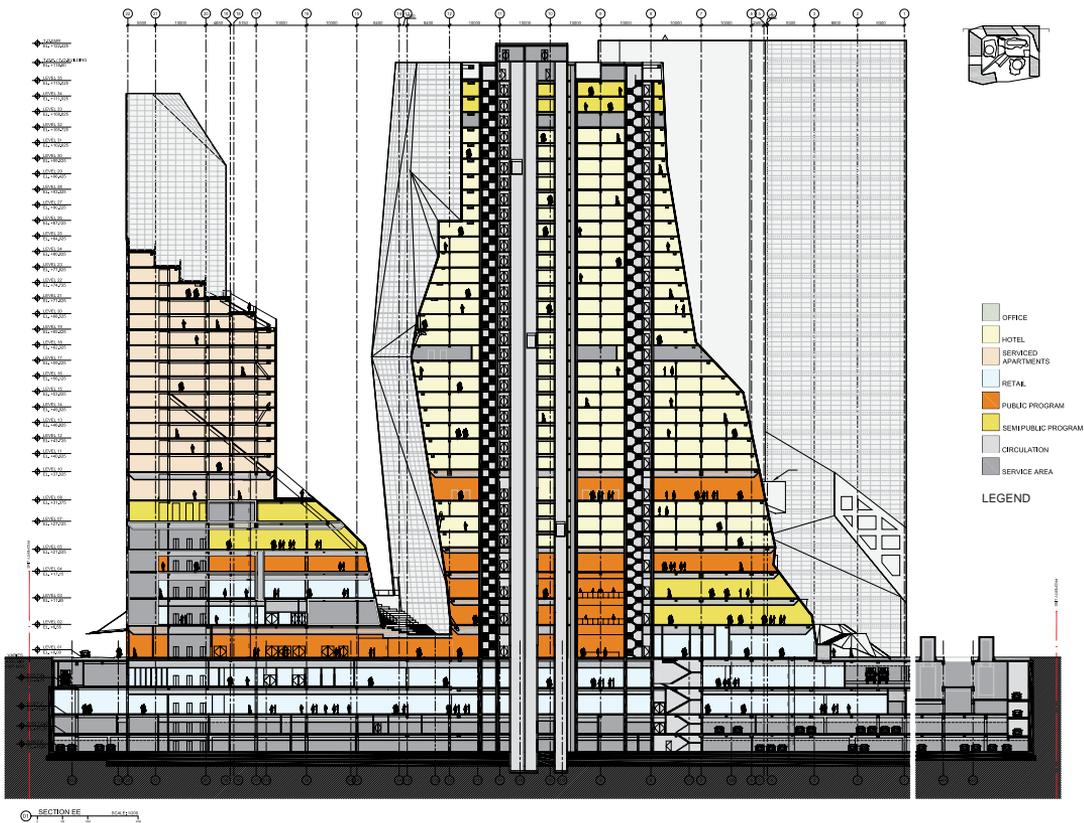
P6



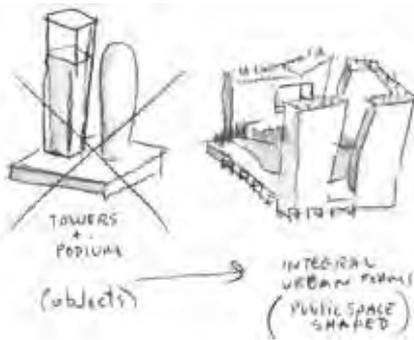
SITE AREA: 1.03 HA.
FLOOR AREA: 80,000 SQ. M.
FAR: 7.77

CROSS SECTION





PERIMETER BLOCK + PODIUM TOWER
 STEVEN HOLL ARCHITECTS (LIGHT PAVILLION BY LEBBEUS WOODS WITH CHRISTOPH A. KUMPUSCH)
 RAFFLES CITY CHENGDU, CHENGDU, CHINA (2007-2012)



Steven Holl Architects' Raffle City Chengdu in Chengdu, China, exemplifies the fusion of perimeter block and podium tower. While the podium typology renders similar urban qualities as the perimeter block, the organization of towers on the podium often fails to establish the architectural qualities of semi-private open space. By pushing the towers to the edge of the podium, Steven Holl Architects complied with the benefits of perimeter block typology and, thus, established a public plaza at the core. The shaping of towers complied with the contextual premises of light and wind to render an original building form.



SITE AREA: 3.20 HA.
 FLOOR AREA: 310,000 SQ. M.
 FAR: 9.69





PERIMETER BLOCK + ZEILENBau
MASSIMILIANO FUKSAS ARCHITETTO,
LYON CONFLUENCE HOUSING, LYON, FRANCE (2005-2010)

SITE AREA: 0.23 HA.
FLOOR AREA: 30,762 SQ. M.
FAR: 13.57

P6

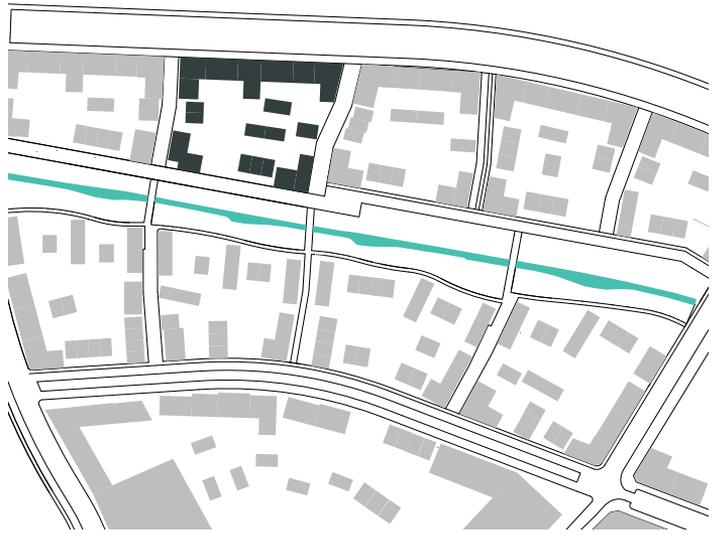


SITE AREA: 0.58 HA.

FLOOR AREA: 12,261 SQ. M.

FAR: 2.12

OkiDoki Arkitekter's Vallastaden in Linköping, Sweden, exemplifies the fusion of perimeter block and town house. Composing a city plan with small and narrow plots, the architects clustered properties to produce irregular urban blocks. With small and independent buildings located at the perimeter of each block, OkiDoki Arkitekter accomplished a distinct division between architecture and urbanism while, at the same time, rendering heterogeneous urban form. The narrow façades that front the public space of arteries and alleys signify a small-scale approach on development, ownership, and expression.

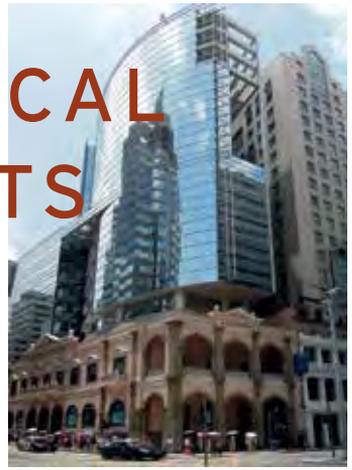


PERIMETER BLOCK + TOWN HOUSE
OKIDOKI ARKITEKTER
VALLASTADEN, LINKÖPING, SWEDEN (ONGOING)

Massimiliano and Doriana Fuksas's Lyon Confluence Housing in Lyon, France, exemplifies the fusion of perimeter block and Zeilenbau. While the Zeilenbau creates an explicit division between building and city, its large footprint tends to produce a relentless urban space. By occupying a longitudinal waterfront site, Massimiliano Fuksas Architetto sliced the large building footprint and, thus, instigated architectural diversity in a single urban block. Discarding the core of perimeter block typology, the spaces between the increments drew from the alley typology to reconceptualize the premises of semi-private open space. When the Zeilenbau has been broken down into increments, multiple dwelling types and architectural expressions can coexist within the premises of a single urban block.



INJECT RADICAL INCREMENTS



Bruno Soares, BNU Tower, Macau, 1995.

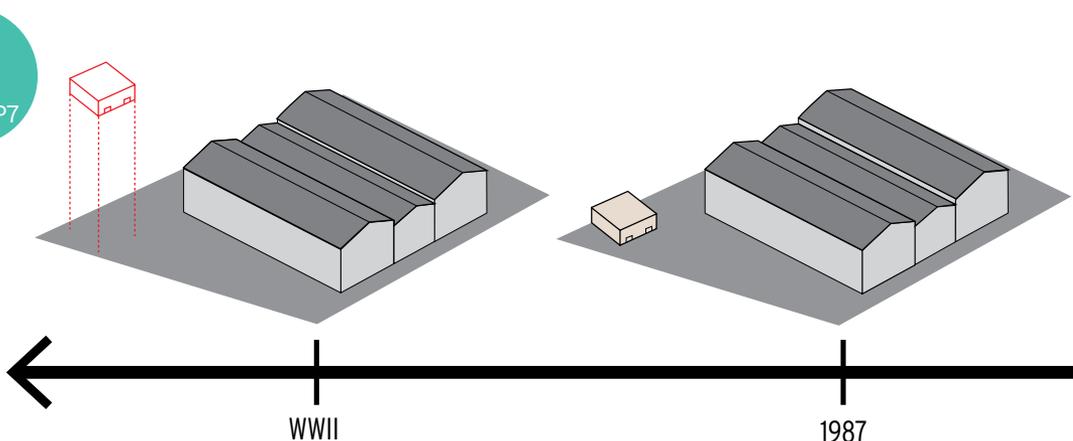
In contrast to utopian thinking in which the master plan is the basis for design, urban identity and vitality can be catalyzed by what is called a “radical increment.”¹⁸ Rather than reproduce the perimeter block like so much urban wallpaper, new housing-commercial-service building types will create new demonstrations that will proliferate and catalyze a particular urban character. One way to generate such a radical increment is to project new possibilities from existing circumstances, whether those are cultural, economic, or environmental. The Frihamnen area contains some historically significant warehouses, such as Kajskjul 107 and Kajskjul 113. Characterized by extended footprints and three story façades, these rather long and low warehouses signify the historical precedent of the former shipyard industry. While these buildings add character and identity to Frihamnen, their volumetric capacity deviates from contemporary requirements of scale and performance. Tectonics and interior configurations additionally fail to meet current demands on space, structure, and technology, which tend to hamper economic viability and, thus, make the warehouses obsolete. To circumvent the battle between financially expedient demolition and insolvent restoration, architectural interventions can be added within and on top of existing structures to fuse the preservation of identities with the creation of new program. With such radical increments, the patina of cultural heritage adds originality to the global flow of tectonics and styles. If a new typological solution is constructed, risk-averse builders, developers, and city agencies will be more willing to try it the next time, thereby instigating the proliferation of the radical increment and the creation of an “indigenous” local character.

18. Dana Cuff and Roger Sherman, “Introduction,” in *Fast-Forward Urbanism*, ed. Dana Cuff and Roger Sherman (New York: Princeton Architectural Press, 2011), 25.

The story of La Fabrique at Ile de Nantes exemplifies the injection of radical increments:

The bunker was built in proximity to three warehouses at the industrial and shipyard area at Ile de Nantes to serve as protection from airstrikes.

The manufacturing industry and the shipyard closed; the bunker and the warehouses were abandoned.





Rocco Yin, The Peninsula Office Tower, Hong Kong, 1994.



Herzog & de Meuron, Elbe Philharmonic Concert Hall, Hamburg, Germany, ongoing.

Herzog & de Meuron added a concert hall atop a seventeenth century warehouse in Hamburg; Rocco Yin added the Peninsula Office Tower atop a colonial hotel building in Hong Kong from 1928; and Bruno Soares added the BNU Tower atop a colonial bank building in Macau from 1925. The harbor transformation at Ile de Nante, France, included several radical increments, where new forms and uses were introduced atop, or attached, to historical buildings. TETRARC designed a cube of metallic lacework atop an abandoned World War II bunker to create La Fabrique, which is a cultural center including various locales for art activities, concert venues, and social spaces.



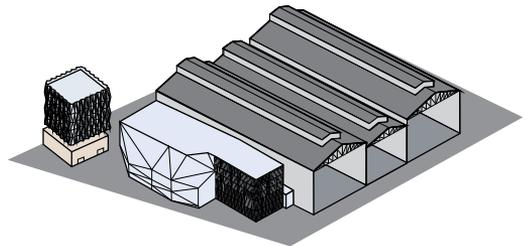
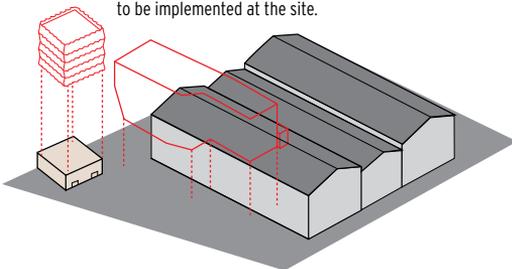
TETRARC, La Fabrique, Ile de Nantes, France, 2011.



Essentiel/Less is more/O&J/Axe303, Karting, Ile de Nantes, France, 2012.

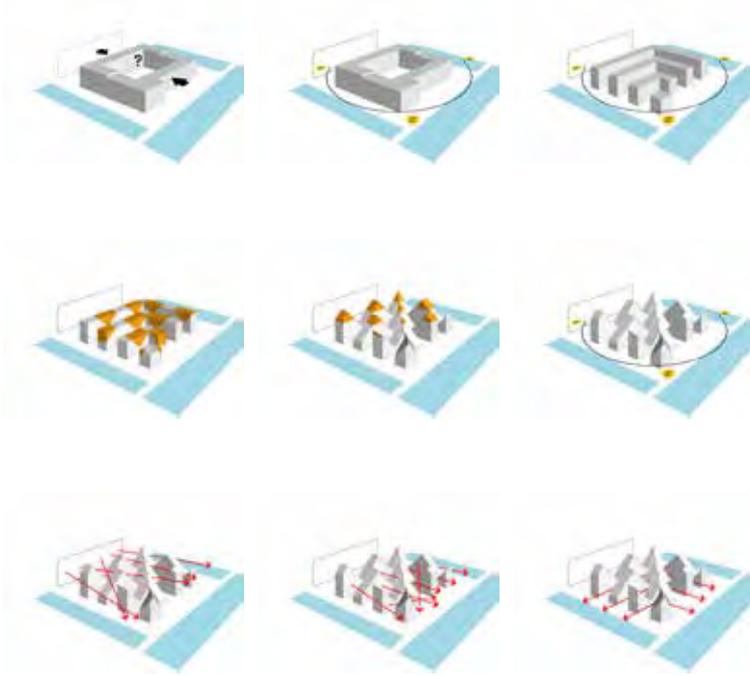
Alexandre Chemetoff developed the 'L'Ile de Nantes le Plan Guide en Projet' to guide incremental transformation of the former industrial and shipyard area; Ville de Nantes arranged an architectural competition for a performing arts complex; the Nantes-based architecture office TETRARC proposed a series of radical increments to be implemented at the site.

La Fabrique was completed in 2011. The performing arts complex contains spaces for artists and musicians, including auditoriums, training and recording studios, offices, areas for digital experiments, plazas, and public venues.



2005 - 2008

2011



WEAVE TOGETHER HOUSING AND WATERFRONT

The RiverCity Vision acknowledges that the river itself is at the heart of Gothenburg's future, but it presents new possibilities and certain problems: the Göta River is an amenity in terms of view, varied uses, beauty, and corridor for activity, and a challenge in terms of sea-level rise, a potential barrier between north and south sides of the city, and the specific micro-climate which can be unpleasantly windy. As residential districts replace formerly active fishing and industrial uses along the riverbanks, they take a surprisingly passive approach to the waterfront. The boundary between water and land is left relatively unchanged even though it could undergo changes through excavation, new docks and piers, or landfill. The water's edge is maintained, to be lined by pedestrian paths that directly follow the boundary, when complementary program – from waterfront restaurants and landscaped parks to boat launches – might be inserted.

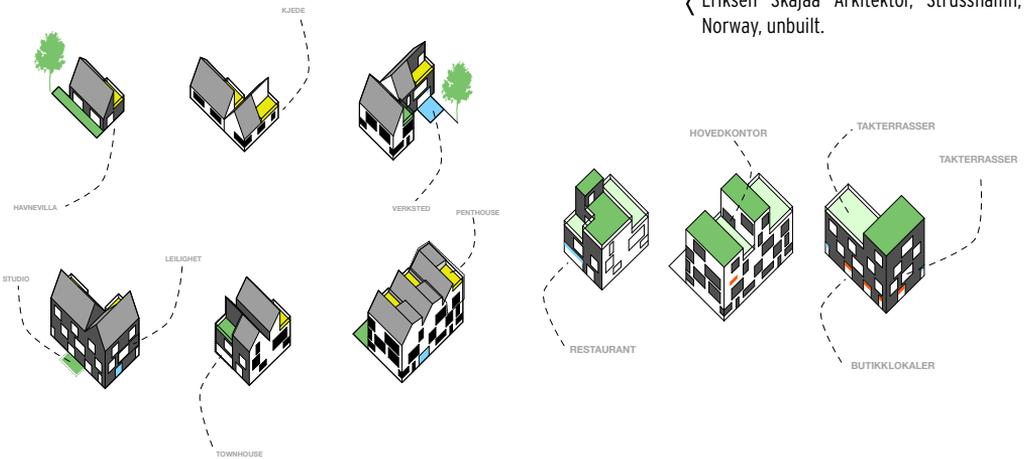
Currently, the two ferry landings on the northern bank at Lindholmspiren and Slottsberget, stand as opportunities-waiting-to-happen. There is a concentration of programs at Lindholmen, including a branch of Chalmers, the Science Park, conference center, new housing, theater, and tramway along the designed allee of Lindhomsallén. Still, the density is low and the infrastructural spaces are vast. On Lindholmsallén three parallel streets, along with bike path and tram line separate the sporadic buildings by more than 75 meters. This dimension is about ten meters wider than the Champs d'Elysees in Paris, lined with consistent ground level commercial spaces and eight-story buildings full of housing. Only one third of the width of the Champs is dedicated to cars while two-thirds is 20-meter-wide sidewalks that

◁ JDS Architects, CEBRA, SeArch, Louis Paillard, Iceberg, Aarhus, Denmark, 2008-2013. Waterfront adjacent. Part of larger Aarhus redevelopment of former industrial zone, L-shaped “wings” frame street spaces and direct views towards waterfront.





◀ Eriksen Skjåaa Arkitektur, Strusshamn, Norway, unbuilt.

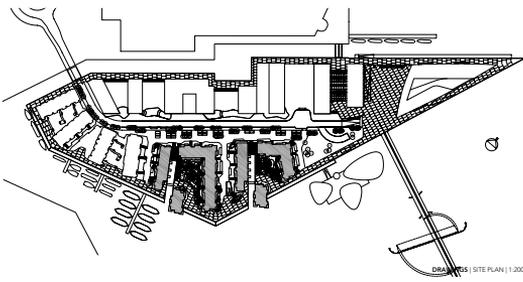


encourage cafés, street trees, and promenades. At Lindholmen, the street is wider, the buildings and cafes are sparse, there is little housing, and perhaps even more problematic, this piece of urban infrastructure prepared for future growth is not connected to the riverfront.

Ferry landings and transit stops are natural hubs for commercial development. The boundary between land and water is malleable, and can be shaped to accommodate activity and promote vitality. Particularly at Frihamnen, where the existing “land” is nothing more than a prior manipulation of the boundary, the shape of the site itself should be taken into consideration.

The ways that land and water can be woven together requires expanding from paths for bikes and pedestrians that line the banks, or housing that only capitalizes on the view. Intricate, lace-edge, design can create floating terraces, fishing bridges, swimming and boating opportunities, waterfowl habitats, picnic areas, art installations, or commercial activities. The water, in turn, can be brought into the land area, carving canals, ponds, and marshes. What Gothenburg needs is a creative and varied approach to the water-land boundary that engages multiple programs while adapting to sea-level rise.

↪ Former boat building factory; study examines three different combinations of density and program on the site, with a similar layout and approach to the site. The layout is based on analysis of climate and landscape with access to light and the spectacular view to the landscape; continuous public space with piers, public spaces, a promenade, and backyards attach the new development to the rest of Strusshamn; central canal on the site connects the two parts of the site together.



> Lundgaard & Tranberg Arkitektfirma, Harbour Isle Apartments, Copenhagen, Denmark, 2008-2013.



Waterfront, pier / harbor. Public footpath diverts around U-shaped towers along dock edge, door-step access to waterfront. Project includes a series of secondary canals that allow water to flow between towers.

CONCLUSION

“Key issues for RiverCity 2021 will be to show how housing, workplaces and services can be integrated into a modern inner-city environment and which connect the city across the river.”

RiverCity Gothenburg Vision

There are two fundamental problems facing Gothenburg and other cities redeveloping their waterfronts today: the geographic and political circumstances particular to urban harbors, and the current practices of high-density residential development. Together, what seems to be a remarkable opportunity instead is becoming a toxic brew as sites are cleared for homogenous, dull, poorly integrated, yet expensive housing. Waterfront redevelopment is also fraught with the problems of displacement, as gentrification pushes existing communities out to less expensive areas. Gothenburg is struggling to create a RiverCity for all, rather than one that excludes significant portions of the population. There must be a better way, if we can learn from both past experience and from efforts in other places.

This handbook elaborates these challenges and proposes new ways to revitalize RiverCity Gothenburg. It focuses on Frihamnen because this area faces imminent redevelopment, it will be the showcase for the Jubilee in 2021, and perhaps most importantly, because it demonstrates principles that can be widely applied to new residential districts.

By now, it is common knowledge that waterfront cities face dramatic challenges related to sea level rise. The solutions are far less commonly grasped, but they range from technologically sophisticated barriers to the abandonment of low-lying zones. What is less well understood about waterfront cities is the radical restructuring of former shipping, fishing, and naval uses into contemporary metropolitan landscapes. From San Francisco and Boston in the United States, to Barcelona and London in Europe, cities have used a range of economic and programmatic strategies to restructure their deteriorating waterfronts. While



the “festival marketplace” characterized early redevelopment schemes, today’s nearly global housing crisis puts pressure on cities to replace former waterfront industries with dense, residential districts.

Few countries have undertaken more extensive housing-related research than Sweden, where nearly every comfort and efficiency has been scrutinized, starting at the Stockholm Exhibition of 1930 and carrying through the Million Homes Program that began in 1965. But neither the experimental, quantitative methodologies that underlay apartment studies nor the aesthetic elegance of functionalist industrial design translate up to the scale of the residential enclave. If the individual dwelling unit is well-understood, we are blind to its aggregation into compounds and neighborhoods. This blindspot in Swedish housing is shared by modernist housing worldwide, and is the exact focus for Gothenburg today. In fact, in the 40s and 50s, Sweden experimented with remarkable housing districts like Guldhelden in Gothenburg or Vällingby in Stockholm, demonstrating the benefits of well-planned neighborhoods. If the city wishes to show, as in the epigraph above, HOW to integrate housing, workplaces, and services, it must break with conventional practices to develop new approaches to the design and development of residential districts. The challenges enumerated in this handbook may stem from the problems built into Gothenburg’s current housing development practices, but the propositions offered to address them are also local products. Fieldwork over the past two years along with dozens of interviews across the city suggest that Gothenburg could step up to become the twenty-first century incarnation of Swedish innovation by creating more than housing – by creating urban neighborhoods. Not only would the next era of cosmopolitan life in Gothenburg benefit from the results, but Gothenburg could show other river cities how to become more vibrant, more sustainable, more equitable, and more diverse. The demonstration begins at Frihamnen, but it certainly will not end there.

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PHOTO CREDITS AND PERMISSIONS

- 2-7 Photographer: Per-Johan Dahl.
- 8-9 Photographers: Jessica Segerlund and Kristoffer Nilsson, Per-Johan Dahl.
- 10 Aerial photo: Courtesy of City of Gothenburg.
- 11 Facsimile: Program för Frihamnen och del av Ringön inom stadsdelen Lundbyvassen i Göteborg.
- 12-13 Photographers: Jessica Segerlund and Kristoffer Nilsson.
- 14 Photographer: Tara Wujcik. Courtesy of Brooks + Scarpa.
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- 16 (top) Photographer: Benny Chan. Drawings by Daly Genik Architects. Courtesy of Daly Genik Architects.
- 16 (bottom) Property of Korteknie Stuhlmacher Architekten.
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- 18 Drawings and renderings Michael Maltzan Architecture. Courtesy of Michael Maltzan Architecture.
- 19 Drawing by Teeple Architects Inc. Courtesy of Teeple Architects Inc. Photographer: Shai Gil.
- 20-21 Drawing by OkiDoki Arkitekter. Courtesy of OkiDoki Arkitekter.
- 22 (top, right) Drawing by NMDA. Courtesy of NMDA. Photographer: Benny Chan.
- 22 (left) Photographer: Per-Johan Dahl.
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- 28 Facsimile: L'Île de Nantes le Plan Guide en Projet.
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- 31 Drawing and rendering by Perkins+Will, Ralph Johnson and Todd Snapp. Courtesy of Perkins+Will, Ralph Johnson and Todd Snapp.
- 32-33 Section drawing, rendering, and diagram by BIG | Bjarke Ingels Group. Courtesy of BIG | Bjarke Ingels Group.
- 34 Section drawing and diagram by Steven Holl Architects. Courtesy of Steven Holl Architects.
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- 41 Photographer: Mikkel Frost. Courtesy of CEBRA a/s.
- 42 Drawing by Eriksen Skajaa Arkitekter AS. Courtesy of Eriksen Skajaa Arkitekter AS. Rendering by Mir Visuals.
- 43 Site plan by Lundgaard & Tranberg Architects. Courtesy of Lundaard & Tranberg Architects. Photographer: Adam Mørk.

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On the banks of the Göta River, the city of Gothenburg is undergoing a transformation that characterizes many urban waterfronts today, as shipping, fishing, and naval uses are replaced by a high demand for new housing. What is unique to Gothenburg is its vision of a RiverCity that is diverse, environmentally sound, and vibrant. It is imperative, however, to take stock of the successes and failures of the effort thus far. Moreover, similar efforts worldwide can provide new ideas to decision-makers in Sweden who seek unconventional solutions that will improve future neighborhoods. This handbook focuses on the next district on Gothenburg's planning agenda, the docks and adjacent land at Frihamnen. The eight challenges named in these pages stem from two years of research into the RiverCity; the eight propositions demonstrate in words and images how those challenges can be met, and moreover, how they can spark new thinking about Gothenburg's future.



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