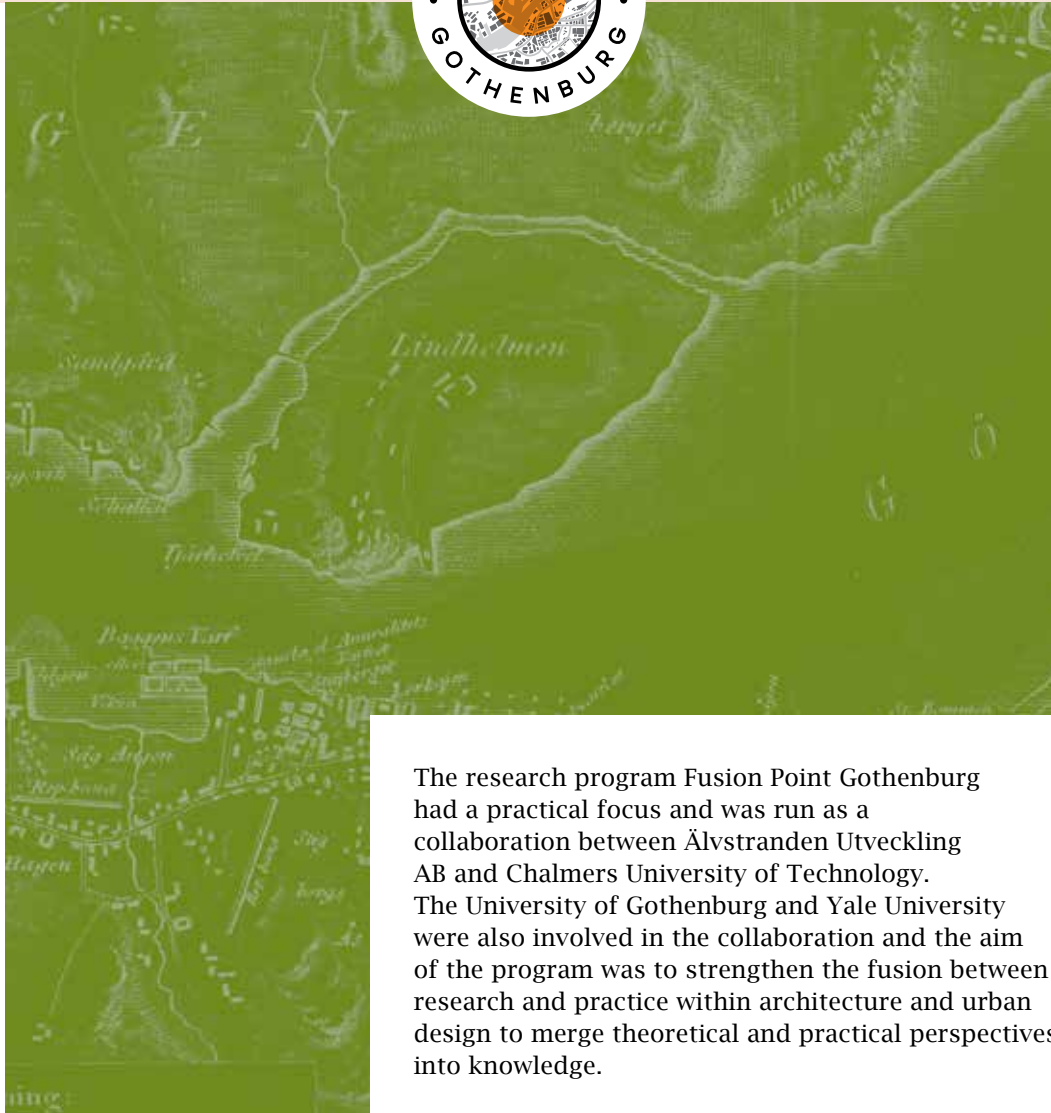




EXECUTIVE SUMMARY

DESIGNCASE LINDHOLMEN FROM SCIENCE PARK TO SCIENCE CITY

ALAN PLATTUS, MARTA CALDEIRA
& ANDREI HARWELL



Cover image: Map of Gothenburg and its Suburbs, prepared by Anders Lindgren in 1815

**THIS BOOKLET IS
A PART OF THE
BOOKLET SERIES
CREATED BY FUSION
POINT GOTHENBURG
(2017-2019) & IS ALSO
FEATURED IN THE
CHALMERS ACE 2020
REPORT SERIES**

The research program Fusion Point Gothenburg had a practical focus and was run as a collaboration between Älvstranden Utveckling AB and Chalmers University of Technology. The University of Gothenburg and Yale University were also involved in the collaboration and the aim of the program was to strengthen the fusion between research and practice within architecture and urban design to merge theoretical and practical perspectives into knowledge.

Various types of workshops and seminars have been used to spread knowledge and initiate discussions with Gothenburg's operative actors within the building sector and the city's officials, with a focus on promoting and highlighting the development potential within RiverCty Gothenburg (Älvstaden). This series of booklets are primarily aimed to those who work with the development of Älvstaden but may also be of interest to others who work with urban development. The authors highlight different perspectives that affect urban development and base their research on their own background and discipline.

THE BOOKLET SERIES

01	LANGUAGE AS KNOWLEDGE CARRIERS WITHIN URBAN DEVELOPMENT
	+ STADSUTVECKLINGENS SPRÅK

Lars Marcus & Fredrik Nilsson

02	TEORIER OM STADSFORM FÖR ATT MÄTA STÄDER
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Lars Marcus & Meta Berghauser Pont

03	TEXTER OM STADSFORM
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Lars Marcus & Meta Berghauser Pont

04	STADSFORM I PRAKTIKEN
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Lars Marcus

The latest developments in knowledge of urban form are summarised and thoughts on a new digitalised planning process are presented.

05	DET SVENSKA PLANERINGSSYSTEMET OCH ÄLVSTADENS MODELLER FÖR STADSUTVECKLING
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Nils Björling

The study discusses how RiverCity Gothenburg's (Älvstaden) urban development models create new planning tools between and around the statutory planning framework in order to bridge gaps between the vision and implementation.

06	HÅLLBAR STADSUTVECKLING - ETT INSTITUTIONELLT PUSSLANDE?
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Filip Bladini & Ulf Petrusson

A study on an "evaluation and governance model" for sustainable urban development. An analysis of municipal activities to identify the core components of an institutional puzzle that create the pieces of a sustainable city.

07	RIVERCITY GOTHENBURG - AN AMBITIOUS LEAP CAUGHT IN AMBIGUITY
	+ SAMMANFATTNING PÅ SVENSKA

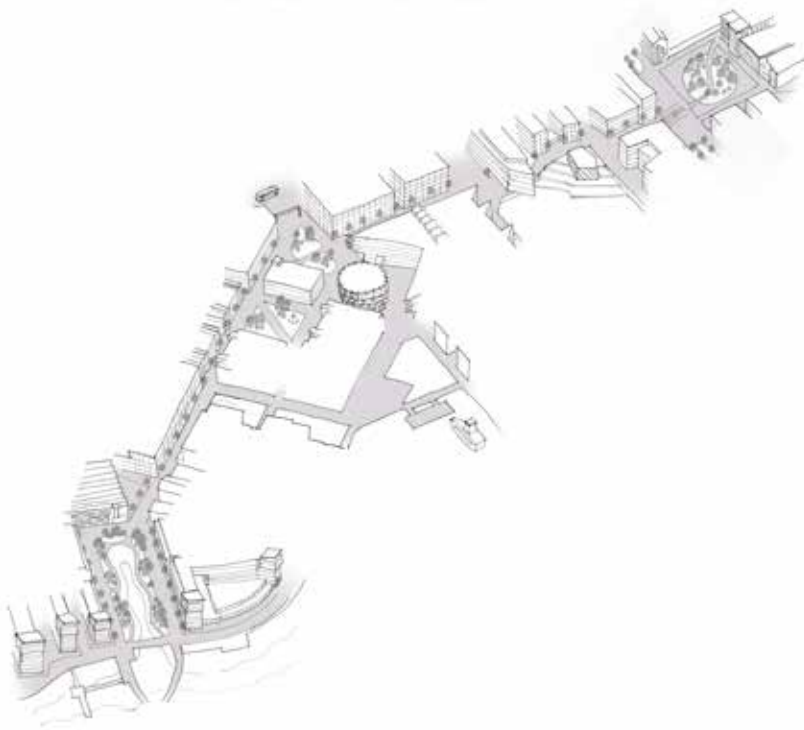
Carl Mossfeldt

Writings that explore challenges of the project RiverCity Gothenburg (Älvstaden) and how the context of a wider displacement of the city's governance model, which was partly expressed by the project but challenged the existing structure. Written in English and present a separate executive summary in Swedish.

08	DESIGNCASE LINDHOLMEN - FROM SCIENCE PARK TO SCIENCE CITY
	+ EXECUTIVE SUMMARY

Alan Plattus, Marta Caldeira & Andrei Harwell

A design case developed by the Yale Urban Design Workshop, emphasizing design process, urban analysis, and design opportunities for the future of Lindholmen, with a particular focus on South Lindholmen and the waterfront. The Case and the Executive Summary are presented in English.



The Yale Urban Design Workshop is a community design center based at the Yale School of Architecture, providing urban design assistance to communities in Connecticut, New England, and around the world.

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On the cover: *Map of Gothenburg and its Suburbs*, prepared by Anders Lindgren in 1815, and included at the back of Part 2 of P.A. Granberg's *Staden Goteborgs Historia och Beskrifning* (City of Gothenburg History and Description), published in 1815.

Above: Proposed public space structure for Lindholmen.

DesignCase Lindholmen
From Science Park to Science City

EXECUTIVE SUMMARY

A research report prepared by the
Yale Urban Design Workshop
School of Architecture, Yale University
New Haven, Connecticut

for
Fusion Point
Gothenburg, Sweden

February 22, 2020



Science Park to Science City

Designcase Lindholmen

Lindholmen represents the fundamental transformations that Gothenburg, like other cities around the world, have experienced in the last two centuries:

- » From natural riparian ecology to constructed industrial waterfront;
- » From heavy maritime industry to knowledge-based redevelopment;
- » And now, from science park to mixed-use, transit-oriented, resilient urban waterfront district.

Our design process begins with a detailed close reading and thick description of the underlying historical, economic and cultural forces that have shaped Lindholmen, as manifest in the topographic, spatial and built form of the district. This has revealed:

- » That Lindholmen has, from the outset, developed far greater richness and complexity than characterization in terms of the dominant use in each period would suggest, and has yet to fully recognize and embrace the potentially productive tension between apparently conflicting identities and uses;
- » That these spatial patterns of use have not been well-coordinated, or integrated into a coherent, but diverse, urban district;
- » That Lindholmen has developed in ways that result in weak connections to adjacent neighborhoods, uses, and populations;
- » That there are, however, latent spatial patterns that suggest a logic of persistent orientation towards the river, as well as an emergent network of public space and circulation that also suggest ways to connect more effectively to both the water and the city.

In addition, the analysis suggests that Lindholmen's unique history of riverfront landscape, shipbuilding, technical education, and cutting edge research, are a potential source of strengthened local identity that can blend global trends and best practices in urban development with a highly visible and distinctive placemaking approach, based on:



South Lindholmen

1. Bridge park ("Broparken")
2. Green edge and multimodal waterfront trail
3. Bicycle / pedestrian bridge to Majorna
4. Urban beach
5. Pavilion
6. Mixed-use buildings
7. Pedestrian / bicycle bridge and Lindholmspiren ferry stop
8. Connection to Old Lindholmen

- A. Skateberg
- B. Old Lindholmen
- C. Hasselblad
- D. Backa Theater
- E. Technical High School
- F. Chalmers Lindholmen campus

- » A prominent location right in the heart of Gothenburg, which should make Lindholmen highly attractive for its current and future uses, for new research, design and production based development, as well as a complementary mix of other uses that contribute to a lively waterfront district;
- » The celebration and integration of Lindholmen's industrial heritage, not as a museum experience, but as an ongoing part of current development and urban life;
- » An accessible and resilient urban waterfront, with new public spaces and uses that invite the broadest range of participation from local residents and workers, and by the whole region;
- » Becoming a showcase for new strategies of urban mobility, sustainability and coastal adaptation, that are not only developed through research based in Lindholmen, but applied and demonstrated in the new public spaces of the district, in the form of intermodal transit, blue and green infrastructure, and enhanced energy efficiency;
- » An inclusive and open approach to public space and programming that highlights human and ecological resilience and diversity.

The design case study based in South Lindholmen is grounded in a number of sources of input into the design process:

- » Broad input from stakeholders and landowners, particularly as reflected in the 2012 RiverCity Vision, whose goals and values the design case study seeks to embed and embody in spatial and built form;
- » The ongoing research of the academic and professional communities, particularly the work of Fusion Point, which is the launching pad for this study;
- » The on-site research and observation of Yale University School of Architecture students and faculty, in collaboration with colleagues from Chalmers Technological University.

These sources of input, along with the detailed historical, economic, cultural and spatial analysis, are layered and synthesized through the design process and represented by the spatial form and design vocabulary of a conceptual proposal for South Lindholmen, which includes:

An enhanced **public space network**, that:

- » Connects the various zones of Lindholmen and integrates the range of uses that comprise the current and future Lindholmen – research, education, residential, hospitality and food, etc. – and give them visibility and identity around shared public spaces;
- » Connects to adjacent urban areas, particularly to the north in Lundby and beyond, to make

Lindholmen a shared waterfront district for diverse neighborhoods and employment centers;

- » Connects to the region and its people and economy through public transit as well as bicycle routes;
- » Uses distinctive landscape and streetscape , as well as public programming, to promote local identity and inclusion through strategies that can begin to be deployed immediately and with limited resources;
- » Organizes South Lindholmen around a new public park that anchors the public space network in the southwest and draws the waterfront into the heart of the district, and models strategies of coastal adaptation, water management, and sustainable landscape, while providing a connection point for a future pedestrian and bicycle connection to the south bank.

An **accessible and resilient public waterfront**, that:

- » Gives the district and the city direct access, both visually and physically, to an active, attractive and diverse waterfront;
- » Adapts the waterfront over time to the challenges of climate change and chronic flooding;
- » Reintroduces a naturalized shoreline that makes a place for characteristic ecosystems, as well as active and passive recreation;

- » Incorporates a continuous waterfront walking and biking trail that connects to the whole RiverCity.

A **block, street, and building framework**, that:

- » Accommodates a range of evolving uses over time with a rich mix of uses both horizontally and vertically;
- » Clarifies the relationship of public, private and service spaces, and carries the spatial fabric and grain of the district down to the waterfront;
- » Encourages dense, street-oriented, pedestrian friendly development, built around various types of public space highlighting the institutions and uses that anchor the district;
- » Bridges between and blends the currently isolated and distinct uses and typologies of Eriksberg and the Science Park, modeling the more mixed character of the evolving RiverCity
- » Builds upon the research of the City, Fusion Point and others, and applies it to a specific local context.

Our approach embraces the productive ambiguity and uncertainty in contemporary urbanism, rather than retreating into a thoroughly bounded and conventional project.



WHERE ARE WE
TO LINDHOLMEN
LACK SPATIAL IDE
WAYFINDING

THIS CAMPUS LACKS IDENTITY AND ACTIVITY. A WEAKLY DEFINED PUBLIC REALM SOMETIMES MAKES LINDHOLMEN FEEL LIKE A SUBURBAN OFFICE PARK INSTEAD OF A PIECE OF INTEGRATED, VIBRANT CITY FABRIC

HOW DO I GET HOME FROM WORK? POOR CONNECTIONS WITH OLD LINDHOLMEN DISCONNECT RESIDENTIAL POPULATIONS

IT KEEPS FLOODING HERE. LOW LYING GROUND IS SUSCEPTIBLE TO STORM SURGE AND FLOODING FROM RAIN AND SNOW MELT

THERE'S A COOL THEATER HERE, BUT WHO KNOWS ABOUT IT? LINDHOLMEN HOSTS A VARIETY OF INTERESTING USES, BUT THEY DON'T YET ADD UP TO A COHESIVE DISTRICT.

I WISH THERE WAS MORE HERE WITH MY SCHOOL. LINDHOLMEN'S OUTDOOR OPEN SPACE LACKS DEFINITION AND ACTIVITY

I JUST WANT TO BIKE TO THE FRIHAMNEN SAUNA. THE WATERFRONT WALKING AND BIKING TRAIL ENDS AT SOUTH LINDHOLMEN

THESE PARKED CARS HAVE THE BEST VIEW IN HISINGEN! LINDHOLMEN'S WATERFRONT IS OFTEN TREATED AS A "BACK"

Lindholmen Today



I CAN SEE THE PARK OVER THERE... BUT HOW DO I GET THERE? MAJOR INFRASTRUCTURE BARRIERS BETWEEN LINDHOLMEN AND KEILLERS PARK

IT'S SO HARD TO GET TO THE WATERFRONT! NEARBY RESIDENTIAL NEIGHBORHOODS ARE POORLY CONNECTED TO LINDHOLMEN

WHERE'S THE FRONT DOOR? WITHOUT A CLEAR, LOGICAL PUBLIC SPACE PLAN, DESIGNERS HAVE A HARD TIME MAKING CHOICES ABOUT THE ADDRESS OF NEW DEVELOPMENT

?! GATEWAYS FROM TRANSIT INTENSITY, MAKING DIFFICULT

WHAT A COOL BUILDING! INDUSTRIAL ARCHITECTURE IN LINDHOLMEN CARRIES THE MEMORY OF THE PAST AND CONTRIBUTES TO THE IDENTITY OF THE PLACE

WHY ARE THESE HEDGES IN MY WAY?! GAPS IN THE PUBLIC SPACE NETWORK MAKE WAYFINDING AND CIRCULATION DIFFICULT

HOW DO I WALK THROUGH HERE?! EAST LINDHOLMEN IS DOMINATED BY SURFACE PARKING LOTS, AND LACKS A CLEAR PEDESTRIAN NETWORK

RE TO DO FRIENDS! IN SPACES LACK ACTIVITY

WHO DOES THIS SPACE BELONG TO? IN SOME AREAS, ITS DIFFICULT TO TELL WHICH SPACES ARE PUBLIC AND WHICH ARE PRIVATE

I WISH THERE WAS A PLACE ON THE WATERFRONT TO GET A DRINK WITH MY CLIENTS AFTER OUR MEETING! LINDHOLMEN LACKS AMENITIES THAT COULD ATTRACT OR RETAIN POPULATIONS IN LEISURE HOURS

I LOVE THE WATER, BUT IS THERE ANYTHING TO DO HERE!? WATERFRONT AREAS LACK DIVERSITY AND PROGRAMMING



1. Waterfront program space
2. New public square
3. Bicycle / pedestrian bridge to Majorna
4. Pedestrian / bicycle bridge and Lindholmspiren Ferry Stop
5. Improved connection to adjacent district
6. High speed tram stop

I ALWAYS BIKE TO VOLVO LUNDBY FOR MY MEETINGS! BETTER CONNECTIONS TO ADJACENT AREAS CAN MAKE LINDHOLMEN THE DOWNTOWN OF LUNDBY

I LOVE BEING A STUDENT AT CHALMERS' LINDHOLMEN CAMPUS - THERE IS SO MUCH TO DO HERE! AN ACTIVATED WATERFRONT, CONNECTED PUBLIC SPACES, AND MORE DIVERSE USES CAN MAKE LINDHOLMEN A MORE ATTRACTIVE, INTEGRATED PART OF THE CITY CENTER

I LOVE WALKING TO WORK! BETTER CONNECTIONS TO OLD LINDHOLMEN ENCOURAGE INTERACTION

IT USED TO FLOOD HERE ALL THE TIME, BUT NOT ANYMORE! PERIMETER SURGE BARRIERS AND GREEN INFRASTRUCTURE MITIGATE THE EFFECTS OF STORMS AND SEA LEVEL RISE

MY SCHOOL FEELS LIKE ITS PART OF A NEIGHBORHOOD NOW!

NOW I CAN RIDE MY BIKE FROM ERIKSBERG TO FRIHAMNEN ALONG THE WATER!

I LOVE BIKING TO SCHOOL ACROSS THE RIVER! NEW BRIDGE CONNECTS LINDHOLMEN TO RESIDENTIAL AREAS AND THE HISTORIC CITY CENTER

MY GRANDFATHER BUILT SHIPS HERE! THE FORM OF THE FORMER DRY DOCKS IS REMEMBERED BUT TRANSFORMED INTO A NEW STORMWATER PARK

CAN'T WAIT 'TIL ANILA AND CARL GET HERE FROM BISKOPSGÅRDEN! PLACES FOR PUBLIC PROGRAMMING ALONG THE WATERFRONT ATTRACT DIVERSE NEW CONSTITUENCIES

THIS IS MY FAVORITE PLACE TO MEET FOR AN AFTERWORK AND WATCH THE SUNSET! WATERFRONT USES TAKE ADVANTAGE OF THE VIEWS AND CONNECTIONS PROVIDED BY THE RIVER

OLD LINDHOLMEN

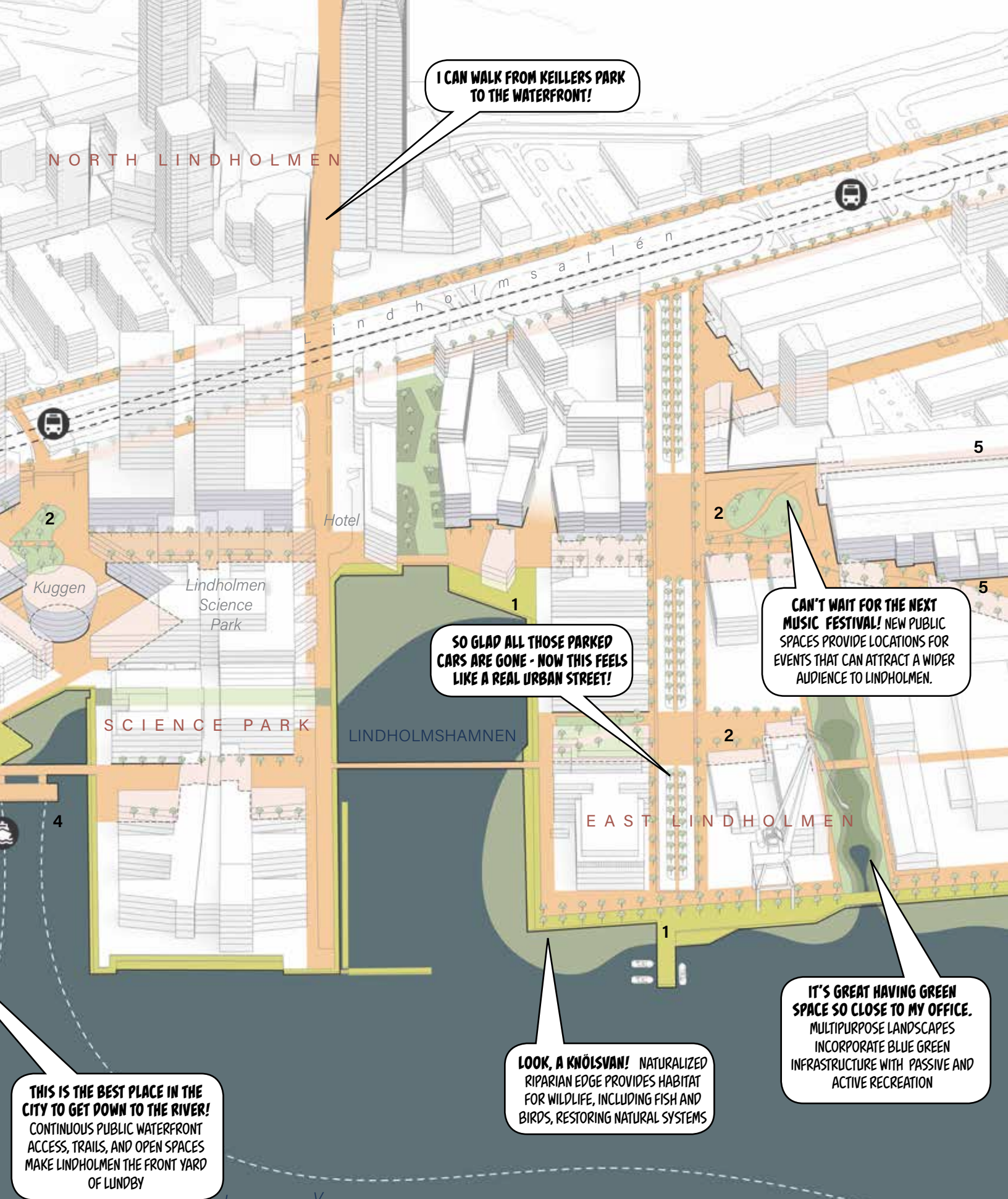
SOUTH LINDHOLMEN

Aftonstjärnan

Backa Theater

CHALMERS

Skateberg



NORTH LINDHOLMEN

I CAN WALK FROM KEILLERS PARK
TO THE WATERFRONT!

L i n d h o l m s a l l é n

Hotel

Lindholmen
Science
Park

LINDHOLMSHAMNEN

EAST LINDHOLMEN

SO GLAD ALL THOSE PARKED
CARS ARE GONE - NOW THIS FEELS
LIKE A REAL URBAN STREET!

CAN'T WAIT FOR THE NEXT
MUSIC FESTIVAL! NEW PUBLIC
SPACES PROVIDE LOCATIONS FOR
EVENTS THAT CAN ATTRACT A WIDER
AUDIENCE TO LINDHOLMEN.

THIS IS THE BEST PLACE IN THE
CITY TO GET DOWN TO THE RIVER!
CONTINUOUS PUBLIC WATERFRONT
ACCESS, TRAILS, AND OPEN SPACES
MAKE LINDHOLMEN THE FRONT YARD
OF LUNDBY

LOOK, A KNÖLSVAN! NATURALIZED
RIPARIAN EDGE PROVIDES HABITAT
FOR WILDLIFE, INCLUDING FISH AND
BIRDS, RESTORING NATURAL SYSTEMS

IT'S GREAT HAVING GREEN
SPACE SO CLOSE TO MY OFFICE.
MULTIPURPOSE LANDSCAPES
INCORPORATE BLUE GREEN
INFRASTRUCTURE WITH PASSIVE AND
ACTIVE RECREATION

Lindholmen Tomorrow



PART 8/8 | 2020

FUSION POINT BOOKLET SERIES

The research program Fusion Point Gothenburg had a practical focus and was run as a collaboration between Älvstranden Utveckling AB and Chalmers University of Technology. The University of Gothenburg and Yale University were also involved in the collaboration and the aim of the program was to strengthen the fusion between research and practice within architecture and urban design to merge theoretical and practical perspectives into knowledge.

Report ACE 2020:10 Department of Architecture and Civil Engineering, Chalmers University of Technology 2020