EXTENDING CARE

Diploma program F23

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Royal Danish Academy

Architecture
Design
Conservation

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EXECUTIVE SUMMARY

Can recovery- and preventative care for depression be extended into the neighborhood scale and provide support for the general public as well as private users?

This project will explore mental health issues facing our communities. With a point of departure in the current societal problem of mental health the program will provide a series of spatial strategies to support prevention of, and recovery from, depressive mental illnesses. There will also be implemented a short-term home for previous psyciatric patients, where the week after discharge is most vulnerable.

Societal theme / *Mental health*
Our society is currently facing a mental health crisis seen in the active measures, such as the new Danish Healthcare plan.[1] Depression is the leading cause of disability and is a known problem worldwide.[2] The metal health crisis has contributed to higher mortality rate, economic loss, and societal shifts.[3] This program will seek to provide preventative- and recovery care for depression and help strengthen the mental health landscape in Denmark for both the public and oupatients.

Site / *The Northern Region, Aalborg*
Previous numbers show a spike in suicide attempts in The Northern Region.[4] Aalborg is a city consisted of previous listed areas in the "*No parallel society package*", which estimates areas by lower income, higher crime rate, and educational level pr inhabitant.[5] With the listet areas and the upcoming plan to host 4000 refugees from Ukraine,[6] this program sees Aalborg as an oppurtunity for a strengthened healthcare plan more central to the city. Aalborg is currently undergoing a large transformation of the healthcare landscape. The city is one of six in Denmark developing the Super hospital[7] – which is visioned to increase patient progress by having every aspect of healthcare combined at one location.[8] The new super hospital being built in Aalborg East will connect the existing hospitals and relocate hospital care.

Program / *Assembled for support*
This program is a contribution to the Danish approach to mental health. Aalborg functions as a test site for a preventative- and recovery care strategy for depression. The project will target specific areas in Aalborg which are currently underserved by mental health facilities and link them to a path of interventions by using a range of preventative programs. The program will zoom in on one location hosting a care facility, Remedy House, and Recovery School. These facilities will be complimented at the urban scale by a range of smaller neighborhood interventions. This is a pilot project that explore healthy living and a holistic approach to design for depression to improve the existing plan for mental health in Denmark.

Fig 1.0
Global impact: nationwide numbers of fact, impact and suicide.
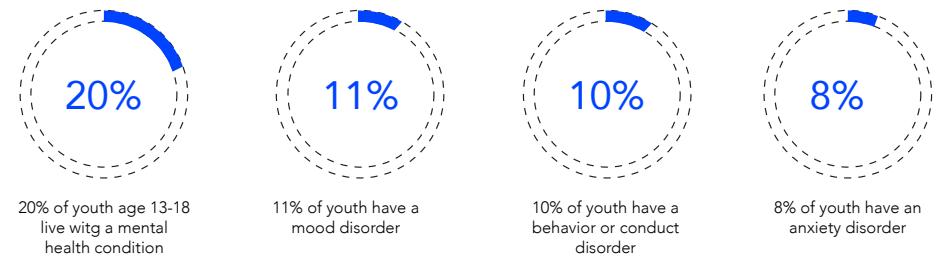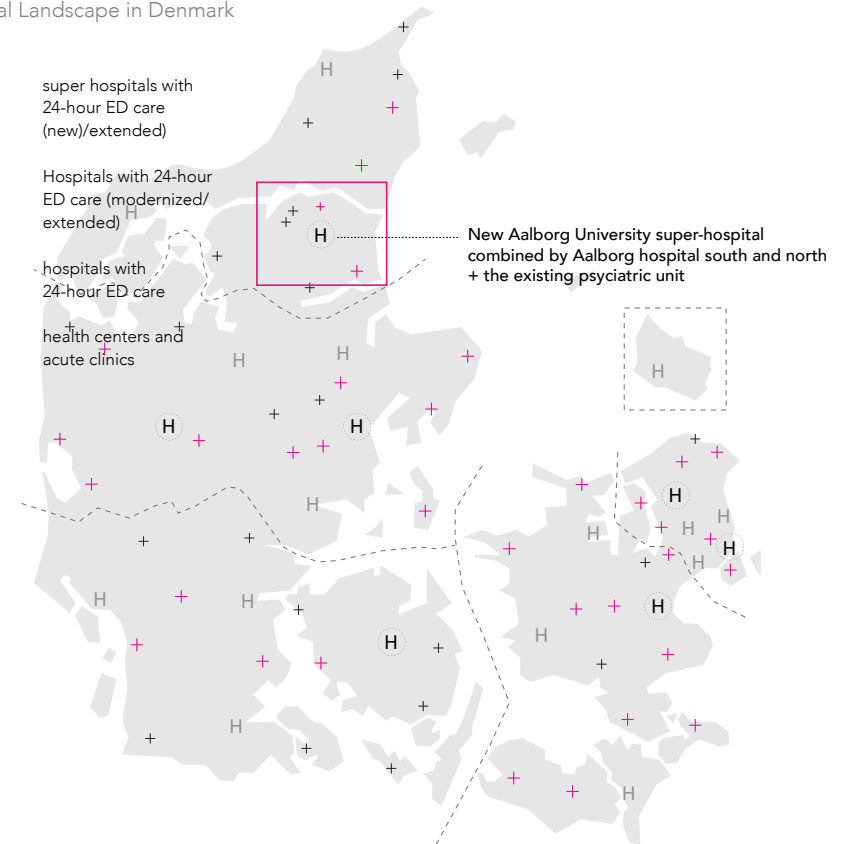Data: National Alliance on Mental Illness

20%
20% of youth age 13-18 live witg a mental health condition

11%
11% of youth have a mood disorder

10%
10% of youth have a behavior or conduct disorder

8%
8% of youth have an anxiety disorder

Fig 1.1
Hospital Landscape in Denmark

super hospitals with 24-hour ED care (new)/extended)

Hospitals with 24-hour ED care (modernized/extended)

hospitals with 24-hour ED care

health centers and acute clinics

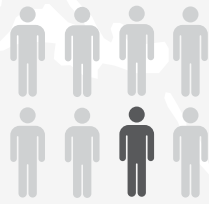New Aalborg University super-hospital combined by Aalborg hospital south and north + the existing psyciatric unit

The global crisis of mental health.

SOCIETAL THEME

Fig 2.0
Credit: Anthony Gerace
'There Must Be More To Life Than This.'
Edited by author

09. World Health Organization. 'Mental Disorders. 08.06.22

10. Project Hope. 'Mental health crisis:10 numbers to note.' 2022.

11. Heunicke, Magnus. 'The Danish approach to mental health.' Healthcare Denmark. 2021

12. World Health Organisation. 'COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression.' 02.03.22

13. World Economic Forum. 'Why this is the year we must take action on mental health. 01.2019

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16. Charbonneau, A., Rosen. 'Monitoring Depression Care: In Search of an Accurate Quality Indicator.' Medical Care. 2004

17. World Health Organisation. 'Disablitity-adjusted life years (DALYs).' The Global Health Observatory. 2019

18. Whiteford, A. Harvey. 'The global burden of mental, neurological and substance use diroders.' PubMed. 2010

MENTAL HEALTH CRISIS

GLOBAL IMPACT

Mental health is a current global crisis that causes economic loss, a rise in mortality and vulnerable societies.

One in every eight people worldwide are living with a mental disorder[8] and approximately **70% of the people afflicted by mental illness are not receiving the proper treatment because a lack of resources**.[10] There is stigmatization surrounding the theme of mental illness, which is considered one of the great barriers,[11] when stigmatization influence individuals to not get treatment or to not acknowledge the symptoms of mental illness.

The Coronavirus (Covid-19) was one of the events that brought forward the global mental health crisis by triggering a 25% increase in prevalence of depression and anxiety disorders worldwide.[12] As well as increased mortality rates the economic growth also suffers, **costing the world almost $16 trillion by year 2030.**[13] Bad mental health prohibits the academic field where employees don't reach the highest potential and risks more absence and disability which contributes to economic loss.[14]

The graph (fig 2.2) shows that depression and anxiety disorders are the highest global disorders common to all countries.[15] This program will tackle the specific user groups and areas where healthcare don't currently stretch. **Depression is a pernicious and prevalent mental illness that trigger an increase in morbidity, mortality, healthcare cost, utilization, and disability.**[16]

The global impact of mental health is also seen in Disability Adjusted Life Years (DALY), where the burden of disease stretches further than mortality.[17] In 2010 mental health disorders accounted for 56,7% of DALY's,[18] also seen in the graph (fig 2.3)- the increase of disorder activates in early adulthood around 20 and 30 years and continue, in comparison to substance and neurological disorders, where the graph is more constant across age groups.

Fig 2.1
Data: World Health Organization. 2022

1 of 8 people suffer from mental health issues globally.

Fig 2.2
Share of the total population with a given mental health or substance disorder.
Data: Our World in Data. 2019
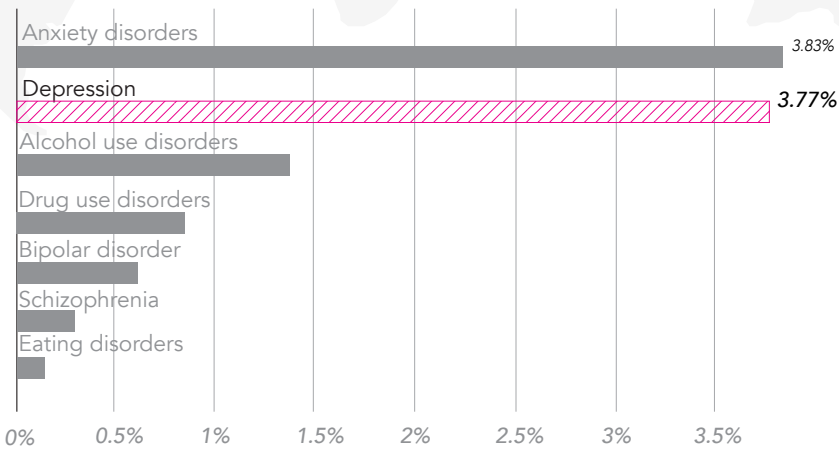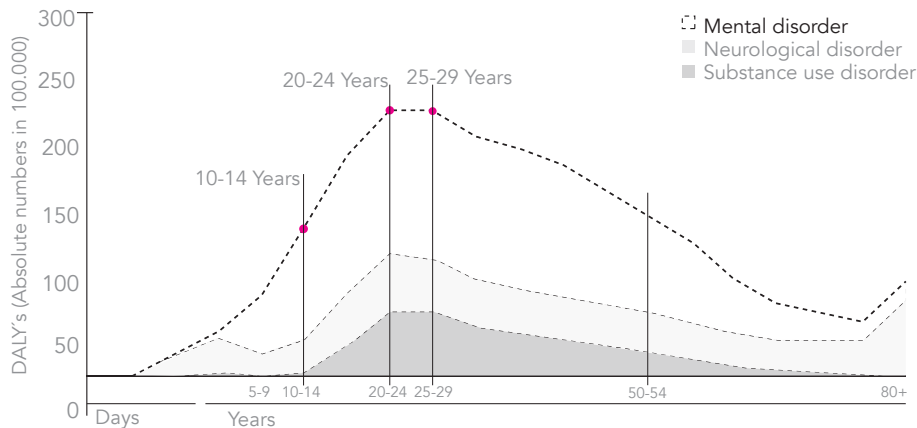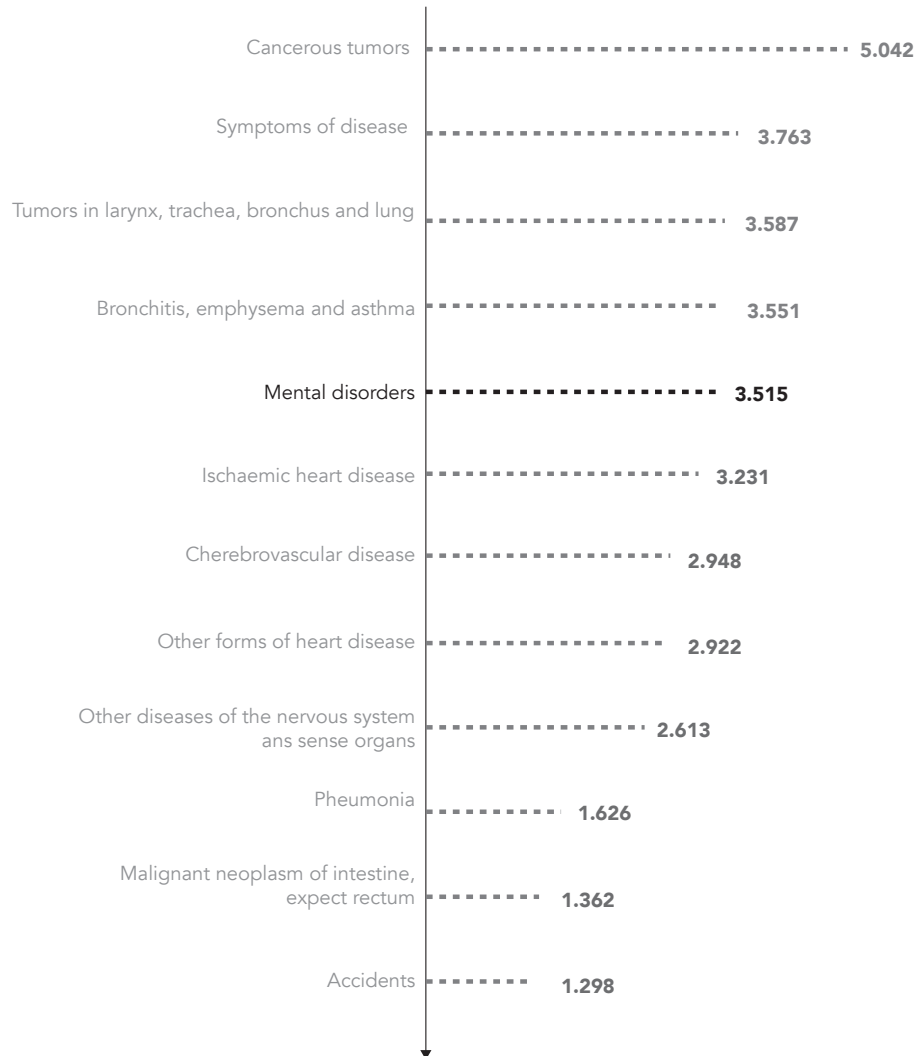

Fig 2.3
DALY's attributable to mental, neurological, and substance disorders, by age group, 2010
Data: Pub Med Central, National Library of Medicine

Suicide accounts for 40% of the excess mortality rate for people with mental health disorders in Denmark.[7]

Fig 2.4
Number of deaths in Denmark:
by cause of death
Data: Statista 2019

Cause of death	Number
Cancerous tumors	5.042
Symptoms of disease	3.763
Tumors in larynx, trachea, bronchus and lung	3.587
Bronchitis, emphysema and asthma	3.551
Mental disorders	**3.515**
Ischaemic heart disease	3.231
Cherebrovascular disease	2.948
Other forms of heart disease	2.922
Other diseases of the nervous system ans sense organs	2.613
Pheumonia	1.626
Malignant neoplasm of intestine, expect rectum	1.362
Accidents	1.298

19. Danish Health Authority. 'strengtening mental health care.' Sundhetsstyrelse. Denmark, 2022

20. Daae, Viktoria. 'Healing the masterplan.' The Royal Danish Academy. 2022

21. Christensen, M.K., McGrath, J.J., Momen, N.C. et al. 'The cost of mental disorders in Denmark: a register-based study.' npj Mental Health. 2022

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24. Nordentoft, Merete. 'Prevention of suicide and attempted suicide in Denmark.' Danish medical bulletin. 2007

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27. Statista. 2019

28. Christensen, M.K., 'The cost of mental disorders in Denmark: a register-based study.' npj Mental Health. 2022

29. The Ministry of Health. 'Healthcare in Denmark: An overview.' Copenhagen. 2017

DANISH IMPACT

Mental health challenges are increasing in Denmark and is the fifth most frequent cause of death (fig 2.4).[19] Denmark is currently the country in Europe using most cost on mental healthcare.[20] Data estimates an annual income loss of **891 Euros per capita linked to major depressive disorder,** personality disorder, and anxiety disorder among the Danish population.[21] OECD Secretary-General, Angel Gurria, stated that the heavy burden of mental illness on individuals and society are not inevitable.[22]

Denmark's mortality rates show that 650 people commit suicide annually, and almost half of the individuals are previous psychiatric patients diagnosed with a mental disorder. The Danish mortality rate also concur that the prevalent part is affected in the younger population, women 15-29 years and men 20-49 years.[23] Psychologist Merete Nordentoft´s analysis *'Prevention of suicide and attempted suicide in Denmark'* states that the leading causes for suicide is male gender, young age, many admissions, short time since discharge, previous recent suicide attempt, co-morbid depression, drug abuse, poor adherence to treatment, and suicidal ideations.[24]

The most common mental disorders in Denmark are connected to two main diagnostic categories: depressive- and anxiety disorders, which is highly prevalent in the population.[25] The focus in this program will be on recovery, but also on preventative actions for general depression. The Danish National Institute of Public Health states that **approximately 20% of the Danish population will experience mental health issues over the course of 1 year**.[26]

Depression is one of the leading causes of mortality, a leading cause of death in Denmark (fig 2.4) which took 3515 lives in 2019.[27] A total of 447 209 Danes suffered from a mental disorder between year 1995 and 2017.[28] The increased mortality rate in Denmark is attributed to a higher risk of death from lifestyle-related diseases and to side effects of medication[29] – which also leads to a greater risk of suicide.

30. Danish Health Authority. 'Strengthening mental health care.' Sundhedsstyrelsen. 2022

31. Healtcare Denmark. 'The Danish approach to mental health.' 2021

32. All.Can International asbl. 'Danish cancer patient pathways.' 2017

33. Mayo Clinic. 'Diagnosis and treatment: Mental illness.' 13.12.22

34. Healtcare Denmark. 'The Danish approach to mental health.' 2021

35. Sundhedsdata-Styrelsen. 'Health Data and Registers. Denmark 2018

THE DANISH APPROACH TO MENTAL HEALTH

Denmark is acting on the mental healthcare crisis in a 10-year plan where they activate focus on preventative care, and create a stronger coherence between general practice, psychiatric hospital services and social psychiatry.[30] The 10-year plan is also set to focus on the needs for adolescents and children with both mental health disorders and drug and/or alcohol abuse disorders.

The overall strategy and plan will be **funded by the Finance Act of 2020, which allocates 600 million DKK annually to strengthen the regional psychiatry.**[31] Mental health issues are a domain of growing concern in Denmark, seeing as a leading cause for mortality and economic loss (Fig 2.4/2.6). The 10-year plan is influenced by the current strategy successfully used in the cancer field – where Denmark has established long-term investments in care.[32]

The Danish psychiatric field is managed by the regional authorities and is split into general, forensic, and private psychiatry. Treatment for mental illness can vary from online cognitive behavior therapy, dialog, and conversational therapy, and in severe cases, medication.[33] The holistic approach and treatment for mental illness can involve family, surrounding environments, pharmacists, medical staff, and psychiatrists. The 10-year plan for mental health states that recovery should be the starting point for all treatment and be provided in the local environment to facilitate patient access and preserve quality of life.[34]

From year 2009 to 2018 there was almost a 50% increase in children and adolescents in Denmark afflicted by mental health issues[35] – alarming numbers which kickstarted the region to act on the societal problem. The increase can however also be linked to transparency and early diagnosis leading to less unreported cases and breaking stigma around getting help and accepting the symptoms of depression.

36. Mayo Clinic. 'Symptoms & causes: Depression.' 14.10.22

37. Mindhelper.dk

DIGITAL RECOVERY

Digital psychiatry is a part of Denmark's planning for mental health. The internet gives immediate access to help and resources – which is more frequently used in healthcare design and programs. The challenge of mental health is increasing in cases faster than the shift in infrastructure and patient spaces.

Depression often gives a resentment to being outside and connect with other people in a social setting.[36] The internet gives an opportunity to seek help without needing to move or interact socially. Email consultations and telepsychiatry is being used more and more for patients and within follow up care, researching facilities and a connection to service helpers.

There are several apps that contributes to mindfulness and stimulating games and such, and the progress in digitalization has gone far throughout the past decade. In Denmark they offer free digital platforms[37] (Mindhelper.dk, 13-20 yrs.) which is an online form of treatment for anxiety and mindfulness. They also offer online treatment with written support from phycologists focusing on anxiety disorders, also testing our virtual reality programs for patients.

As the programs user group will be the younger generation, **the program will be a part of both the physical treatment and digital platform for psychiatry where the project will explore the opportunities made possible by combining digital technology with physical interventions and programs.**
The strategy will be helped by digital awareness and apps with prevention care and where to locate healing areas in the city. The use of technology will also let the program reach more people by having a call hotline for emergencies and offer dialog over phone for the people who can't show up psychical.

Fig 2.5

38. Christensen, M.K., 'The cost of mental disorders in Denmark: a register-based study.' npj Mental Health. 2022

39. Rice, D. P., Hodgson, T. A., & Kopstein, A. N. 'The economic costs of illness: a replication and update.' Health care financing review. 1985

40. Christensen, M.K., 'The cost of mental disorders in Denmark: a register-based study.' npj Mental Health. 2022

SOCIETAL AND ECONOMIC INFLUENCE
Overall focus

Denmark has suffered an income loss of 5 billion Euros[36] due to mental health disorders. Health outcomes can link to income loss, excess healthcare cost, and excess public transfer payments and seen in the graph (fig 2.6) **Major depression disorder is currently costing Denmark heavily from psychiatric services.**

A high proportion of years lived with disability is linked to mental disorders in high-income countries. An analysis of cost-of-illness studies show that the economic cost of illness will continue to play a significant role in decisions of resources in the health care sector.[39]

238 659 Women and 208 550 men were diagnosed with a mental disorder between 1995 and 2017, in Denmark. The cost of all individuals with mental disorders refers to a **nationwide healthcare cost of 1.63 billion Euro**, which corresponds to 284 Euro per capita per year.[40] Major depression disorder (736 M Eur), schitzophrenia (457 M Eur), and personality disorders (430 M Eur) is currently ranked the highest in healthcare cost.

User group:

The graph (fig 2.7) shows that mental disorders have an onset for young people between 16-24 years and that depression is a leading disorder to the cost of mental health in psychiatric services - the project will focus on a younger user group (14-25 yrs.) previous admitted for depression, where the diagnosis often is linked to other diagnoses and diseases.

Seeing the previous figure (fig 2.3) that the younger generation is most vulnerable for early diagnosis the user group will mainly focus on the public youth, but as a preventative program, also open for the general public.

Fig 2.6
Ranking of mental disorders according to nationwide healthcare cost.
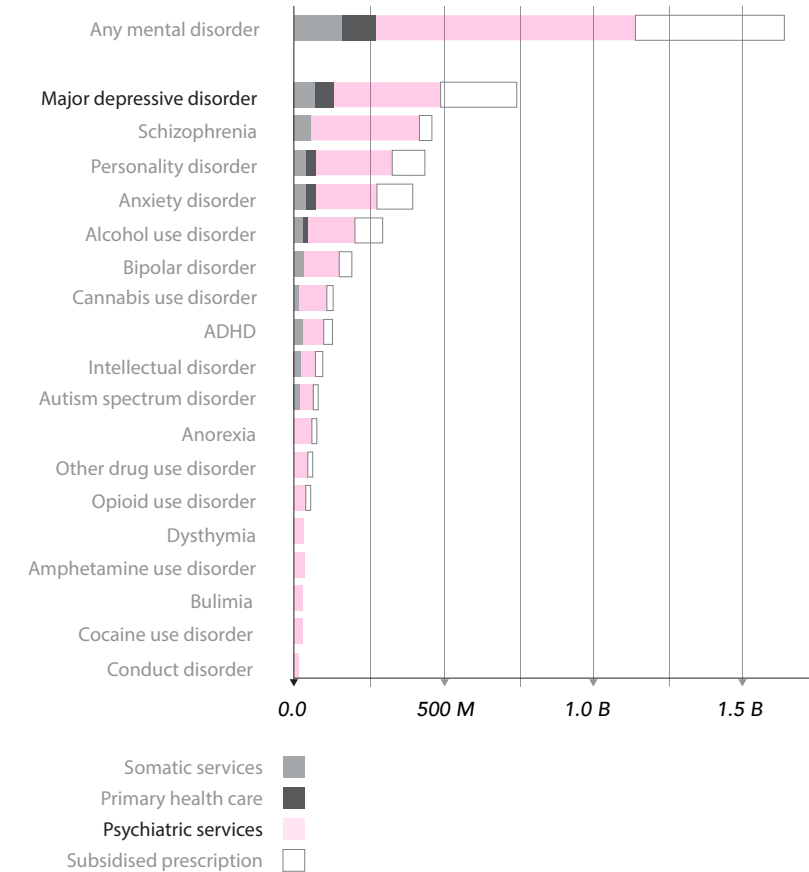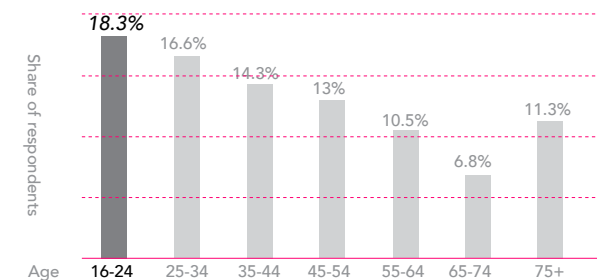Data:npj Mental Health 2022

Somatic services
Primary health care
Psychiatric services
Subsidised prescription

Fig 2.7
Share of induviduals in bad mental health,
Denmark 2017, by age group
Data: Statista 2019

18.3% 16.6% 14.3% 13% 10.5% 6.8% 11.3%

Share of respondents

Age   16-24   25-34   35-44   45-54   55-64   65-74   75+

SOCIETAL THEME

SITE

Fig 3.0

"Infrastructure is a key pillar supporting the fundamental aim of promoting improved standards of care and well-being for all patients"

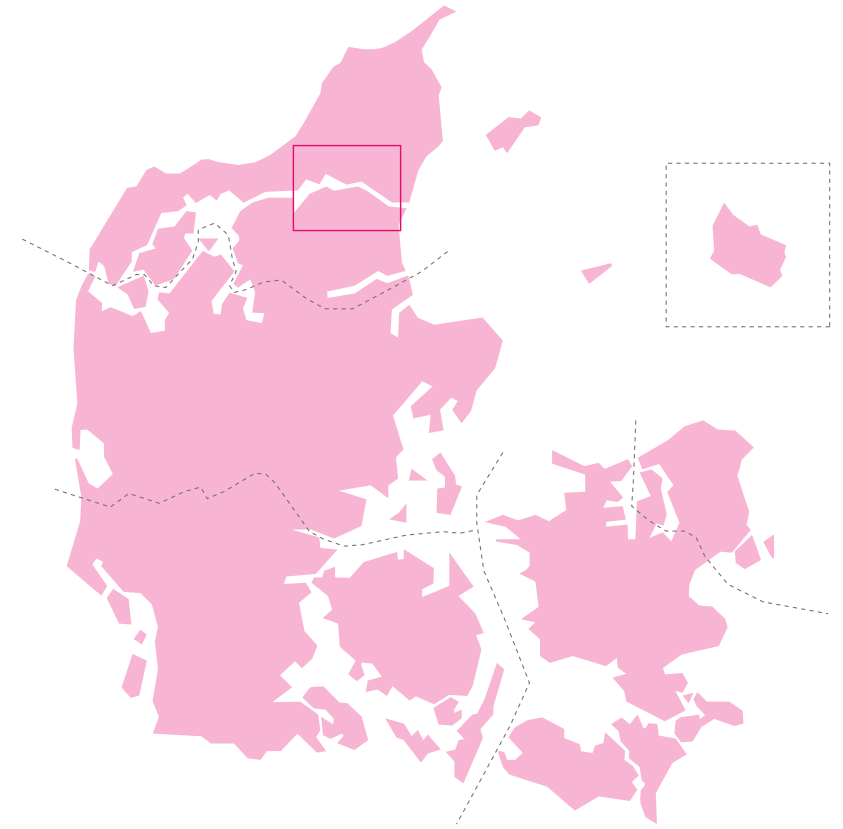Luxon L. Infrastructure - the key to healthcare improvement. 2015

Fig 3.1
Credit: Anthony Gerace
'100 color studies on vintage paper.'
Edited by author

41. City population, Aalborg. 2022

42. Britannica, T. Editors of Encyclopaedia. 'Ålborg.' Encyclopedia Britannica. 14.09.11

43. Nielsen, Julie. 'Det skal der ske på Sygehus Nord-grunden.' TV2 Nord. 10.05.22

44. Smidt, Henrik. 'Nyt sygehus mangler penge: Kræftbehandling kan forblive samlet op Sygehus Syd indtil 2030.' TV2 Nord. 19.05.21

45. Joergensen, Kathrine A. 'Geographic differences in suicide attempts.' Centre for suicide research, Denmark. 2016.

46. The Local dk. 'The number of young Danes diagnosed with anxiety and depression trebles in ten years.' 06.02.2018

THE NORTHERN REGION, AALBORG

Site introduction

Aalborg is Denmark's 4th largest city, and the municipality is the home to 203 448 inhabitants.[41] Aalborg is in the Northern Region split by Limfjorden into Nørresundby and Aalborg city.

Today – the city is in transition from being industrial to a city of knowledge, history, and education.[42] As well as re-programming the city structure, Aalborg is also under development of a new hospital care system, where the two existing hospitals will be relocated to the new super-hospital being built (fig 3.4). With the hospitals being re-located out of the city center there will be minimal access for central care. The existing hospital in south is already sold and is to be built into a new housing district in the inner city,[43] the hospital in north will continue to be a center for radiation until 2030, where it's expected to be sold to the Aalborg Zoo as an extension.[44]

The graph under (fig 3.2) analyses the geographic differences in suicide attempts, traced by environment and infrastructure based on urban space, rural- and peripheral municipalities. Exploring the numbers of suicide attempts based on regions shows that Zealand had a decline in attempts, while The Northern Region faced an increase in 2015.[45] This is based on the urban context and type of municipality, but the overall statistics show that people aged 16-24 in the Northern Region are especially vulnerable and there is an increase in depression and anxiety among the younger generation.[46]

Fig 3.2
Distribution of suicide attempts between four municipality types. Showing the rapid rise in the Northern Region compared to Zealand Region.
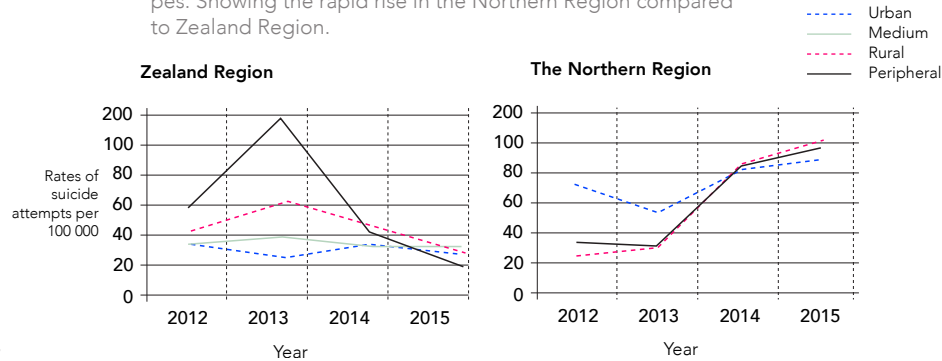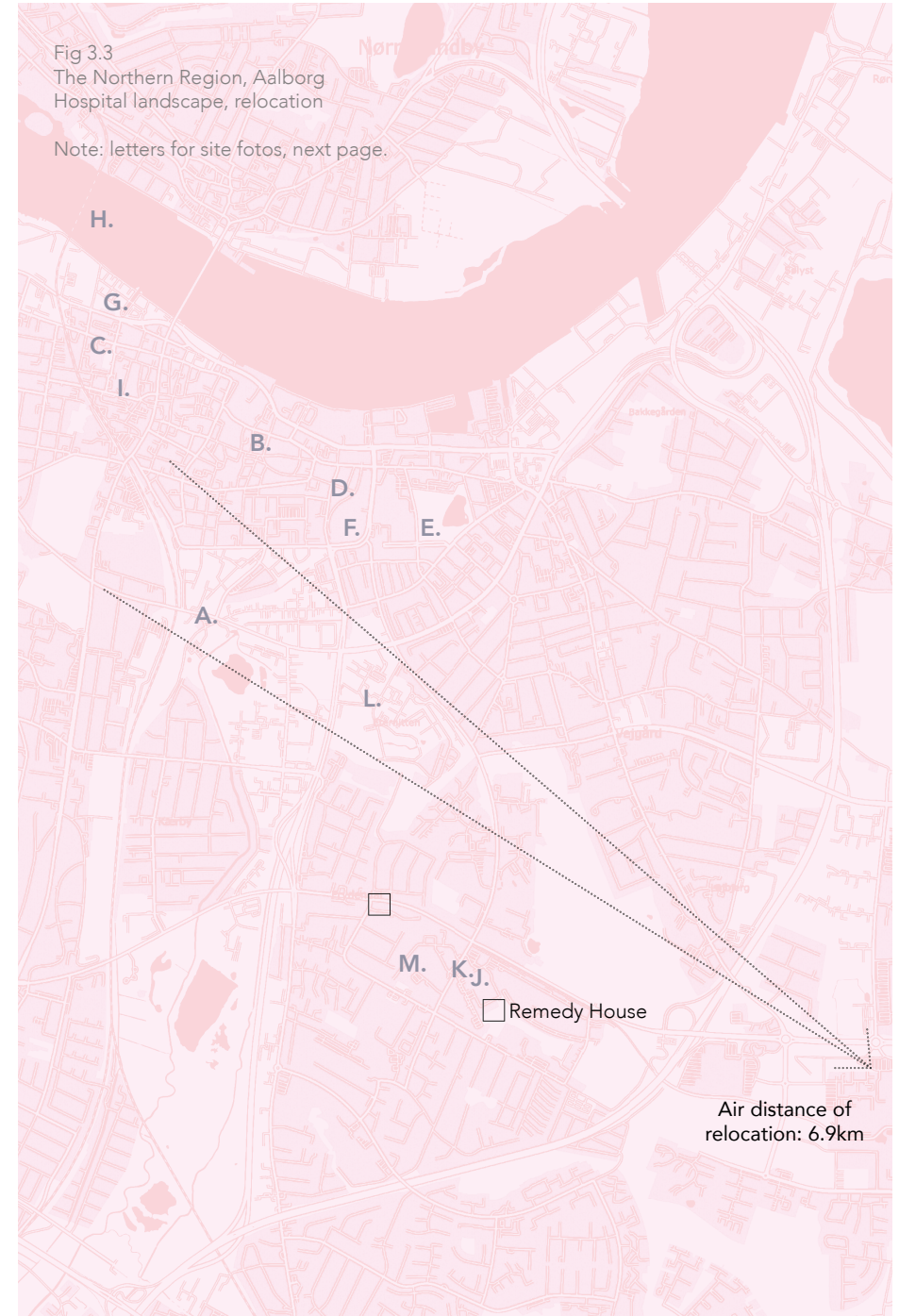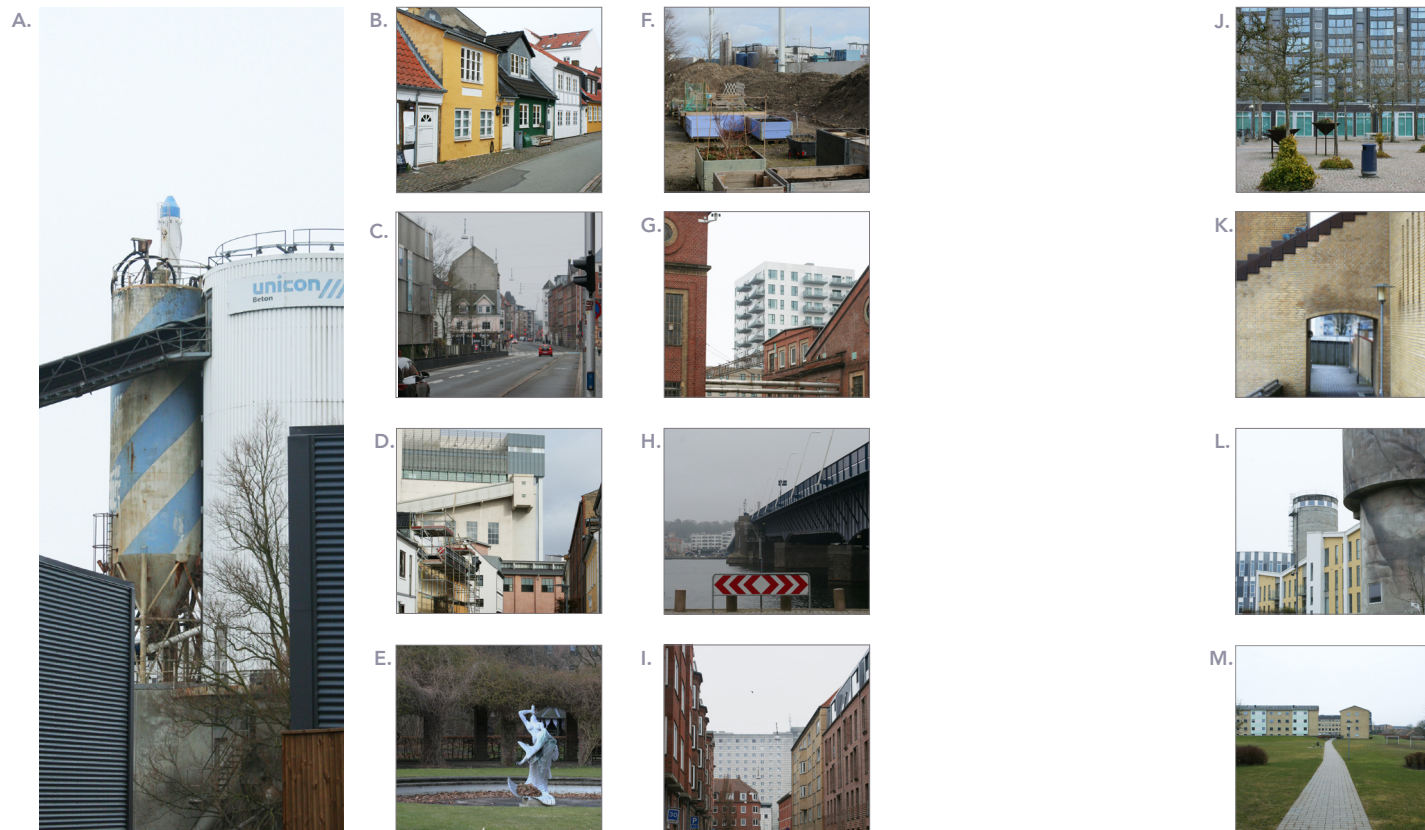

- - - - Urban
———— Medium
- - - - Rural
———— Peripheral

Zealand Region

The Northern Region

Rates of suicide attempts per 100 000

Fig 3.3
The Northern Region, Aalborg
Hospital landscape, relocation

Note: letters for site fotos, next page.

H.

G.

C.

I.

B.

D.

F.   E.

A.

L.

M.   K. J.

□ Remedy House

Air distance of relocation: 6.9km

Site analysis
(See figure 3.3 for location)

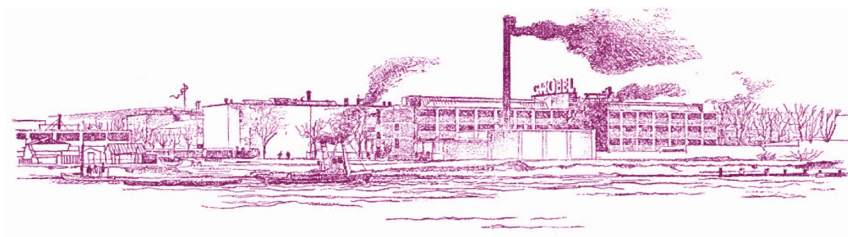|	
A.	Gørtlervej
B.	Klokkestøbergade
C.	Kastetvej
D.	Brettevillesgade
E.	Østre Anlæg
F.	KarolineLund Urban Garden
G.	C.A. Olesens Gade
H.	Aalborg railway bridge
I.	Aalborg University Hospital North
J.	Grøndlandskvarter, center
K.	Hans Egedes Church
L.	Eternitten
M.	Greenland Quarter, Fritdjof Vej

Fig 3.4
Site photos
By author

Fig 3.5
C.W Obels Fabrikker, Aalborg -
Credit: Preben Hansen, Architect
Source: Arkitekten issue 1940.

47. Præstegaard, Susan. 'Hvem er på listen over udsatte boligområder.' BL. 02.06.22

48. Municipal plan, Aalborg. 'The Greenland Quarter.' 12.09.2016

49. Editorial board migogaalborg. 'Acute housing shortage: this is where the Ukrainian refugees must live.' 26.04.2022

URBAN CONTEXT

Aalborg is a city consisted of previous listed areas in the *'No parallel society package.'*[47] The Greenland Quarter is a large composite with a varying housing stock, businesses, and educational institutions, as well as private and public services.[48] The quarter appears as a large neighborhood, split in tree districts. Surrounded by greenery, the site has a starting point at the old industrial area Eternitten and stretches down to the university area by one of the main roads to Aalborg city. Eternitten is today being transformed into a new housing district.

The area is connected by mobility and urban development with a busway under the highway and newly built transportation structures along the route. The district is located on a chalk hill where the terrain forms the border for the urban areas and continues the cities green infrastructure. Vandbakken marks the hilltop and has a historical background and seasonal use for activities and social gathering.
        At the intersection of Sohngårdsholm meeting Universitetsboulevarden and TH Saursvej, the future plan is to create a distinctive hub consisted of greenery, urban spaces and human scale infrastructure. The mappings clearnly shows the areas main fields as greenery, mobility and residential areas connected in each end by industry and education.

Aalborg municipality is currently going to host 4000 refugees from Ukraine, and are therefore establishing temporary housing possibilities.[49] They have decided to use an old nursing home called Lollandshus and the nearby facilities, which is currently under reconstruction. Lollandshus will be housing up to 64 families, and they are also establishing a day care facility for Ukrainian children - therefore the program will map the area in need of care.

Program location:
The building scale of the project targets a selected site located in the center of the Greenland Quarter as a barrier between Sohngårdshold and Greenland Quarter West. The program will facilitate a stop on the route from the hospital and back to society, connected to the vulnerable areas targeting people aged 16-24 and mental health challenges in the public sector. With the building scale as a care facility after institution, the program will also tackle public treatment in the shape of smaller spatial interventions located in the path, from site to the city.
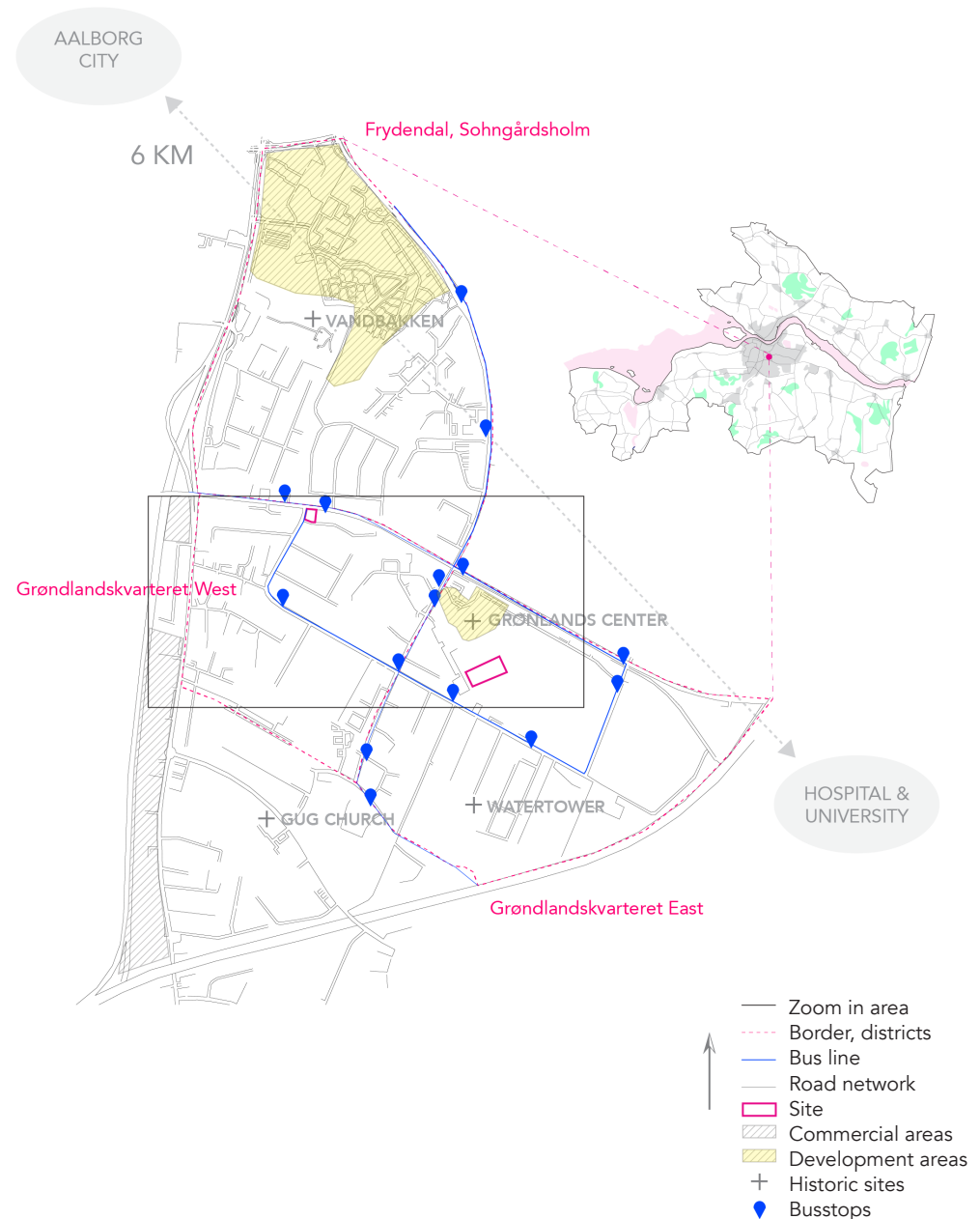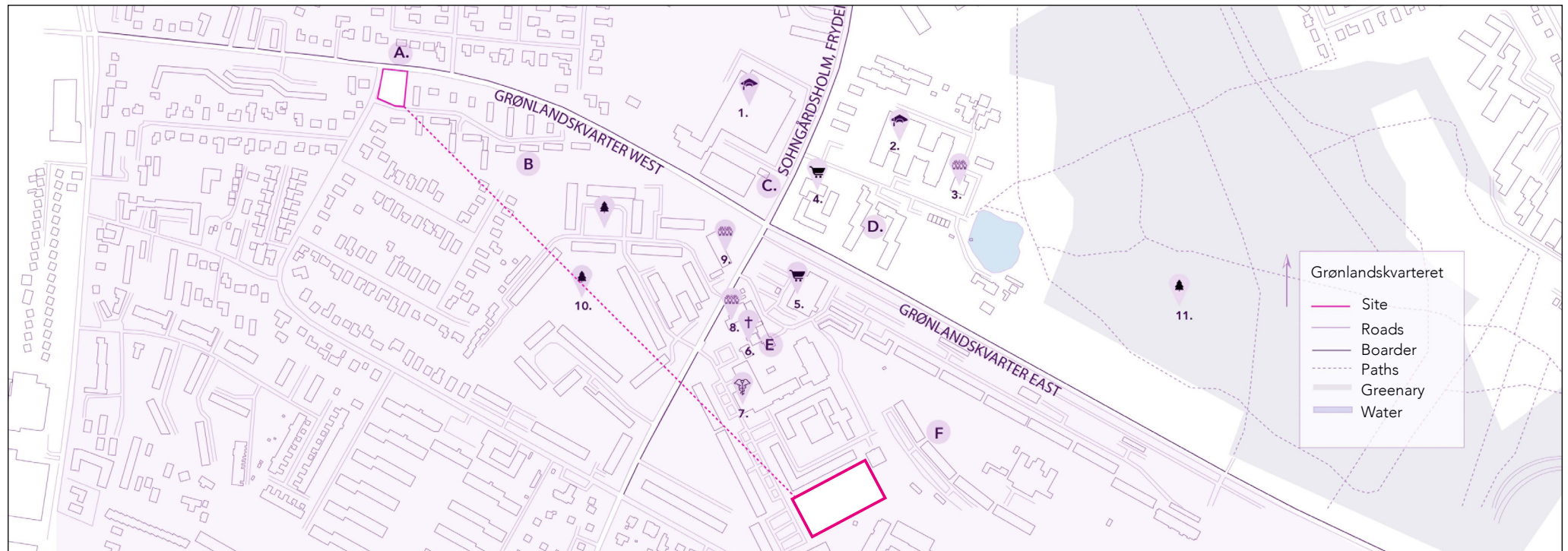
Fig 3.6
Grønlandskvarteret, infrastructure

AALBORG CITY

6 KM

Frydendal, Sohngårdsholm

VANDBAKKEN

Grøndlandskvarteret West

GRØNLANDS CENTER

HOSPITAL & UNIVERSITY

GUG CHURCH

WATERTOWER

Grøndlandskvarteret East

— Zoom in area
---- Border, districts
— Bus line
— Road network
▭ Site
▨ Commercial areas
▨ Development areas
+ Historic sites
● Busstops

Fig 3.7
The Greenland Quarter:
Building typologies

A. Parcel houses
Private owned

B. Attached houses
Duplex housing

C. Individual house
Office spaces

D. Multiplex
Student dorms

E. High-rise apartments

F. Low-rise apartment block

Fig 3.8
Infreatsurcture and commerce

GRØNLANDSKVARTER WEST

SOHNGÅRDSHOLM. FRYDE

GRØNLANDSKVARTER EAST

Grønlandskvarteret

Site
Roads
Boarder
Paths
Greenary
Water

1. Aalborghus High School. 2. Kollegievejens School. 3. Troldehulen daycare. 4. Netto. 5. Lidl. 6. Hans Egedes Church. 7. Aalborghus Drugstore.
8. Kindergarden Luna. 9. Kindergarden Stjernestund. 10. Playground. 11. Sohngårdspark.

0   150m   300m

50. Poulsen, Henning A. 'The Greenland Quarter.' Lindhart & Ringhof, Egmont. 30.06.21

51. Hansen, Jesper V & Frandsen, Martin S. 'The genealogy of the plan for "A Denmark without Parallel Societies."' Dansk Sociologi. 28.05.20

52. Municipal plan, Aalborg. 'The Greenland Quarter.' 12.09.2016

BUILDING SCALE CONTEXT

The program will be split in several spatial interventions on different sites. The building scale program will be zoomed in on this specific site (fig 3.9).

The Greenland Quarter was constructed in the 1950´s and is a place of many divided opinions. Many of the residents say it's the best place to live[50], but in the *'No Parallel Society package'* given by the Danish ministry – the area was in 2016 listed as disadvantaged.[51]

The selected building site the program is zooming in on, the Greenland Quarter´s main center, a site that functions as a barrier between commercial- and housing areas. The site is in the area that connects the East and West district on Umanakvej. The site is an existing vacant basketball court connected to a larger green area and parking.
As the site is near the local center, the access to exercise and daily routines become easier and connects to an easy access for public transport. The site is close to the central urban areas, and in connection to the overall road network. As it's an attractive area, it opens the possibility for more clinics, offices, and other facilities.[52]

The road that connects to the site has housing on one site and cafes, fitness world, a church and other facilities to the north side. The site is also close to educational facilities and lies on the way between the new super hospital and the inner city – a mid-point for care.
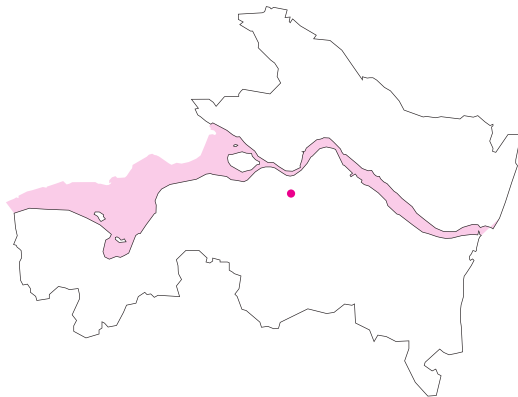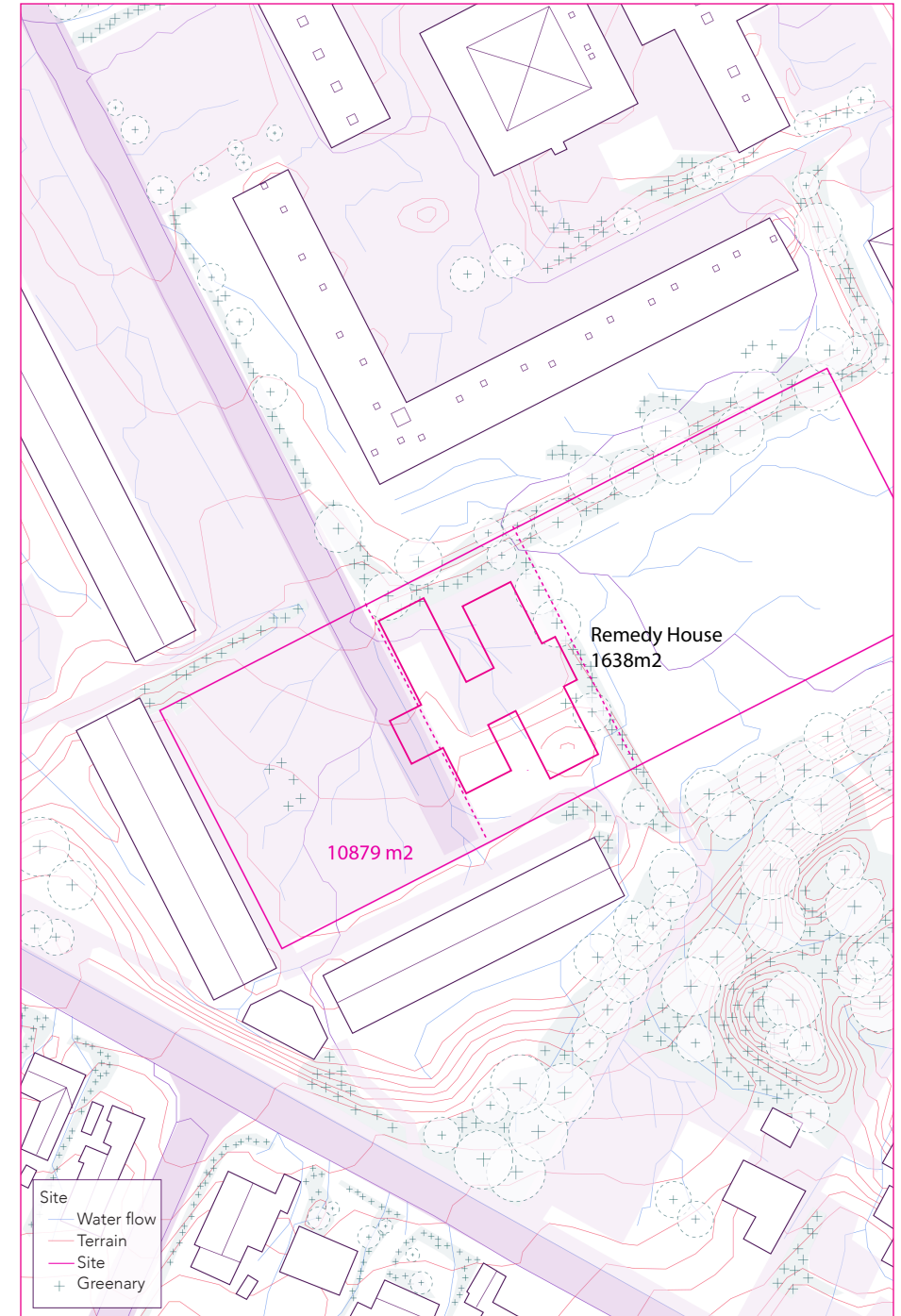
Fig 3.9

Remedy House
1638m2

10879 m2

Site
— Water flow
— Terrain
— Site
+ Greenary

PROGRAM

Principles

provide personal care services
create a de-institutionalized facility
provide adaptive spaces
give access to socializing
access to privacy
create a sense of safety

design with fous on health improvement
relationship with nature

"The ever-growing patient rate necessitated implementing programs for early discharge of treated patients and prepearing them for community."

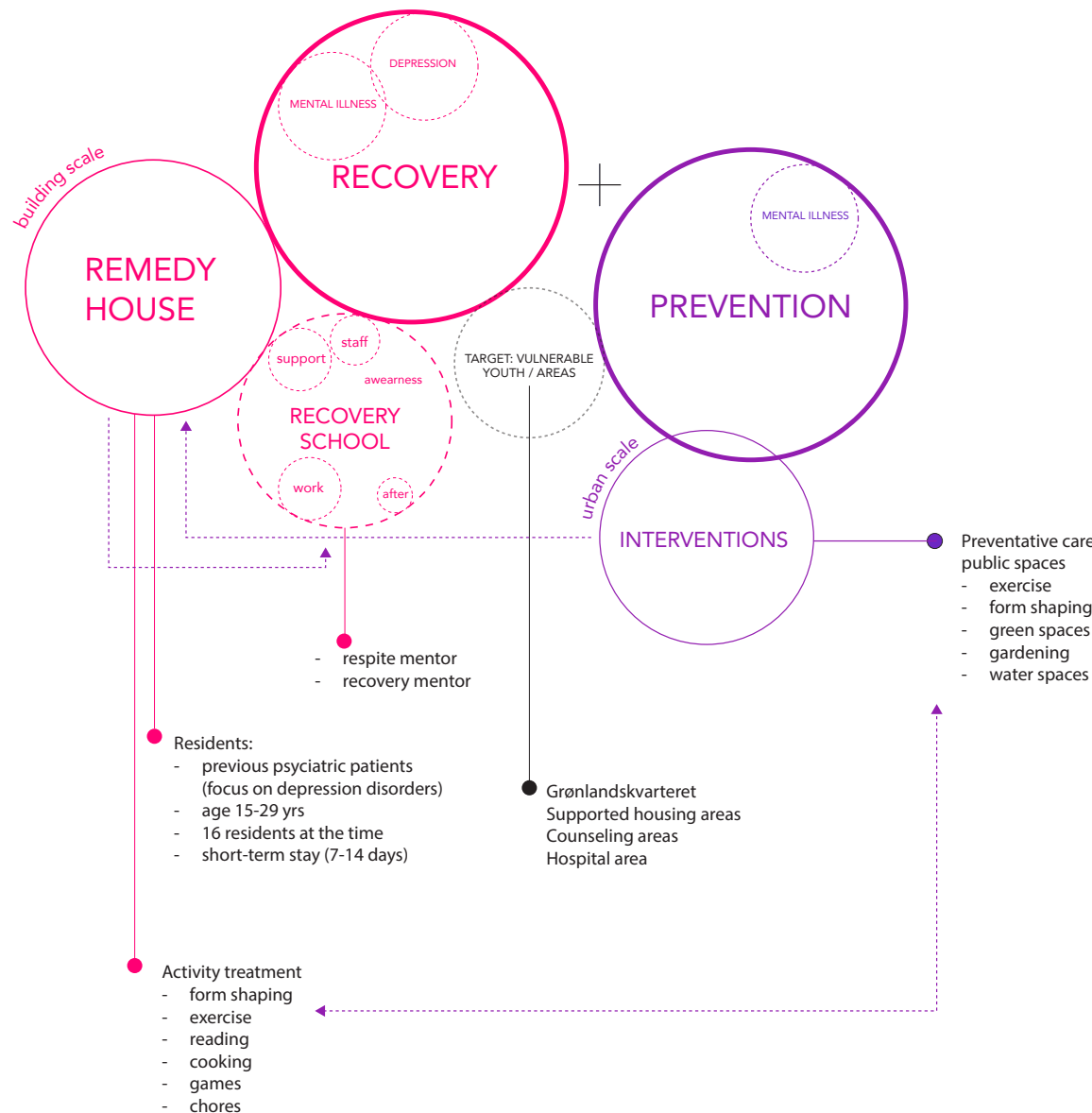Samira Pasha & Mardelle McCuskey Shepley. 'Design for mental health and behavioral health.' 2017

Credit: Anthony Gerace
'There Must Be More To Life Than This.'Edited by author

Fig 4.1
Program description

DEPRESSION

MENTAL ILLNESS

RECOVERY

building scale

**REMEDY
HOUSE**

+

MENTAL ILLNESS

PREVENTION

staff
support
awearness

**RECOVERY
SCHOOL**

work   after

TARGET: VULNERABLE
YOUTH / AREAS

urban scale

INTERVENTIONS

Preventative care
public spaces
- exercise
- form shaping
- green spaces
- gardening
- water spaces

- respite mentor
- recovery mentor

Residents:
- previous psyciatric patients
  (focus on depression disorders)
- age 15-29 yrs
- 16 residents at the time
- short-term stay (7-14 days)

Grønlandskvarteret
Supported housing areas
Counseling areas
Hospital area

Activity treatment
- form shaping
- exercise
- reading
- cooking
- games
- chores

PROGRAM

Description -

As a contribution to the existing hospital care in Denmark, this program will be a **prolonged strategy for depression recovery as well as taking preventative measures to decline the mental health crisis** – although this program seeks to provide care for depression, the vision is not to solve the mental health crisis. This program is only exploring a new way of care that involves both recovery patients and the public, where Aalborg is a test site for a wider future strategy.

The program contains a recovery and care facility called Remedy House, for previous psychiatric patients admitted for depression and the public, where the limit of users falls into an hourly schedule where the residents of the facility will have private hours and space, while in the daytime there will be opening hours for the public. To combine recovery and preventative measures – the vision is to break some of the stigmatization of being institutionalized. The Remedy House will provide treatment for both residents and visitors.

In the same building program, there will also be a Recovery School – where patients, previous affected and next of kin have a chance to become a respite- and recovery mentor, where there is possibilities for work and become staff for the Remedy House program. The Recovery School will hold courses that contain topics like how to live with a diagnosis, recovery stories, balance between stress and vulnerability, stigmatization, and guide to a structured routine. The recovery school and facility will create jobs, a wider network in outpatient care, and awareness to mental health.

Beside the building scale, the overall program will contain smaller spatial interventions around the transportation areas from hospital to city with a vision to encourage healing activity like gardening, exercise, and social interactions. At the end of the path there will be implemented a **Livingroom – a meeting place for the user groups and recovered patients, where knowledge about the program will be distributed.** The supported youth housing in Aalborg doesn't have a community space attached so this program will be in an empty storefront around the corner from Poul Paghs Gade.

53. Mental Health Foundation. 'Publication: How to look after your mental health using exercise.' Registered Charity.

54. Center for urban design and mental health. 'How urban design can impact mental health.'

PATH OF CARE - *urban scale 1:5000/1:200*

By mapping areas in Aalborg, the project will implement designs for preventative- and recovery care by introducing a path of care through Aalborg. The path will consist of preventative programs for mental illness such as an exercise route combined with natural elements. Exercise and nature are proven to be healing by improving self-esteem, wellbeing, anxiety, and stress.[53] Physical activity is a proven key to sleep, stress-resilience, and social interactions. Outdoor activity gives access for all people and is often linked to green spaces and nature that also can reduce risk for depression and other mental illnesses.[54]

Connecting programs between the Remedy House and the Livingroom in the city center, there will be provided awareness and information. The program will function as a path of care for the public as well as being a part of the daily routine in the Remedy House. The design interventions are placed carefully around mapped supported areas in Aalborg, places for people with a special need for care. The Livingroom is placed at the end of the path and will reuse an empty storefront in Aalborg city – previous bar called West-End located in the intersection Borgergade, Badehusvej and Kastetvej. The location is also around the corner of supported housing at Poul Paghs Gade for both adults and adolescents. (See fig 4.3 for an overall vision.)

REMEDY HOUSE - *building scale 1:100/1:50*

The central principals for this project will focus on mental health improvements to the existing psychiatric system. The Remedy House ensures recovery for psychiatric patients after discharge from a larger institution. The process from being institutionalized and entering the society can be a handful for patients that has had a longer admission – and in the week after discharge they are at risk for suicide or re-admission.

      The Remedy House will focus on the age group between 15-29 years, where there is a higher risk of relapse. By having a range of age, the House will also support age- and genderequality. The stay will have a duration of 7 days after discharge and will give support in focus areas that will improve your health and enter back to society. Combined with the care aspect, the house will also provide a Recovery School for previous patients and next of kin, where you can become a mentor to the Remedy House program.
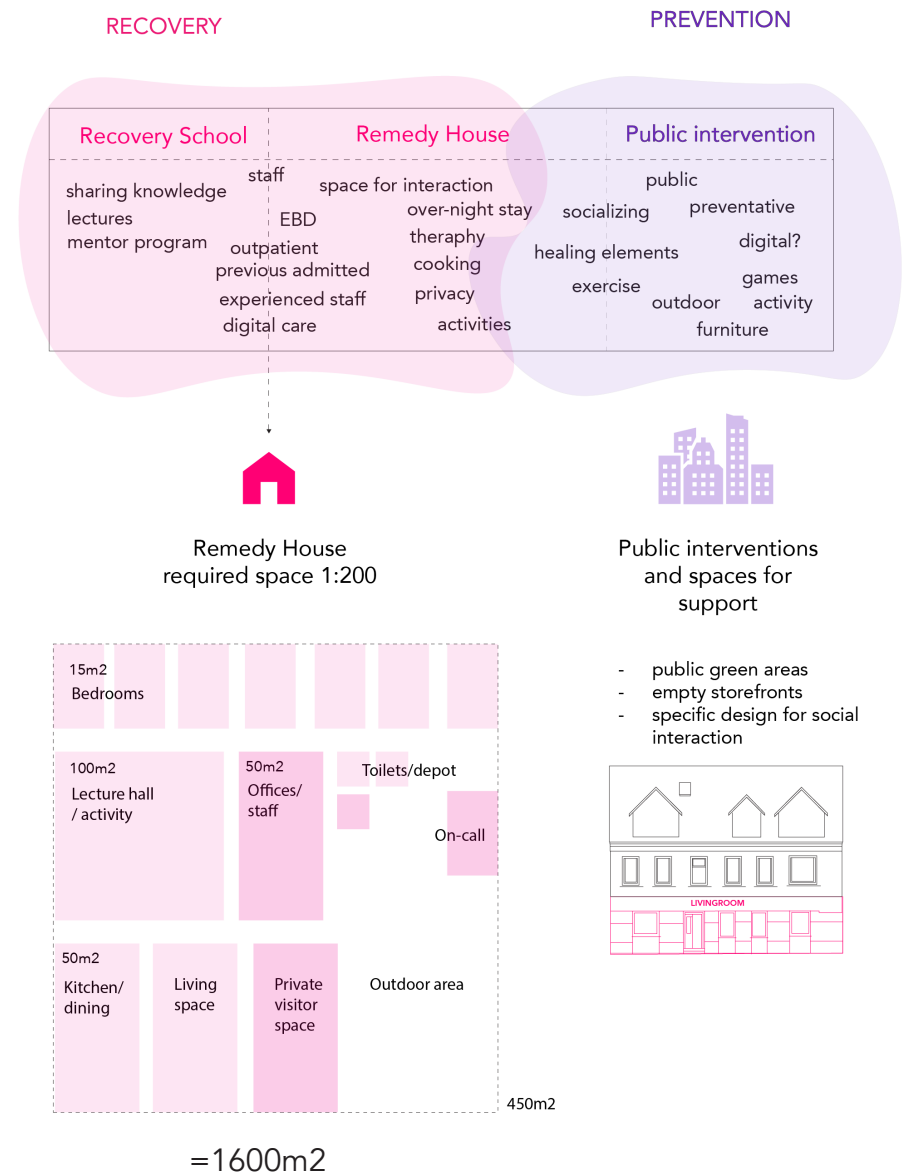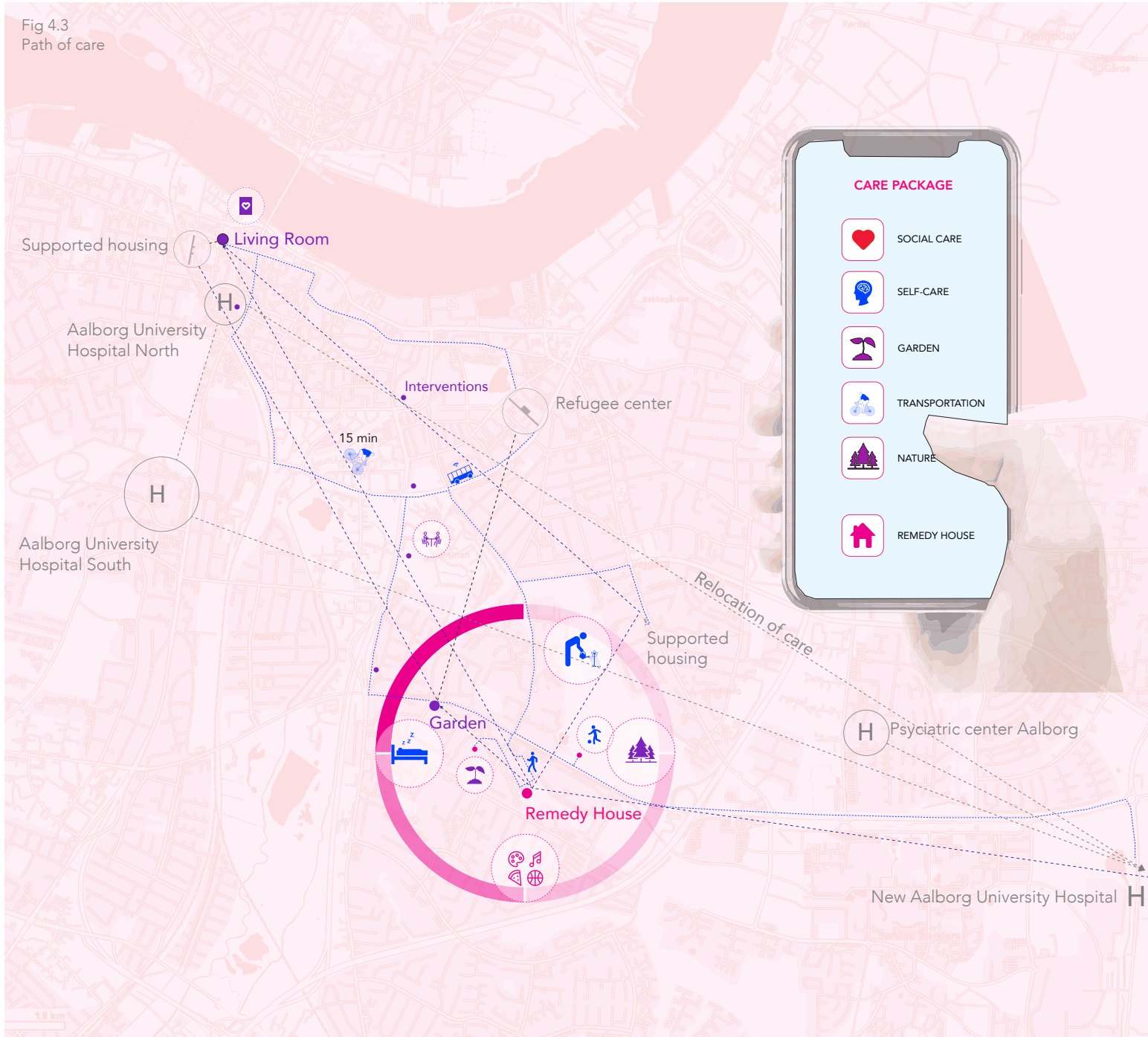
Fig 4.2
Program - required space

RECOVERY

PREVENTION
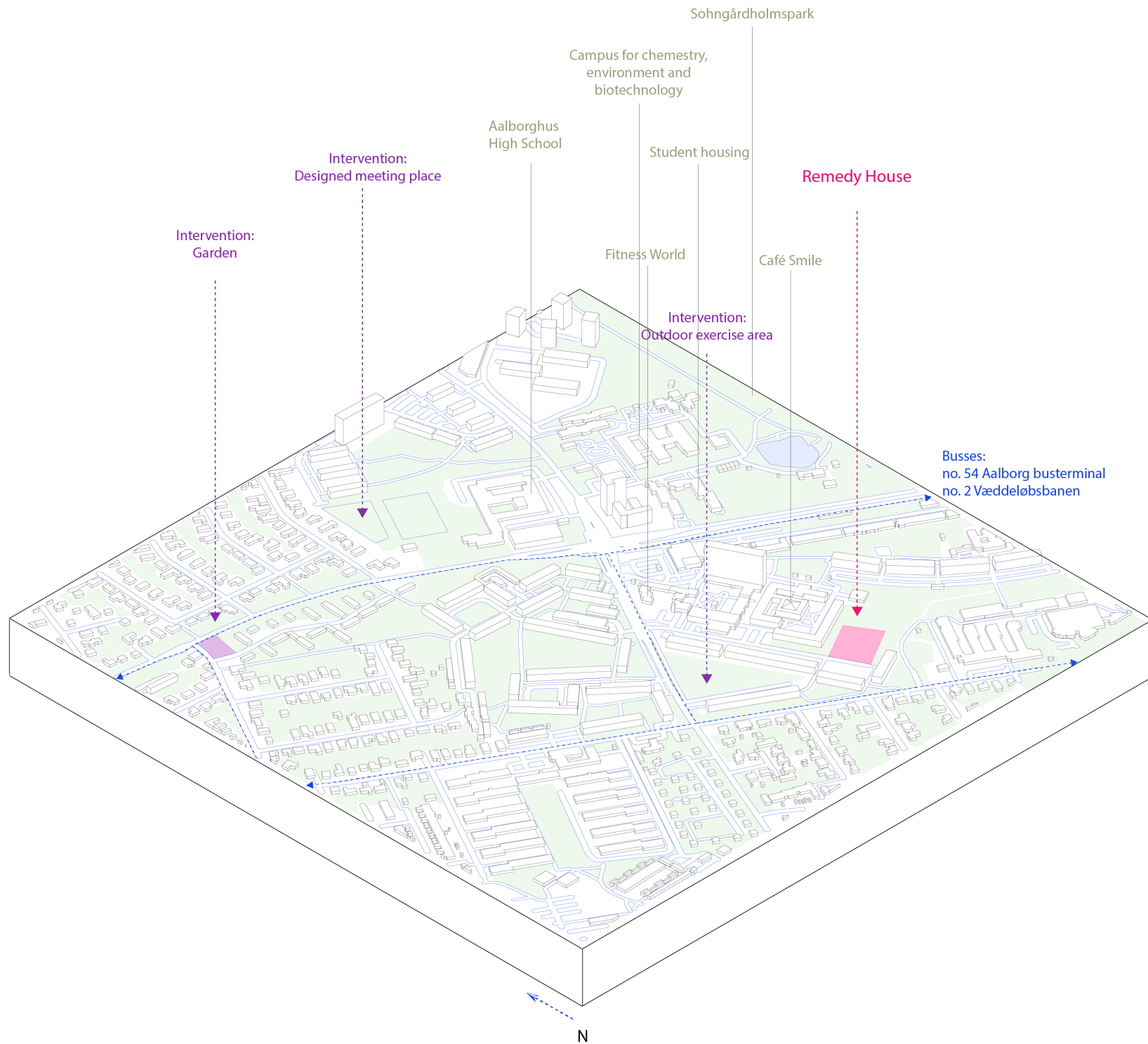
Recovery School   Remedy House   Public intervention

sharing knowledge   staff   space for interaction   public

lectures   EBD   over-night stay   socializing   preventative

mentor program   outpatient   theraphy   digital?

previous admitted   cooking   healing elements

experienced staff   privacy   exercise   games

digital care   activities   outdoor   activity

furniture

Remedy House
required space 1:200

Public interventions
and spaces for
support

-   public green areas
-   empty storefronts
-   specific design for social interaction

15m2
Bedrooms

100m2
Lecture hall
/ activity

50m2
Offices/
staff

Toilets/depot

On-call

50m2
Kitchen/
dining

Living
space

Private
visitor
space

Outdoor area

450m2

=1600m2

LIVINGROOM

Fig 4.3
Path of care

Supported housing

Living Room

Aalborg University
Hospital North

Interventions

15 min

Refugee center

H

Aalborg University
Hospital South

Supported
housing

Relocation of care

Garden

Remedy House

Psyciatric center Aalborg

New Aalborg University Hospital

CARE PACKAGE

❤ SOCIAL CARE

🧠 SELF-CARE

🌱 GARDEN

🚲 TRANSPORTATION

🌲 NATURE

🏠 REMEDY HOUSE

DIGITAL CARE STRATEGY /

The overall strategy will implement pre-ventative- and recovery care for your mental health. The path is connected to supported housing areas as well as Grøn-landskvarteret and the relocation of care. The Remedy House will function as a main hub for therapy and inpatient care, duration of seven days. The residents will have easy access to socializing, natu-re, and a structured daily routine. While the privacy of the residents are secured in one part of the program, there is also public use of the facility and activities.

The Livingroom will be connected to the path and function as a meeting space for awareness and information about the "Care Package" – a digital platform that will provide mental health care as well as function as a transportation system and a shared space for mental illness. Through the Care Package there will be an overall system that connects both the general public, Remedy House and Path of Care.

Fig 4.4
Program site

Sohngårdholmspark

Campus for chemestry,
environment and
biotechnology

Aalborghus
High School

Student housing

Intervention:
Designed meeting place

Remedy House

Intervention:
Garden

Fitness World

Café Smile

Intervention:
Outdoor exercise area

Busses:
no. 54 Aalborg busterminal
no. 2 Væddeløbsbanen

N

PROGRAM

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56. UN Environment Programme. 'Caring for the enviroment helps to care for your mental health.' 10.10.19

57. Feisner, Edith Anderson & Reed, Ron. 'Color Studies.' New York: Fairchild books. 2014

58. Thompson R. 'Gardening for health: a regular dose of gardening. Clinical medicine.' London, England. 2018

Provide personal care services

The Remedy House will give access to support and intimate follow-up care after institution for a stretch of 7 days, where the mental decisions are most vulnerable. The personal care service will extend to the greater public with digital service such as a suicide line, and preventative healing interventions.

De-institutionalized

To enter directly from institution to society can be harsh and immense[55] – the Remedy House will offer a "homelike" environment that stimulates human needs in form of design, safety, access, stability, and socialization with others in the same position.

Provide adaptive spaces

The strategy will be a part of a greater stability for the larger community by creating adaptive spaces for social interactions and recovery after a depressive episode. The spaces will adapt to the patient and the normal life.

Accessible socializing

With a focus on social activity, the Remedy House is located nearby Sohngårdspark and residential areas, creating a space for meeting but also for individual's needs. There will be an admission of 7/10 outpatients that will be free to come and go as they please but interact with dinners and social gatherings. The social aspect is easy to access and be a part of and the program will encourage social activities.

The Remedy House will supplement the patients with a common schedule of activities to join and sign up for. Exercise, games, walking trips, gardening: activities that are proven to be effective and help depressive disorders. Painting, coloring, and sculpting is to be a social but also private process combined with clinical therapy.

Privacy

To provide a safe semi-private facility, the interaction happens outside you room, where the bedroom is private for the residents even though the center will be open to the public. Privacy relates to the individual's ability to determine for themselves, where in recovery protection and privacy is key to ensure human dignity, safety, and self-determination. Privacy can help with feeling safe and allow the residents to freely develop their own personality outside the institution. Privacy is also introduced by the limit of beds, where the facility won't be crowded and disoriented.

Create a sense of safety

Safety is a central value in care. With depression and suicidal thoughts, you don't feel safe, but the environment can help build the feeling of protection, so you get a sense of calmness and are led to see no danger or risk of injury. Safety is enforced by group sessions, writing journals, and feel helpful to others as well as have privacy in their own room. Consisting of routines with a visual schedule, showing illustrations of the daily routine and step-by step will also help decreasing the stress of a daily process.

The care provided will be free and accessible by referrals from the larger institution as a part of the system. Safety is also ensured by banning alcohol and drug use during a stay. After your stay at the Remedy House, you will be digitally followed up by calls and conversations about your recovery and former stay to ensure the trip back to society.

Design with focus on health

Our environment has great impact on our mental health and behavior.[56] By using social and Evidence-Based Design that has showed improvement for depression the program will be a part of recovery and prevention. A de-institutionalized environment will be more adaptive after being admitted. Color, nature, and lighting are all social design methods that can help improve health outcomes. Blue has positive connotations and gives a calm feeling, prink is said to be the color of health and purple gives a sense of bravery and self-esteem.[57]

Creating a calm environment is also a value in a safe place and mental health care. A calm place needs order and organizing by adjusting the sensory input to support well-being. Spaces also incorporate an opportunity for movement and music into the daily routine to create stability.

Relationship with nature

Gardening and plants are shown therapeutic for mental health and can be used to stimulate all patients.[58] The program will implement gardening and nature as a value to rehabilitation and socializing at the same time. The residents of the facility will be provided a plat during their stay, the plant will be handed down to the next resident and thereby creating a sense of belonging and meaning by continuing a process. The relationship with nature will also be implemented around the city as design interventions, with a map over areas.

UNITED NATION:
SUSTAINABLE DEVELOPMENT GOALS

This project is working with the 'UN Sustainable Development Goals' seeking to provide improvements to the current societal theme of mental health.

Good health and well-being

3.4 - *"By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being." (United Nation, 2015.)*

This program will be split in recovery- and preventative care for both the public and private user group.

Decent work and economic growth

8.2 - *"Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors" (United Nation, 2015.)*

The program will provide jobs in Aalborg by having a Recovery School implemented in the program. By tackling the mental health crisis, the vision is also to decrease the economic loss Denmark suffers from disability, in a larger strategy.

Industry, innovation and infrastructure

9.1 - *"Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all." (United Nation, 2015.)*

As a cost free and preventative program, the goal will be to create a larger strategy for outpatient care and recovery care in Denmark. Treatment after discharge is minor in Aalborg with mostly private clinics. With the Path of Care, the program will provide both the general public and a special user group with a new green infrastructure of preventative design. Also reusing existing vacant spaces will contribute to the sustainabal spatial design.
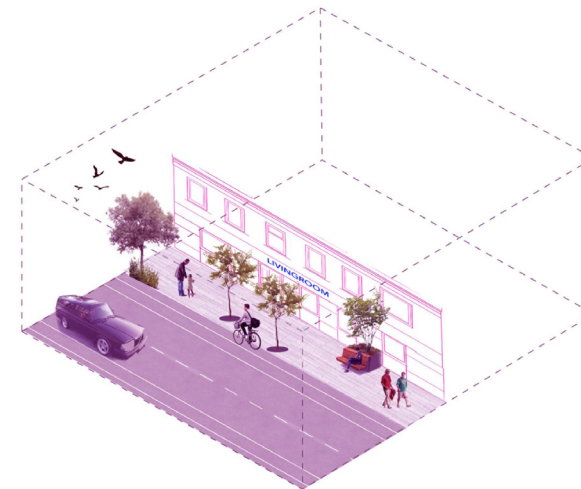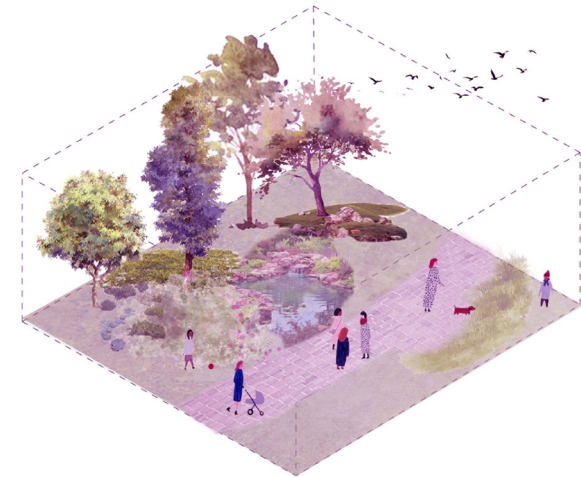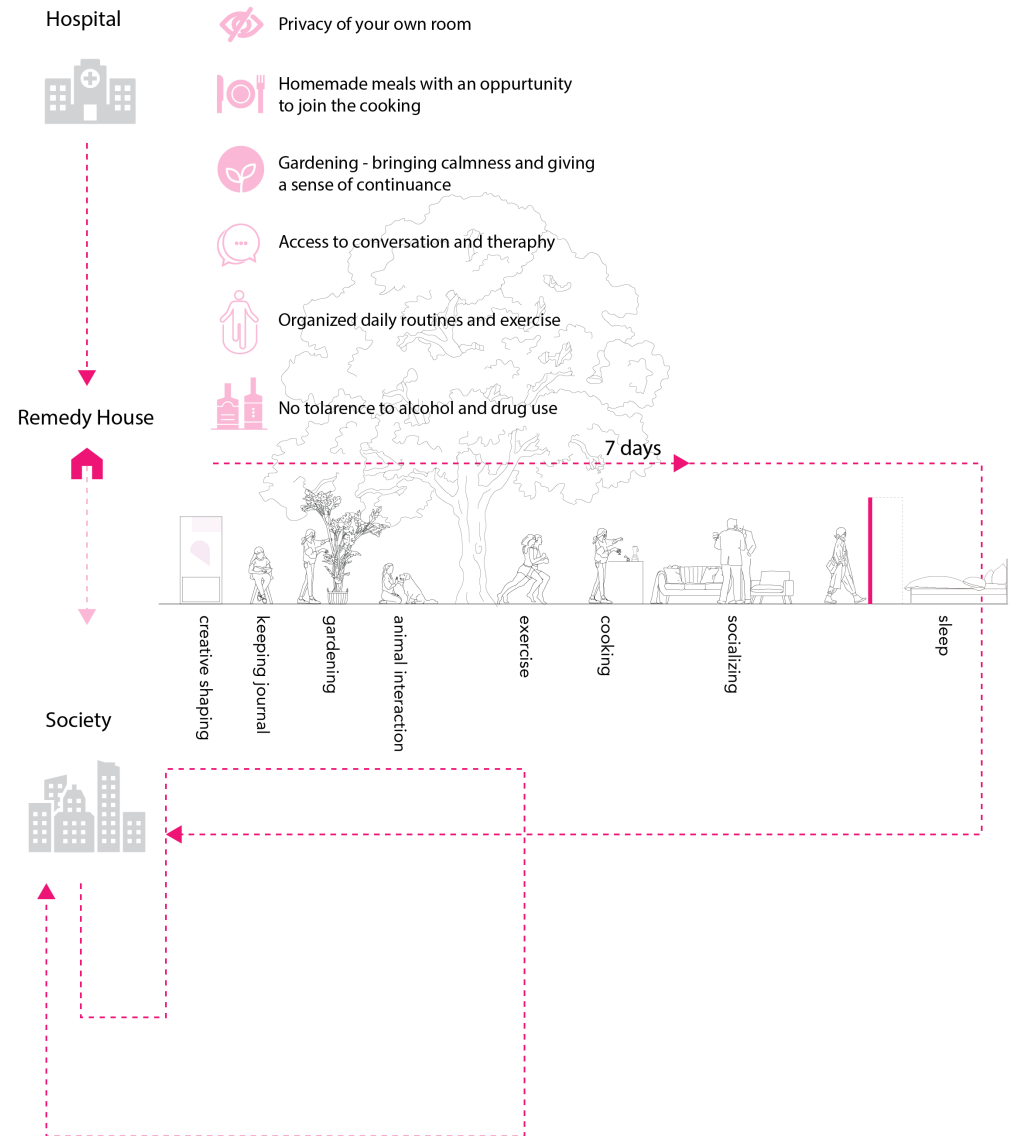
Fig 4.5
Program: spaces

DELIVERABLES

Urban scale: 1:20 000/200
Path of Care

The Path of Care will be an improved infrastructure for Aalborg city, with healing activities and greenary. The strategy of mapping vulnerable areas will explore empty smaller-scale storefronts to implement a meeting space, awearness and gathering of people in the same position. With the Recovery School there will also be focus on preventative care: exercise and mobility through the city as a part of the daily routine for the residents in the Remedy House program.

Building scale: 1:100/50
Remedy House

The project will zoom in on one building on selected site to show the proposed program for a care facility and recovery school. The building will host previous psychiatric patients, determined by the diagnosis hierarchy and provide a routine schedule that takes place in the weekor days after discharge. The scale will zoom in on the building structure and activities the program provides.

Fig 4.6
Program timeline

Hospital

Privacy of your own room

Homemade meals with an oppurtunity to join the cooking

Gardening - bringing calmness and giving a sense of continuance

Access to conversation and theraphy

Organized daily routines and exercise

No tolerance to alcohol and drug use

Remedy House

7 days

creative shaping
keeping journal
gardening
animal interaction
exercise
cooking
socializing
sleep

Society

CV

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Studynumber: 180365

Education -

2017-18 **The Scandinavian Design College**
Architecture & City Planning

2018-21 **The Royal Danish Academy**

Institute: Buildingart & Technology
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2021-23 **The Royal Danish Academy**

Institute: City & Landscape
Masterprogram: Urbanism & Societal Change

Internship -

2021 **Karlsson Architects, Copenhagen**

Figures

Fig. 3.9	Source: Aalborg Municipal plan- Building rules and guidelines for area B1.
Fig. 3.10	By author.
Fig. 4.0	Credit: Anthony Gerace - 'There Must Be More To Life Than This.' Edited by author
Fig. 4.1	By author.
Fig. 4.2	By author.
Fig. 4.3	By author.
Fig. 4.4	By author.
Fig. 4.5	By author.
Fig. 4.6	By author.

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"A problem we face in the psyciatric care is that there are too many criterias and demands for the previous patients for recovery and life after the institution."

Ditte Khalid, ward nurse at Ballerup Psyciatric Center, unit 1