"Architecture as medicine - rethinking care for the terminally ill"

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ARCHITECTURE AS MEDICINE

RETHINKING CARE FOR THE TERMINALLY ILL
Palliative care aims to improve quality of life for the terminally ill. Its philosophy is based on a holistic approach, which focuses on physical symptoms as well as the psychological, social and existential or spiritual needs of patients and their relatives.

Societies have an ethical responsibility to provide the dying with the highest possible quality of care. However, currently the healthcare system is fractured through the separation of treatments and therapies. The three facets of terminal illness care; in-patient care, day care and rehabilitation, are often part of completely separate facilities and institutions, which provides little continuity for patients throughout the treatment process. The time frame of terminal illness is often short and the splintering of care can be traumatic and leave patients and families feeling systemised at an already vulnerable time.

Palliative care provides a meaningful alternative that focuses on the needs of the individual and their relatives. The concept is to provide a clinical method, which is coupled with a psychosocial and existential approach to care.
advances in home care
palliative care unit
30km
25km
20km
15km
10km
5km
1km
Mellansydlands Hospice Sundsvall
Hospice Gabriel Laholm
Aneugården Hospice
Lund Hospice
Källtorps Hospice Göteborg
Bräcke Diakoni Göteborg
Ängelholms Hospice
Lunds Hospice
Axlagården Umeå Hospice Umeå
Maria Regina Hospice Nacka
Akademiska Sjukhuset Hospice Uppsala
Ersta Sjukhus Hospice
hospices in sweden palliative care in stockholm
hospices in europe
palliative care mapping
europe, sweden, stockholm
need for palliative care beds in stockholm county

population and mortality compared to available palliative care beds

source: kartläggning av palliativa vårdenheter i stockholms län -undersökning centrum stockholms galleriad

palliative care statistics
stockholm county
Most hospices are run through churches or as units within larger hospitals. This project envisions a different approach, a gathering of functions within a combined framework, which facilitates a restructuring of the current care system to combine rehabilitation, home care and end of life care within a shared facility. By bridging this gap between facilities and home care this project promotes social exchange and increased access to medical staff, facilities and treatments.

The project is aimed towards patients between 18-65; this age group is often ignored in the dialogue regarding terminal care facilities. However they, and their families, require extensive support due to the premature nature of their illness. Therefore this demographic and their varied circumstances was at the forefront when considering the project's location. With this in mind, the validity of the greenfield but ultimately remote facility came into question, many patients within this age group will have young families and urban-centered lives. The primary concern for most terminal patients is proximity and access to family and friends, and therefore a central location with excellent communications was prioritized.

Aim
design for both patients and public

adaptive re-use of existing building

holistic approach to care

gathering of programs

range of rehabilitation therapies

separation of life and grief

medical rehab grief

care 

light water garden

art counseling physical 

approach diagrams
Site

Located at the edge of Kronobergsparken, in the middle of Kungsholmen in Stockholm, the site is one of only a few instances within the city of available land with a rich, varied green space. The park has a changing topography and protective character; due to its location in-between housing blocks that hide it from plain view. The proximity to this green space goes some ways to reconcile the program with its traditional greenfield setting.

The site itself has been home to the fire station of Kungsholmen since its completion in 1930. The momentous building is a significant landmark in the area, however its future is currently unclear, as the fire department will move to a new site in 2015. This decision has left the existing building without a clear purpose, and potentially under threat of demolition.

The site elevates the issue of care for the terminally ill, a topic that rarely gets discussed in a public forum, to a prominent place in the community. It is hoped that this will work to address the taboos surrounding the topic.
site photos
site and surroundings
site analysis

diagrams

proximity to park

proximity to public transport

space for play & recreation

building pushed back from street

park scene

park activity
orientate site towards park not road

maintain deep setback from street

softening of edges between public and private

new modes of establishing boundaries

sequential experience

extending park through building

site strategies
diagrams
The program and spatial development of the project has been carried out through extensive research into the topic of palliative care. Precedents from around the world has been analysed in terms of spatial configuration and compiled into a set of common functions that exists between all references. Apart from these spaces, a group of special functions were added. These functions were not prevalent among all references but deemed valuable additions to the program. At last, functions were added that were not part of any precedents but instead came from literature about the topic. The three sets of functions were then grouped into different types of spaces and compiled according to a set of desirable criteria, such as whether they should be private or communal, light or dark and what views were desirable.

The following program study was used throughout the process as a rational example of spatial configuration. The final project deviates from the study where necessary in order to fulfill other important criteria.
The existing site has a generous and welcoming entrance at the front; it houses characteristics that were the reason behind focusing on this site. But the front facade stands in heavy contrast to the rear of the site which is cluttered, shaded, inaccessible and cut off from the social and public atmosphere of the park.

The garage, tower and previous extension have been removed in order to raise the ground plane to meet the level of the bordering park and thereby bridging the barrier between green space and the building.

Underneath the newly formed park ground plane is an extension to the existing building which utilizes the available floor area of the existing site while not protruding outside of the site limits. Above this horizontal element sits a lightweight and translucent vertical addition, which houses the in-patient care facilities.

The park is now accessible and useable by patients via the extended park plane; it can be accessed from the day spaces on the ground floor of the addition. The existing street barrier has been turned into a private and dignified entrance walkway that provides a much-needed barrier between the public park and the private garden.

Strategies
urban strategies

vertical layout adapts to urban condition

prioritizing private living

introducing vegetation through built space

extension of social amenities

managing access to park

softening of edges

urban strategies
diagrams
<table>
<thead>
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<th>Design Strategies</th>
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<tr>
<td>- Intervention through addition</td>
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<td>- Minimising shade crawl</td>
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<tr>
<td>- Engaging with scale of the city</td>
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<td>- Internal vegetation buffering</td>
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<td>- Contrasting of material</td>
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<td>- Focussing of view &amp; light</td>
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**Diagrams**
To unify the park and site, the existing ground level was raised one storey to create a continuous plane, which provided an opportunity for a semi-subterranean extension at the rear of the building. The back-alley road, which borders the site and park, has been built up and now reads as a narrow slit in the ground that acts as a buffer between the park and facility.

Separation between end of life care and the grieving process was a key consideration of the project. The new extension includes a grieving facility and separate entrances from the street and the park. The front of the site has been left largely untouched. It contains the character of the site, through a generous setback, and a welcoming entrance. The rear facade however has none of these attributes, its shaded, bare and partially hidden from view. These flaws promoted the decision to add a thin, light extension at the rear of the building to house the additional program. The existing building has been altered through the partial removal of some floor plates and expansions of north facing openings. The new facility is comprised of alterations to the existing building, above ground addition and below ground extension.
site plan
1:5000
1. server room
2. boiler room
3. mechanical & electrical
4. storage
5. gas meter
6. water meter
1. staff room
2. staff dressing room
3. common WC
4. staff lunch room
5. cafe
6. entrance hall
7. waiting area
8. bookable office
9. administration office
10. care team office
11. light therapy / waiting
12. sluice
13. day care / recovery
14. interview / examination
15. doctor’s office
16. counselling
17. group counselling / meeting
18. refuse
19. courtyard
20. WC
21. storage
22. waiting hall
23. ceremony space
24. grieving space
25. preparation space
26. hall for receiving coffins
1st Floor Plan

1. Kitchen
2. Pantry
3. Common WC
4. Informal Kitchen
5. Storage
6. Children's Room
7. Children's WC
8. Family Lounge
9. Dining Room
10. Day Room
11. Living Room
12. Garden

Scale: 1:200
2nd floor plan
1:200

1. accommodation for families
2. dressing room men
3. physical therapy
4. dressing room women
5. massage room
6. spa waiting
7. hydrotherapy
8. void

2nd floor
+7.80
+7.80
+7.80
1. patient room
2. supply closet
3. common WC
4. quiet space
5. yoga mezzanine
6. laundry
7. reading space
8. resource library
9. internet access
10. creative therapies
4th floor
1. patient room
2. sun terrace
3. sluice
4. common area
5. nurses station
6. medication room
7. horticultural garden
rooftop garden +18,95m

roof plan
1:200
The weight of the existing building is transferred through the facade in a strict grid pattern. Since the facade functions as a load-bearing shell, the horizontal elements of the building could be changed without damaging the external structure. This made it possible to remove the first and top floors to make the very condensed building feel much more open and spacious.

The load-bearing grid became the basis for the addition, which adheres to the same structural logic but with different materials. The north facade has been opened towards the addition, to allow for a greater unity between the old and new elements.

The addition has a steel frame structure cladded in insulated double wall polycarbonate panels. The new openings prioritise the user and align to the internal program. They are offset from the strict grid, which the rest of the building adheres to.

The light materiality of the addition sits in contrast with the heaviness of the existing building, thereby introducing a much needed light and ephemeral element to the site as well as to the program.
exploded view
building structure
The first floor of the addition houses common spaces for closed care patients and staff, including a living room, dining room and day room. The space is double height and is dividable through full height curtains.
*View from the park*

The raised ground level facilitates access to the park via the private gardens, which extends the park's boundaries beyond what exists today. The courtyard void seen from the garden provides light to the day care and grieving spaces below.
The fourth floor horticultural therapy garden provides patients with purpose and a sense of ownership.
The vegetated courtyard separates day care from grieving spaces, while permitting natural light to penetrate. It offers visitors and patients close contact to nature, while being in a protected and safe environment.
This transitional space separates the public entrance hall from the private medical wing. It functions as a light therapy space that provides patients and visitors with beneficial light as they wait to be treated.
model photos
1:200
model photos
1:200
The process of creating this thesis project has been driven by extensive research into all focus areas. Since the project is dealing with a topic that is unfamiliar to most, emphasis was put on understanding as much as possible regarding palliative care, in order to be able to propose a considered scheme.

The process has been linear. After researching different topics and choosing to focus on palliative care, the next step became choosing an appropriate site. After careful consideration of a set of sites around Stockholm, the existing building of the fire station of Kungsholmen was chosen. Site visits were made, including a guided tour inside of the station.

After that, more extensive research into the topic was carried out before compiling a large set of guidelines for how to design for palliative care. Precedents were studied and analysed and a program was devised according to those studies. The research phase culminated in a mid semester proposal, largely focused on the topic, site and discussing different strategies for how to design a scheme. As part of researching the topic, several study visits were made to existing palliative care units within Stockholm. Interviews were carried out of professionals working within the field, among them Peter Strang, Cancer specialist & professor in Palliative Medicine at Karolinska Institutet, Stockholm and researcher at Stockholms Sjukhem. Peter became an external tutor for the project and made himself available for interviews and tutorials during the research phase.

After mid semester review the focus shifted from researching the topic and sites into testing and developing different design schemes. The method of developing the project consisted of all relevant media but was focused around sketching on paper and in model, planning and modelling in 2D and 3D, as well as rendering. As the project demanded a high level of research, writing was used throughout the process as a means of collecting and developing ideas and concepts.

The process was developed and catalogued through the use of a set of process booklets, which acted as a common thread throughout the project. This method of containing all work in one location and being able to easily follow the process of the project was of great help and importance in producing a complete and considered proposal.
pitched roof patient houses
tilted roof patient houses
tilted roof with raised courtyard
full enclosure
two enclosures
cut and fill building
design process
sketch models
Paimio sanitorium, Alvar Aalto
Paimio, Finland 1930-33

North London Hospice, Alford Hall Monaghan Morris
London, United Kingdom 2013

Centre for cancer and health, NORD architects
Copenhagen, Denmark 2011

House in Tousienn, Suppose Design Office
Hiroshima, Japan 2012

Maison Latapie, Lacaton & Vassal
Floirac, France 1993

House 5, SANAA
Okayama, Japan 1995

references
precedents
Japanese pavilion, Venice Biennale, Junya Ishigami
Venice, Italy 2008

House for a young couple, Junya Ishigami
Tokyo, Japan 2013

Serpentine pavilion, Peter Zumthor & Piet Oudolf
London, United Kingdom 2011

Chichu art museum, Tadao Ando
Naoshima, Japan 2004

House near Tokyo, Shigeru Ban
Tokyo, Japan 2001

Maggie Centers, Norman Foster among others

references
precedents
Literature


Interviews

- Lindén, Carina. Department head dpt. 4, Stockholms Sjukhem, Stockholm. Interviewed 2014-06-21