Building Green and Integrating Nature, Rikshospitalet University Hospital, Oslo, Norway

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Green hospital building:

Planning and building:
• A hospital that does as little harm to the micro and macro environment as possible throughout the building’s complete life cycle

Operating:
• Establish a committed culture for operating and maintaining a durable building and service system concept throughout the building’s useful life, according to key green values

What are the most important indicators?
What is shaping our healthcare system?

- Public system, tax based
- Hospitals owned by the State
- Physicians employed by the hospital
Rikshospitalet University Hospital, Oslo

- Tertiary teaching hosp.
- All med. specialities -2
- 585 beds
- 4000+ FTEs
- 35,000 inpatients
- 15,000,000 sq.ft
Rikshospitalet University Hospital
2000-2004 – clinical production

- Inpatient activity (+22%)
- Outpatient activity (+66%)
- Patient satisfaction - top of the rank
- Productivity measures up more than rise in staff levels
- Absenteeism & turnover rates down

- The effect of design ?
Sustainable site?

- Site: 87 acres
- Footprint: 4,360,000 sq.ft
  Hosp. only: 3,270,000 sq.ft
Landmark on plaza

First impression counts
Proximity

Walkways connect patient units with treatment facilities
Integrated art:

Can art have the same stress-reducing qualities as nature?
Low buildings - respect for the surroundings
Staff survey on the built environment - 2004

- Interesting, non-frightening buildings
- Main street perfect for interaction
- Daylight to working – and patient spaces
- Good functional proximities
- The art makes staff feel proud of their environment
Humanistic planning approach

Medplan Architects:

Physical environment intentions:
• Village structure
• Daylight to all spaces
• A horizontal hospital
• Use all means to reduce anxiety and build dignity
• Nature’s materials

Planning process:
• Deep user involvement
Village structure

Street hierarchy:
- Main street, square,
- Landmark tower

Buildings:
- Separate but interconnected

Daylight effects
- longer walking distances
- more circulation space
- space efficiency
- higher energy needs
- positive staff response
Village structure - Main street

Identity aids recognition, facilitates wayfinding
Main street

Place for positive distractions
The lovely energy drain

Light and space vs energy saving
Energy use:

Rikshospitalet – not an exemplar project
Access to daylight

Operating theatre

Physiotherapy
Integrating nature-materials
Integrating nature materials
Integrating nature

Pictures of nature
Integrating nature

Views to the outside from main street
Integrating nature

Access and views of courtyards
Integrating nature

Use of nature for distraction – considered as part of therapy
Integrating nature

Places for contemplation,
Rikshospitalet:

Partly green and integrating nature

• Daylight to as many spaces as possible – worth the extra investment/operation cost - and a key to achieve humanistic goals

• Village main street - creates a place with identity and interest, high quality without showing off.

• Low buildings and village structure counters unhealthy clinical machine impression = low shoulder technology