



AL WAKRA PSYCHIATRIC HOSPITAL

Concept Design

MAAP Architects, Sydney
Makower Architects, London & Qatar
AECOM, Qatar

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European Healthcare Design Congress London 2016

Tuesday 28th June 2016

Concept Design Competition for a New Psychiatric Hospital at Al Wakra

Client: Hamad Medical Corporation & Private Engineering Office of Emir (PEO)

Competition Brief

Facilities for Acute and Forensic Inpatients
Drug and Alcohol Unit
Outpatient Suites
Therapy
Pharmacy
Education and Training
Facilities Management

Metrics

Site Area: 80,000m²
160 Beds (expandable to 208)
30,000m² Accommodation over 3 levels
45,000m² Gardens over 3 levels
6,000m² Recreational space
750 Car Parking Spaces in Basement

Budget

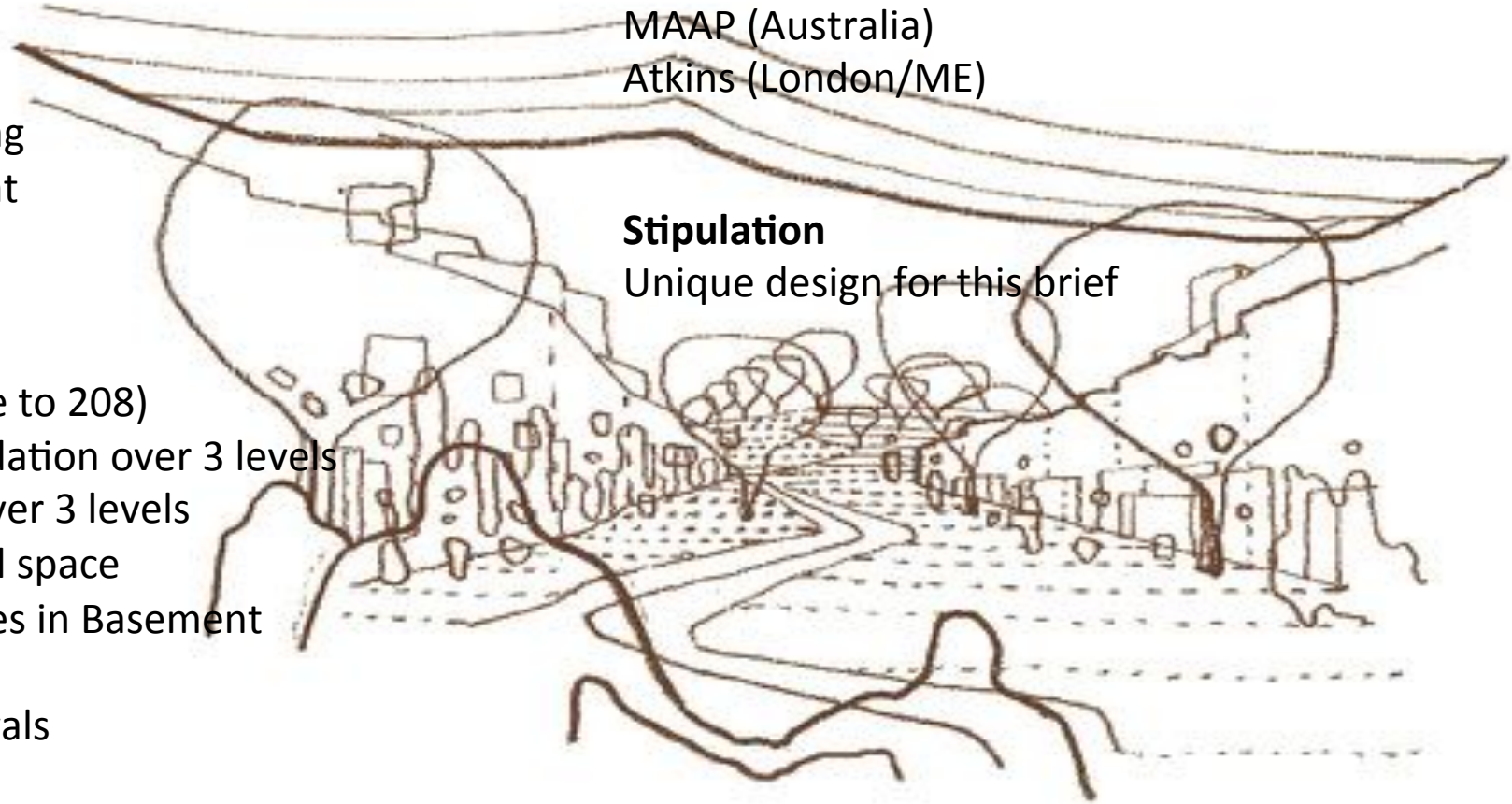
500 Million Qatari Riyals
\$160 Million AUD

Competition Teams

Stantec (London/USA/Canada)
RTKL (USA/Qatar/London)
Perkins Eastman (USA)
MAAP (Australia)
Atkins (London/ME)

Stipulation

Unique design for this brief



Key Challenges

Understanding Islamic culture and mental health care in Qatar

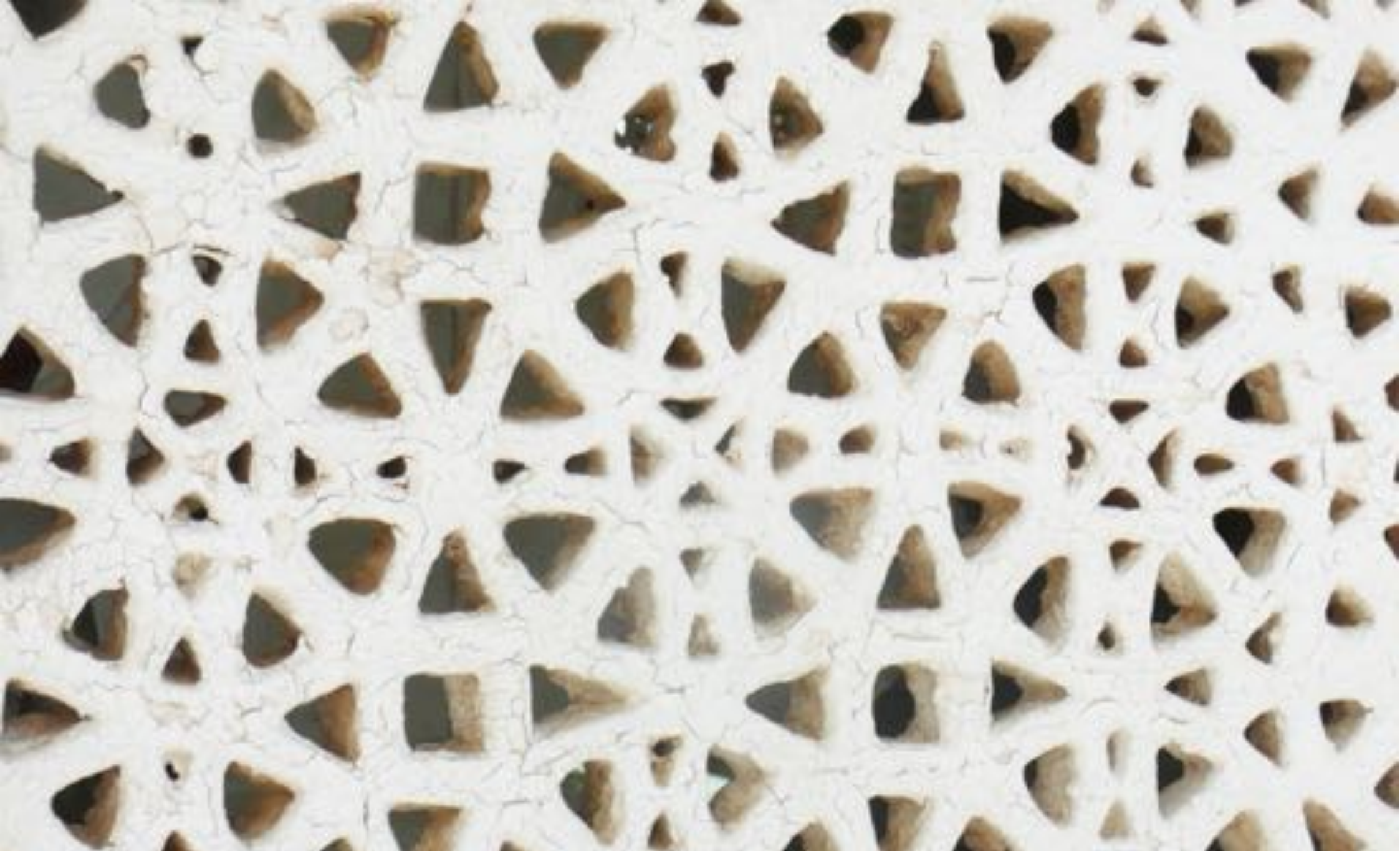
Extreme climate

Minimal context - exposed suburban site

Flexibility- gender, acuity, optimising functionality, expansion

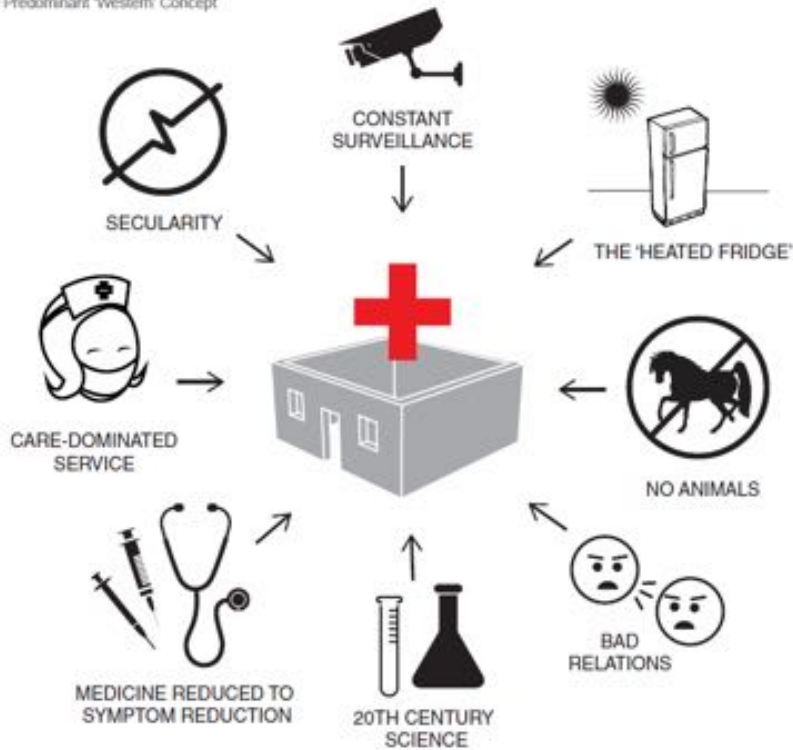
Competition Response

Create a protective residential scale setting, balancing need for privacy and safety, embedded with gardens, using familiar architecture and urban form responsive to local climate.



Predominant Western Concept

The Predominant 'Western' Concept

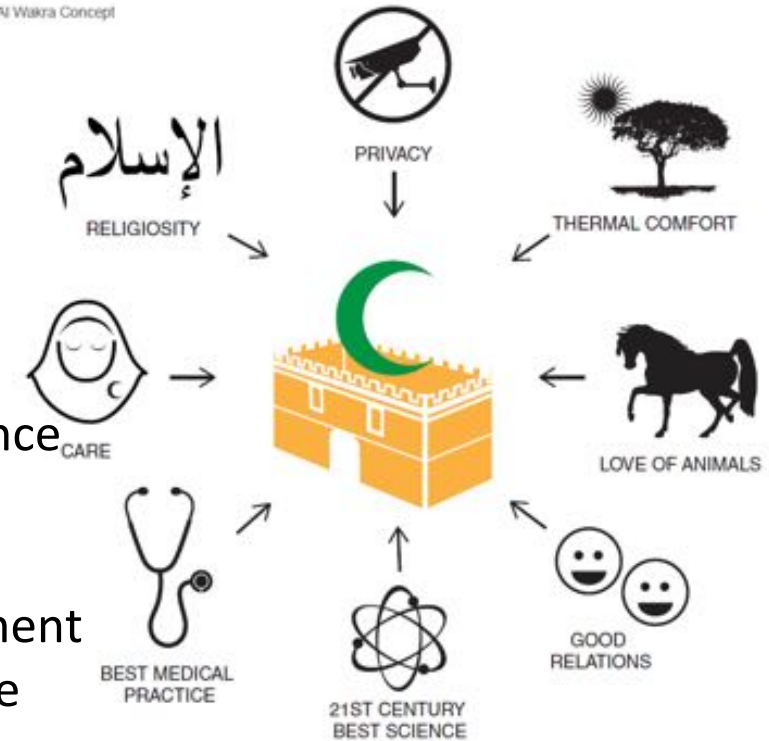


Aspirations

Person-Centredness
 Cultural appropriateness
 Embracing of Islam
 Genuinely therapeutic
 Very sustainable
 Engaging patient experience
 Legible
Flexible & Future-proof
 Quality working environment
 Supports high staff morale
 A coherent civic presence
 High aesthetic value

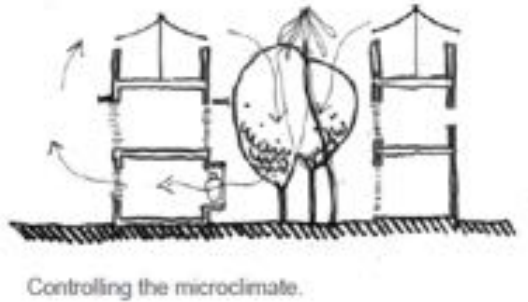
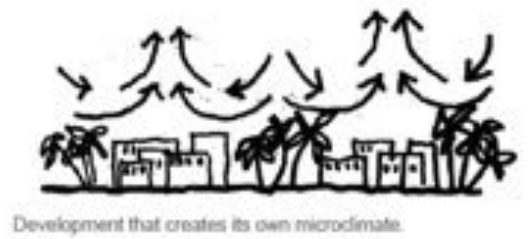
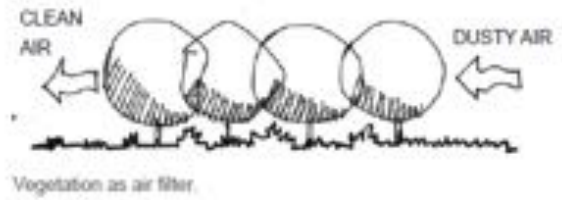
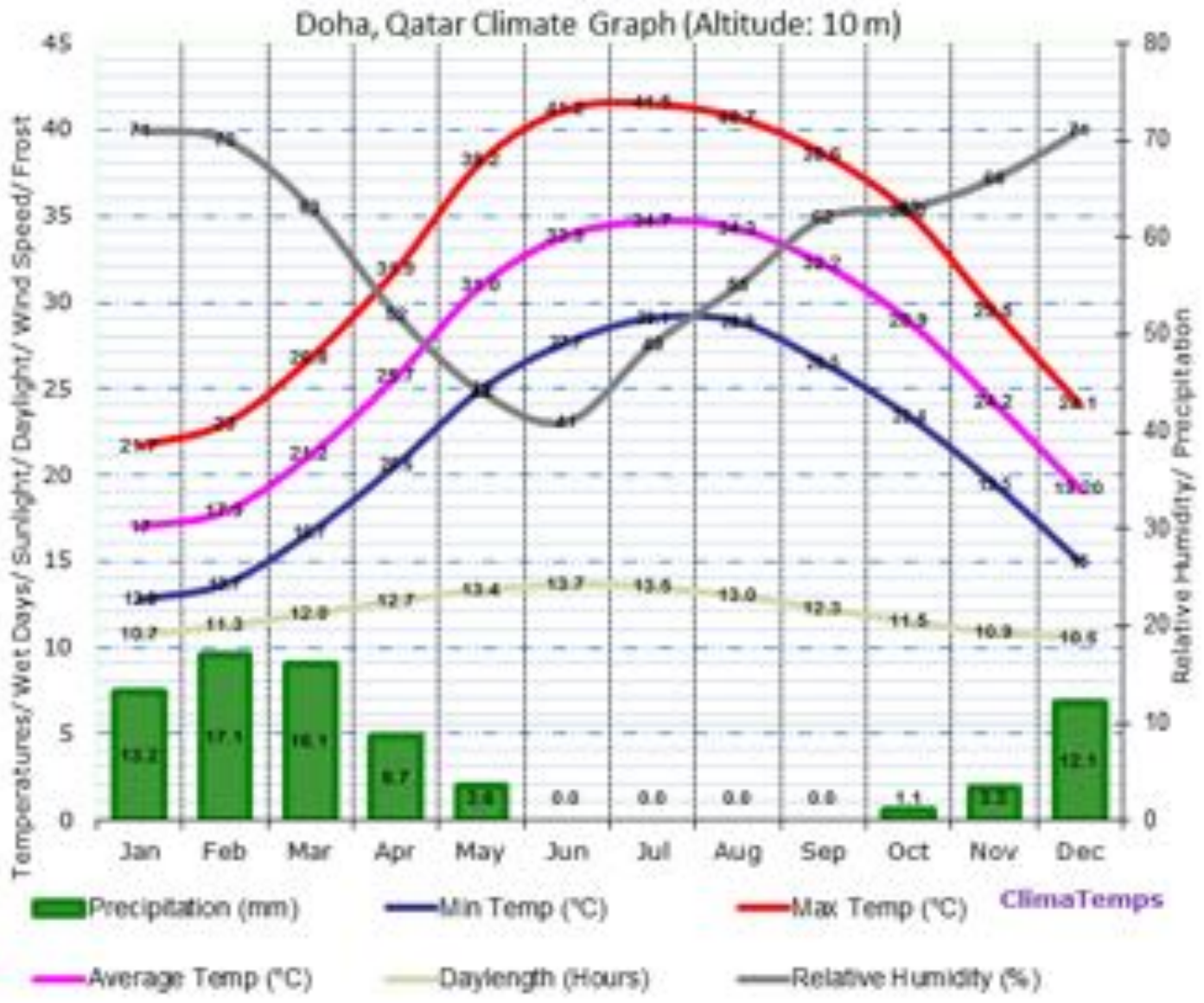
Al Wakra Concept

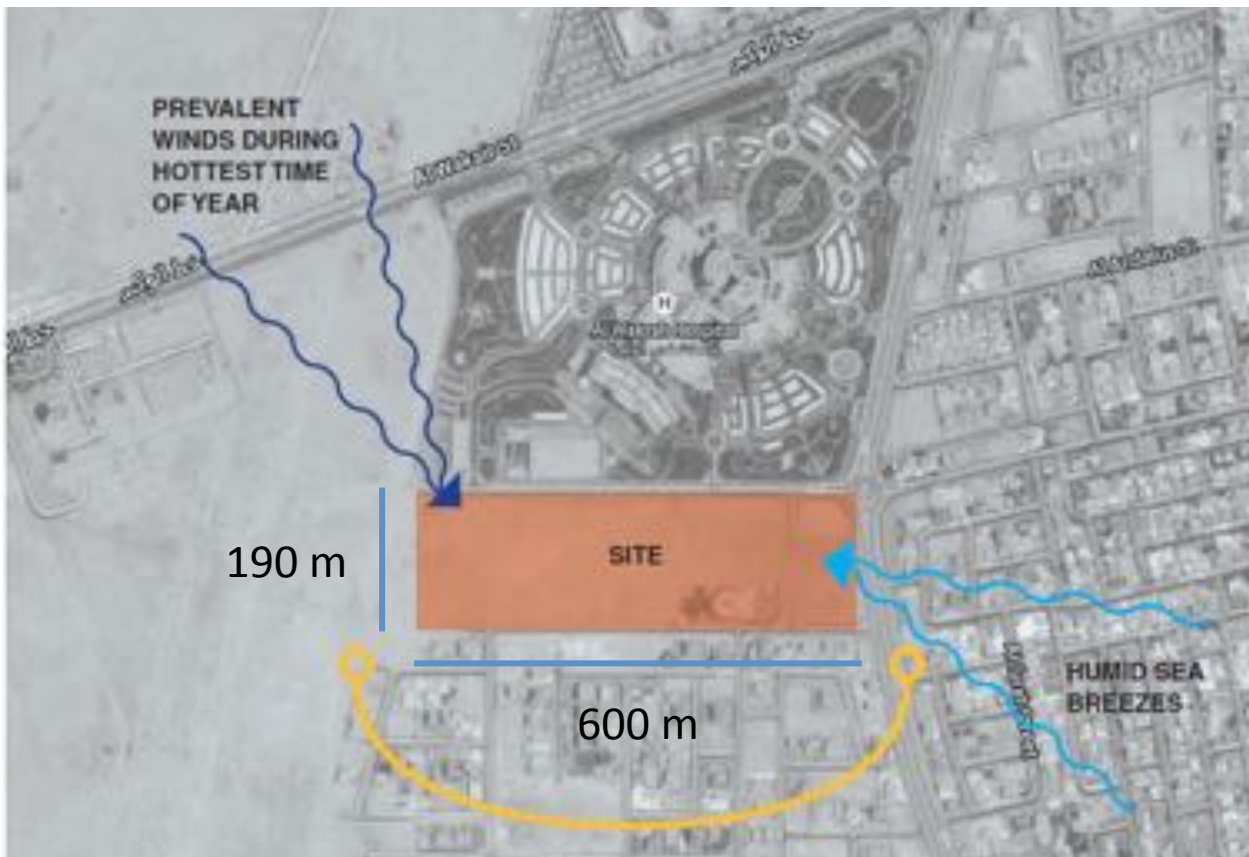
The Al Wakra Concept











The oasis in the desert (eastern arid climates).



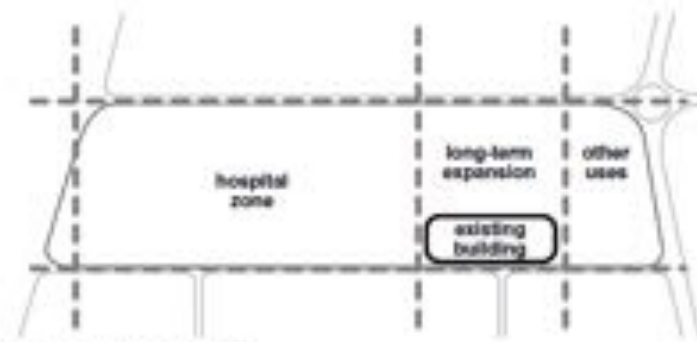
The clearing in the forest (western temperate climates).



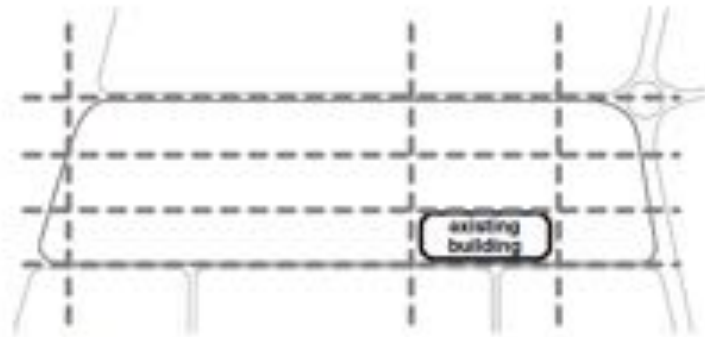
The modern urban landscape requires both oasis and clearing.



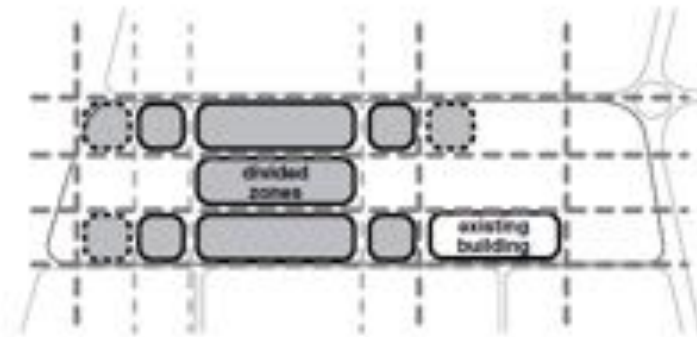
1. existing site



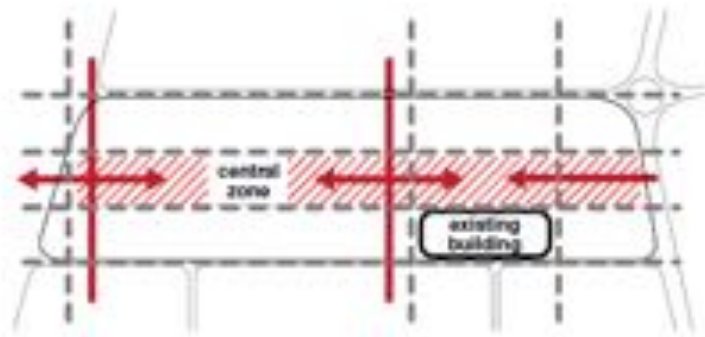
2. zoning along length



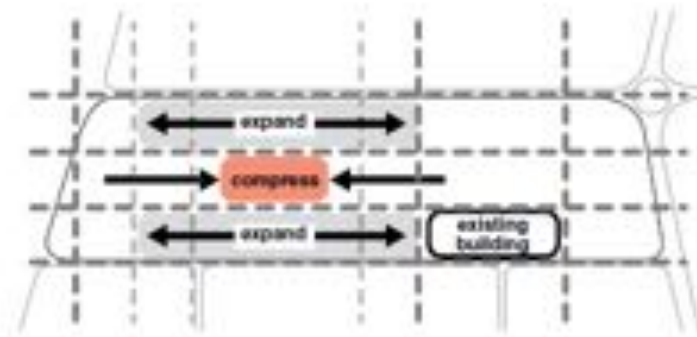
3. zoning along width



4. sub-divisions



5. central zone

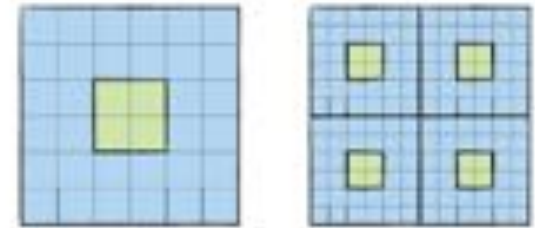


6. compression and expansion

Traditional response. Closely packed courtyard houses and narrow streets. Flexing between small single units or multiple units combined

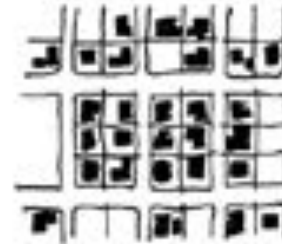


1.

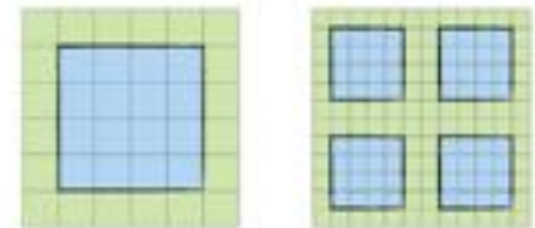


Traditional house form with central courtyard

Suburban development uses the centre of the plot with no physical connection to adjoining buildings results in loss of privacy and inability to mitigate extreme climate .

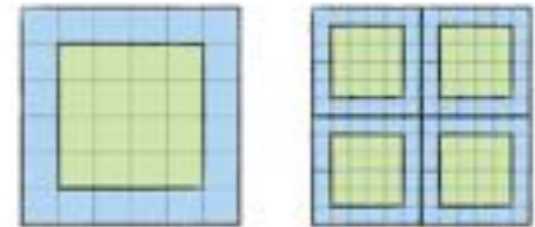
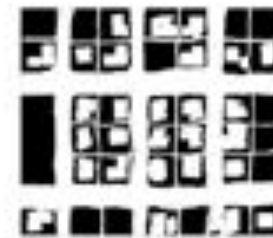


2.



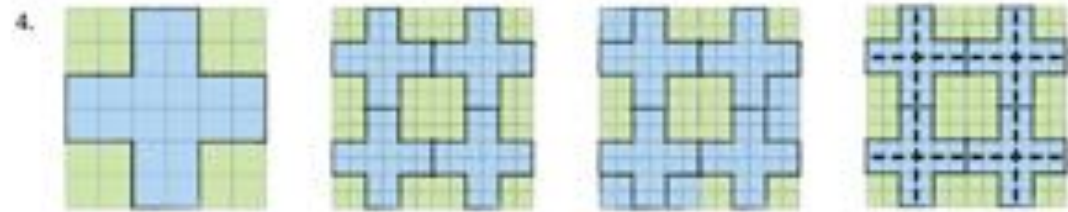
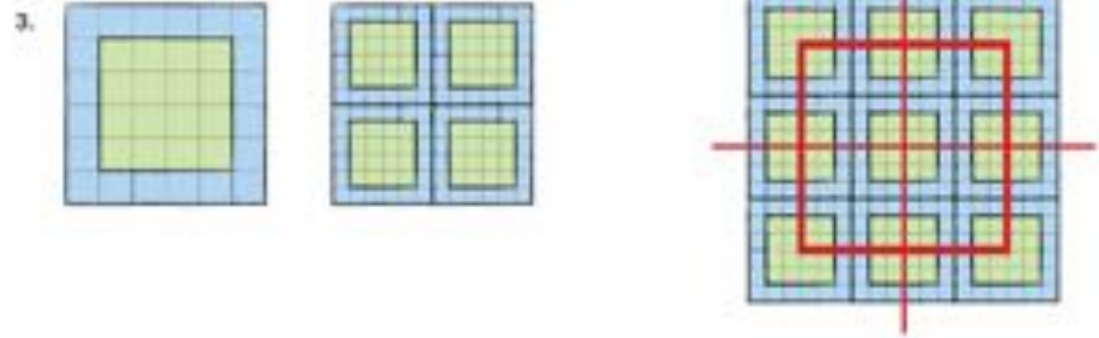
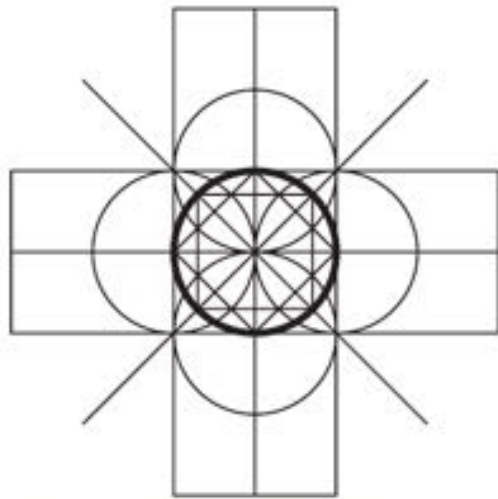
Modern house form with isolated structure on plot

Alternative approach revives traditional spatial structure

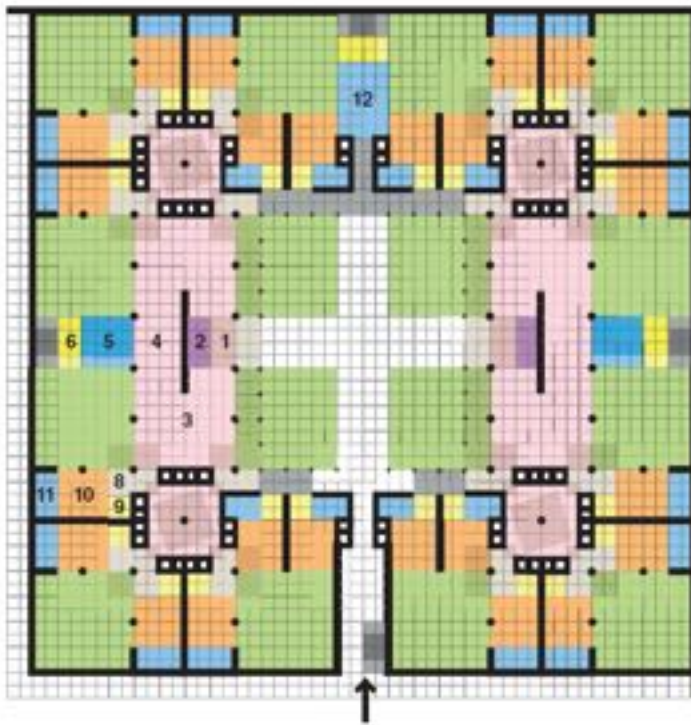


Modern house form with isolated structure on plot

The courtyard is developed into a repeating module that allows connectivity with adjoining elements. A tiling system based on different infill options and using square (orthogonal) geometry



Expandable connected system- diverse structured infill options, fully serviced



Al Wakra, Qatar

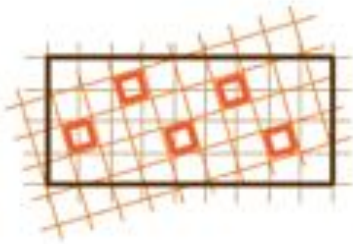
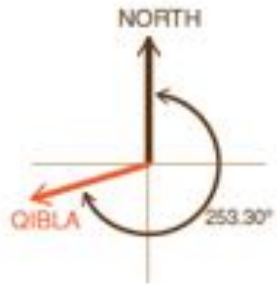


Royanji Lampung, Pusat Riadita

Roseberry Park, UK



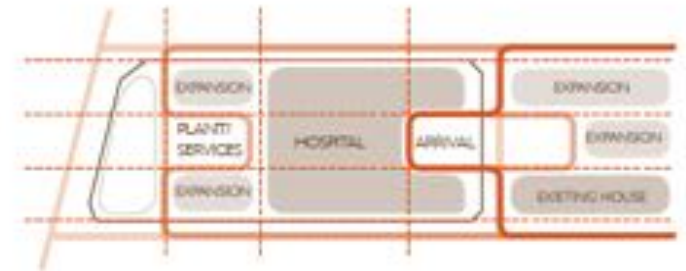
Organisational grid

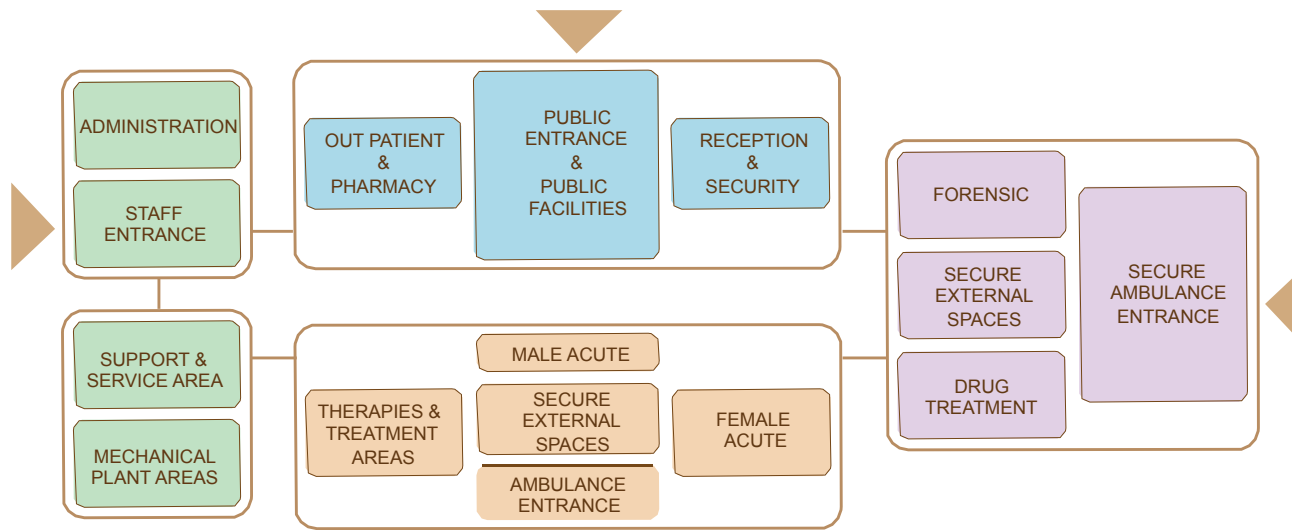


Setting up the site

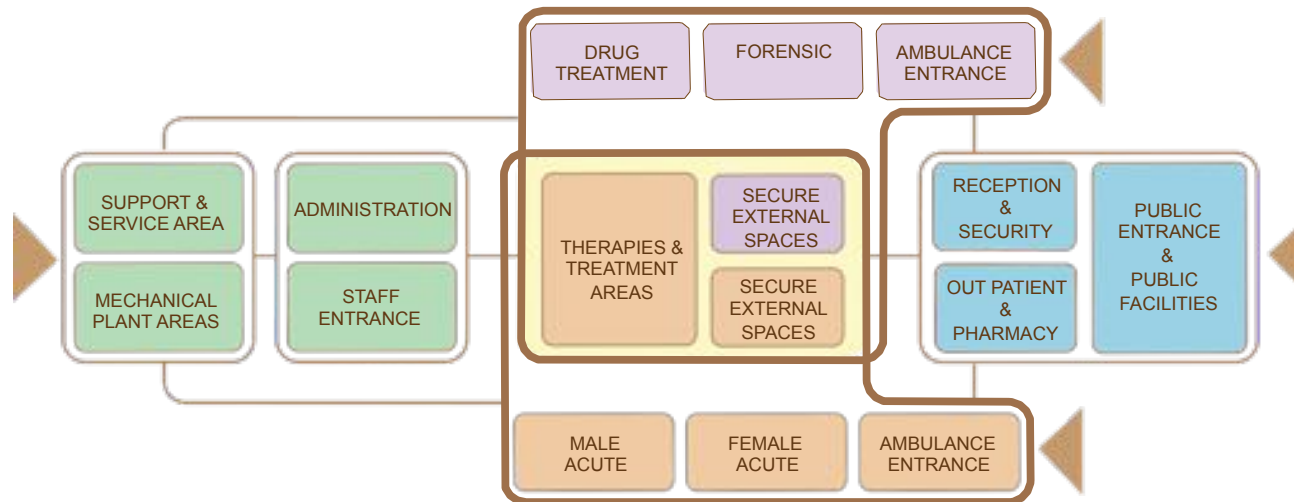


Access & expansion

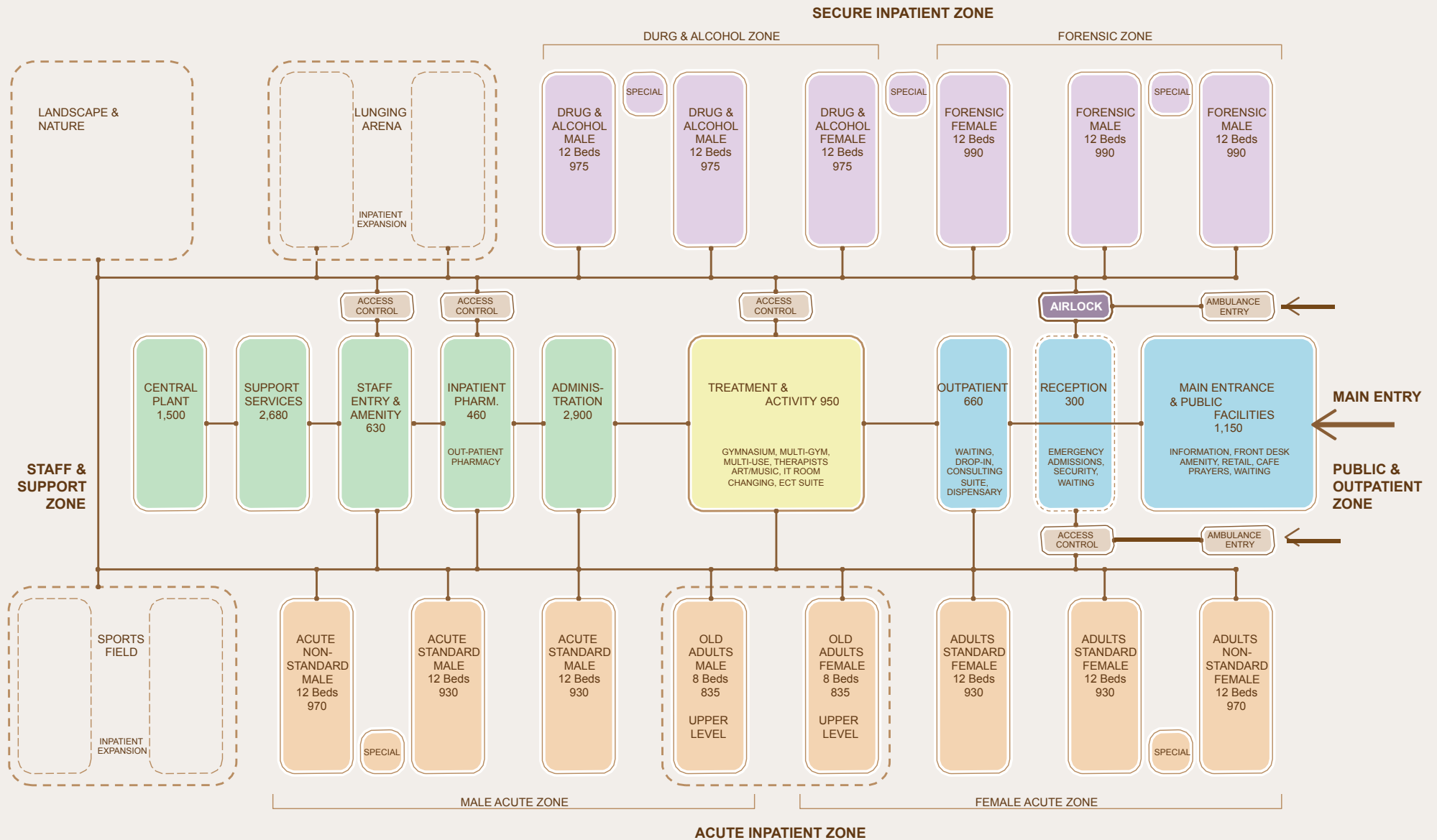


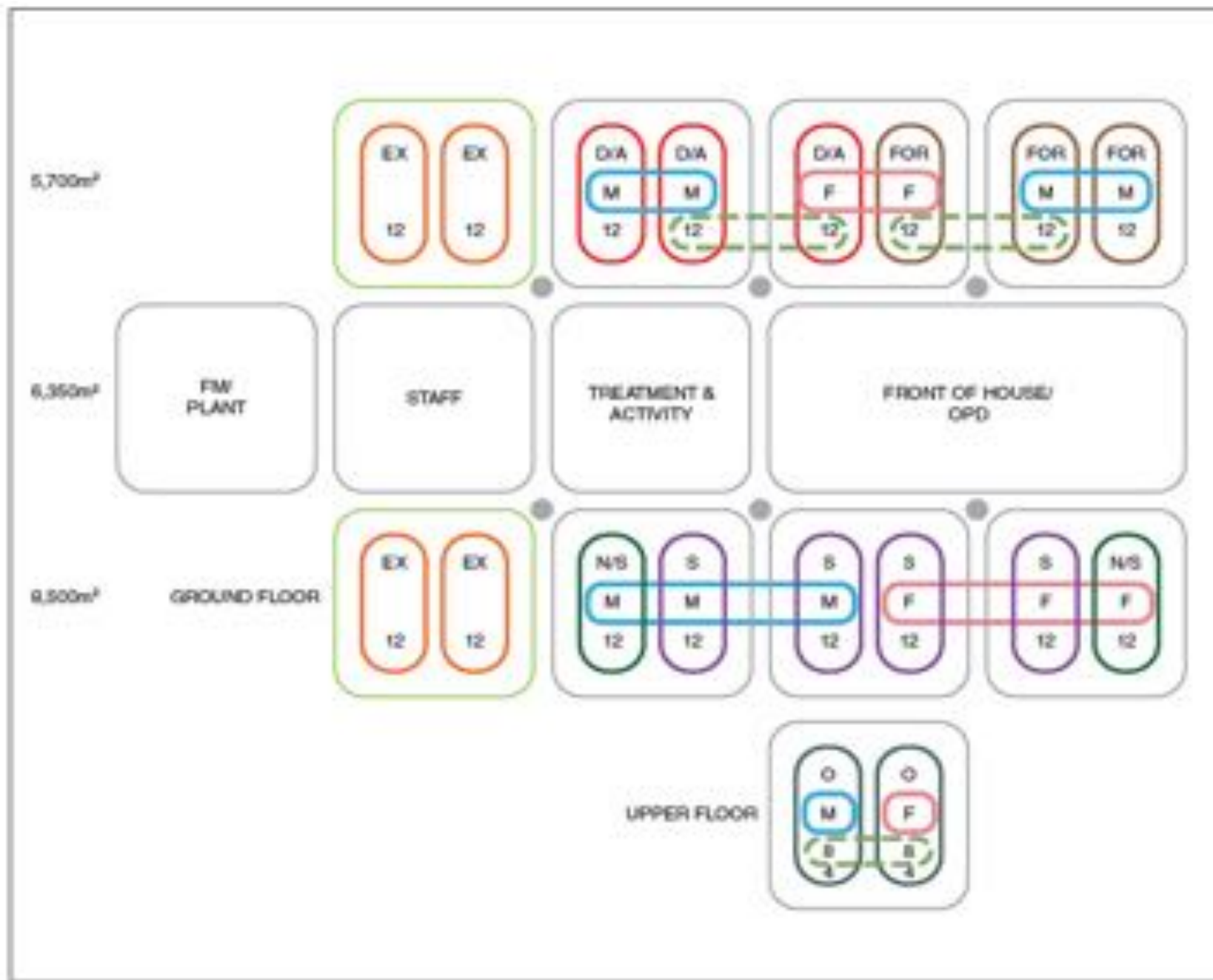


Original Functional Brief



A clinical reconfiguration of the original Functional Brief showing key uses



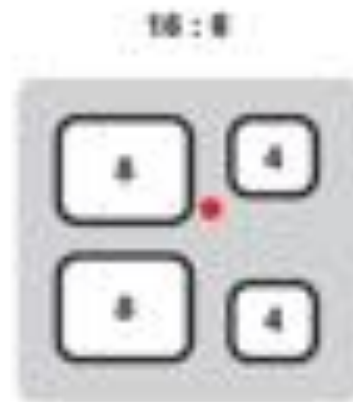
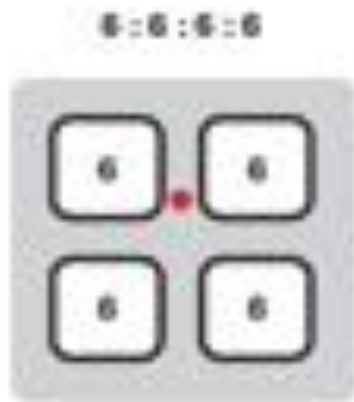
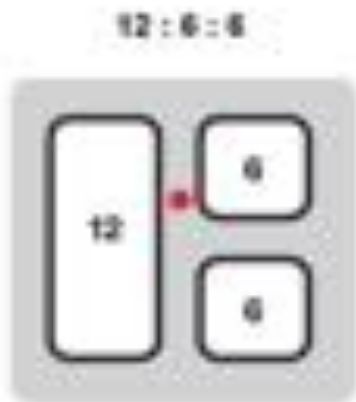


FUNCTIONAL RELATIONSHIPS

Male & Female Separation

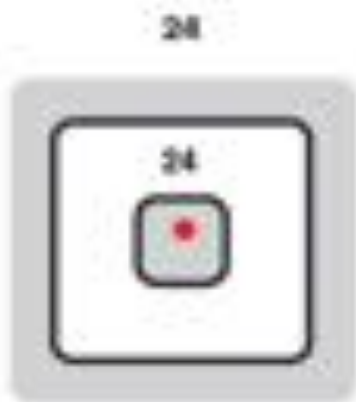
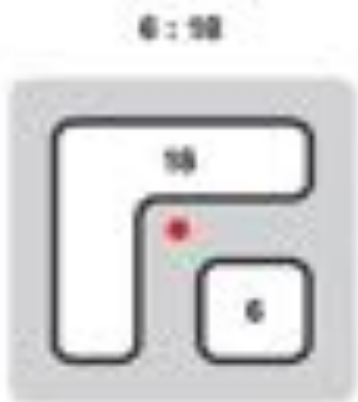
- female
- male
- standard acute
- non standard acute
- older adults
- drug + alcohol
- forensic (secure)
- wing beds
- expansion
- lift cores

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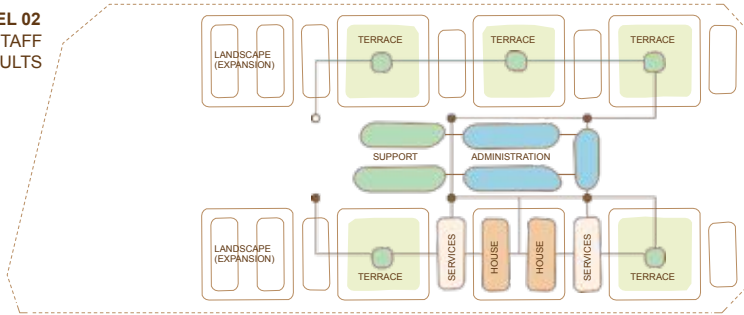


4 : 6 : 6 : 6

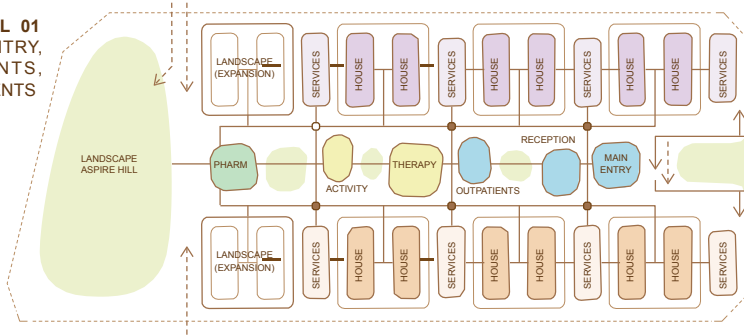
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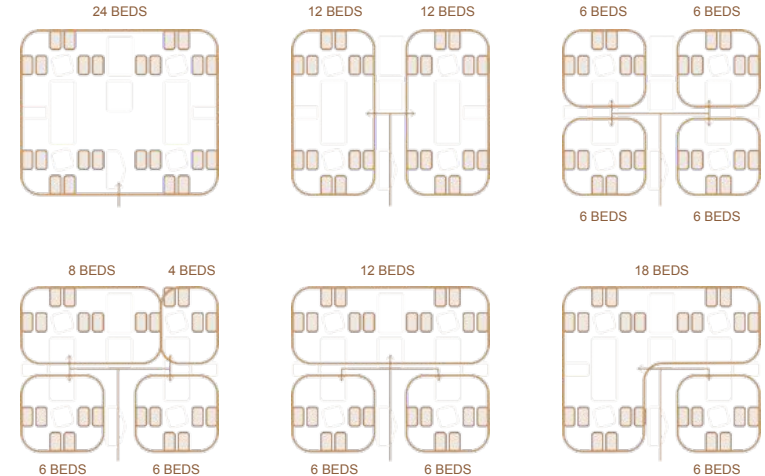
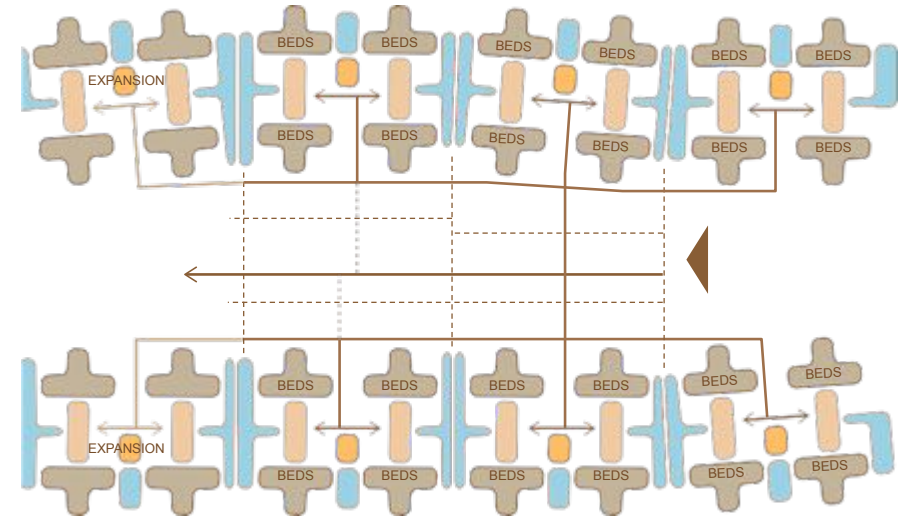
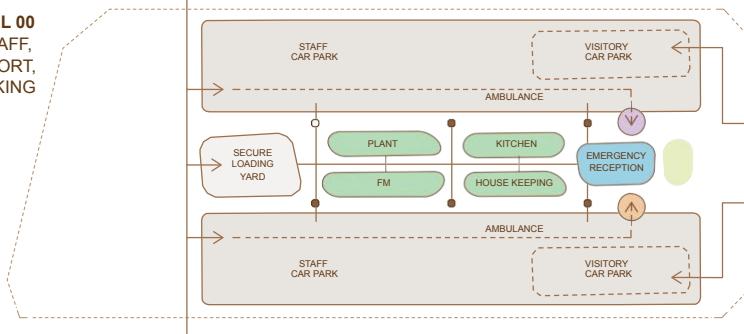
LEVEL 02
ADMIN, STAFF
OLDER ADULTS

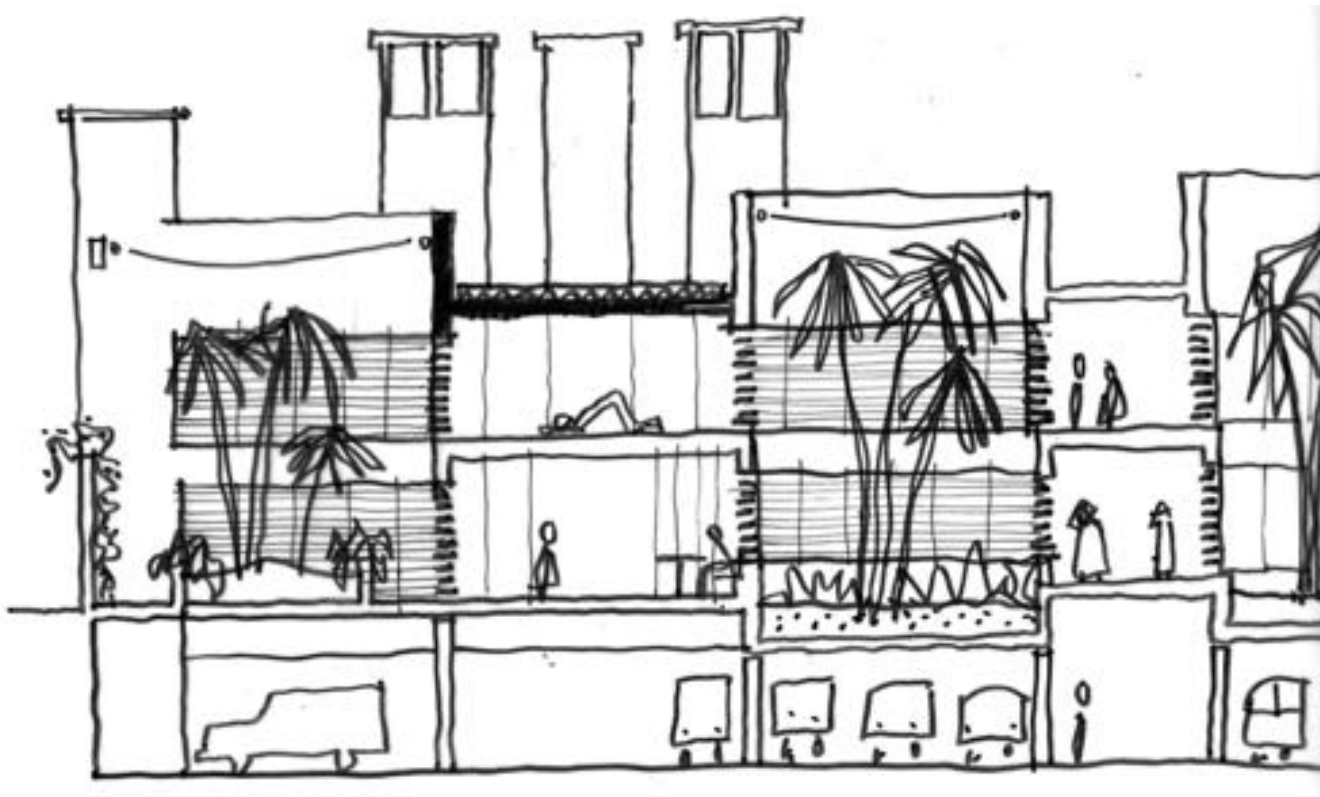
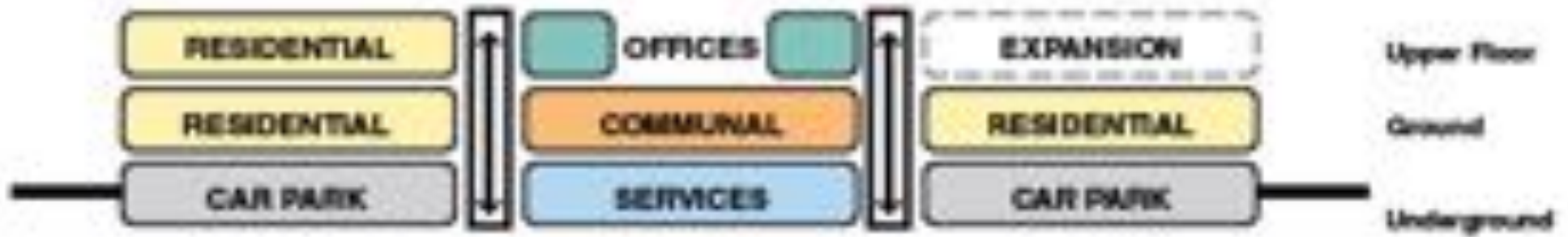


LEVEL 01
MAIN ENTRY,
INPATIENTS,
OUTPATIENTS

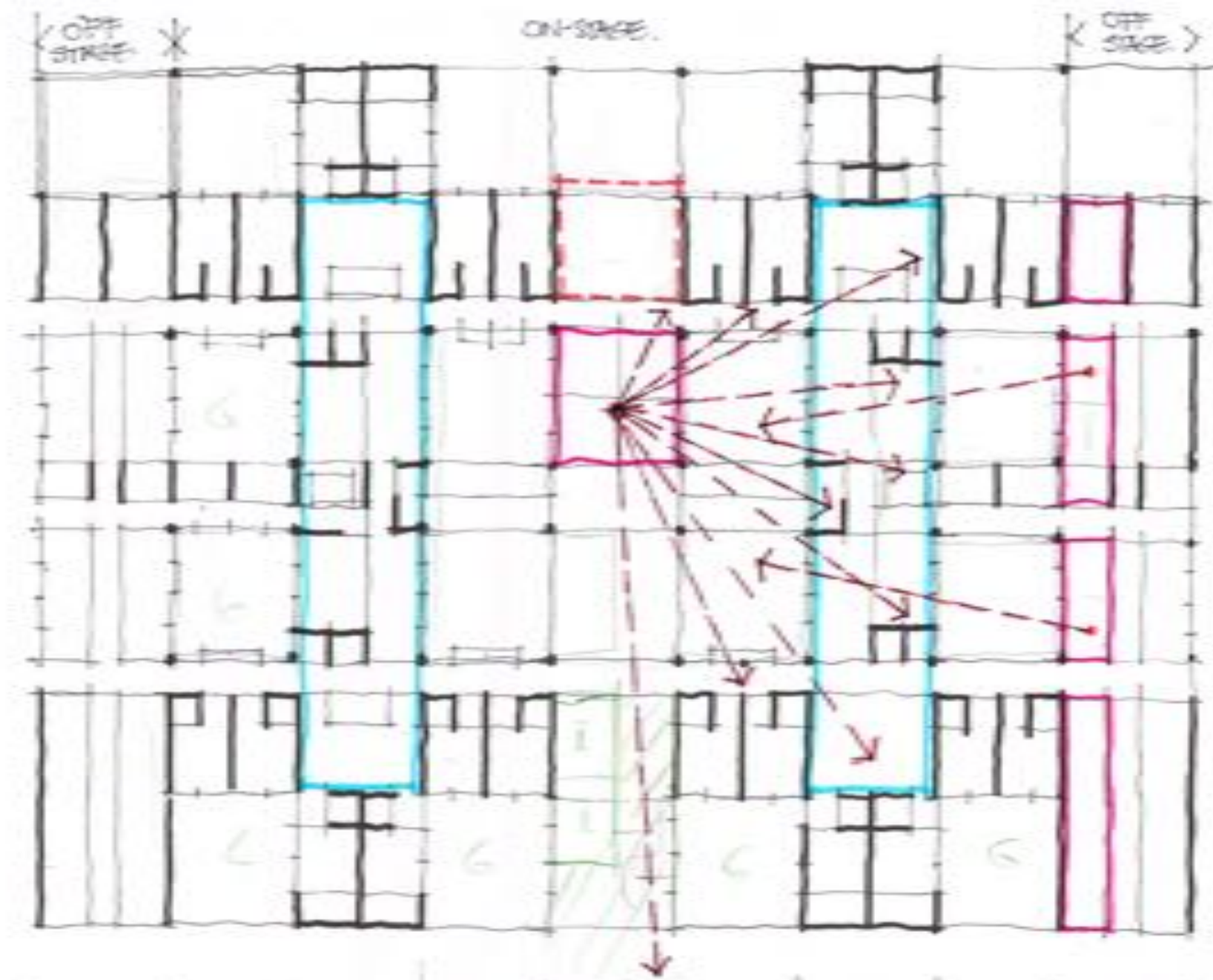


LEVEL 00
FM, STAFF,
SUPPORT,
CAR PARKING









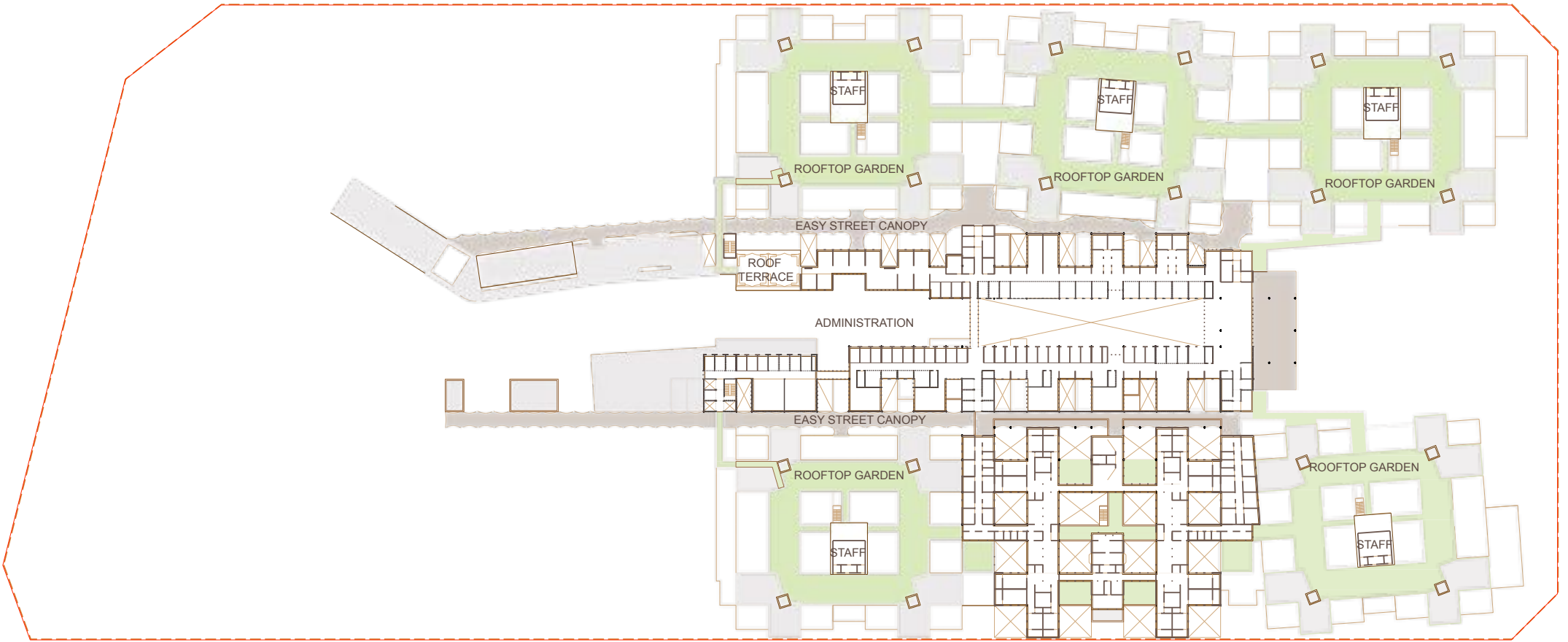


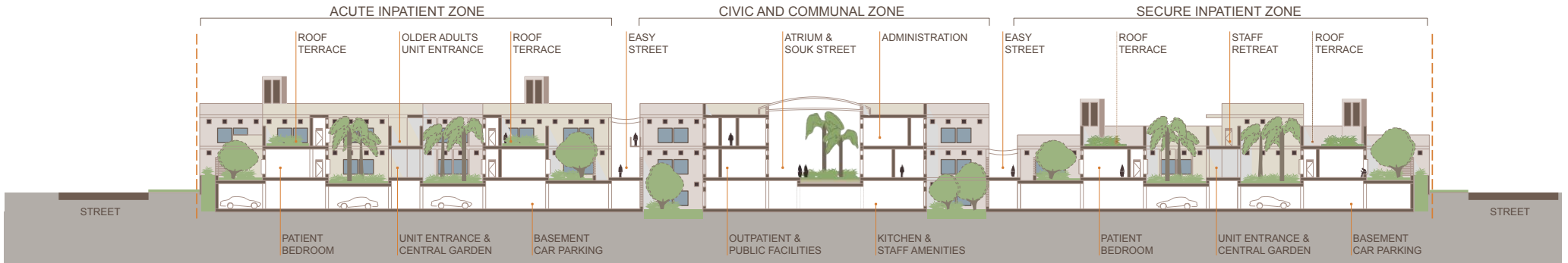
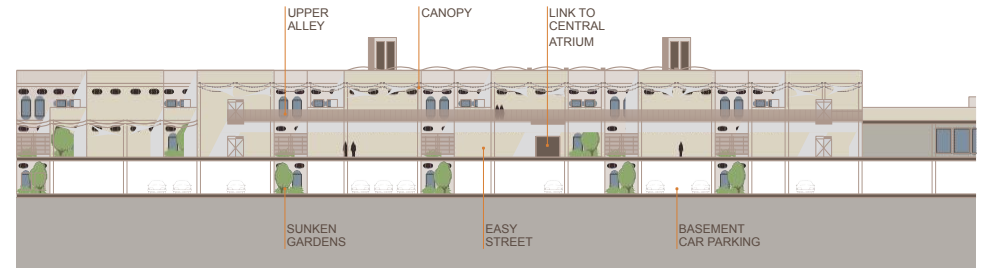
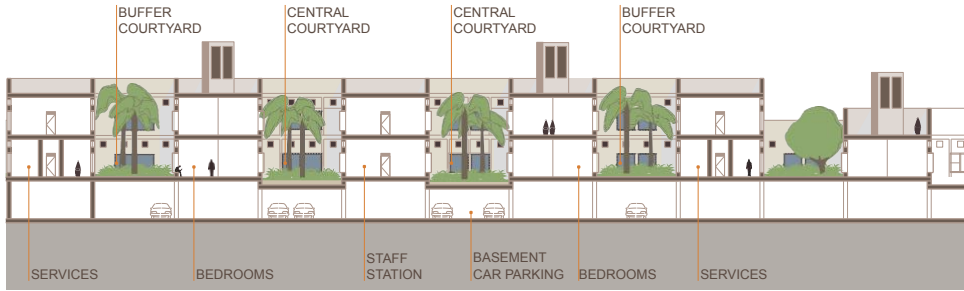






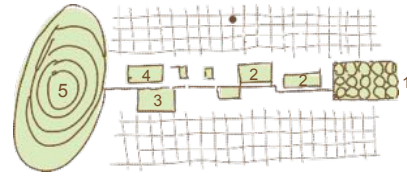




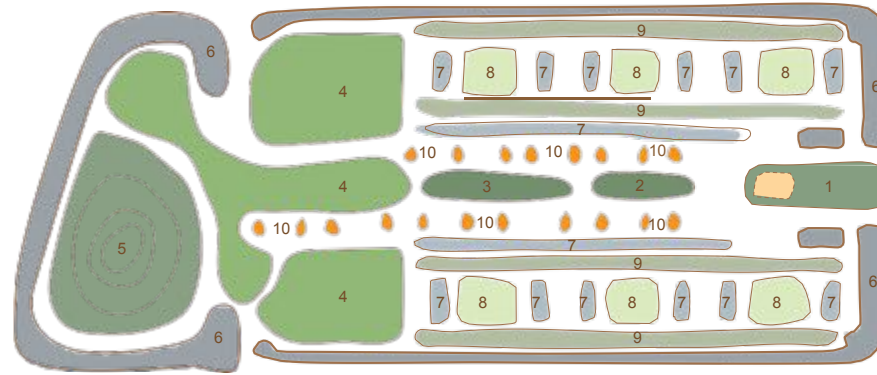






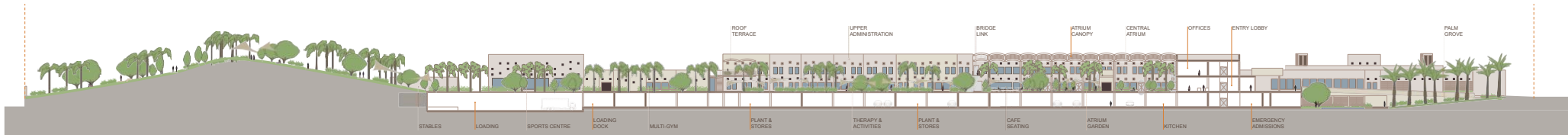


- 1 ENTRANCE FORECOURT - DATE PALM GROVE
- 2 CENTRAL ATRIUM - INDOOR PUBLIC SPACE
- 3 SOUK - OUTDOOR PUBLIC SPACE
- 4 ACTIVITY SPACES - ANIMALS, GARDENING, HORSES
- 5 ASPIRE HILL - WALKING, WANDERING, LOOKOUT, VIEWS
- 6 EXTERNAL LANDSCAPE BUFFER - PLANTERS
- 7 INTERNAL LANDSCAPE BUFFER - COURTYARDS
- 8 LIWAN HOUSE COURTYARD
- 9 PRIVATE PATIENT COURTYARD
- 10 LIGHTWELLS TO BASEMENT LEVEL

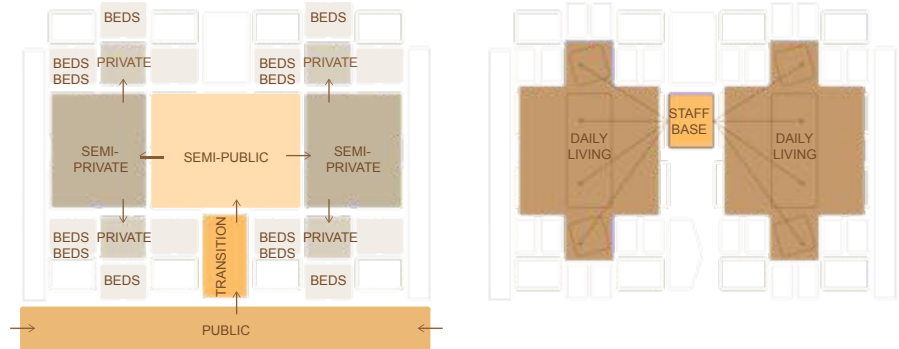
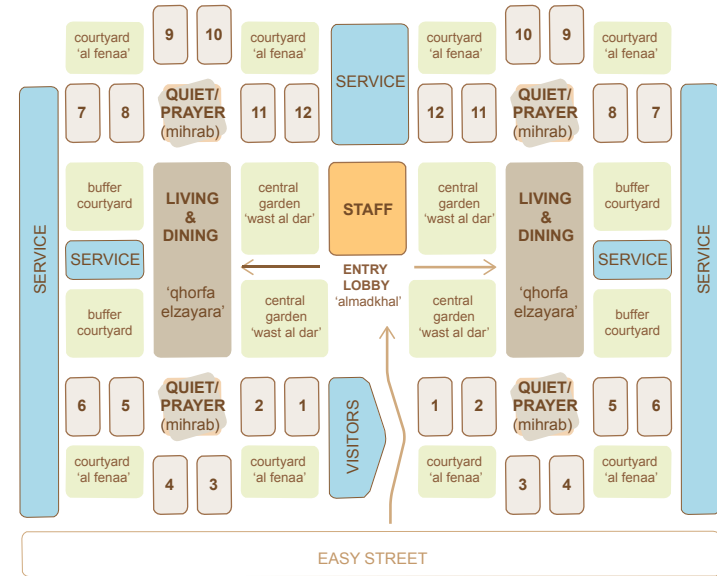


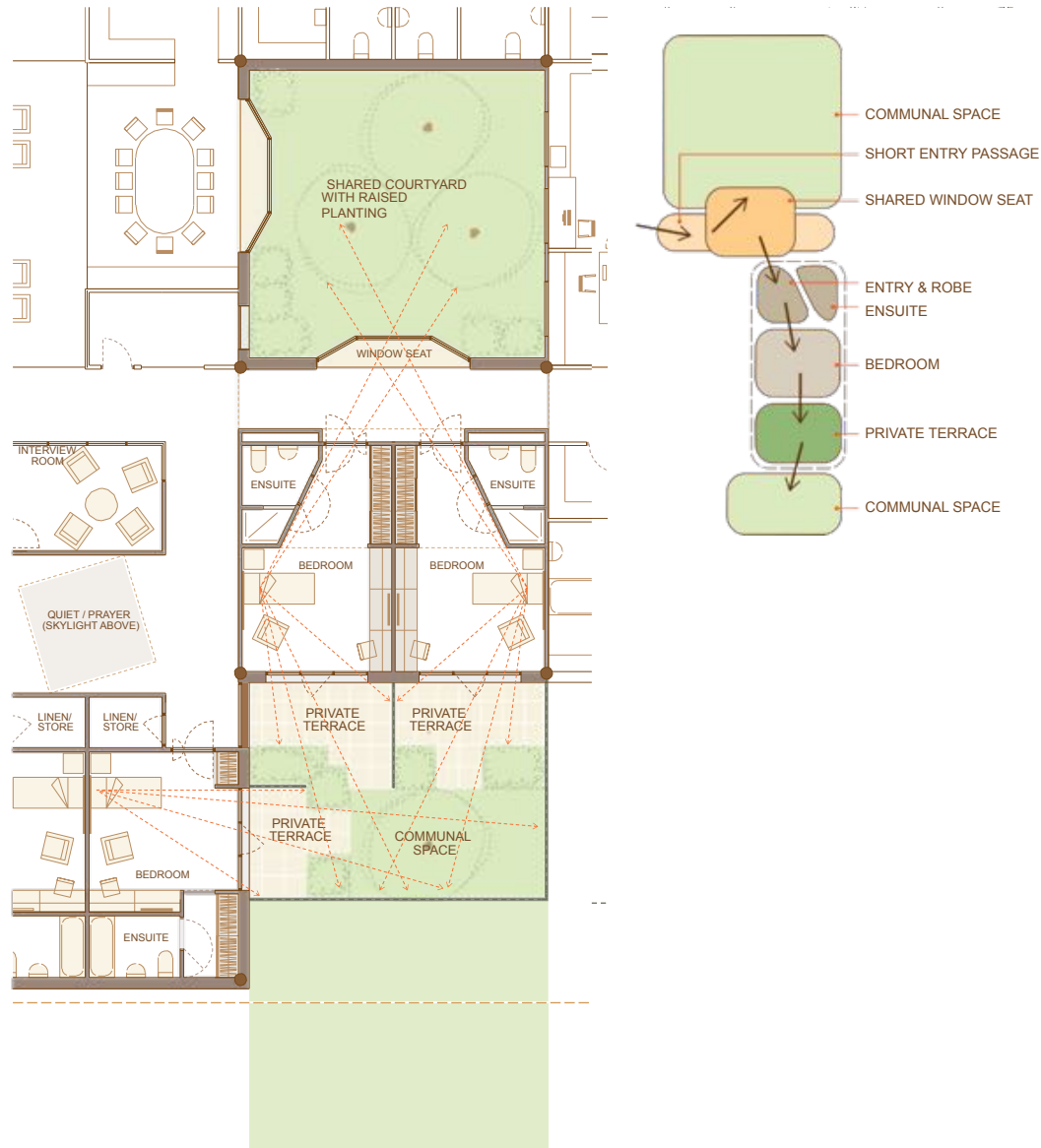
ASPIRE HILL ACCESS AND POINTS OF INTEREST

- PERIMETER WALL WITH PLANTING BUFFER
- GRASSY FLAT AREA FOR EASY ACCESS
- LUNGING ARENA
- HORSES STABLES
- EASY STREET LINK
- GENTLE 1 IN 30 SLOPE LEADING TO SUMMIT CEREMONIAL
- SPACE - LINK TO SOUK & PUBLIC SPACES
- FALCONRY
- LOOKOUT / SUMMIT OF ASPIRE HILL
- EASY STREET LINK
- COVERED AREAS AND LOOK-OUTS
- VEGETABLE GARDENS
- AVAIRY / BIRD WATCHING
- SPORTS FIELDS

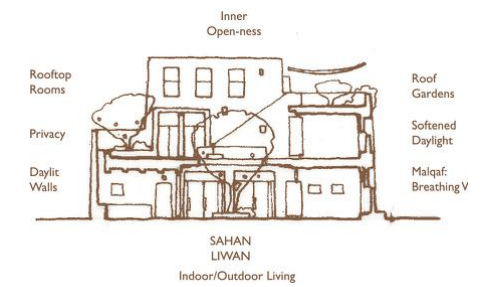
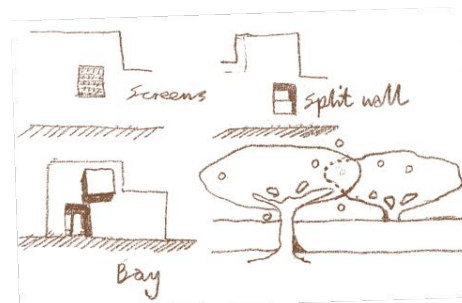
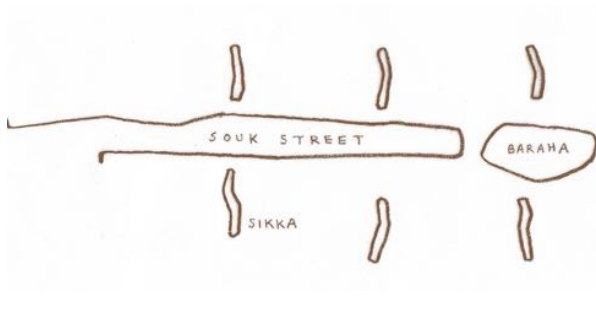
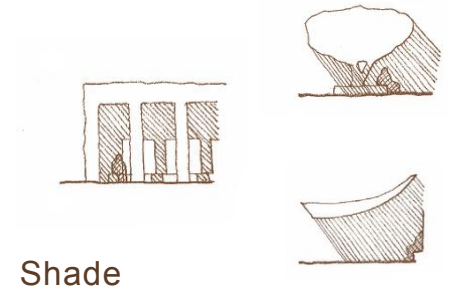
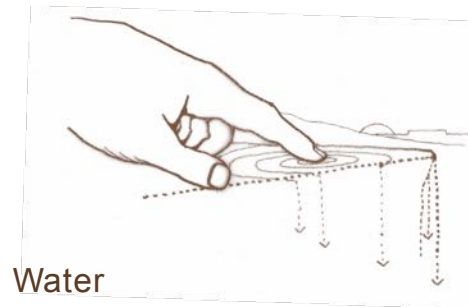
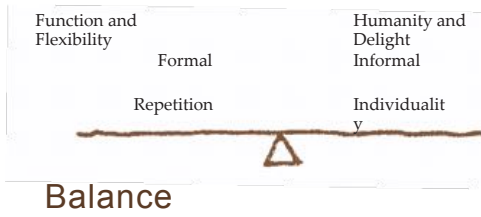














Final thoughts

Is there relevance to other contexts?

- Designing with climate – extending the seasons and moderating microclimate
- Cultural sensitivity in a multi-cultural society
- Inclusive design with minorities in mind
- Challenging the panopticon plan & obsession with lines of sight as proxy for safety
- Expanding space, the range of settings and affordances available to inpatients

Questions