Climate & Comfort
- embodying green

SERINA HIJNAS for MGBC GREEN DEVELOPMENT SEMINAR 081212
I used to think we would run out of food and space to feed the growing population of the world which will reach 9 billion by 2050. The truth is that we will have too much atmospheric CO2 before we run out of land or food.
Climate & Comfort - embodying green sustainability
HOW CAN WE DO IT BETTER

HOW CAN WE CREATE LIVEABLE SPACES: PLACEMAKING

HOW CAN WE GO BEYOND SHORT TERM THINKING TO LONG TERM DIFFERENCE

HOW CAN WE BALANCE GROWTH & CONSUMPTION
People, **Planet & Priorities**

Contextual, integrating community planning, environment & ecology with priorities on climate, energy, water, resources to building & making liveable Communities & cities
Not all buildings can talk about everything encompassing green but they can be sustainable on to themselves.
Dr Nirmal Kishnani
6 principles for sustainable architecture

- **Efficacy**
  Seeking long term effectiveness

- **Ecology**
  Respecting and repairing networks

- **Wellness**
  Connection with outdoors, community, nature

- **Embeddedness**
  Local reliance & self sufficiency

- **Advocacy**
  Local reliance & self sufficiency

- **Integration**
  Aligning process towards performance
• **Integration**

Aligning process towards performance

Connecting to the surrounding, connection with outdoors and to the greater community and making the rail accessible to all whilst relating to a cultural context was important.
Context Connections Visibility sustainability
More than a Transit

• Visually memorable
  - as urban gateway & landmark
  - visibility & connectivity

• Economically viable
  - retail activator

• Socially Responsible
  - urban spaces
  - green by design
Each nodal stop is a public plaza, each node must have positive values to the context which translates to positive values to people & real estate. Opportunities for community information, wireless network, retail, Public facilities.
The purpose of this transportation plan is to accommodate the years ahead of us, anticipating the expected population growth, diminishing land availability, the limitation of energy resources and the desire to preserve the natural environment and cultural integrity of our region to the best of our ability.

- Sense of space & Identity

A new park or urban generator strip
• Large Overhangs
  • Lush Green, warm feel
• Naturally Day Lit
  • Rain collector
• Cross Ventilation
Connections from and to station can be in the form of pathways, urban streets, covered, Uncovered, the importance is clarity minimise feeling of labyrinth and congestion

- Pedestrian Link Bridge, Pedestrian walkway, escalators, lifts
- Car Bus Bike, all prioritise pedestrian Transit friendly
Public conveniences for community reach out

Connections

Retail on the run
Police Beat
Kiosks
Post office
Tourist info center
Suraau Toilets
SMS for Arrival Information
Real-Time Arrival Panels
Bus connections mapping
Clarity in urban space

Visibility

Presence of 120 meter long edifice intersections, middle of roads, between buildings, next shops the challenge is to harmonise

Minimise & integrate structures, visual uniformity
Visibility across and into the surrounding

Walking & driving to a station

Visibility in the train, connection to surrounding

Visibility & safety at stations

• Shaded walk, canopy tree
• Covered drop off
• Reduce obstruction on ground minimize utilities, increase pedestrian views, cross flows
• Visual clarity of building key surrounding buildings
The system is designed to operate using solar energy captured by photovoltaic panels placed at each monorail station and along the track’s south-facing side.
Reclaiming braking heat into energy has to be incorporated into the trains itself and should be used to supplement energy supply for the train. If no budget then best to let the technology catch up and become a standard practice.

- Energy saving lifts and escalators with standby modes to save electrical use
- Use of LED lighting in the stations to cut down on energy consumption

sustainability

energy
sustainability

- 3000 m² roof surface area for Rainwater harvesting for amenities & irrigational use
- Water condensate collection from air-conditioned areas more for underground stations
A string of tropical pavilions, light; provide respite and delight along the Jaluran.
• Ecology
  Respecting and repairing networks

A key driver for this project was to find a design that articulated City Campus position at the convergence of nature and technology.

Considerations of Ecology
Green Continuum
Today we usually design for 10% landscape
Tomorrow’s future is 80% landscape
Ecological Urbanism will start to emerge by necessity.
SITE WITHIN PRECINCT 5
In designing for the future we are cognisant that the depletion of nature now more than ever means the significance of the natural environment in the future.

The land site for the new city campus stretches 250 meters around a bay overlooking the Putrajaya waterfront. Precinct 5 is a recreational precinct and includes the Putrajaya water sports center, and Pullman hotel. The site directly behind the city campus will be residences which will no longer have direct views to the waterfront, potentially blocked by the future campus. It was important to us to redeem this view with something equally significant.

This greenfield site should remain largely greenfield and we decided to peel the earth up and over a series of spaces to create an earth berm where the campus settlement could appear as human scale buildings plugged into the earth. An urban forest was to create the buffer the campus at street level between future residences and the campus. At the mid viewing level a Berm park emerges from the ground as a canopy. The once a year Firework festival can equally be enjoyed from the rooftop earth berm. At higher levels the residences enjoy a park and water view.

Concept

Today we usually design for 10% landscape. Tomorrow’s future is 80% landscape.
“Hidden Treasures” describes the design philosophy for the scheme where the scheme peels open from the ground to reveal treasures in the form of knowledge spaces. The peeling over of the earth is a gestural feat reinforcing the concept of the a Green continuum.
NIGHT VIEW PERSPECTIVE
EAGLE EYE VIEW
The public realm starts when you enter the circle a dynamic public meeting point. Above rises the loop a 24hr room
ENVIRONMENTAL ANALYSIS

- NORTH-SOUTH FACES
  OPTIMISE SOLAR
  CONDITIONS

- WIND TURBINE
  TECHNOLOGY

- LOW E GLASS LIMITS
  HEAT GAIN

- SOLAR COOLING

- GREEN ROOF
  ABSORBS THERMAL
  RADIATION

- RAINWATER
  HARVESTING &
  WETLAND FILTRATION

- NATURAL
  VENTILATION THRU
  BUILDING PODS,
  CARPARK AND M&E
  SPACES.
• Advocacy

Local reliance & self sufficiency

“The info centre encapsulates the emerging aspiration of KL metropolis as a blooming & dynamic urban centre of the future.”
Menara Kuala Lumpur
KLCC
5.2 km
4.9 km
N
CONTEXT
SITE
Plot 6A
6.5 km
KL SENTRAL
Menara Kuala Lumpur
KLCC
BACK
Water in abundance on average 3000 mm water a year.
light

organic

dynamic
LEGEND:

1. Entry
2. Lobby
3. Main Gallery Space
4. Staff Office
5. Restaurant
6. Internal Courtyard
7. Sales Gallery
8. Theatre
9. Car park

SITE PLAN
LEGEND:
1. Main Entry Level & Staff Offices
2. Restaurant
3. Internal Courtyard
4. Project Office
5. Sales/ Audio Visual / Theater
6. Roof Terrace