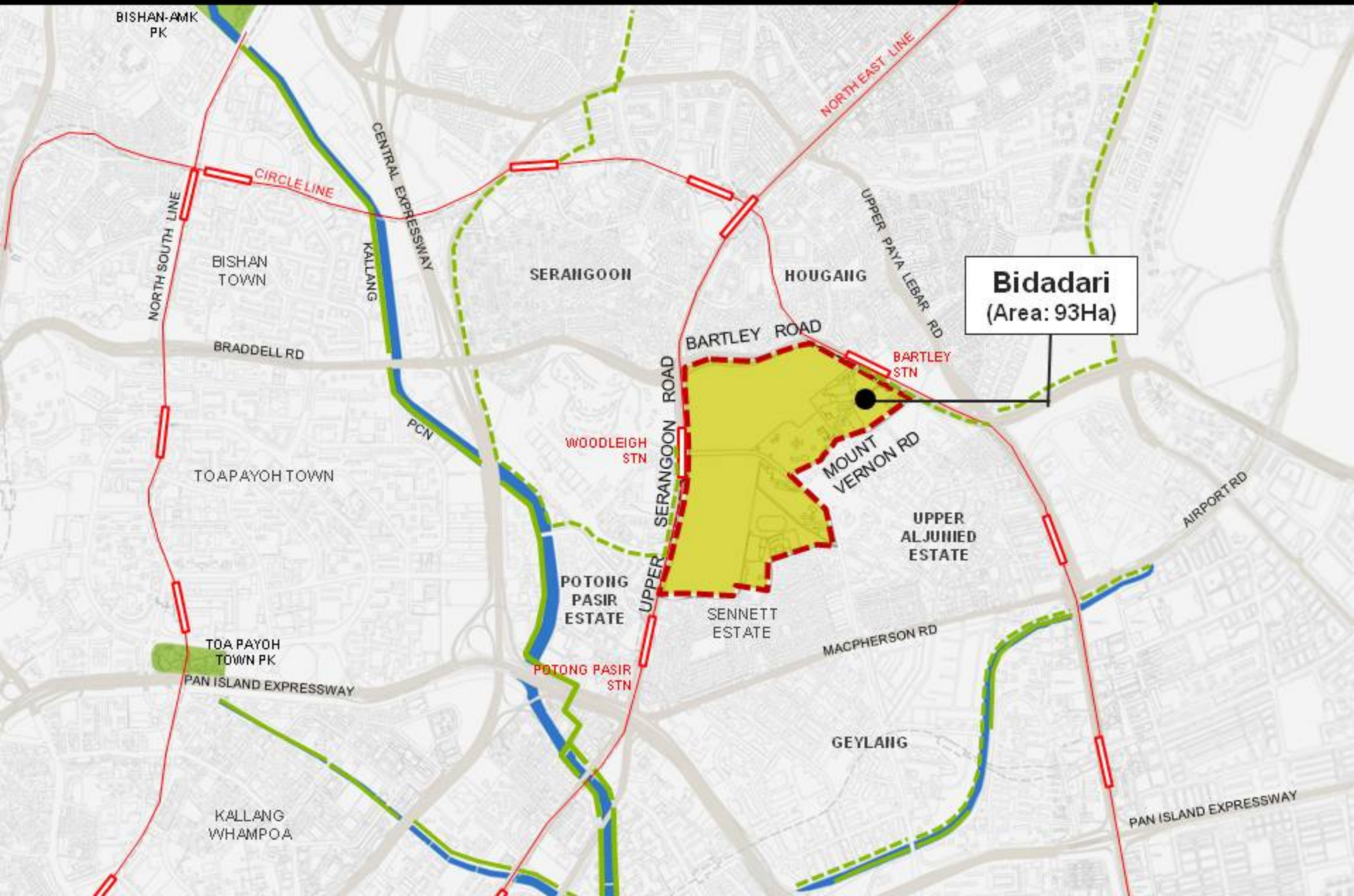
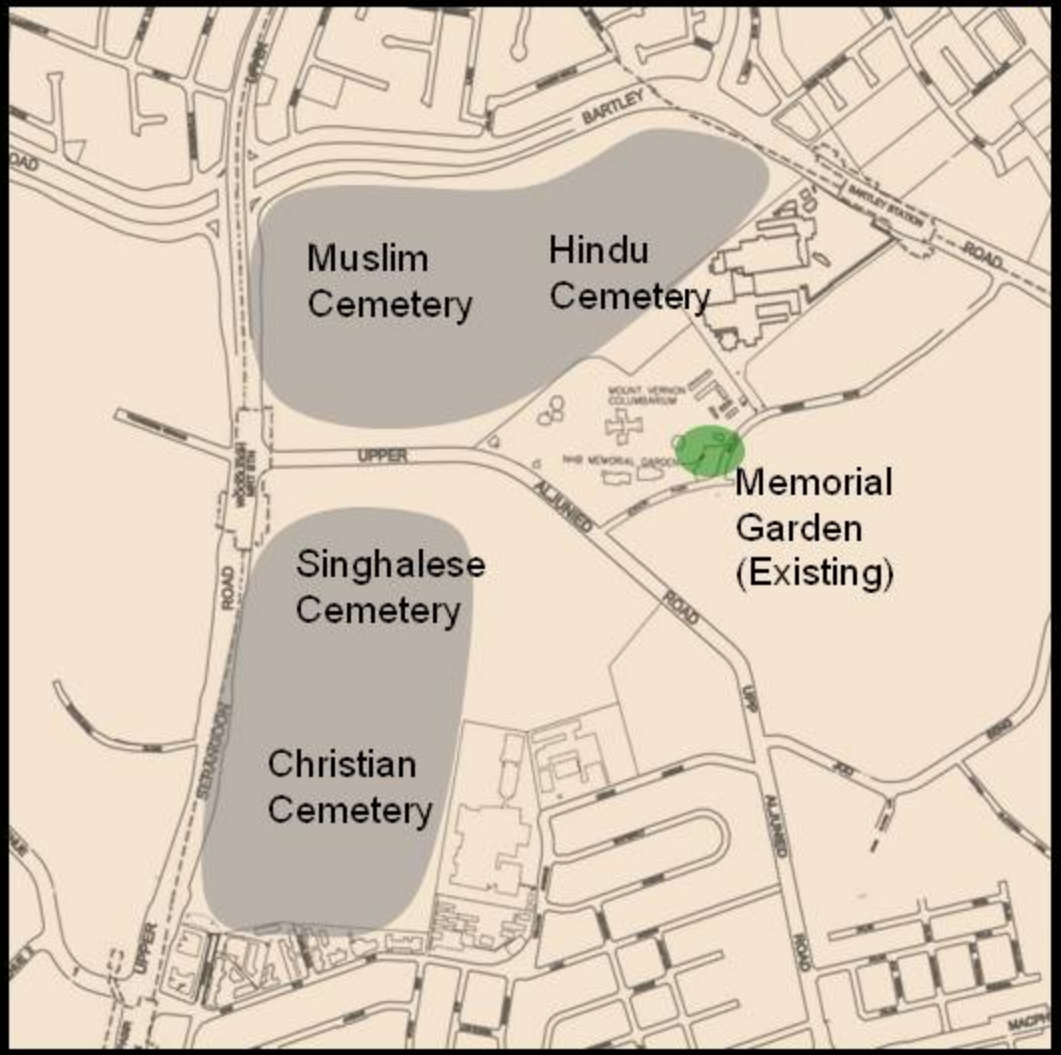


Lim Shu Ying ▪ Director (Urban Design Department) ▪ Research & Planning Group

LOCATION


BISHAN-AMK PK
NORTH EAST LINE
CIRCLE LINE
CENTRAL EXPRESSWAY
NORTH SOUTH LINE
KALLANG
BISHAN TOWN
SERANGOON
HOUGANG
UPPER PAYA LEBAR RD
Bidadari
(Area: 93Ha)
BRADDELL RD
BARTLEY ROAD
BARTLEY STN
PCN
WOODLEIGH STN
SERANGOON ROAD
MOUNT VERNON RD
TOA PAYOH TOWN
UPPER ALJUNIED ESTATE
AIRPORT RD
POTONG PASIR ESTATE
UPPER
SENNETT ESTATE
MACPHERSON RD
TOA PAYOH TOWN PK
PAN ISLAND EXPRESSWAY
POTONG PASIR STN
GEYLANG
KALLANG WHAMPOA
PAN ISLAND EXPRESSWAY

HISTORICAL CONTEXT (Bidadari Cemetery)





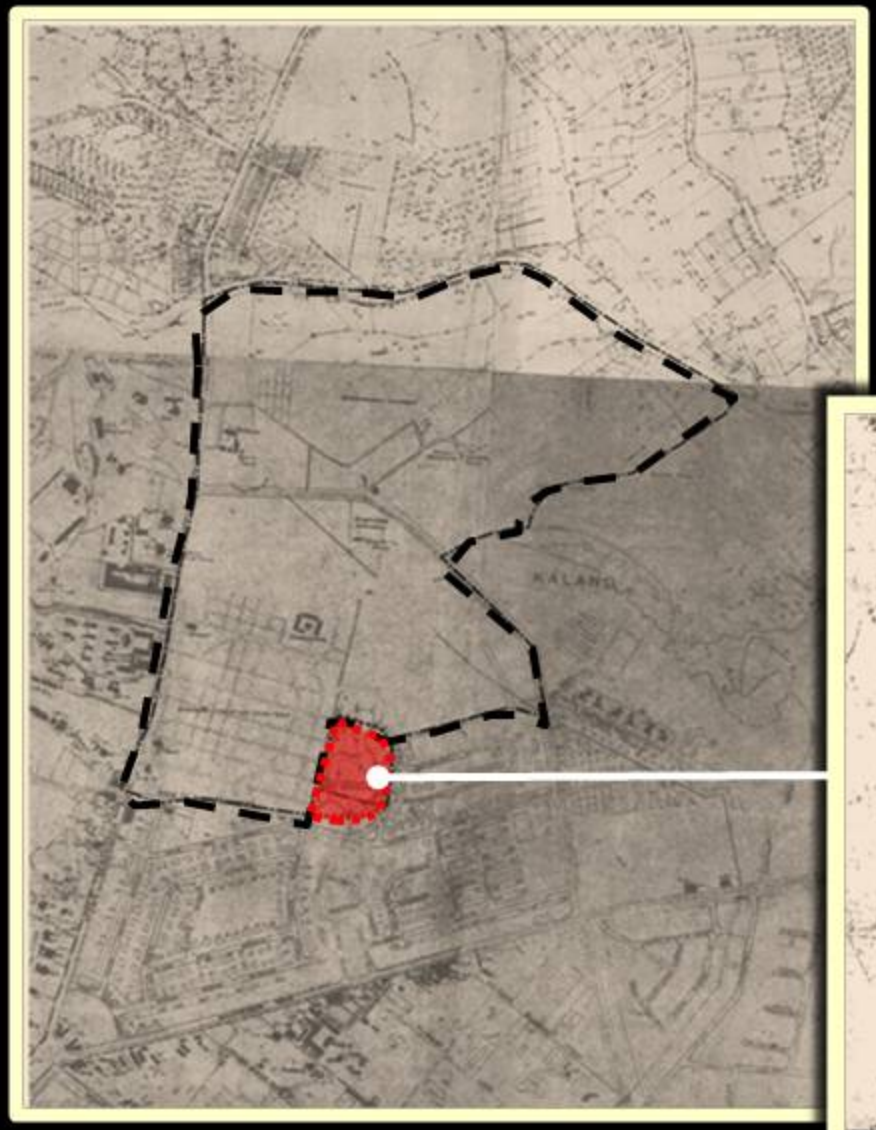
View Of Bidadari Cemetery Along Upper Serangoon Road
Photo courtesy of Mr Lim Kheng Chye



Iron Gate at Bidadari Cemetery
Photo courtesy of Mr Lim Kheng Chye

- First multi-ethnic cemetery
- Exhumed in phases between 2001 to 2004

HISTORICAL CONTEXT (Alkaff Lake Gardens)



- Owned & built by the Alkaff family (merchants from Southern Arab)
- Site presently where Cedar Girls' Secondary School is sited

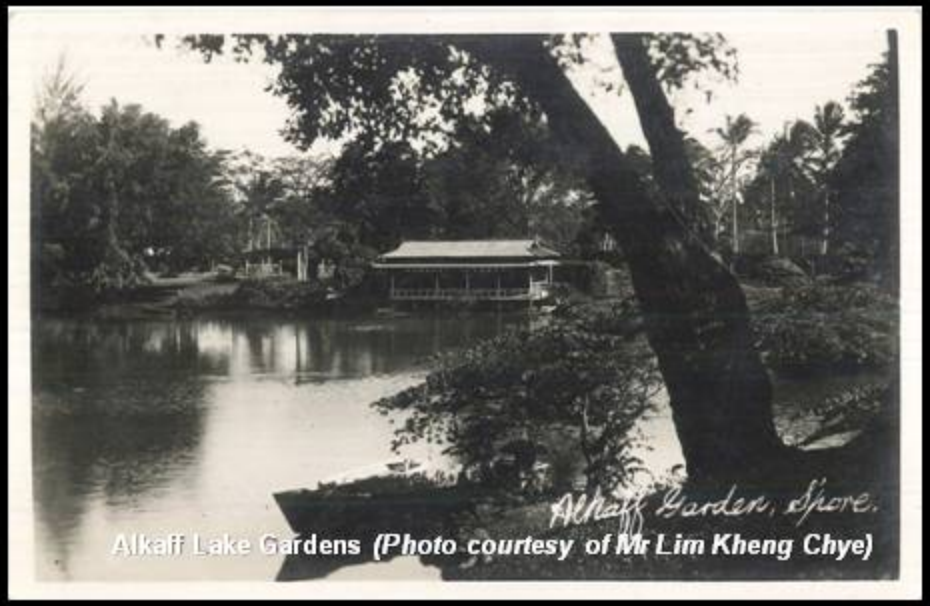


Plan – Courtesy of Mr Lim Kheng Chye & National Archives of Singapore

HISTORICAL CONTEXT (Alkaff Lake Gardens)


ALKAFF GARDENS, SINGAPORE *(Photo courtesy of Mr Lim Kheng Chye)*

- Japanese-styled Alkaff Gardens
- Opened to the public in 1929. Closed in 1964.



Alkaff Lake Gardens *(Photo courtesy of Mr Lim Kheng Chye)*


Alkaff Lake Gardens
(Courtesy of National Archives Of Singapore)

HERITAGE CONTEXT (Greenery)







Cluster of Calophyllyum Inophyllum





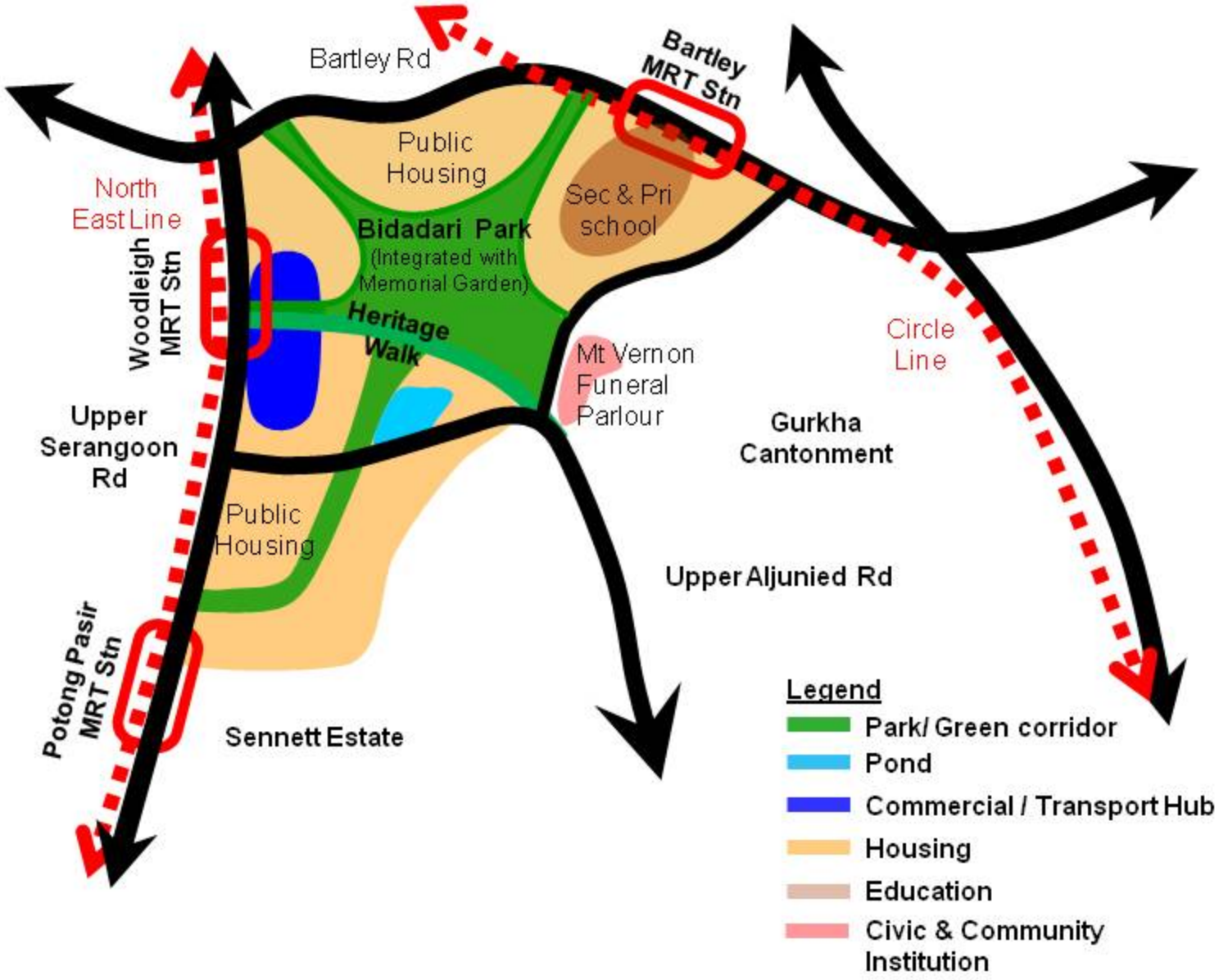
Conservation of mature trees along Upper Aljunied Road

VISION



A tranquil urban oasis where the residents can rest, relax and connect with family & friends in a garden setting; well-served by amenities, convenient connections to the rest of Singapore.

CONCEPT DIAGRAM



SITE VISITS & WORKSHOPS















KEY PLANNING IDEAS

- **Tranquil Urban Oasis**
  Greenery weaving through the estate



- **Kaleidoscope of Memories**
  Fusion of past & present along the Heritage Walk & park



- **Moving Around with Ease**
  Promoting safe & interconnected networks for cycling & walking





- **Conducive Public Places**
  Encouraging community bonding

- **Distinctive Neighbourhoods**
  Thematic housing typologies and landscaping



MASTER PLAN

- Landuse
- Commercial Quantum
- Road & Rail Network
- Pedestrian & Cycling Network

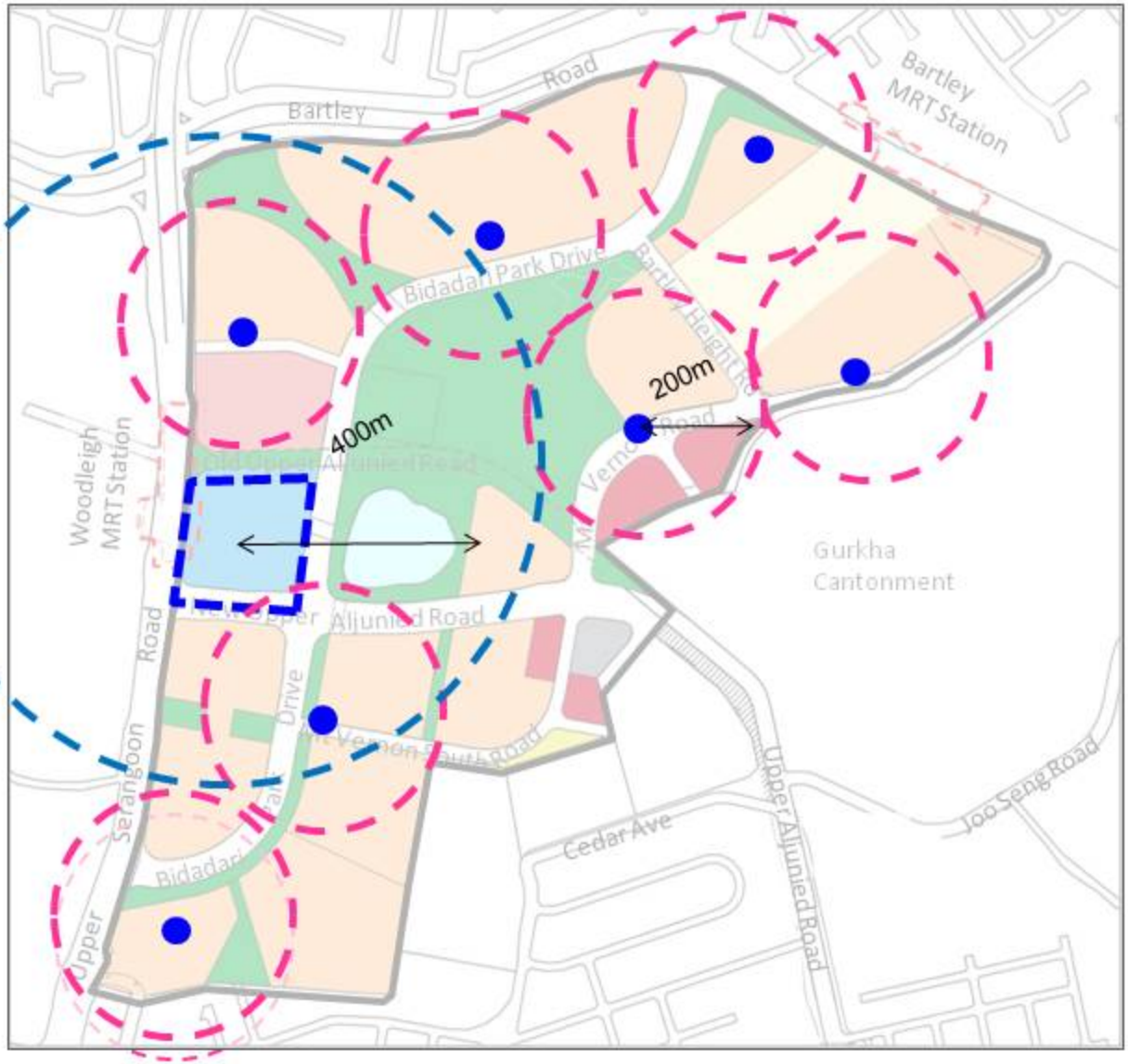
LANDUSE



LEGEND

- RESIDENTIAL
- RESIDENTIAL WITH COMMERCIAL AT FIRST STOREY
- COMMERCIAL & RESIDENTIAL
- H — HEALTH & MEDICAL CARE
- E — EDUCATIONAL INSTITUTION
- W — PLACE OF WORSHIP
- CIVIC & COMMIUNITY INSTITUTION
- PARK
- RESERVE SITE

MASTER PLAN – COMMERCIAL QUANTUM

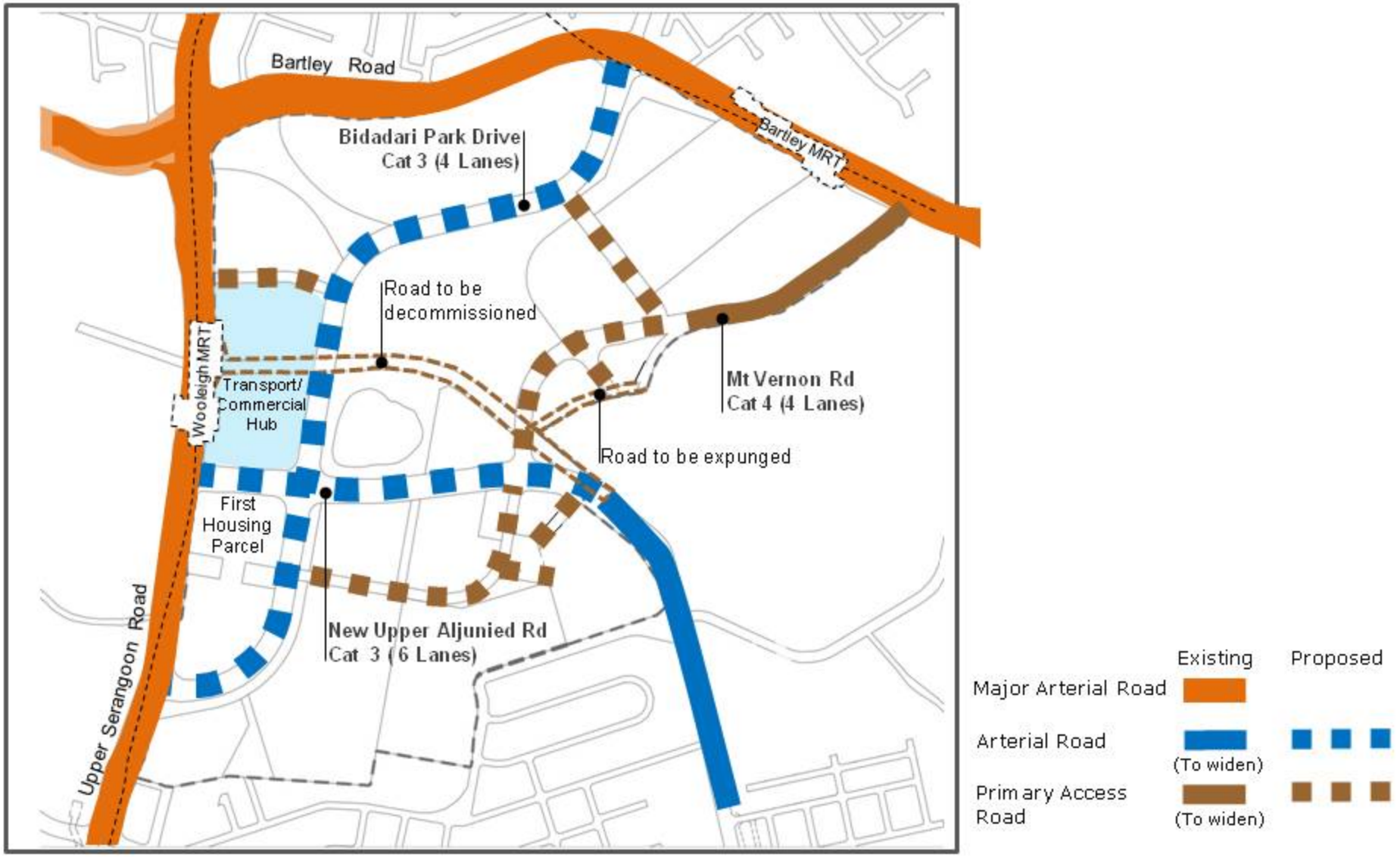


Total Commercial GFA : 30,500 sqm

- Mixed Development : GFA of 20,500 sqm

- Commercial/ Community Node : GFA of 10,000 sq m

ROAD & RAIL NETWORK



PEDESTRIAN & CYCLING NETWORK



Main Pedestrian & Cycling Route

Secondary Cycling Route

Main Pedestrian Route

Secondary Pedestrian Route

SUSTAINABILITY

- Sustainability Framework
- Optimising Wind Flow
- Mitigating Heat Gain
- District Level Pneumatic Refuse Collection System (PRCS)

SUSTAINABILITY FRAMEWORK

Goal	Objective	Indicators	Master Plan	Urban Design	Building Design
Low Carbon Development	Passive Design	• Outdoor Comfort Level • Indoor Comfort Level	√	√	
	Clean Energy	• % renewable energy (public areas)		√	√
	Energy Efficiency	• Lighting • Lifts • Public domain cooling / ACMV		√	√
	Greenhouse Gas Emissions	• % reduction of GHG emissions • % reduction of embodied GHG emissions		√	√
Greener Transport	Clean Commuting (cycling)	• Bicycle parking spaces per DU • Distance from DU to cycling track	√	√	
	(car-sharing)	• % of shared vehicle parking spaces		√	
	(public transport)	• % of DUs within acceptable distance from bus stop/MRT station	√	√	

SUSTAINABILITY FRAMEWORK

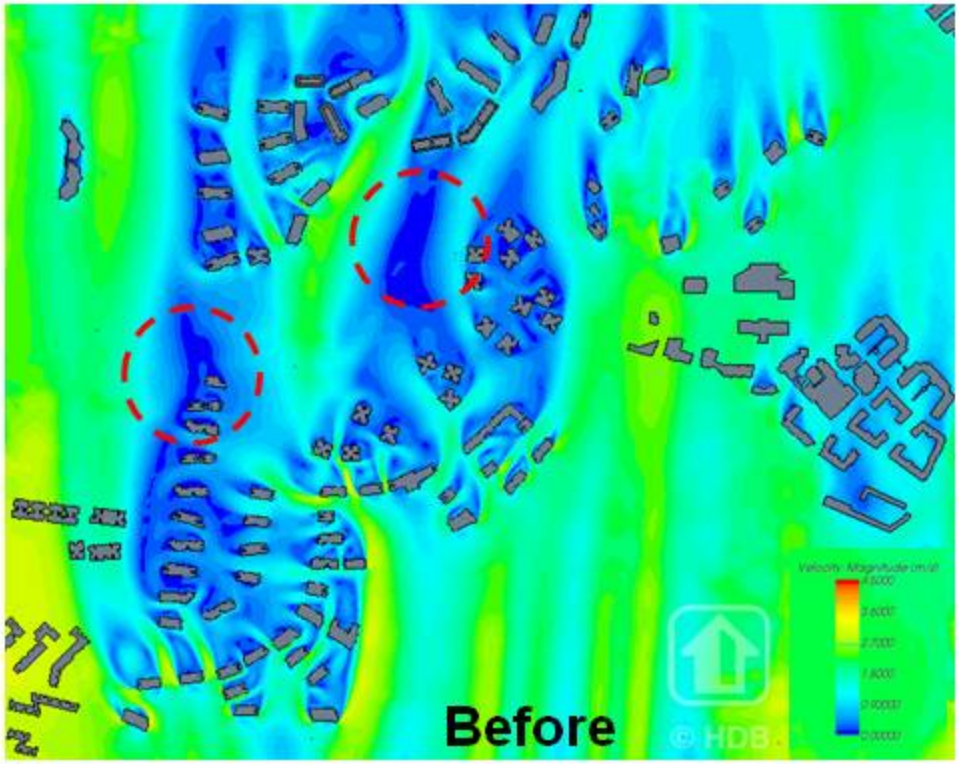
Goal	Objective	Indicators	Master Plan	Urban Design	Building Design
Enhanced Greenery & Biodiversity	Green Spaces	• Green Plot Ratio		√	
Reduced Waste	Waste Minimisation	• Reduction in waste		√	√
	Recycling	• % increase in recycling rate		√	√
Adequacy of Water	Water Consumption Minimisation	• Reduction in potable water consumption • % of non-potable demand supplied by potable water		√	√
Clean, Healthy & Comfortable Environment	Clean Living Environment	• % waste collection by PRCS • Stormwater quality • Indoor air pollutants • Indoor air quality in wet areas		√	√
	Acoustic Comfort	• Noise level			√

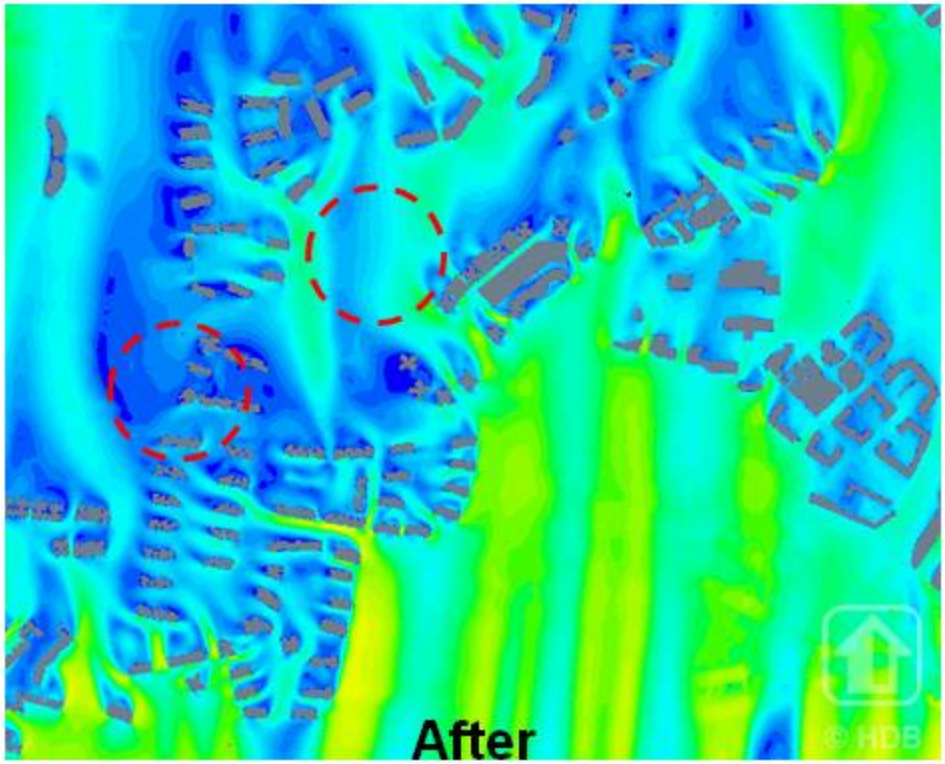
SUSTAINABILITY FRAMEWORK

Goal	Objective	Indicators	Master Plan	Urban Design	Building Design
Meeting Society's Needs	Estate Facilities	• % of DUs within acceptable walking distance from precinct shops/town centre	√	√	
Endearing Homes	Sense of Belonging	• % Belonging Survey		√	
	Eco-Awareness	• Web portal • Educating residents			
Inclusive Growth	Transferrable Knowledge	• Environmental Management Practices		√	√
Inclusive Growth	Contribution to Green Industry	• Sustainable construction • Sustainable products		√	√

OPTIMISING WIND FLOW

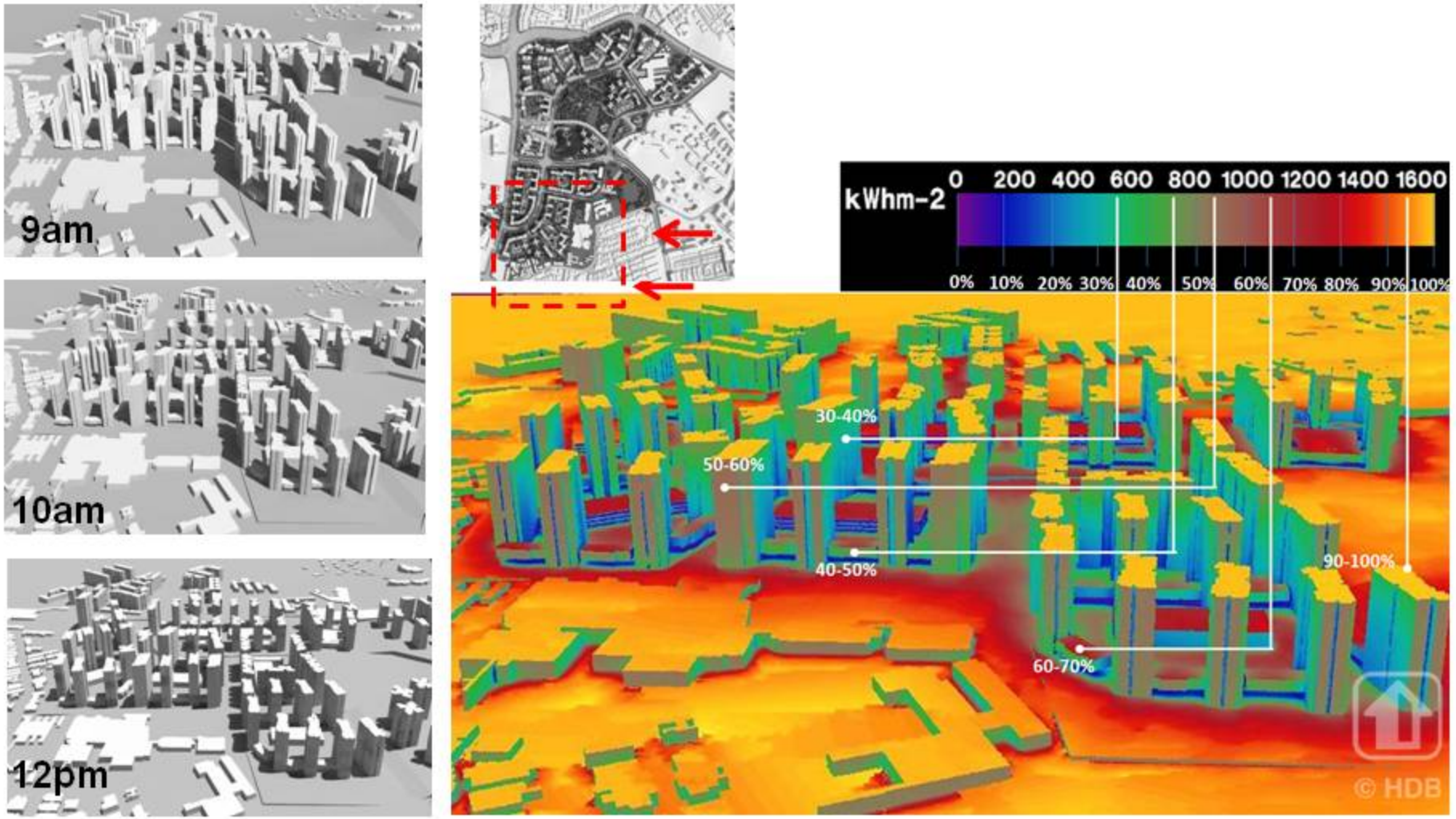
South Wind





District level wind flow analyses to ensure that major wind corridors are created to maximize the wind flow

MITIGATING HEAT GAIN



Solar irradiance simulation to study the effect of typologies and inter block shading to minimise heat gain


Bidadari
Where Rich Heritage & Fond Memories Come Alive
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Thank You