

2017

DESIGN BASIS REPORT FOR MLCP WITH RETAIL SPACE DEVELOPMENT PROJECT AT HAMPANKATTA, MANGALURU



PROJECT MANAGEMENT CONSULTANT
FOR MANGALURU SMART CITY PROJECT



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ABBREVIATIONS.

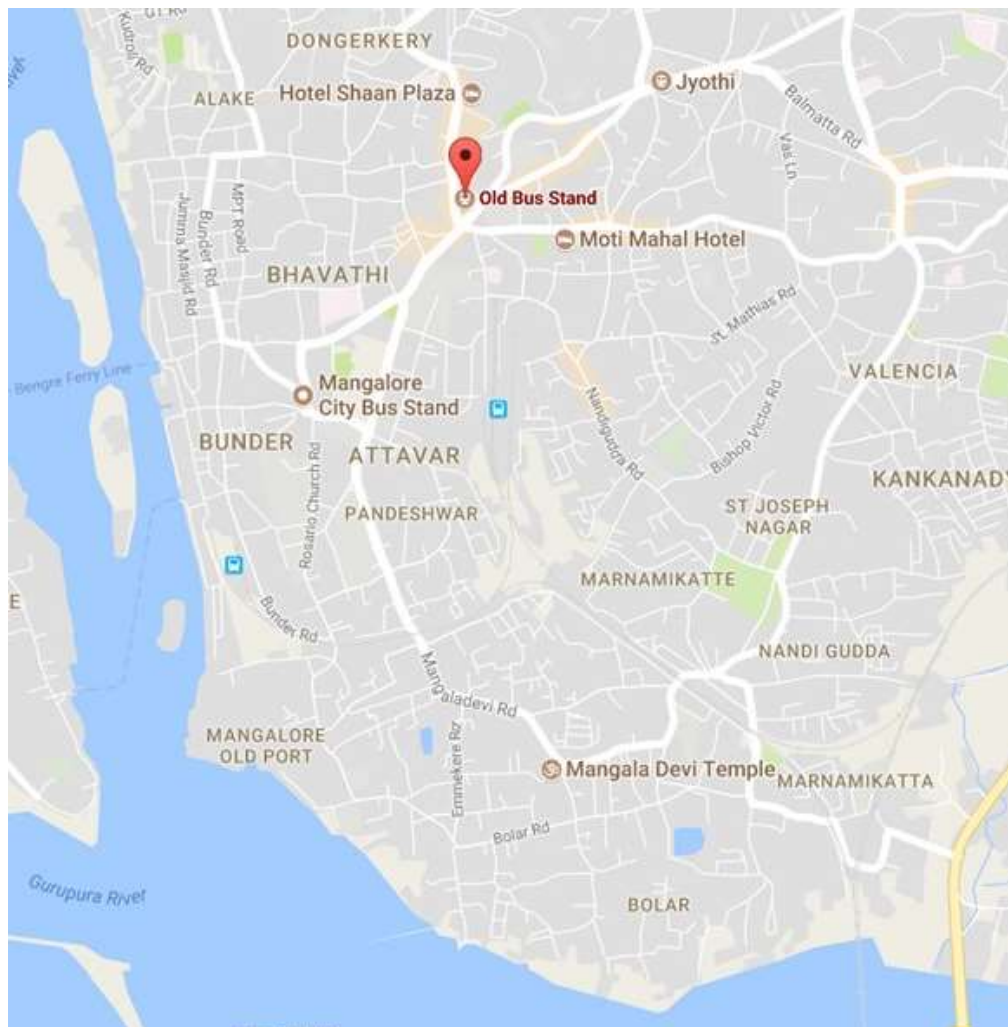
ABD	Area Based Development
ATM	At The Moment" or "Automated Teller Machine
DBFOT	Design Built Finance Operate and Transfer
MCC	Mangaluru City Corporation
MSCL	Mangaluru Smart City Limited
MLCP	<i>Multi-Level Car Park</i>
PPP	<i>Public Private Partnership</i>
GoI	<i>Government of India</i>
GoK	<i>Government of Karnataka</i>
SCP	<i>Smart City Proposal</i>
SPV	Special Purpose Vehicle

1. EXISTING SITUATION ANALYSIS

1.1.1. Site Location

The MLCP project site is located at Hampankatta junction in Mangaluru. It is situated at the cross roads of KSR road and Balmatta road. The project site is easily accessible from all parts of the city and has excellent connectivity from the existing public transport routes. The site is strategically located within the central business district of Mangaluru and is in close proximity to all the important places such as the Central Market, Railway Station, City Centre Mall, Wenlock District Hospital and Town Hall. The site is within the Hampankatta - Old Port - Bunder area selected for Area Based Development (ABD) under the Smart City Mission.

Figure 1: Location Map for MLCP Project Site



1.1.2. Characteristics of site

The project site is located at the junction of KSR road and Balmatta road and has access from both these roads. This site was the earlier location of the old bus stand in Mangaluru. The vacant site is about 1.55 acres which is bounded on 3 sides by small commercial and retail buildings fronting the main roads. The total extent of the site including the surrounding existing buildings is about 2.61 acres.

Satellite Image showing the project site



View of the project site

Presently the site serves as a municipal parking lot with a maximum capacity of about 110 cars. During late evening and night the site also serves as the informal starting point of inter-city private buses.

Aerial View of the project site



The buildings on the periphery of the site are at quite old and many of these are in disrepair and deteriorating condition. Only the Diamond House building having the jewelry store is well maintained in good condition. These buildings have shops, commercial establishments and hotel/ guesthouse. The retail development found around the site is mostly informal high street retail mainly housing private bus operators' offices, assorted shops and eateries. However the buildings have no front set-back space on the road-side, which would have to be provided for in case of redevelopment or road widening.

1.1.3. Neighbourhood Profile

The built environment around the site is very commercial in character. The neighbourhood of the Project Site is dominated by multi-storey hotels and commercial buildings with retail shops on the ground floor. The newly constructed City Centre Mall is located at a short distance from the site. Many small and medium budget hotels are located on the KSR and Balmatta road.

The Hampankatta area, has dense development with most buildings abutting the road and almost no side setback space. The streets are also narrow with heavy pedestrian and vehicular traffic. Consequently there is severe lack of parking spaces in the surrounding area.

Important public places such as the Central Market, Town Hall and Railway Station are within half kilometer distance from the site. The above destinations attract lots of visitors and therefore the locality has a significant amount of floating population throughout the day.

1.1.4. Existing Buildings and Stakeholders at Site:

Most of the structures in the site are commercial buildings with retail shops facing the road.
 Area Statement of Existing Structures on site:

Plot Area proposed for MLCP project				
SI No.	Property description	Sy. No.	Area (SqM)	Area (Acre)
1	MCC Land	3, 4 and other	6274.40	1.55
2	Diamond House at KSR Road	4, 5 and other	728.64	0.18
3	Diamond Building, Balmatta Rd	3 and other	890.56	0.22
4	Baliga building	4/1 B, 6A and other	80.96	0.02
5	Maruthi building	4/1 B, 6A and other	161.92	0.04
Total			8136.48	2.01

- Vacant space at the site belonging to MCC: 1.55 acres
- Area occupied by private buildings at periphery of site: 0.46 acres
- [Figure 2: MLCP Site Profile](#)



The MSCL has conducted stakeholders consultation meetings on 13/06/17 & 08/08/17.

2. Need for Proposed Intervention

Hampankatta is the main retail hub and Central Business District of Mangalore. This area has intense commercial activities in the form of shops, market, hotels and offices. However, over the years this area has witnessed dense development resulting in problems such as traffic congestion and lack of parking facilities. This shortfall in basic urban infrastructure is constraining further growth of this retail node.

Therefore Mangaluru City Corporation has proposed a Multi-level Car Parking (MLCP) facility in Hampankatta with intent to reduce the traffic and parking woes in this area. The MLCP facility has been proposed at the vacant site of the old bus stand in Mangalore.

Realizing the commercial potential of this strategic location, it is proposed to develop this site as an integrated MLCP cum Commercial Complex facility by involving private sector participation for development, operation and maintenance of the facility.

2.1.1. Objective

The proposed intervention aims to achieve the following:

- To reduce the traffic congestion and parking shortage in Hampankatta area by creating multi-level smart parking facility
- To utilize the commercial potential of the vacant site of old bus stand
- To create a civic infrastructure facility through PPP mode

2.1.2. Assumptions/ prerequisites

The assumptions for implementation of the MLCP are:

- The project site has significant commercial potential to enable the implementation of MLCP facility and commercial complex on PPP mode
- Mangaluru City Corporation will facilitate the development of this project through mobilization of the various stakeholders such as the private shop owners at the site
- Owners of shops and commercial property abutting the vacant site would be agreeable to participate in this development
- The project has permissible FAR/ FSI of 2.5, with potential to increase upto 4 (including premium FSI of 1 and TDR of 0.5) for commercial development based on the zonal regulations for Mangaluru

2.1.3. Proposed Development

It is proposed to develop a modern Multi Level Car Parking cum Commercial Complex facility at the Old Bus Stand site in Hampankatta. The proposed Site is considered suitable for commercial development given its location, size and connectivity. The Basement floors and part Ground floor could have parking facility and the upper floors could have

commercial complex. The MLCP facility would create the much needed parking space within the CBD area and assist in decongesting the traffic along the main arterial roads.

2.1.3.1. Multi-Level Car Parking Facility:

- Multi-level car parking facility having minimum parking capacity of 500 cars and 300 two-wheelers.
- Parking facility can be developed in Basement floors as well as Ground and upper floor
- It will have public conveniences such as Toilets and Tourist information centre
- Car parking areas can be automated/ mechanized or manual with demarcated parking slots.
- Separate entry and exit for Commercial Complex and Multi Level Car Parking and also entry to commercial complex from the multilevel car parking.
- Real time information system (showing availability of parking slots) would be incorporated with parking facility and also in Mangalore One mobile application.

Area Requirement for Different Parking Technologies

S. No.	Parking Systems	Area Requirement
1	Ramp Based Manual Parking Systems	32 SqM per ECS
2	Semi-Automatic Parking Systems	23 SqM per ECS
3	Automatic Parking Systems	16 SqM per ECS

Note: ECS = Equivalent Car Space (i.e. parking space required for a four-wheeler vehicle)

a) Ramp Based Manual Parking Systems



View of Ramp based MLCP at Delhi International Airport

b) Automated Parking systems



View of Automated parking system installed by Wöhr Automatik Park Systeme, GmbH at Akruiti Skypark in Mumbai

2.1.3.2. *Commercial Development Facilities:*

Commercial Complex may include the following:

- Shopping Mall
- Cinema/ Multiplex
- Food Courts
- Hotel, Restaurants
- Hypermarket
- Large Showrooms for consumer goods / electronics etc.
- Banks and ATMs
- Office spaces for commercial organizations
- Educational institutes

2.1.3.3. *Project Contractual Structure:*

The MLCP cum Commercial Complex is proposed to be developed on Public Private Partnership (PPP) basis on the Design-Build-Finance-Operate-Transfer (DBFOT) format.

The Concessionaire would be permitted to develop a Commercial Complex as per his plan on the site and to use his ingenuity to maximize the value from the property and factor the same in the Proposal submitted. The proposed development shall be subject to the Concessionaire obtaining the requisite approvals under the applicable law including the local building by-laws.

Project Implementation – Option 1:

Integrated development combining the vacant municipal land and the private buildings at the site

Site area for development:	2.61 acres (10,575 SqM)
Built-up Area potential (considering maximum FSI of 4):	42,300 SqM
<ul style="list-style-type: none"> • Permissible FAR: 2.5 • Premium FAR: 1 • TDR: 0.5 	
Advantages	<ul style="list-style-type: none"> • Proposed development will get road frontage/visibility along KSR and Balmatta road • Rehabilitation of the property owners of the existing buildings at site • Project will get maximum development potential
Disadvantages	<ul style="list-style-type: none"> • Reaching consensus with the private property owners may delay the project and derail the implementation timeline • Compensation demands of the private property owners will increase the project cost and may make project unviable

Project Implementation – Option 2:

Standalone development only on the vacant municipal land

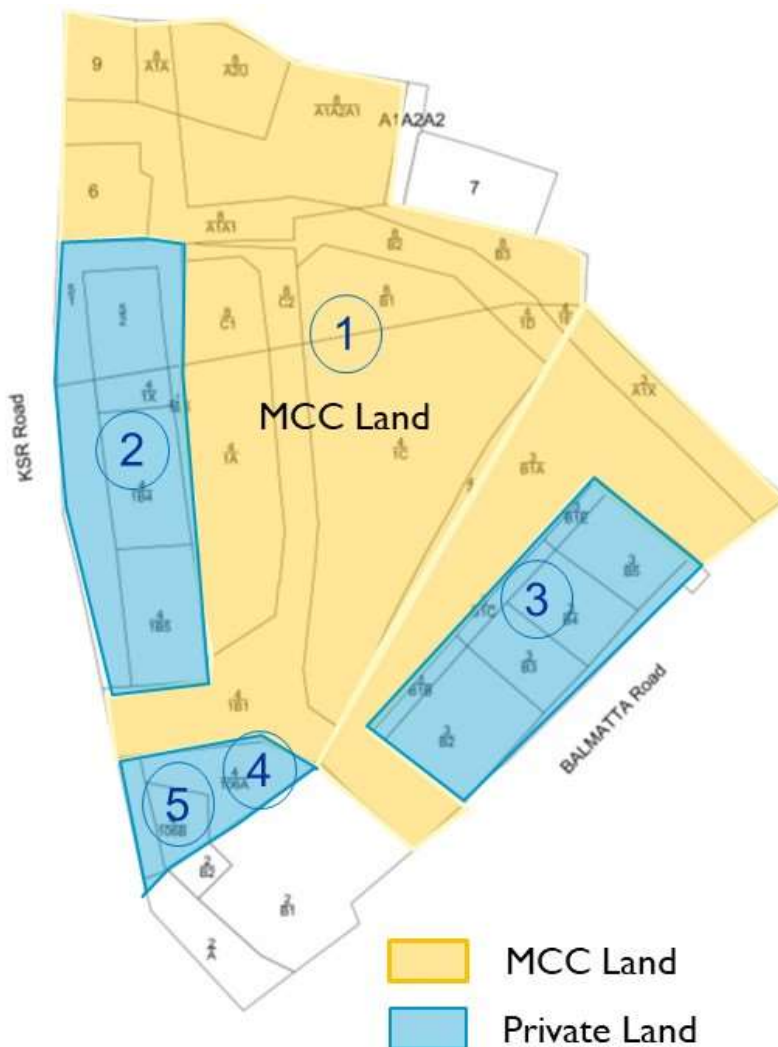
Site area for development:	1.55 acres (6275 SqM)
Built-up Area potential (considering maximum FSI of 4):	25,100 SqM
<ul style="list-style-type: none"> • Permissible FAR: 2.5 • Premium FAR: 1 • TDR: 0.5 	
Advantages	<ul style="list-style-type: none"> • Project implementation will be faster since it will involve construction on vacant land of MCC • Project cost would be in control, since there would be no rehabilitation or compensation component
Disadvantages	<ul style="list-style-type: none"> • Proposed project will have less frontage and visibility on main road • Commercial potential may decrease due to less frontage and less built-up area

Option 1 comprising Integrated Development of Site was selected for implementation.

3. DESIGN CONSIDERATION

3.1. Land Ownership Profile of Site

The site considered for this project comprises of municipal land (1.55 acres) at center of site and private land (0.46 acres) at periphery of the site



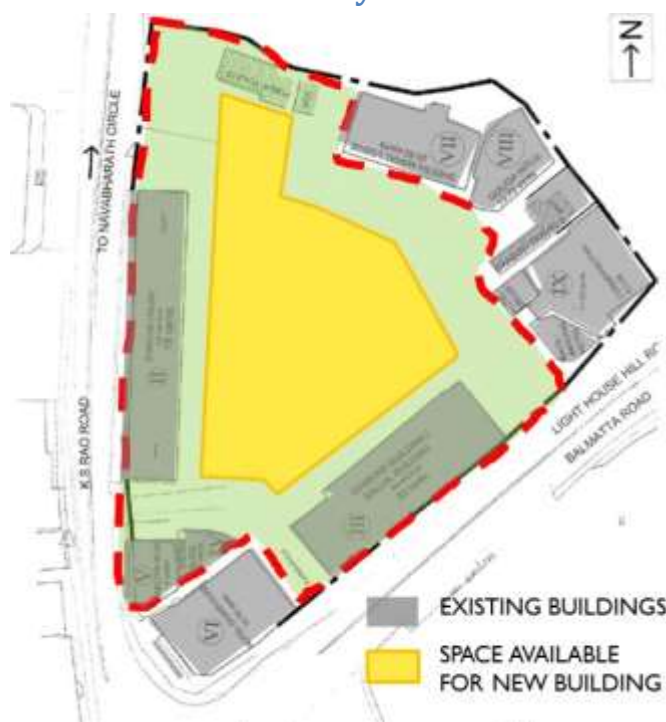
Private land is on periphery of the site and has benefit of road frontage along the KSR and Balmatta Road. MCC land is at the center of the site.

3.2. Design Brief

The Design brief evolved based on MSCL requirement, site analysis and stakeholder consultation is summarised below:

- **Public Parking** for minimum 200 cars/ Equivalent Car Space
 - Access through entry/ exit ramps mandatory as per Zonal Regulations
 - Stack Parking permitted on 25% capacity as per ZR
- Existing **stakeholder rehabilitation** area: 5246 SqM
- **Rehabilitation pre-conditions** of stakeholders:
 - Construction of MLCP without disturbing the existing buildings at site
 - Demolition of existing buildings after shifting of stakeholders into new premises
 - Allocation of built-up area in the new building equivalent to existing built-up area of the private stakeholders
 - Shops located facing a particular road to be given space facing the same road
 - Shops located on a particular floor of existing building shall be given space in equivalent floor in the new building
- **New Retail/ Commercial facility:**
 - Retail/ shopping mall at lower floors
 - Offices at higher floors
- **FSI** permissible on site: 2.5
- **Additional FSI** permissible: 1.5 (Premium FSI of 1.0 + TDR of 0.5)

3.3. Site Buildability



Although plot area is 8137 SqM, the actual area available for new building foot-print is only 3000 SqM, due to the constraint of retaining existing buildings and triangular shape of site.

Considering minimum FSI of 2.5, proposed Built-up Space would be at least 20,500 SqM, and available foot-print of 3000SqM, the new building would be at least 7 floors tall.

Existing Plot area:		8137 SqM
Proposed Built-up Area:		
Sl No.	Component	Area (SqM)
1	Estimated Built-up Area (@ 2.5 FAR)	20341

Proposed Commercial Development potential:		
Sl No.	Built-up area component	Area (SqM)
A	Permissible Built-up Area (@ 2.5 FAR)	20341
B	BUA required for rehabilitating pvt stakeholders	5246
	BUA for commercial potential (A-B)	15095

Note: Free FSI of 2.5 is considered for base estimate.

Developer has the option to buy Premium FAR and TDR

Estimated Built-up Area for Parking:				
Sl No.	Component	Parking Slots	BUA (SqM)***	BUA considering stack parking (SqM) #
1	Public Parking/ MLCP for MCC*	200	6400	4800
2	Parking for Building occupants**	410	13146	9860
	Total	610	19546	14660

Note:

* Public parking capacity as per requirement specified by MCC

** As per Zonal Regulations, parking lot for building occupants is to be provided @ 1 car space for every 50 SqM

*** Built-up Area is as per 32 SqM per car for Ramp Based Parking

#Stack parking is permitted on 25% Parking capacity as per Zonal Regulations of Managluru

Proposed Built-up Area (BUA) of the project:		
Sl No.	Component	BUA (SqM)
1	Public Parking for MCC	9860
2	Addl Parking for new Building as mandated by Zonal Regulations	4800
3	BUA for rehabilitating pvt stakeholders	5246
4	BUA for commercial potential	15095
	Total	35001

Based on above established parameters, following two options for proposed site layout were developed.

3.4. Proposed MLCP Layout - Option A: Single Building:



Salient features:

Plot Area after road widening = 6492 Sq.m.
 Total Built up Area = 35001 Sq.m.
 Proposed Footprint Area = 2454 Sq.m.
 Basement Parking: 3 floors
 Above Ground floors = 11 floors
 Total Green Space = 2304.05 Sq.m.

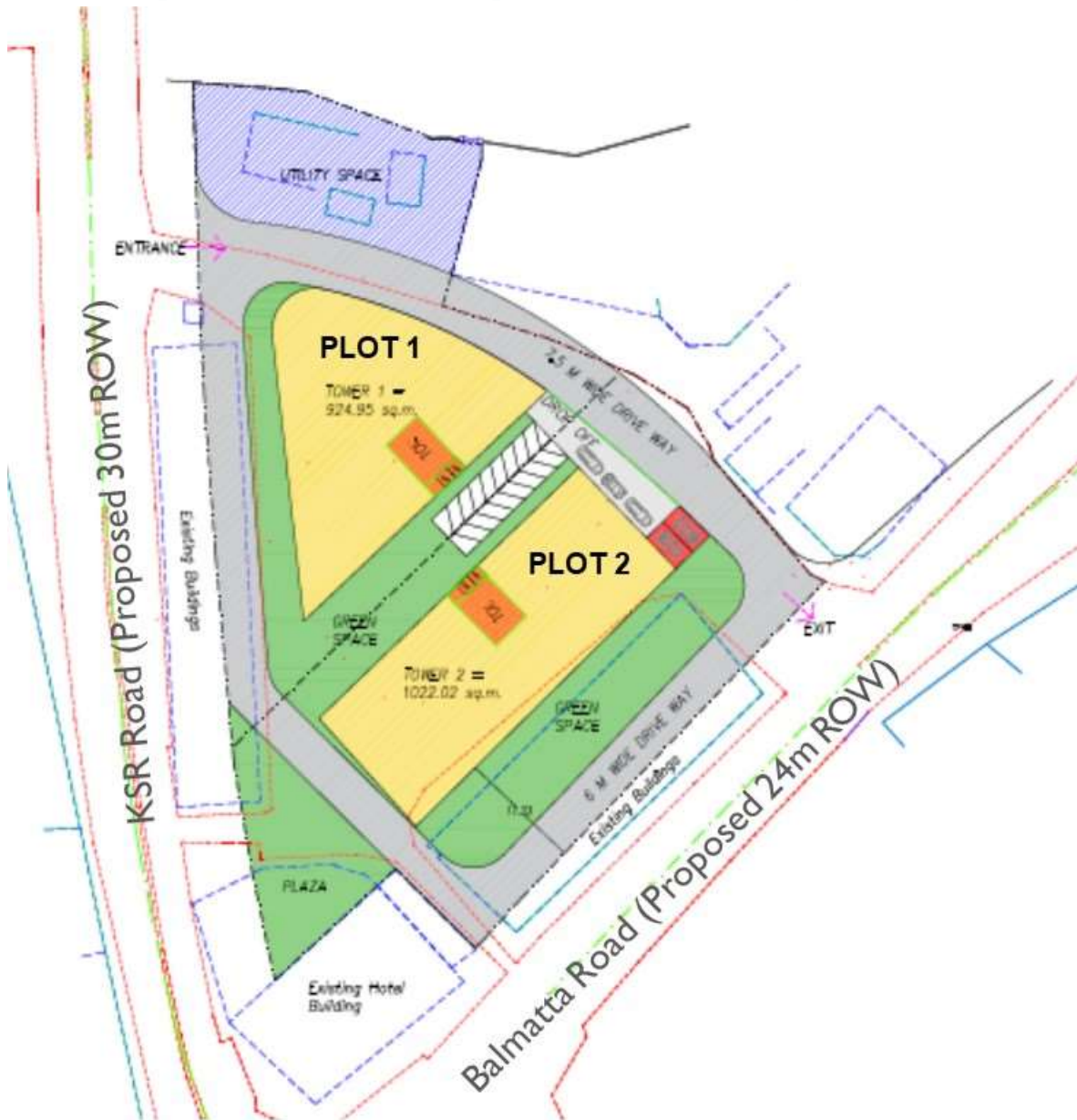
Advantage:

Larger footprint area, so lesser floors

Disadvantage:

Built-up area > 20,000 SqM. Therefore Environmental clearance required, which may be onerous

3.5. Proposed MLCP Layout - Option B: Two Buildings:



Salient features:

Plot Area after road widening = 6492 Sq.m.
 Total Built up Area = 35001 Sq.m.
 Building Footprint Area = 1947 sq.m.
 Parking: Basement – 3 floors
 Above Ground: upto 14 floors
 Green Open Space = 3238 Sq.m

Advantage:

Built-up area of each plot < 20,000 SqM.
 Therefore Environmental clearance not required

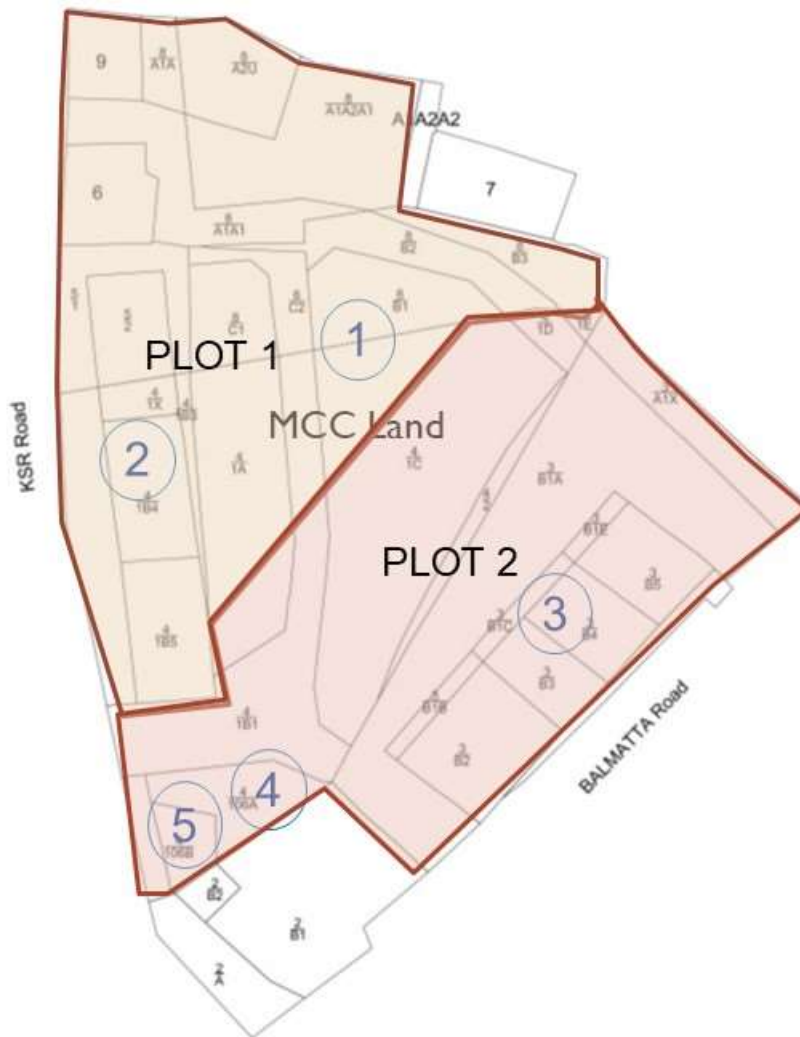
Disadvantage:

Smaller footprint area, so more floors

Option B was selected, since it would not require Environmental Clearance thereby reducing the project implementation timeframe and costs.

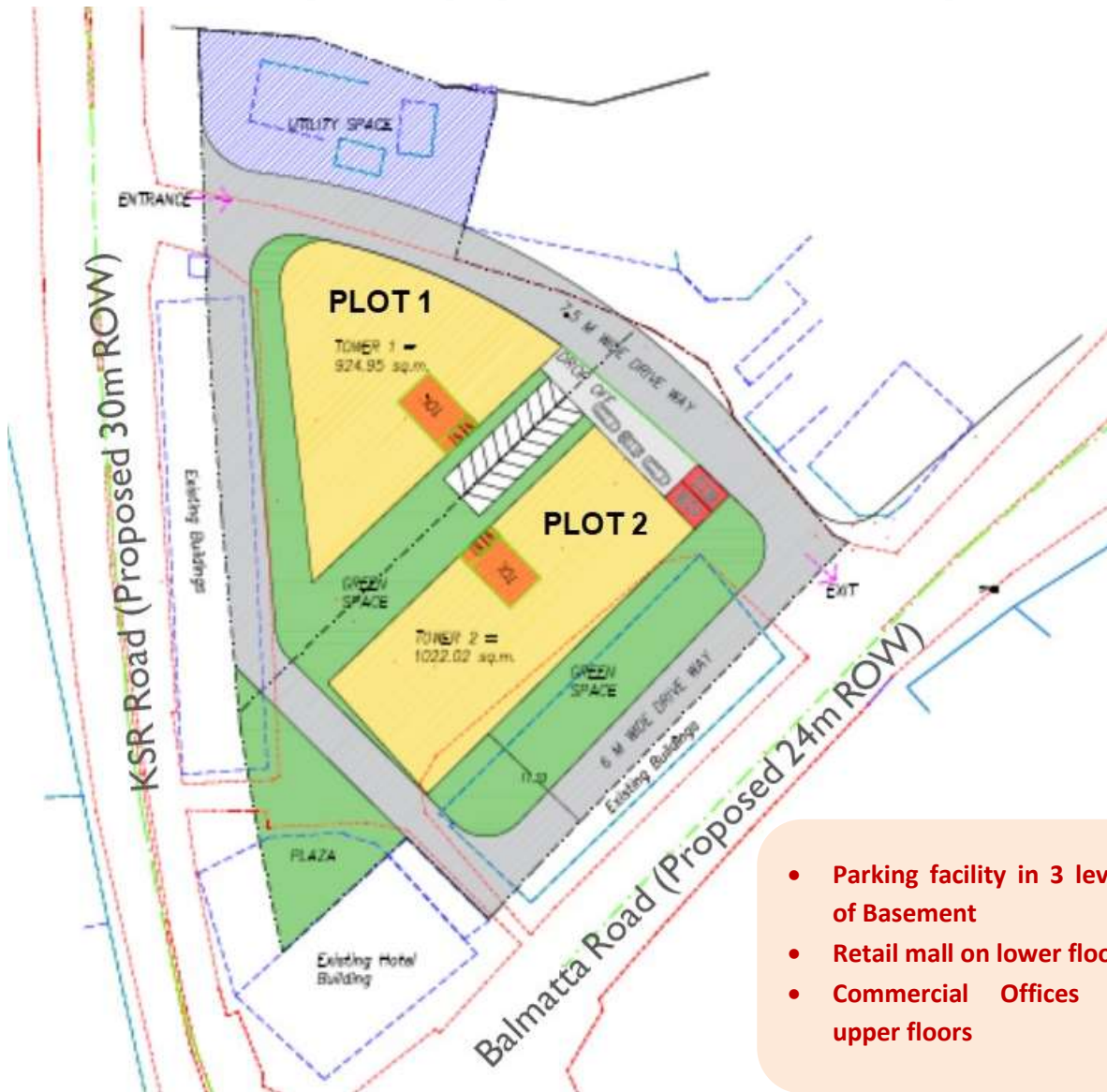
3.6. Indicative proposed site layout after amalgamation of MCC and private plots:

- The existing land of MCC and the private land is proposed to be assembled into two plots
- Plot configuration after amalgamation of plots for proposed development, is indicative.
- Concessionaire may opt for similar or different configuration as per its own proposal



Plot Configuration	Plot Area (SqM)	Plot Area (SqM)
Plot 1	4535.00	1.12
Plot 2	3601.48	0.89
Total	8136.48	2.01

3.7. Finalised Proposal for proposed MLCP and Retail development:



- Due to site gradient difference of 6m between KSR and Balmatta Road, the building can have Lower Ground Floor accessed from KSR Road , middle Ground Floor and Upper Ground Floor accessed from Balmatta road side
- Ground floor shops get allocated to existing stakeholders, as per their demand.
- Part Ground floor and 1st, 2nd and 3rd floor shops are for new retail development
- Therefore entire Parking needs to be accommodated within Basement

Proposed Built-up Area (BUA) of the project:

S No.	Component	BUA (SqM)	Tower 1	Tower 2
1	Public Parking/ MLCP for MCC	4800	1720	3177
2	Parking space for new Building as mandated by Zonal regulations	9860	5442	4322
3	BUA for rehabilitating stakeholders	5246	1457	3789
4	BUA for commercial potential	15095	9880	5215
	Total	35001	18499	16502

3.8. Estimated Break-up of Proposed Built-up Area of the Project:

SI No.	Component	BUA (SqM)	Tower 1	Tower 2
1	Public Parking for MCC	4800	1720	3177
2	Parking space for new Building mandated as per Zonal Regulations	9860	5442	4322
	Sub-Total -Basement Parking (1+2)	14660	7162	7498
	Basement 1	4887	2387	2499
	Basement 2	4887	2387	2499
	Basement 3	4887	2387	2499
3	BUA for rehabilitating stakeholders	5246	1457	3789
4	BUA for commercial potential	15095	9880	5215
	Sub-Total -Above Ground (3+4)	20341	11338	9004
	Lower Ground Floor	1947	925	1022
	Middle Ground Floor (1st Floor)	1947	925	1022
	Upper Ground Floor (2nd Floor)	1947	925	1022
	3rd Floor	1947	925	1022
	4th Floor	1947	925	1022
	5th Floor	1947	925	1022
	6th Floor	1947	925	1022
	7th Floor	1070	608	462
	8th Floor	1070	608	462
	9th Floor	1070	608	462
	10th Floor	1070	608	462
	11th Floor	608	608	
	12th Floor	608	608	
	13th Floor	608	608	
	14th Floor	608	608	
	Total (Basement + Above Ground)	35001	18499	16502

Note:

- FSI considered is 2.5
- Developer may choose to go upto FSI 4, by purchasing premium FSI of 1 and TDR of 0.5
- For FSI of 4, number of floors will increase due to limited footprint of building at site
- The area allocation and No. of floors shown is indicative
- Since the project is DBFOT, Developer may come up with different design