



GOVERNMENT OF KARNATAKA

INFRASTRUCTURE  
DEVELOPMENT  
DEPARTMENT



*Sector Specific Inventory &  
Institutional Strengthening  
for PPP Mainstreaming  
Transport Department*

**FEEDBACK INFRA**  
*Making Infrastructure Happen*

# *Pre-feasibility Report*

## Development of Passenger Amenity Centres for KSRTC & NEKRTC

May 2012



Feedback Infrastructure Services Pvt. Ltd., India

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## List of Abbreviations

BOOT	Built Own Operate Transfer
BOT	Built Operate Transfer
BMTC	Bangalore Metropolitan Transport Corporation
DBFOT	Design Build Finance Operate Transfer
DBOT	Design Built Operate Transfer
ECS	Equivalent Car Space
FISPL	Feedback Infrastructure Private Limited
GoK	Government of Karnataka
IDD	Infrastructure Development Department
IR	Indian Railways
JV	Joint Venture
KSRTC	Karnataka State Road Transport Corporation
MoR	Ministry of Railways
NEKRTC	North East Karnataka Road Transport Corporation
NWKRTC	North West Karnataka Road Transport Corporation
PPP	Public Private Partnership
SPV	Special Purpose Vehicle
TA	Transaction Advisor
VGf	Viability Gap Funding

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## 1 EXECUTIVE SUMMARY

### Background:

Government of Karnataka (GoK) envisages development of infrastructure through Public Private Partnership (PPP) and intends to attract investments in various sectors in Karnataka.

The current report details out the prefeasibility study done for 'Development of Passenger Amenity Centres'. The following sites were finalized in consultation with Transport department in the Workshop held under the Chairmanship of the Principal Secretary, Transport on 23<sup>rd</sup> February 2012:

- Chitradurga (Area- 10 Acre)
- Lingsugur (Area- 0.67 Acre)
- Sindhanur (Area- 0.84 Acre)

The project idea is to utilize the existing land parcels, with various state transport undertakings, and develop them in the form of Passenger Amenity Centres (PAC).

### Sector Profile:

Transport sector in Karnataka is looked after by the State Transport Department (Secretariat). It has under it the following line departments:

- Four State Transport Undertakings, viz; Karnataka State Road Transport Corporation (KSRTC), Bangalore Metropolitan Transport Corporation (BMTC), North East Karnataka Road Transport Corporation (NEKRTC) & North West Karnataka Road Transport Corporation (NWKRTC) for providing road transport services and associated infrastructure across Karnataka. The functions of State Transport Undertakings are governed by the Road Transport Corporation Act, 1950 and Karnataka Road Transport Corporation Rules, 1961. All issues involving finances and all functions to be carried out by Government as per the Road Transport Corporation Act, 1950 & Karnataka State Road Transport Corporation Rules, 1961 are being discharged in the Transport Secretariat
- Dr. Devraj Urs Truck Terminal Ltd that is responsible for setting up truck terminals, wherever required in Karnataka
- Office of Transport Commissioner: Also called as the Road Transport Department that is responsible for tax collections and registrations of the vehicle, issue of permits, driver's and conductor's licenses etc in Karnataka. It has 56 Regional Transport Offices across the state

Some of the key steps required for greater success of PPP projects in the sector are as follows:

- More proactive approach to take up a larger number of PPP projects
- Need for structuring the projects for sustained commercial and financial viability
- A need for standardized bidding documents including concession agreement across all the state transport undertakings

- Flexibility in concession period and FAR restrictions for making projects more attractive
- Interdepartmental issues should be resolved before the project is bid out
- The distribution of risk between the private and public sector needs to be balanced
- Concession period needs to be in sync with the kind of development envisaged. An option of extending concession period via right of first refusal can also be given

### Project Details:

State transport undertakings in Karnataka such as KSRTC, NEKRTC and NWKRTC have land parcels at various locations. Most of them are either vacant or not in-use old bus stand sites. These sites are mainly near operating bus stands and can be developed as Passenger amenity centres (PAC). PAC would have those facilities that a transit passenger would require during his / her journey. These PAC would be developed under PPP basis and will also have commercial component in order to allow the private investor to get reasonable returns on investments.

For the same, extensive discussions were held with KSRTC, NEKRTC, NWKRTC and the Principal Secretary (Transport Department), on the basis of which the above mentioned sites were finalized for developing PAC. For Chitradurga, it was decided that two options—Passenger Amenity Centre and Bus Terminal Cum Commercial Complex—will be examined.

### Case Studies:

In order to derive a better understanding of the issues faced and to cull out the learnings from past experiences, the Consultants have analyzed experiences of similar projects undertaken in Karnataka and other states. The following case study was considered:

- Multi-functional Complexes (MFCs) – Indian Railways

### Market Assessment:

Product mix for development of any land plot is derived based on its suitability for various kinds of development options available. A suitable product mix attracts potential buyers/takers and in turn generates good returns from land. In this section, a suitability analysis has been done for Passenger Amenity Centre development at all sites. Further, suitability analysis was also done for Bus Terminal Cum Commercial Complex in Chitradurga. Various factors which directly and indirectly govern the suitability and demand of the possible or envisaged activities are discussed. The following product mixes are proposed for the three sites:

- **Chitradurga**

#### **Alternative 1: Bus Terminal Cum Commercial Complex**

Product Mix	Percentage	Area (sqm)
<b>Terminal Area</b>	31%	15,173
<i>Commercial Area within the Terminal (Retail)</i>		2,023
<b>Commercial Complex</b>		34,391
<i>Retail Shopping</i>	42%	20,635
<i>Commercial office space</i>	24%	12,036

<b>Budget Hotel</b>	3%	1,720
<b>Total</b>	<b>100%</b>	<b>49,564</b>

**Alternative 2: Only PAC**

Product Mix	Percentage	Area (in Sq.m)
<b>Retail Shopping</b>	30%	4,370
<b>Commercial office space</b>	60%	8,739
<b>Budget Hotels</b>	10%	1,457
<b>Total</b>	<b>100%</b>	<b>14,566</b>

- **Lingsugur**

Product Mix	Percentage	Area (in Sq.m)
<b>Retail Shopping</b>	45%	823
<b>Commercial office space</b>	15%	274
<b>Budget Hotels</b>	40%	732
<b>Total</b>	<b>100%</b>	<b>1,830</b>

- **Sindhanur**

Product Mix	Percentage	Area (in Sq.m)
<b>Retail Shopping</b>	50%	1,338
<b>Commercial office space</b>	25%	669
<b>Budget Hotels</b>	25%	669
<b>Total</b>	<b>100%</b>	<b>2,676</b>

**Project Financials:**

Financial analysis of the projects is done to understand if the project is bankable from the perspective of DSCR (Debt Service Coverage Ratio) and Post Tax NPV. Different concession fee scenarios are considered to analyse returns / risks for the Concessionaire and the Government.

Three payment models to the Government which have been considered are:

1. When the private player pays only the lease rental to the government, Lease Rental is taken to be the bid variable here
2. When the private player pays an upfront amount plus the lease rental to the government. Upfront payment is taken to be the bid variable here
3. When the private player pays an upfront amount, the lease rental and annual revenue share. Revenue share is considered as the bid variable here

It is to be noted that the values assumed for the bid variable components in each case is the maximum reserve prices/percentages for the respective components that the government can expect for the project to be attractive to private player.

The summary of the project financials is presented below:

- **Chitradurga:**

**Alternative 1: Bus Terminal plus Commercial Complex**

As per the analysis done, the project is found to be financially unviable with very low IRR and negative project NPV.

Item	Only Lease Rental Paid by the Pvt Developer
Project Cost (INR Cr) including IDC and Upfront Payment	81.75
Equity (INR Cr) @ 30% of capital cost	24.53
Debt (INR Cr) @ 70% of capital cost	57.23
Project IRR (%)	9.2
Project NPV (INR Cr)	-17.95
Equity IRR (%)	8.6
VFM (INR Cr)	18.42
Receivables to Govt	
<i>Lease Rental (INR cr/Year @ INR 5 per sqft/year)</i>	0.22
<i>Upfront Payment (INR Cr)</i>	0.00
<i>Revenue Share (% of the Revenue)</i>	0.00
NPV of Receivables to Govt (INR Cr)	1.13

**Alternative 2: Only PAC**

Lease rental model is the only model with a positive NPV. As per the model, the NPV of receivables to the government is INR 0.45 Cr. The private player is expected to observe a Project IRR of 14.2% and a Project NPV of INR 4.21 Cr.

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share
<b>Project Cost (INR Cr) including IDC and Upfront Payment</b>	23.80	32.01	29.66
<b>Equity (INR Cr) @ 30% of capital cost</b>	7.14	9.60	8.90
<b>Debt (INR Cr) @ 70% of capital cost</b>	16.66	22.41	20.76
<b>Project IRR (%)</b>	14.2	11.3	11.3
<b>Project NPV (INR Cr)</b>	4.21	-2.10	-1.98
<b>Equity IRR (%)</b>	15.7	11.6	11.6
<b>VFM (INR Cr)</b>	12.33	6.02	6.14
<b>Receivables to Govt</b>			

<i>Lease Rental (INR cr/Year @ INR 5 per sqft/year)</i>	0.09	0.09	0.09
<i>Upfront Payment (INR Cr)</i>	0.00	7.00	5.00
<i>Revenue Share (% of the Revenue)</i>	0.00	0.00	6.00
<b>NPV of Receivables to Govt (INR Cr)</b>	0.45	6.06	5.77

- Lingsugur:** An upfront plus lease rental model appears to be the best option as it balances the returns to government and the private player, at minimum risk to the government. As per the model, the NPV of receivables to the government is INR 0.65 Cr. The private player is expected to observe a Project IRR of 18.4% and a Project NPV of INR 2.06 Cr.

<b>Item</b>	<b>Only Lease Rental Paid by the Pvt Developer</b>	<b>Upfront Payment Plus Lease Rental Model</b>	<b>Upfront Payment, Lease Rental and Revenue Share</b>
<b>Project Cost (INR Cr) including IDC and Upfront Payment</b>	2.96	3.73	3.46
<b>Equity (INR Cr) @ 30% of capital cost</b>	0.89	1.12	1.04
<b>Debt (INR Cr) @ 70% of capital cost</b>	2.07	2.61	2.42
<b>Project IRR (%)</b>	21.7	18.4	18.3
<b>Project NPV (INR Cr)</b>	2.66	2.06	1.89
<b>Equity IRR (%)</b>	28.1	22.2	22.0
<b>VFM (INR Cr)</b>	3.29	2.70	2.53
<b>Receivables to Govt</b>			
<i>Lease Rental (INR cr/Year @ INR 5 per sqft/year)</i>	0.015	0.015	0.015
<i>Upfront Payment (INR Cr)</i>	0.00	0.70	0.45
<i>Revenue Share (% of the Revenue)</i>	0.00	0.00	6.00
<b>NPV of Receivables to Govt (INR Cr)</b>	0.09	0.65	0.76

- Sindhhanur:** For this project also, an upfront plus lease rental model is the best option as it balances the returns to government and the private player, at a minimum risk to the government. As per the model, the NPV of receivables to the government is INR 1.31 Cr.

The private player is expected to observe a Project IRR of 19.0% and a Project NPV of INR 3.66 Cr.

<b>Item</b>	<b>Only Lease Rental Paid by the Pvt Developer</b>	<b>Upfront Payment Plus Lease Rental Model</b>	<b>Upfront Payment, Lease Rental and Revenue Share</b>
Project Cost (INR Cr) including IDC and Upfront Payment	4.43	5.87	5.44
Equity (INR Cr) @ 30% of capital cost	1.27	1.76	1.63
Debt (INR Cr) @ 70% of capital cost	2.96	4.11	3.80
Project IRR (%)	24.2	19.0	19.1
Project NPV (INR Cr)	4.93	3.66	3.40
Equity IRR (%)	32.6	23.4	23.4
VFM (INR Cr)	5.33	4.06	3.80
Receivables to Govt			
<i>Lease Rental (INR cr/Year @ INR 5 per sqft/year)</i>	0.02	0.02	0.02
<i>Upfront Payment (INR Cr)</i>	0.00	1.50	1.10
<i>Revenue Share (% of the Revenue)</i>	0.00	0.00	6.00
NPV of Receivables to Govt (INR Cr)	0.11	1.31	1.47

### **Statutory & Legal Framework:**

As per the amendments made to the Infrastructure Policy, 1997 in 2007 (Government Order No.IDD 32 IDM 2003 Bangalore dated 16<sup>th</sup> July 2007), Government of Karnataka has introduced the involvement of private players through Public Private Partnerships (PPP) for the implementation of major infrastructure projects. The projects would be implemented through open competitive bidding for the upgradation, expansion and development of new infrastructure projects.

### **Environmental & Social Impacts:**

Preliminary environmental and social screening of the projects has been conducted to identify critical issues and areas that would require to be studied in detail for impact assessment, mitigation measures and management plan. Findings of the screening are presented in this chapter. A more detailed study will be required to be done by the Concessionaire in the subsequent stages of the project.

For the purposes of prior environmental clearances, the projects do not fall either under Category 'A' or 'B', as the projects do not satisfy all the criteria laid under the purview of the EIA Notification of September 2006 and its subsequent amendments.



The social impact of these projects is generally a consequence of Land Acquisition process and the change in land use and traffic flow patterns. Because the land is already owned by government agencies, there will be no issues related to shifting or disruption of activities on the site.

Another impact of any new development with commercial component is changes in traffic pattern and generation of additional traffic, which can create congestion on roads. These issues will need to be dealt with in detail by the Government in co-ordination with the concerned municipal authorities.

**Operating Framework:**

The projects are proposed to be implemented on Public-Private Partnership (PPP) format under Design, Finance, Build, Operate and Transfer (DBFOT) basis.

Under this structure, Private Developer / Private Sector Player (PSP) shall finance, design, engineer, construct, market, operate, maintain and manage the projects during the concession period and transfer the project facilities to the Concessions Authority at the end of the same. The following structure is proposed:

<b>Component</b>	<b>Description</b>
<b>Structure</b>	<ul style="list-style-type: none"> <li>• The project is to be developed under DBFOT model of PPP</li> <li>• The project is structured for capital investment to be brought in by the selected private sector player and land is provided by Concessions Authority.</li> <li>• The private sector player recovers its investments over a period of time from revenues from property development created under the project and any other applicable sources.</li> </ul>
<b>Concession Period</b>	30 years
<b>Payment to Concessions Authority</b>	Option to choose from 3 models: <ul style="list-style-type: none"> <li>○ Lease Rental only</li> <li>○ Lease Rental plus Upfront Payment</li> <li>○ Lease Rental, Upfront Payment plus Revenue Share</li> </ul>
<b>Role of Concessions Authority</b>	<ul style="list-style-type: none"> <li>• Provision of identified land for the Project, free from all encumbrances</li> <li>• Grant of lease hold rights of the project site to the developer</li> <li>• Provision of adequate rights to the developer for collection of user charges, parking fees and rentals from property development.</li> </ul>

<b>Component</b>	<b>Description</b>
<b>Role of Private Sector Developer</b>	<ul style="list-style-type: none"> <li>• Detailing and placement of the Project components</li> <li>• Detailed designing and Engineering of facilities based on Concept</li> <li>• Achieving financial closure and making the necessary capital investment</li> <li>• Construction, Marketing, Operating, Maintaining and Managing (Utilities, Facilities, Equipments etc) the Project during the Authorization Period</li> <li>• Obtaining all clearances/approvals from the concerned Govt. Department, handling legal issues etc</li> </ul>

## 2 INTRODUCTION

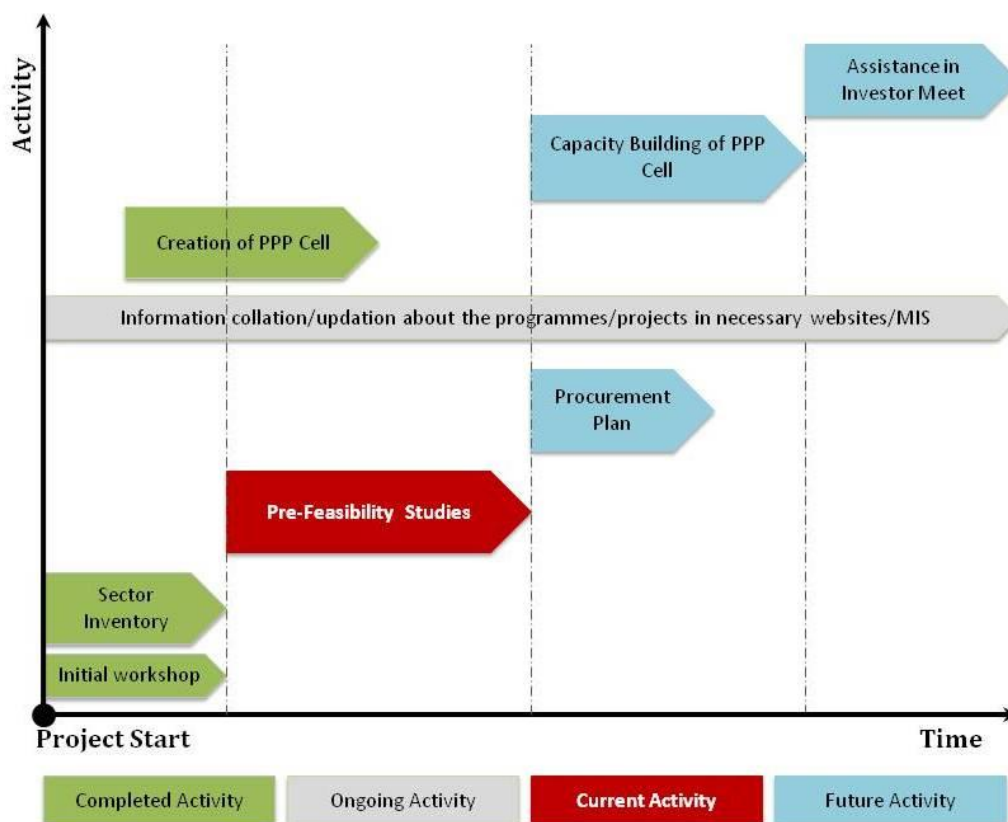
### 2.1 Project Background

Government of Karnataka (GoK) envisages development of infrastructure through Public Private Partnership (PPP) and intends to attract investments in various sectors in Karnataka.

For this, Infrastructure Development Department (IDD) has selected consultants for Sector Specific Inventory & Institutional Strengthening for mainstreaming of PPP for various departments related to infrastructure development in the state. Feedback Infrastructure Services Private Limited (FISPL) was selected to assist Transport Department to fulfill the above objective.

For the same, the Inception Report, comprising of the preliminary information on the various sectors covered under Transport and the inventory of the projects finalized in consultation with Transport department, was submitted by the said consultant on March 06, 2012. The figure below summarizes the current state of work, in reference to the defined objectives.

Figure 1: Project Status



The current report details out the prefeasibility study done for ‘Development of Passenger Amenity Centres’. The following sites were finalized in consultation with Transport department in the Workshop held under the Chairmanship of the Principal Secretary, Transport on 23<sup>rd</sup> February 2012:

- Chitradurga (Area- 10 Acre)
- Lingsugur (Area- 0.67 Acre)

- Sindhanur (Area- 0.84 Acre)

The project idea is to utilize the existing land parcels, with various state transport undertakings, and develop them in the form of Passenger Amenity Centres (PAC). Typically following facilities are provided in a PAC. However, the facilities will differ as per the requirement at each site, arrived at after detailed market assessment. The facilities are:-

- Small size Commercial Shops
- Retail Shops
- Commercial Office Space
- Public Conveniences
- Parking for Cars and Bikes
- Budget Hotels

## 2.2 Structure of the Report

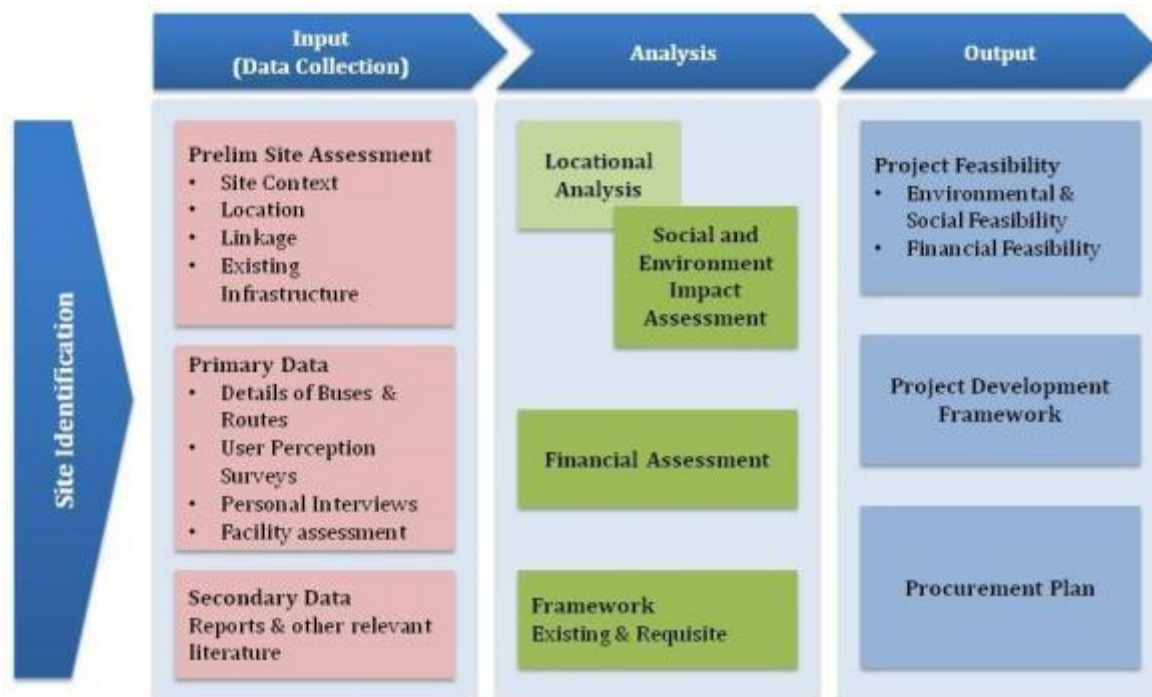
This Project Report has been structured along the following in a chapter-wise format.

<b>Introduction</b>	<ul style="list-style-type: none"> <li>•Project Idea</li> <li>•Approach &amp; Methodology</li> </ul>
<b>Sector Profile</b>	<ul style="list-style-type: none"> <li>•Industry Overview</li> <li>•Regional Profile</li> </ul>
<b>Project Details</b>	<ul style="list-style-type: none"> <li>•Description and Components</li> <li>•Needs &amp; Considerations</li> <li>•Best Case Studies</li> </ul>
<b>Market Assessment</b>	<ul style="list-style-type: none"> <li>•Industry Outlook</li> <li>•Opportunities &amp; Demand Projections</li> <li>•Product Design</li> </ul>
<b>Project Financials</b>	<ul style="list-style-type: none"> <li>•Cost &amp; Revenue Assessment</li> <li>•Project Viability</li> <li>•Funding</li> </ul>
<b>Statutory &amp; Legal Framework</b>	<ul style="list-style-type: none"> <li>•Legal &amp; Regulatory Framework</li> </ul>
<b>Indicative Environmental &amp; Social Impacts</b>	<ul style="list-style-type: none"> <li>•Environmental &amp; Social Impact Assessment</li> <li>•Mitigation Measures</li> </ul>
<b>Operating Framework</b>	<ul style="list-style-type: none"> <li>•Risks &amp; Mitigation</li> <li>•Project Structure</li> </ul>
<b>Way Ahead</b>	<ul style="list-style-type: none"> <li>•Key Milestones</li> <li>•Recommendations</li> </ul>

## 2.3 Approach & Methodology

The approach and methodology adopted for the study is as outlined in the figure below.

Figure 2: Methodology for the study



### Stage I: Input

The first stage involved the study of the project site to understand its suitability for the defined activity. Various factors influencing the site’s potential like accessibility, linkages, physical features, economic activities and developments in proximity, etc were analyzed. This study also helped us to carry out the environmental and social impact assessment of the project.

### Stage II: Analysis

This stage involved the review and analysis of data, collected in previous stages, in order to determine the feasibility of the project, both in terms of financial as well as environmental & social impact.

This stage also involved a study of the legal and statutory framework along with identification of issues and mitigation measures.

### Stage III: Output

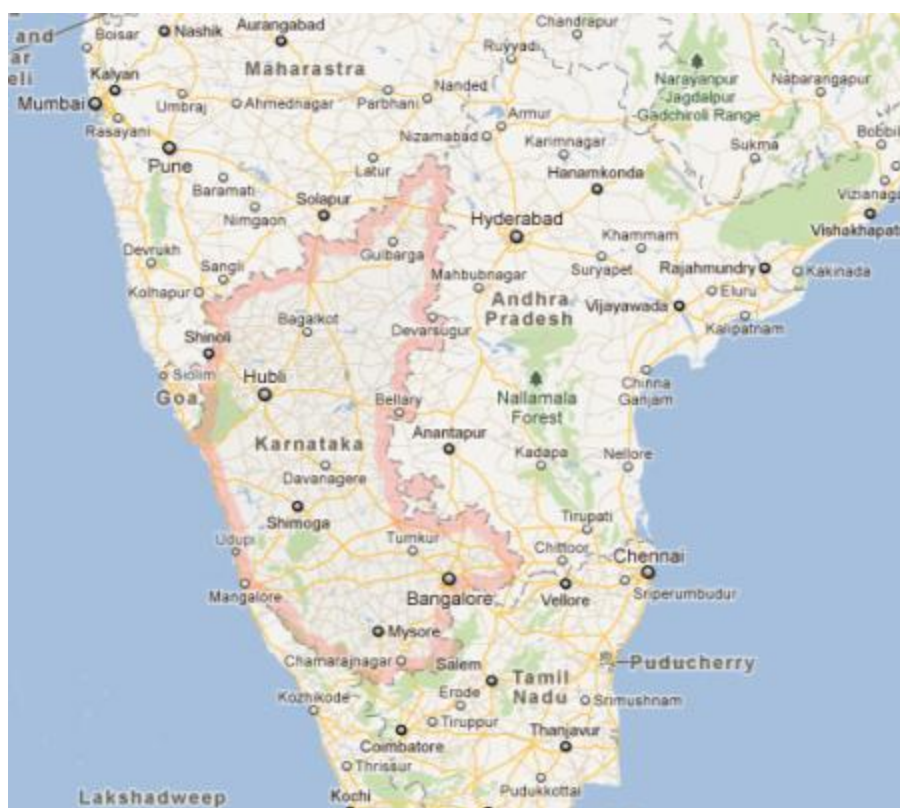
Based upon the results of the analysis, the framework and the procurement plan for further development of the project were finalised.

### 3 SECTOR PROFILE

#### 3.1 Overview

Karnataka is the 8<sup>th</sup> largest state in India with an area of 191,791 sqkm, spread across 30 districts and accounts for 5.83% of India’s geographical area. It has a population of about 61 million (as per census 2011). Located in the southern part of India, the state is bordered by Andhra Pradesh to the east, the Arabian Sea to the west, Maharashtra to the north and Tamil Nadu in the south. Bengaluru is the administrative and financial capital of the state.

Figure 3: Map of Karnataka



Karnataka has a total road length of 75,454 km comprising of 15 National Highways, 156 State Highways and other Major District Roads. While the improvement and development of the NH network comes under the purview of the central ministry and National Highways Authority of India (NHAI), the development and maintenance of state highways, MDRs and other district roads/village roads are the responsibility of the Karnataka Public Works Department (KPWD).

Table 1: Karnataka - Road Length (as on 31 Mar, 2010)

S.No.	Hierarchy	Nos.	Length (Km)
1.	National Highway	15	4490
2.	State Highway	156	20528
3.	Major District Road	-	50436

Source: Karnataka Public Works Department



## 3.2 Transport Sector

Transport sector in Karnataka is looked after by the State Transport Department (Secretariat). It has under it the following line departments:

- Four State Transport Undertakings, viz; Karnataka State Road Transport Corporation (KSRTC), Bangalore Metropolitan Transport Corporation (BMTC), North East Karnataka Road Transport Corporation (NEKRTC) & North West Karnataka Road Transport Corporation (NWKRTC) for providing road transport services and associated infrastructure across Karnataka. The functions of State Transport Undertakings are governed by the Road Transport Corporation Act, 1950 and Karnataka Road Transport Corporation Rules, 1961. All issues involving finances and all functions to be carried out by Government as per the Road Transport Corporation Act, 1950 & Karnataka State Road Transport Corporation Rules, 1961 are being discharged in Transport Secretariat
- Dr. Devraj Urs Truck Terminal Ltd that is responsible for setting up truck terminals, wherever required in Karnataka
- Office of Transport Commissioner: Also called as the Road Transport Department that is responsible for tax collections and registrations of the vehicle, issue of permits, driver's and conductor's licenses etc in Karnataka. It has 56 Regional Transport Offices across the state

### **Karnataka State Road Transport Corporation (KSRTC)**

The Karnataka State Road Transport Corporation was established in August, 1961 under the provisions of Road Transport Corporation Act 1950 with the objective of providing “adequate, efficient, economic and properly coordinated road transport services”.

With its corporate office in Bangalore, KSRTC is spread across Karnataka via 12 divisional offices. Assets owned by KSRTC include 7,599 buses, 66 depots, 124 bus stations, eight Divisional Work Shops, two Regional Workshops.

### **Bangalore Metropolitan Transport Corporation (BMTC)**

The Bangalore Metropolitan Transport Corporation came into existence in 1997 to provide public transportation in the Bangalore city and its sub-urban areas. The organization comprises a fleet of over 6,092 buses servicing the area in the 36 kilometers radius from the city centre. In a day BMTC operates on 583 city and 1,785 sub-urban routes, runs 13 lakh kilometers and makes 79,445 trips.

### **North West Karnataka Road Transport Corporation (NWKRTC)**

The North Western Karnataka Road Transport Corporation was established in the year November 1997, under provision of the Road Transport Corporation Act 1950. The Corporation's jurisdiction covers Belgaum, Dharwad, North Kannada, Bagalkot, Gadag & Haveri districts. The corporate office of NWKRTC is situated at Hubli, under which seven division headquarters are located at Belgaum, Hubli, Sirsi, Bagalkot, Gadag, Chikkodi & Haveri. NWKRTC

has 46 Depots functioning under the administrative control of respective divisions and 4,315 buses. NWKRTC operates in all villages, which have motorable roads in its jurisdiction.

### North East Karnataka Road Transport Corporation (NEKRTC)

NEKRTC was established in 2000, carved out of KSRTC for providing “adequate, efficient, economic and properly coordinated road transport services” in the North Eastern part of Karnataka. NEKRTC operates 2,710 schedules covering 9.78 lakh km carrying 10 lakh passengers every day. It has 8 divisional offices in Gulbarga, Yadagir, Koppal, Raichur, Bijapur, Bellary, Bidar and Hospet.

NEKRTC serves 92% of the 4,200 villages in its area. NEKRTC’s infrastructure includes 41 Depots, 108 bus stands and 2,745 buses.

### Office of Transport Commissioner

The Road Transport Department is responsible for tax collections and registrations of the vehicle, issuing of permits, driver and conductor licenses etc in Karnataka. This Department controls all vehicles and road limits and rules and regulation on road transport. There were 8.8 mn registered vehicles in Karnataka in 2009-10. The Transport Commissioner’s office operates through 56 Regional Transport Offices across the state.

A summary of the total infrastructure under the various line departments is presented in the table below:

Table 2: Summary of Transport Infrastructure under line departments

Infrastructure owned	KSRTC	BMTC	NWKRTC	NEKRTC
<b>Depots</b>	72	37	-	41
<b>Divisions</b>	15	-	-	8
<b>Bus Stations</b>	128	48	136	108
<b>Vehicles</b>	7599	6102	4315	2745
<b>Effective Kms per day (Lakhs)</b>	24.91	12.7	15.5	9.78
<b>Schedules</b>	6881	5910	3892	2710
<b>Average traffic revenue per day (Lakhs)</b>	589.78	385	-	-
<b>Average passengers travelled per day (Lakhs)</b>	23.6	45	21.5	10
<b>Staff</b>	34019	32715	21433	-

Source: Transport Secretariat, Karnataka

### 3.3 Budgetary Provisions for the sector

The Karnataka state budget 2011-12 defines a total expenditure of INR 85,319 Cr with a Plan Outlay of INR 38,070 Cr. At present, a total of ninety-one projects with an investment outlay of INR 67,792 Cr are being pursued through Public-Private Partnership mode. The plan outlay for

Transport sector has been set for INR 3,743 Cr (10% of total outlay). Following are some of the major initiatives under the plan for roads and urban transport infrastructure:

- Projects for development of 4000 km of roads are under various stages of progress
- State government has obtained loan approval from the Asian Development Bank to develop 600 km of state highways at an estimate of INR 1330 Cr
- The World Bank has conveyed its concurrence to finance development of 269 km of state highways at an estimate of INR 657 Cr.
- A state level Transport Fund to be constituted with an annual contribution of INR 60 Cr to fund the urban transport initiatives.
  - Annual accrual to this fund to come through INR 20 Cr each from the budgetary sources, a cess on local taxes collected by Urban Local Bodies and a cess on Motor Vehicle Taxes.

Some other ongoing projects, being handled by the Transport Department include:

*Table 3: Ongoing projects for the transport department*

Project Name	Nodal Agency	Capacity	Status
<b>Modern Bus Terminal &amp; Commercial complex at Hassan</b>	KSRTC	Commercial Complex (1,50,000 sq ft)	Agreement signed
<b>Modern Bus Terminal &amp; Commercial complex at Mangalore</b>	KSRTC	KSRTC Guest House (3000 sq ft) & Commercial Complex (90,000 sq ft)	Agreement signed
<b>Modern Bus Terminal &amp; Commercial complex at Puttur</b>	KSRTC	Integrated Bus Station & Commercial Complex	Agreement signed
<b>Development of Modern Bus Station &amp; Commercial Complex at Gulbarga</b>	NEKRTC	Modern Intra City Bus Station - 12 Platforms in 3 Bus Bays & Commercial development - 72,000 sq.	Signing of Concession Agreement
<b>Commercial Development of KSRTC vacant land parcel at Chitradurga</b>	KSRTC	Yet to be decided	Pre-Feasibility Done
<b>Development of Commercial Complex at Bidar</b>	NEKRTC	Yet to be finalised	Pre-Feasibility Done

### 3.4 Other Initiatives

Besides the above, there are also various other urban transport related projects currently ongoing/completed in the region. One such example is that of projects under the purview of JNNURM. The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) is a countrywide city modernisation scheme launched, in December 2006, by the Government of India under the

Ministry of Urban Development with an aim to create 'economically productive, efficient, equitable and responsive Cities' through upgradation of social and economic infrastructure.

Under JNNURM, a total of 47 projects, with a cost of INR 3694 Cr, have been sanctioned till date, out of which 21 projects have been completed while the rest are under various stages of progression.

### 3.5 Key Issues

Some of the key steps required for greater success of PPP projects in the sector are as follows:

- More proactive approach to take up a larger number of PPP projects
- Need for structuring of projects for sustained financial viability
- A need for standardized tender documents including concession agreement across all the state transport undertakings
- Flexibility in concession period and FAR restrictions for making projects more attractive
- Interdepartmental issues should be resolved before the project is bid out
- The distribution of risk between the private and public sector needs to be fair
- Concession period needs to be in sync with the kind of development envisaged. An option of extending concession period via right of first refusal can be given

## 4 PROJECT DETAILS

State transport undertakings in Karnataka such as KSRTC, NEKRTC and NWKRTC have land parcels at various locations. Most of them are either vacant or are not in-use old bus stand sites. These sites mainly have operating bus stands nearby and can be developed as Passenger amenity centres (PAC). PAC would have those facilities that a transit passenger would require during his / her journey. These PAC would be developed under PPP basis and will also have commercial component in order to allow the private investor earn returns.

For the same, extensive discussions were held with KSRTC, NEKRTC, NWKRTC and the Principal Secretary (Transport Department), on the basis of which the following towns were finalized for developing PAC.

- **Chitradurga** – An area of 14.35 acres of land is with KSRTC and a part of it is used as depot. Approximately 10 acres is lying vacant at the project site. As per the discussions with KSRTC, the depot will be shifted to the north-west corner of the plot and rest of the area is to be utilised for bus terminal cum commercial complex. The inter-city buses operating from the existing KSRTC bus terminal will also shift to the subject site. Ten acres are earmarked for development of bus terminal cum commercial complex. As per discussions with KSRTC officials, shifting of depot shall be done by KSRTC and bus terminal cum commercial complex will be developed by private player. If the project is found to be financially not viable, then the option of building only a passenger amenity centre on 4 acres of land will be explored. KSRTC will develop the bus terminal on the balance land.
- **Lingsugur** – The subject site is the old Lingsugur bus stand site spread across 0.67 acres, 1.5 Km away from the already operational new bus stand. The site is with NEKRTC and is encroached by petty shops selling fruits, vegetables and pharmacy shops. There is a legal issue regarding eviction of these tenants and the High Court has now ordered the Municipal council to clear all illegal shops from the subject site for NEKRTC.
- **Sindhanur** – (Total area - 0.84 acres): The site is with NEKRTC and is located at the heart of the city. The subject site is presently used for operating inter-city buses as the existing bus stand is under renovation. The new bus stand shall start operation in six month and the subject site shall be ready for new development.

### 4.1 Chitradurga

The site is located at the south-eastern part of the city along the Bangalore road (SH 48). Chitradurga is the administrative headquarter of the Chitradurga district with a population of 1,39,914 person (as per 2011 census). The city has many government administrative buildings and Hospitals which are at the centre of the city. The KSRTC has a bus stand located at the heart of the city and is operating all intercity buses from the bus stand. As mentioned above, the existing bus terminal will be shifted to the subject site. The subject site is ~1.5 Km away from the existing bus stand and at present, KSRTC bus depot is operational at the site. The total site area, with the KSRTC, is 14.35 acres, out of which, 10 acres shall be utilized for bus terminal cum commercial developments.

*Figure 4: Location & connectivity map of Chitradurga site*



Source: Google map

#### 4.1.1 Connectivity

As the city is located at the centre of the Karnataka state, it is connected to other major districts and their headquarters such as Bellary, Hubli, Shimoga and Tumkur through various National highways. It is one of the major cities on the Bangalore-Hubli highway (NH 4). Within the city, the subject site is connected to centre of the city through state highway 48 (which is also known as Bangalore road) and also connects the national highway number 4 (NH 4). So, it is an ideal location for the development of inter-city bus terminal. The location and connectivity is shown in figure given above.

#### 4.1.2 Key Issues

- Project site will be ready only in 4-5 months for construction work: First, the project requires shifting of existing depot to another location within the site. Second, the land requires land filling as there are two ponds within the plot. Both the activities shall take 6 month time for the site to be ready for construction. .

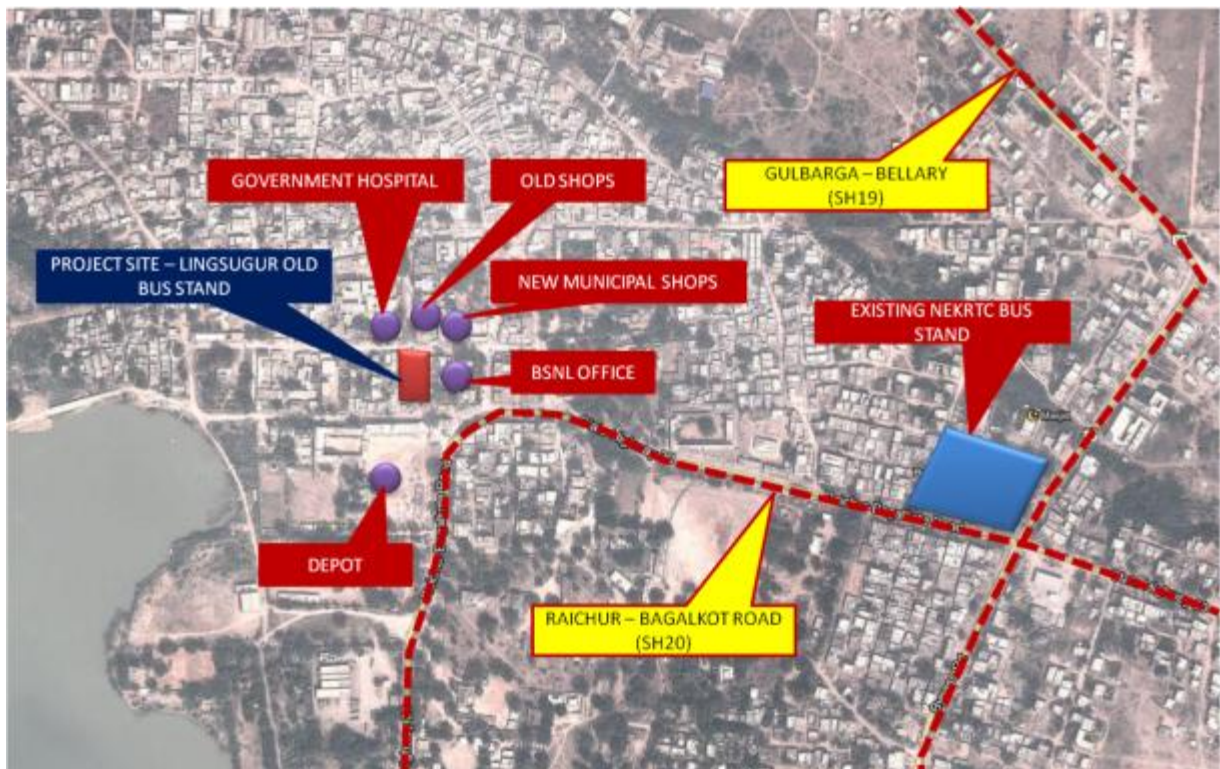
## 4.2 Lingsugur

Lingsugur is a medium-sized town in the district of Raichur with population of 34,932 persons (as per 2011 census). The subject site, with an area of 0.84 acres, is located near the Lingsugur Lake on the Raichur-Bagalkot road (SH 20). The site was used as NEKRTC bus stand, which was



shifted to the existing new bus stand site. The site is located near a government hospital. There are old and new commercial shops all around the site as it used to host the old bus terminal earlier. The commercial activities are still active and shops for condiments, stationery and pharmacy items exist within the site. However, a portion of land is encroached by petty shops selling fruit and vegetables. But as per the recent court order, the local municipal body has been ordered to clear the site for new developments. The existing bus stand is located 1.5 Km away from the subject site and bus depot is just 0.5 Km south of the subject site along the SH 20. The location of the project site is provided in the figure given below.

Figure 5: Location & connectivity map for Lingsugur site



Source: Google.com

#### 4.2.1 Connectivity

The subject site is connected to the Raichur-Bagalkot road (SH 20) through local roads. The SH 20 further connects the site to the existing bus stand and SH 19, which connects Lingsugur with Gulbarga. The site enjoys good connectivity with other parts of the town through local roads. The connectivity of the subject site with other parts of the town is shown in figure given above.

#### 4.2.2 Key issues

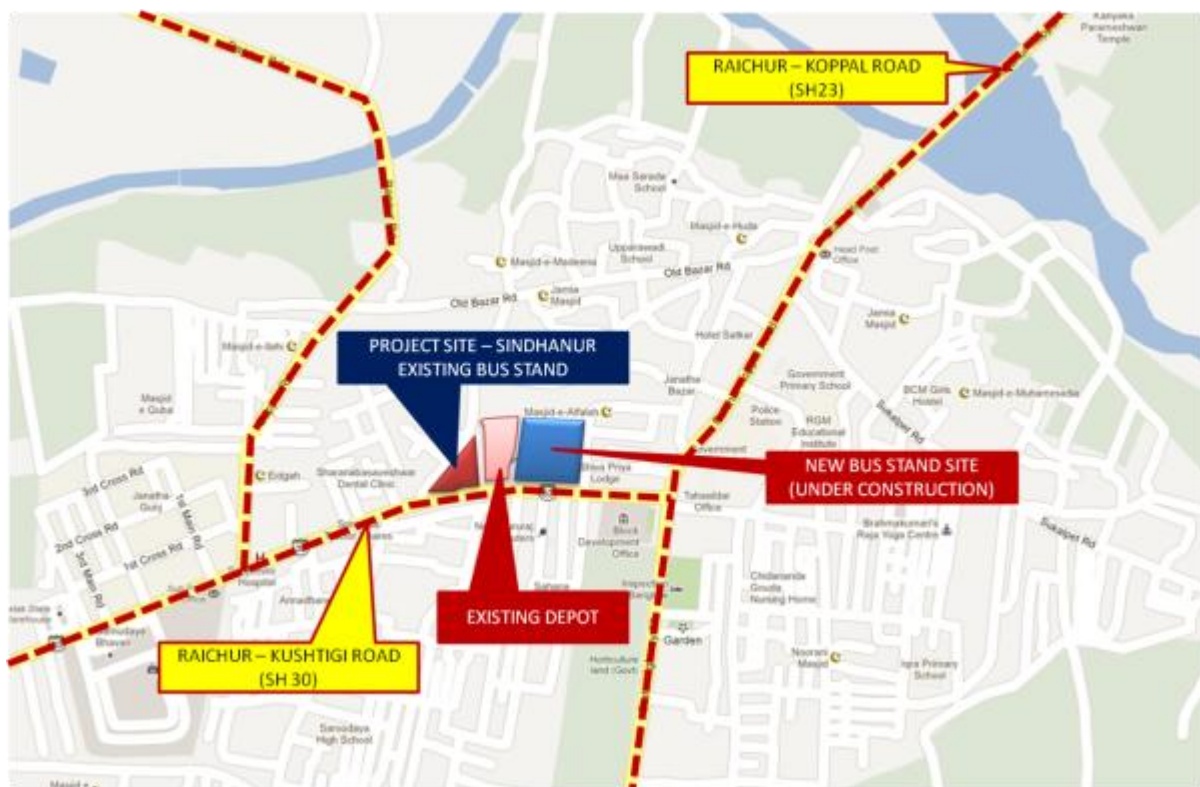
- Even though the court order is issued for eviction of encroachers, illegal shops are still operating at the site



### 4.3 Sindhanur

Sindhanur is a major taluk and a town in the Raichur district with a population of 76,008 persons (as per 2011 census). The subject site is located at the heart of the town and is at present being used as NEKRTC bus terminal. The site is located besides the NEKRTC bus depot along the Raichur-Kushtigi state highway (SH 30). Operation of buses from the subject site shall be shifted to the new bus stand which is under construction and is expected to be completed in six months. as per NEKRTC officials. The subject site will be available for new development in 6 months only. The new bus stand is 200 m away from the subject site and hence shifting of the bus stand will not impact the flow of travelers in the area surrounding the site. As it is located at the heart of the town and also along the major commercial street, all three sides of the plot have dense commercial activities with retail shops, restaurants, budget hotels and offices. The location of site with respect to the surrounding area is provided in the figure given below.

Figure 6: Location & connectivity map of Sindhanur site



Source: google.com

#### 4.3.1 Connectivity

The subject site is located along the SH 30, which further connects to the Raichur – Bellary road (SH 23). So the site has good connectivity with other cities such as Raichur in the North, Bellary in the South and other towns like Ron and Kusthigi towards Western side of Sindhanur. The site enjoys a good connectivity with other parts of the town through a network of local roads.

## 4.4 Case Study

### 4.4.1 Multi-functional Complexes (MFCs): Indian Railways

#### Project Overview:

Indian Railways had land parcels available at various stations, which it has developed to provide amenities to its passengers. Facilities at MFCs mainly included ATMs, shops, restaurants, budget hotels etc. Five of its MFCs at Nanded, Cuttack, Dehradun, Nanded and Katra were successfully awarded to various private players.

#### PPP structure of the Project:

The MFCs were given on BOT basis for 30-45 years. The private player can earn revenues through leasing out the commercial space and in return, it will pay Indian Railways an upfront fee and an annual lease rental.

#### Present Status:

- MFC at Cuttack was awarded to Keshari Estates
- MFC at Dehradun was awarded to Janak Holdings
- MFC at Katra was awarded to Bhagwati Infraestate and MCG Estate

#### Key Learning

Land parcels at Tier-2 cities can be successfully developed on PPP basis provided that the contracting agency is willing to grant higher concession periods for projects where the returns are low.

## 4.5 Development Control regulation and other planning considerations

Physical and land development activity in Chitradurga is governed by Chitradurga Master plan and Zoning regulations prepared by Chitradurga Urban Development Authority (CUDA). In Lingsugur and Sindhanur, the land development activities are based on the zoning regulations prepared by respective Municipal Corporation for the towns on the basis of Karnataka Town and Country Planning Act, 1961. This Chapter provides an analysis of Development Control Regulations which defines the development framework at the subject sites.

### 4.5.1 Permissible FAR and Ground Coverage

All the projects sites are under the Transportation use and the relevant FAR and ground coverage for the transportation use is applied for the subject sites. The permissible FAR and ground coverage for Chitradurga is derived from the Development Control Regulations for Chitradurga prepared by Chitradurga Urban Development Authority (CUDA), and for Lingsugur and Sindhanur, the FAR and ground coverage is derived from building regulations prepared by the respective Municipal Corporations.

#### Chitradurga

- The maximum permissible FAR for the site is 2 and maximum permissible Ground Coverage is 50% of the plot area.

#### **Lingsugur**

- The maximum permissible FAR for the site is 1.50 with a maximum permissible Ground Coverage of 55% of the plot area.

#### **Sindhanur**

- The maximum permissible FAR for the site is 1.75 with a permissible Ground Coverage of 55% of the plot area.

#### **4.5.2 Permitted Activities**

As per the Notification No: UDD 249 BcMaPra 2008 dated 12.02.2009 (amendments made by the Government of Karnataka to the Zoning Regulations, in the exercise of the power conferred by the section 13-E of the Karnataka Town and Country Planning Act, 1961), uses that are permissible under special circumstances under the traffic and transportation use are as follows:

- Retail shops
- Restaurants and Hotels
- Showrooms
- Offices
- Boarding and lodging houses
- Banking counters
- Indoor recreational uses
- Multiplexes
- Clubs

The uses given above are permissible provided that total area for such ancillary uses **shall not exceed 45% of the allowable floor area ratio** of the project when taken up by Central and State government and Public undertakings.

#### **4.5.3 Parking Norms:**

The parking requirements for the proposed developments in Chitradurga, Lingsugur and Sindhanur sites are found to be similar except at Chitradurga site, bus terminal is also proposed, so parking for park and ride also has to be considered. The adopted parking regulations are provided below (the parking requirements are adopted as per the zoning regulations prepared by Karnataka State Planning Board for the towns in Karnataka).

*Table 4: Parking norms adopted for Passenger amenity centre*

Sl no	Type of use	Minimum one parking space for every
1.	Retail business	50 sq.mt of floor area.
2.	Restaurants serving food & beverage	100 sq.mt of floor area.

3.	Lodging establishments & Tourist homes	100 sq.m of floor area.
4.	Office buildings [Govt/semi-Govt & pvt] & Commercial / Banks	75 sq.mt of office floor space.
5.	Public and semi-public buildings	100 sq.mt of floor area.

As per the UDPFI guidelines and general zoning regulations prepared by the Karnataka State Planning Board, 25% of the parking should be provided for park and ride facilities.

## 5 MARKET ASSESSMENT

Product mix for development for any land plot is derived based on its suitability for various kinds of development options available. A suitable product mix attracts potential buyers/takers and in turn generates good returns from land. This section presents an activity wise analysis..

Following sections present a suitability analysis for commercial developments at Chitradurga, Lingsugur and Sindhanur.

Various factors which directly and indirectly govern the suitability and demand of possible or envisaged activities are discussed below for the three identified sites. The findings of the market assessment are based on site visits, primary interviews with passengers, commercial establishments in the vicinity, hotels and the users of commercial facilities.

### 5.1 Chitradurga

#### 5.1.1 *Sites location in the city*

Location is traditionally considered as the single most critical parameter for deciding best use of land parcels, as it governs most important aspects like demand and attractiveness. The site is located in the south-eastern part of the city and is little away from the city centre. However owing to its location along the Bangalore road and city's growth axis being in the south-east and north-west direction, new developments such as residential and commercial retail developments are coming up along the proximity of the site (2 Km away from the site) which are in initial stages of development. The site, hence, is expected to have potential for commercial development such as retail and office as the existing bus terminal is expected to be shifted to the project site which makes it high movement area. At present, the existing bus terminal has a daily ridership of 7,000 to 10,000 persons, which will shift to the project site making it a potential site for retail and office spaces (Transit oriented development). There are few commercial office space and budget hotels already existing near the site.

#### 5.1.2 *Primary Catchment*

Analysis of primary catchment gives the profile and estimation of user base, which will use the proposed development. It also gives understanding of the surrounding area characteristic, which is a critical aspect affecting the attractiveness of the land parcel for various use types. The primary catchment of the subject site includes commercial developments such as retail shops, commercial office space such as financial institutions (There are three, they are - Union Bank, ICICI & Muthoot Finance), Budget hotels (Vasishta and Prakash hotel), government buildings such as LIC building and the NEKRTC Depot. Secondary catchment comprises government hospital, educational institutions and retail commercial shops. This makes the site suitable for any type of commercial developments.

#### 5.1.3 *Visibility from important corridors*

Visibility is important as it directly impacts the prospective tenants as well as the end users. In case of some development types like retail and hospitality, this factor becomes more critical.

The sites are located along major arterials of the city such as Bangalore road (SH 48). The site is clearly visible from both the road. This attribute makes the site suitable for retailing and hospitality related development.

#### **5.1.4 Size of the Plot**

The size of the development is a major criterion for deciding its possible usage. Larger sites permit more options to be explored. The area of subject sites total to ~14 acres, which is sufficient for a bigger bus terminal integrated with commercial development.

#### **5.1.5 Movement pattern near the site**

Traffic and its circulation pattern near the site are important as it affects the overall environment and footfalls at the site. This is linked with parking and other infrastructure issues as well. Some developments like high end hospitality and institutional spaces desire less movement near the site, while retail and entertainment are suitable for high movement areas. Currently, the site area is a moderate traffic movement area which is desired for retailing and transit oriented development. The consultants have observed a slow moving traffic at the intersection which is at the corner of the plot. This intersection may require proper traffic management in future. This aspect needs to be studied in detail by the executing agency while implementing the project.

#### **5.1.6 Demand supply scenario of various products in the surrounding areas**

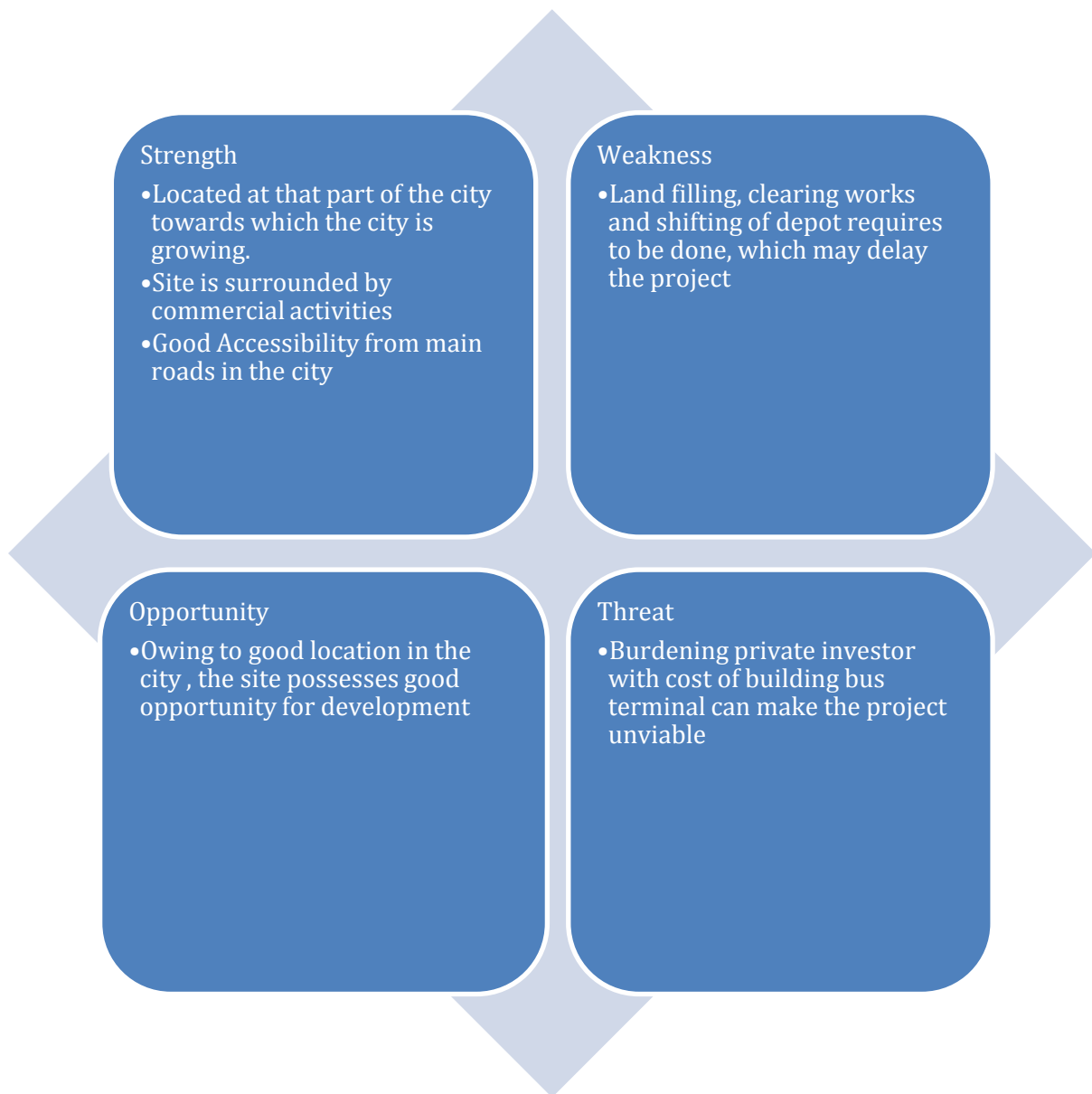
Demand supply scenario of various product typologies gives a precise understanding of suitability and attractiveness of the land parcel, which is primarily governed by the inherent characteristics of the area. Demand-supply scenario for various products like restaurants, retail shops, office spaces and budget hotels suggest that these products are in good demand near the areas of subject site. From the primary survey conducted by the Consultants, it is observed that, the demand for budget hotels has grown ten-folds in the last five years. In 2007, there were only 2-3 budget hotels in the city; but at present there are ~23 budget hotels here. The Vasishta hotel and Prakash Lodge near the site have close to 80% occupancy. The commercial office spaces and retail within the surrounding areas have increased in the last three years. This shows that commercial shops, offices and budget hotels are in good demand. The details of the primary survey are given in site assessment data provided in the Annexure 1.

#### **5.1.7 Rentals**

Average commercial rentals for shops and offices are in the range of INR 30 – 35 / sq.ft. / month for ground floor. For first floor it is INR 22 / sq.ft. / month. The rentals for hotels are in the range on INR 350 / day/ person to INR 950 / day / person with room size of 150 sq.ft.

#### **5.1.8 SWOT Analysis for Chitradurga**

Based on above discussion under various heads, a SWOT analysis of the site is done to determine the potential of the site in terms of real estate opportunity.



**5.2 Lingsugur**

**5.2.1 Site's Location in the city**

The site is located in the old town area near a government hospital, so commercial activities such as entertainment centre and convention centre cannot be proposed at the site. Any development at the site will need to ensure a peaceful environment with low decibel commercial activities. Office space and budget hotels are a probable option for the site.



### **5.2.2 Primary Catchment**

Primary catchment of the site comprises commercial shops, the government hospital and offices such as Bharat Sanchar Nigam Limited and Post office. The bus depot is also within the primary catchment. The secondary catchment consists of residential areas. Due to the presence of the hospital in the vicinity, hotels and office space may be a probable product mix option with little commercial space for retail shops.

### **5.2.3 Visibility from the important movement corridor**

The site is fairly visible from the main road; so, it may be a good site for providing high end hospitality and retail space such as commercial complex.

### **5.2.4 Size of the plot**

The area of the subject site is ~ 0.84 acre, which is very less for the development of large scale commercial developments. So the site can be utilized for only low-scale commercial developments.

### **5.2.5 Movement pattern near the site**

At present, all the roads are having low movement of traffic and may not be suitable for development of high-end retail shopping in the area. So, offices and budget hotel may be probable product mix option.

### **5.2.6 Demand supply scenario of various products in the surrounding areas**

Nearly 80% of the land usage around the subject site is commercial. This is due to it being used as a bus terminal earlier, which attracted commercial activities to the surrounding area. Most of the existing commercial buildings are old and the local municipal authority has constructed new shops which are given on 5 years lease to tenants. From the Consultant's primary survey, it is observed that the site has seen encroachment in the form of petty commercial shops during the last few years. Even though the court has ordered to evacuate these shops, the encroachment has increased in last one year. The number of these shops increased from 15-16 in 2011 to ~25 at present. The increase in number of shops and construction of new shops by the municipal authority clearly indicates a demand for commercial shops. But competition can be high due to presence of large commercial space in the vicinity. There are no hotels near the site and this option can be explored for development here. The primary survey indicates that visitors to the government hospital are now staying at hotels which are 2 to 3 Km away from the subject site.

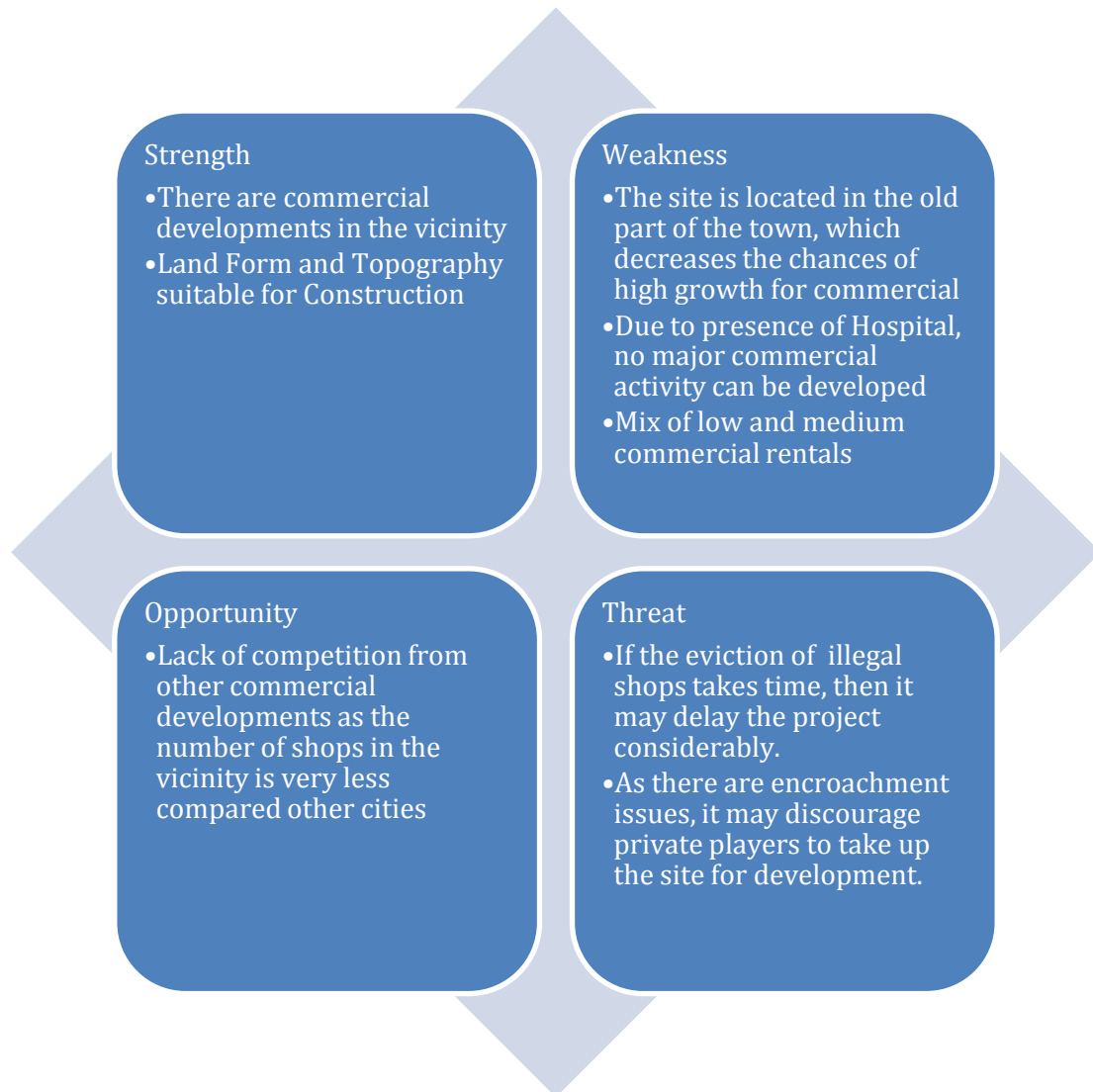
#### **5.2.6.1 Rentals**

Average commercial rentals for shops are in the range of INR 30 – 35 / sq.ft. / month. The rentals for hotels near the existing bus stand are in the range on INR 350 / day/ person to INR 900 / day / person with room size of 150 sq.ft. The details of the rentals are provided in the site assessment data provided in Annexure 1



### 5.2.7 SWOT Analysis for Lingsugur site

Based on the above discussion under various heads, the SWOT analysis of the site has been done for determining the potential of the site in terms of real estate opportunity.



## 5.3 Sindhanur

### 5.3.1 Site's location in the city

The subject site is located in the heart of the town and along the major commercial street with dense commercial developments. This makes the site suitable for any type of commercial development at the site.

### 5.3.2 Primary Catchment

Primary catchment comprises commercial retail shops, office spaces, restaurants, budget hotels and bus depot. There are two commercial complexes in which first two floors are allocated for

commercial shops and third floor for budget hotel. There are also commercial shops built in front of the depot and new commercial shops are proposed in the under-construction bus terminal. There are three budget hotels opposite to the subject site.

### **5.3.3 Visibility from the important movement corridors**

The site is clearly visible from the main road as it is located along the SH 30. This makes the site suitable for high-end retail, high-end hospitality and office spaces.

### **5.3.4 Size of the plot**

Size of the subject size is less than an acre which makes the site not suitable for high-end retail developments.

### **5.3.5 Movement pattern near the site**

The movement pattern near the site is high, but due to the width of the road (18m), no traffic issue was observed by the consultants in the vicinity. This makes the suitable for development of high-end commercial office spaces.

### **5.3.6 Demand Supply scenario of various products in surrounding areas**

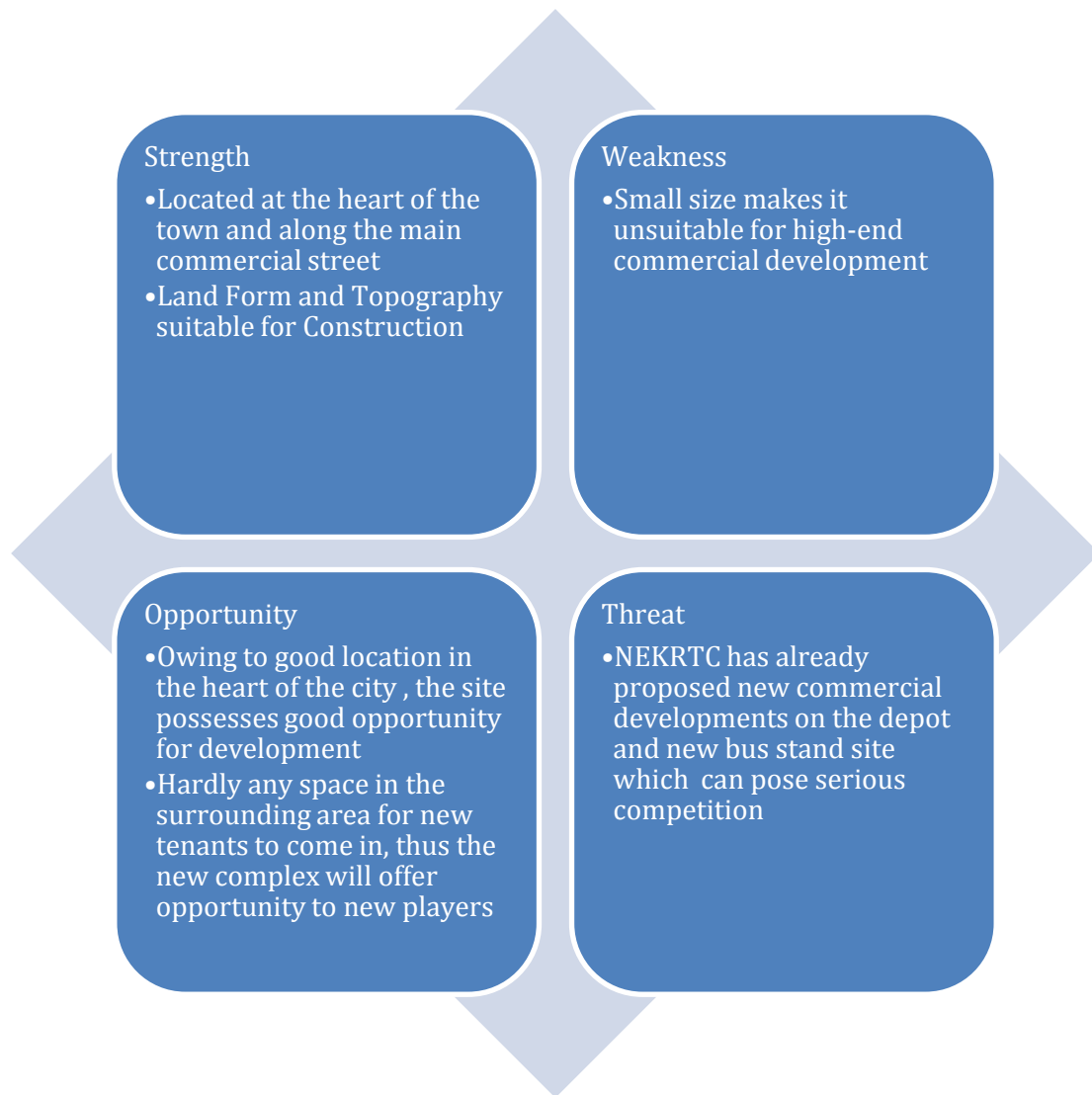
From the preliminary assessment of the surrounding area it is observed that, there is high demand for commercial activities in the vicinity as it is a high movement corridor of commuters and office goers. But the vicinity also has high commercial supply, which is expected to go up further in future. This is because commercial shops are proposed at the new bus stand site nearby and also above the existing commercial shops along the depot. By end of 2013, if all construction works are completed by NEKRTC as per the planned schedule, there would be ~ 125 to 130 commercial shops in the vicinity. This can add to competition for commercial space. So it may be better to allocate more commercial office space at the subject site and few commercial retail spaces.

#### **5.3.6.1 Rentals**

Average commercial rentals for shops are in the range of INR 60 – 65 / sq.ft. / month. The rentals for hotels opposite to the project site are in the range on INR 350 / day/ person to INR 1200 / day / person with room size of 150 sq.ft. The details of the rentals are provided in the site assessment data provided in the Annexure 1

### **5.3.7 SWOT Analysis for Lingsugur site**

Based on the above discussion under various heads, the SWOT analysis of the site has been done for determining the potential of the site in terms of real estate opportunity.



**5.4 Product Mix options**

**5.4.1 Retail space**

Development of retail areas requires land parcels to be located amid residential areas with substantial disposable incomes. High visibility and high movement of travelers and commuters is also important. Facilities like Multiplexes complement retail facilities as they generate extra footfalls, especially in malls. The surrounding areas near the subject sites were not found suitable for high-end retail, due to various reasons. These include presence of a hospital and less visibility from the main road (at Lingsugur site) and small size of land parcel (at Lingsugur and Sindhanur). So the site may be allocated with low-scale few retail shops at the subject sites. Chitradurga can have retail developments due to high ridership expected at the project site due to proposed shifting of the bus terminal. At present, the existing bus terminal has a daily ridership of 7500-10000 persons.

### 5.4.2 Commercial office

Development of commercial office requires a land having good visibility and connectivity. In many cases, developers and tenants prefer to be located in prime locations of the city / town. All the sites have good connectivity with other part of the city and are in proximity to the other commercial area or social infrastructure of the city / town, so commercial offices can be provided at all the sites. These offices may comprise financial institutions and registered offices of various sectors.

### 5.4.3 Hospitality

Development of hospitality requires land parcels having good connectivity with transit hubs like airport, railway station and bus terminals. Star category hotels desire good habitat surroundings and scenic beauty around. Primary survey by the Consultants confirms that even though the sites are not suitable for high-end hospitality, budget hotels are a probable product mix option.

## 5.5 Evaluation Matrix

An evaluation matrix is prepared to gauge suitability of different product mix options in the light of site attributes, which are critical from the development point of view. The evaluation matrixes for the sites are as follows:

### 5.5.1 Chitradurga

Table 5: Evaluation matrix for Chitradurga site

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
<b>Site's Location in the City</b>	Retail		✓		Retail for middle income and lower income group need to be provided along with requirements for passengers
	Commercial office		✓		There are offices in the vicinity that can pose a competition for any new office space
	Hospitality		✓		There are lot of budget hotels present in the vicinity, but due to high demand observed from the recent past, it can be provided.
<b>Primary Catchment</b>	Retail		✓		Medium Income group people are present in the catchment and they visit the place either for shopping or as transit passenger. Thus, share of
	Commercial office		✓		

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
					office space within the commercial area at the site should not be very high
	Hospitality		✓		As the area is to have a bus terminal, it is going to be high movement area with large number of transit passengers is present in the area, the place has good potential for a Budget Hotel
Visibility from important movement corridors	Retail	✓			The plot is clearly visible from the major road, hence good visibility for all kind of developments
	Commercial office	✓			
	Hospitality	✓			
Size of the plot	Retail	✓			Absorption of large development may be possible, hence a suitable mix has to be derived for the site
	Commercial office	✓			
	Hospitality	✓			
Movement pattern near the site	Retail	✓			The surrounding roads have high traffic movement, so the site has high potential for Retail commercial and Hospitality (budget hotels)
	Commercial office	✓			
	Hospitality	✓			
Demand supply scenario of various products in surrounding areas	Retail		✓		Moderate demand, moderate supply; So potential is medium
	Commercial office		✓		High demand, High supply; So potential is medium
	Hospitality		✓		High demand, high supply; So potential is medium

### 5.5.2 Lingsugur

Table 6: Evaluation matrix for Lingsugur

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
Site's Location in the City	Retail			✓	Located near a Hospital. Retail attracts more

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
					people which may hamper the environment of the locality. So not recommended
	Commercial office		✓		Can be recommended for the site
	Hospitality	✓			For the visitors to the Hospital and due to non-availability of hotels near the hospital, it is highly recommended.
<b>Primary Catchment</b>	Retail			✓	Catchment is mostly commercial and more such facilities are expected to come up in future. This will create competition for new commercial developments at the site.. So not highly recommended.
	Commercial office			✓	
	Hospitality		✓		
<b>Visibility from important movement corridors</b>	Retail			✓	The plot is fairly visible from the major road, hence not a potential site for commercial developments
	Commercial office			✓	
	Hospitality			✓	
<b>Size of the plot</b>	Retail			✓	Absorption of large development may be difficult, hence a suitable mix has to be derived for the site
	Commercial office			✓	
	Hospitality			✓	
<b>Movement pattern near the site</b>	Retail		✓		The surrounding roads have moderate traffic movement, so the site has moderate potential for Retail commercial and Hospitality (budget hotles)
	Commercial office		✓		
	Hospitality		✓		
<b>Demand supply scenario of various products in surrounding areas</b>	Retail		✓		High demand, high supply; So potential is medium
	Commercial office		✓		Moderate demand, less supply; So potential is medium

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
	Hospitality		✓		moderate demand, less supply; So potential is medium

### 5.5.3 Sindhanur

Table 7: Evaluation matrix for Sindhanur

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
<b>Site's Location in the City</b>	Retail	✓			Located at the heart of the town, so potential is high
	Commercial office	✓			Located at the heart of the town and also along main arterial, so potential is high
	Hospitality		✓		Location is ideal for budget hotels, so it may be recommended.
<b>Primary Catchment</b>	Retail		✓		Catchment is mostly commercial which may create competition for commercial space at the site reducing the demand. So moderate potential exists.
	Commercial office		✓		
	Hospitality		✓		
<b>Visibility from important movement corridors</b>	Retail	✓			The plot is along the main arterial hence a potential site for commercial developments
	Commercial office	✓			
	Hospitality	✓			
<b>Size of the plot</b>	Retail			✓	Land availability is less. So, absorption of large development may be difficult, hence a suitable mix has to be derived for the site
	Commercial office			✓	
	Hospitality			✓	
<b>Movement pattern near the site</b>	Retail		✓		The surrounding roads have moderate traffic movement, so the site has moderate potential for
	Commercial office		✓		



Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
	Hospitality		✓		Retail commercial and Hospitality (budget hotles)
Demand supply scenario of various products in surrounding areas	Retail		✓		High demand, high supply; So potential is medium
	Commercial office		✓		High demand, High supply; So potential is medium
	Hospitality		✓		Moderate demand, moderate supply; So potential is medium

## 5.6 Recommended Product Mix options

Having analyzed the options of retail, commercial office and hospitality as presented in detail in the previous sections, it may be noted that the subject sites, owing to their characteristics, fulfill the requirements deemed essential for retail, hospitality or commercial office options. The product mix options for commercial development for the different sites are given below:-

Table 8: Product mix option for Chitradurga (Alternative 1: Bus Terminal Cum Commercial Complex)

Product Mix*	Percentage	Area (in Sq.m)
<b>Retail Shopping</b>	60%	20,635
<b>Commercial office space</b>	35%	12,037
<b>Budget Hotels</b>	5%	1,720
<b>Total</b>	<b>100%</b>	<b>34,391</b>

\*Total Plot Area: 10 Acres

Table 9: Product mix option for Chitradurga (Alternative 2: Only PAC)

Product Mix*	Percentage	Area (in Sq.m)
<b>Retail Shopping</b>	60%	8,739
<b>Commercial office space</b>	30%	4,370
<b>Budget Hotels</b>	10%	1,457
<b>Total</b>	<b>100%</b>	<b>14,566</b>

\*Total Plot Area: 4 Acres

Table 10: Product mix option for Lingsugur

Product Mix	Percentage	Area (in Sq.m)
<b>Retail Shopping</b>	45%	823
<b>Commercial office space</b>	15%	274
<b>Budget Hotels</b>	40%	732
<b>Total</b>	<b>100%</b>	<b>1,830</b>

Table 11: Product mix option for Sindhanur

Product Mix	Percentage	Area (in Sq.m)
<b>Retail Shopping</b>	50%	1,338
<b>Commercial office space</b>	25%	669
<b>Budget Hotels</b>	25%	669
<b>Total</b>	<b>100%</b>	<b>2,676</b>

## 5.7 Product Design

The following conceptual designs have been adopted for the respective sites, in order to carry out the financial feasibility analysis for the project.

### Chitradurga:

Table 12: Product Design for Chitradurga (Alternative 1: Bus Terminal Cum Commercial Complex)

Item	Value	Unit	Item	Value	Unit
<b>Area Break-up</b>			<b>Terminal Operation</b>		
<b>Total Plot Area</b>	40,460	sqm	<b>Total no of Trips (Current)</b>	1500	
<b>Built-up Area</b>	49564	sqm			
<b>No. of Floors</b>	2		<b>Car Parking Provided</b>		
<b>Terminal Area</b>	15,173	sqm	Terminal	152	ECS
<i>Commercial Area within Terminal</i>	2,023	Sqm	Commercial	459	ECS
<b>Retail Area</b>	20,635	sqm			
<b>Office Area</b>	12,037	sqm			
<b>Budget Hotel</b>					
Area	1,720	sqm			
No. of Rooms (200 sqft)	49				

\*ECS: Equivalent Car Space

In the above case, 25% of surface parking to be reserved for Park & Ride facility.

Table 13: Product design for Chitradurga (Alternative 2: Only PAC)

Item	Value	Unit
<b>Area Break-up</b>		
<b>Total Plot Area</b>	16,184	sqm
<b>Built-up Area</b>	14,565	sqm
<b>No. of Floors</b>	2	
<b>Retail Area</b>	4,370	sqm

Item	Value	Unit
<b>Offices Area</b>	8,739	sqm
<b>Budget Hotel</b>		
Area	1,457	sqm
No. of Rooms (150 sqft)	52	
<b>Car Parking Provided</b>	194	ECS

\*ECS: Equivalent Car Space

**Lingsugur:**

Table 14: Product design for Lingsugur PAC

Item	Value	Unit
<b>Area Break-up</b>		
<b>Total Plot Area</b>	2,711	sqm
<b>Built-up Area</b>	1,830	sqm
<b>No. of Floors</b>	2	
<b>Retail Area</b>	823	sqm
<b>Offices Area</b>	274	sqm
<b>Budget Hotel</b>		
Area	732	sqm
No. of Rooms (150 sqft)	26	
<b>Car Parking Provided</b>	27	ECS

**Sindhanur:**

Table 15: Product design for Sindhanur PAC

Item	Value	Unit
<b>Area Break-up</b>		
<b>Total Plot Area</b>	3,400	sqm
<b>Built-up Area</b>	2,676	sqm
<b>No. of Floors</b>	2	
<b>Retail Area</b>	1,338	sqm
<b>Offices Area</b>	669	sqm
<b>Budget Hotel</b>		
Area	669	sqm
No. of Rooms (150 sqft)	24	
<b>Car Parking Provided</b>	37	ECS

## 6 PROJECT FINANCIALS

Financial Analysis of the projects is done to get a perception of different scenarios from the Concessioning Authority’s perspective and to then determine how much the Concessioning Authority can get from the developer while ensuring that the developer gets a reasonable IRR, and that the Project is Bankable from the perspective of DSCR (Debt Service Coverage Ratio) and Post Tax NPV.

### 6.1 Key Assumptions and Considerations

#### 6.1.1 Chitradurga

- a) **Period of Analysis:** The period of analysis has been taken as 30 years inclusive of a 3 year construction and 27 years operations period for the developments.
- b) **Land Area Break-up & Built up area:** The total land available in Chitradurga is 10 Acres. However, as mentioned earlier, in case the project (Bus Terminal Cum Commercial Complex) comes out to be unviable, KSRTC can build the terminal on its own while the PAC would be developed by the private player.

In line with the above, two alternatives have been considered, one for the development of entire 10 acres as Bus Terminal and Passenger Amenity Centre on PPP basis and the other, for development of only 4 Acres of land as PAC, to be done by the private developer.

The Land Area Break-up and built up area for the site, for the two alternatives, is as follows:

#### *Alternative 1: Bus Terminal Cum Commercial Complex (10 Acres)*

Description	Value	Unit
Plot Area	40,460	sq.m
F.A.R	2.00	
Ground Coverage	50	%
No. of Floors	2	
Max BUA on Ground	20,230	sq.m
Max BUA	80,920	sq.m
Max Permissible Commercial Space	45	%

#### *Alternative 2: Only PAC (4 Acres)*

Description	Value	Unit
Plot Area	16,184	sq.m
F.A.R	2.00	
Ground Coverage	50	%
No. of Floors	2	
Max BUA on Ground	8,092	sq.m
Max BUA	32,368	sq.m
Max Permissible Commercial Space	45	%

The F.A.R and Ground coverage for the site have been taken in accordance with the Development Control Regulations, as defined.

- c) **Project Construction Cost:** While calculating the project cost, the assumptions have been based on market feedback, as well as the Consultant’s own experience of advisory and project management consultancy.

Construction Component	Value	Unit
<b>Terminal Area</b>	1,100	INR per sq. ft.
<b>Commercial Area (Retail &amp; Office)</b>	1,200	INR per sq. ft.
<b>Budget Hotel</b>	1,400	INR per sq. ft.
<b>Basement Parking</b>	250	INR per sq. ft.
<b>Ground Parking</b>	100	INR per sq. ft.

- d) **Recurring Expenditure:** Recurring expenditures, in the form of O&M costs, are taken into consideration in order to define the total project cost. These assumptions are based upon market trends and the consultant’s own past experience.

O&M Cost	Value	Unit
<b>Bus Terminal</b>	3	INR/sft/Month
<b>O&amp;M Commercial Building</b>		
O&M Expenses	5	INR/sft
O&M Escalation	15%	every three years
<b>Hotel</b>		
O&M (Rooms, HR, F&B)	30%	of total receivables from Hotel

- e) **Revenue Assumptions:** Revenue assumptions for development options are based on site analysis and demand assessment already discussed in previous chapters. Sales phasing and occupancy has been taken considering prevailing demand supply scenario for comparable projects. Following is the detail of revenue related considerations:

Revenue Head	Value	Unit
<b>Commercial</b>		
Retail	30*	INR/Sft
Commercial Office	20*	INR/Sft
<b>Hotel</b>	800*	ARR/Day
<b>Retail &amp; Commercial Office</b>		
Security Deposits	6	months rental
Interest on Security Deposit	9%	pa
Escalation in Rentals	15%	every three years
Parking Charges	10	INR
Average Utilization of Car Park per day	2	
Price escalation	15%	every three years
<b>Advertising Revenue</b>	10%	of total revenue

\*As per primary surveys done in the project vicinity

- f) **Construction Cost and Schedule:** It has been assumed that the construction of all the developments will take three years to complete.
- g) **Debt Equity Ratio (DER):** A debt equity ratio of 70:30 has been considered.
- h) **Revenue & Expenditure increment Rates:** An inflation rate of 5% has been applied on the cost streams while revenue related escalations have been provided in the previous section

- i) **Interest Rate:** The rate of interest for the analysis has been assumed as 13% per annum.
- j) **Debt Tenure & Repayment:** 10 years debt tenure, including a moratorium period of 1 year, has been considered excluding construction period.
- k) **Pre-Operative Charges and Contingencies:** Preliminary and pre-operative expenses @ 5% have been considered for all the developments.
- l) **Taxation:** The tax rates have been taken as follows:

Tax Component	Rate	
Income tax	30%	on the profit before tax
Surcharge	5%	on the tax
Education Cess	3%	on the income tax and surcharge
<b>Effective tax component @ 30.00%</b>	<b>32.45%</b>	

- m) **Depreciation:** The depreciation on the project components of Buildings has been taken as per the Company's Act through Straight line Method (SLM), @1.63%

### 6.1.2 Lingsugur

- a) **Period of Analysis:** The period of analysis has been taken as 30 years inclusive of a 2 year construction and 28 years operations period for the developments.
- b) **Land Area Break-up & Built up area:** The Land Area Break-up and built up area for the site is as follows:

Description	Value	Unit
Plot Area	2,711	sq.m
F.A.R	1.50	
Ground Coverage	55	%
No. of Floors	2	
Max BUA on Ground	1,491	sq.m
Max BUA	4,066	sq.m
Max Permissible Commercial Space	45	%

The F.A.R and Ground coverage for the site have been taken in accordance with the Development Control Regulations, as defined.

- c) **Project Construction Cost:** While calculating the project cost, the assumptions have been based on market feedback, as well as the Consultant's own experience of advisory and project management consultancy.

Construction Component	Value	Unit
Commercial Area (Retail & Office)	1,200	INR per sq. ft.
Budget Hotel	1,400	INR per sq. ft.
Basement Parking	250	INR per sq. ft.
Ground Parking	100	INR per sq. ft.

- d) **Recurring Expenditure:** Recurring expenditures, in the form of O&M costs, are taken into consideration in order to define the total project cost. These assumptions are based upon market trends and the consultant's own past experience.

O&M Cost	Value	Unit
<b>O&amp;M Commercial Building</b>		
O&M Expenses	5	INR/sft
O&M Escalation	15%	every three years
<b>Hotel</b>		
O&M (Rooms, HR, F&B)	30%	of total receivables from Hotel

e) **Revenue Assumptions:** Revenue assumptions for development options are based on site analysis and demand assessment already discussed in previous chapters. Sales phasing and occupancy has been taken considering prevailing demand supply scenario for comparable projects. Following is the detail of revenue related considerations:

Revenue Head	Value	Unit
<b>Commercial Building</b>		
Retail	35*	INR/Sft
Commercial Office	30*	INR/Sft
<b>Hotel</b>	600*	ARR/Day
<b>Retail &amp; Commercial Office</b>		
Security Deposits	6	months rental
Interest on Security Deposit	9%	pa
Escalation in Rentals	15%	every three years
Parking Charges	10	INR
Average Utilization of Car Park per day	2	
Price escalation	15%	every three years
<b>Advertising Revenue</b>	10%	of total revenue

\*As per primary surveys done in the project vicinity

- f) **Construction Cost and Schedule:** It has been assumed that the construction of all the developments will take three years to complete.
- g) **Debt Equity Ratio (DER):** A debt equity ratio of 70:30 has been considered.
- h) **Revenue & Expenditure increment Rates:** An inflation rate of 5% has been applied on the cost streams while revenue related escalations have been provided in the previous section
- i) **Interest Rate:** The rate of interest for the analysis has been assumed as 13% per annum.
- j) **Debt Tenure & Repayment:** 10 years debt tenure, including a moratorium period of 2 year, has been considered excluding construction period.
- k) **Pre-Operative Charges and Contingencies:** Preliminary and pre-operative expenses @ 5% have been considered for all the developments.
- l) **Taxation:** The tax rates have been taken as follows:

Tax Component	Rate	
<b>Income tax</b>	30%	on the profit before tax
<b>Surcharge</b>	5%	on the tax
<b>Education Cess</b>	3%	on the income tax and surcharge
<b>Effective tax component @ 30.00%</b>	<b>32.45%</b>	

m) **Depreciation:** The depreciation on the project components of Buildings has been taken as per the Company's Act through Straight line Method (SLM), @1.63%



### 6.1.3 Sindhanur

- a) **Period of Analysis:** The period of analysis has been taken as 30 years inclusive of a 2 year construction and 28 years operations period for the developments.
- b) **Land Area Break-up & Built up area:** The Land Area Break-up and built up area for the site is as follows:

Description	Value	Unit
Plot Area	3,400	sq.m
F.A.R	1.75	
Ground Coverage	55	%
No. of Floors	2	
Max BUA on Ground	1,869	sq.m
Max BUA	5,948	sq.m
Max Permissible Commercial Space	45	%

The F.A.R and Ground coverage for the site have been taken in accordance with the Development Control Regulations, as defined.

- c) **Project Construction Cost:** While calculating the project cost, the assumptions have been based on market feedback, as well as the Consultant's own experience of advisory and project management consultancy.

Construction Component	Value	Unit
Commercial Area (Retail & Office)	1,200	INR per sq. ft.
Budget Hotel	1,400	INR per sq. ft.
Basement Parking	250	INR per sq. ft.
Ground Parking	100	INR per sq. ft.

- d) **Recurring Expenditure:** Recurring expenditures, in the form of O&M costs, are taken into consideration in order to define the total project cost. These assumptions are based upon market trends and the consultant's own past experience.

O&M Cost	Value	Unit
<b>O&amp;M Commercial Building</b>		
O&M Expenses	5	INR/sft
O&M Escalation	15%	every three years
<b>Hotel</b>		
O&M (Rooms, HR, F&B)	30%	of total receivables from Hotel

- e) **Revenue Assumptions:** Revenue assumptions for development options are based on site analysis and demand assessment already discussed in previous chapters. Sales phasing and occupancy has been taken considering prevailing demand supply scenario for comparable projects. Following is the detail of revenue related considerations:

Revenue Head	Value	Unit
Commercial Building		

Retail	50*	INR/Sft
Commercial Office	40*	INR/Sft
<b>Hotel</b>	600*	ARR/Day
<b>Retail &amp; Commercial Office</b>		
Security Deposits	6	months rental
Interest on Security Deposit	9%	pa
Escalation in Rentals	15%	every three years
Parking Charges	10	INR
Average Utilization of Car Park per day	2	
Price escalation	15%	every three years
<b>Advertising Revenue</b>	10%	of total revenue

\*As per primary surveys done in the project vicinity

- f) **Construction Cost and Schedule:** It has been assumed that the construction of all the developments will take three years to complete.
- g) **Debt Equity Ratio (DER):** A debt equity ratio of 70:30 has been considered.
- h) **Revenue & Expenditure increment Rates:** An inflation rate of 5% has been applied on the cost streams while revenue related escalations have been provided in the previous section
- i) **Interest Rate:** The rate of interest for the analysis has been assumed as 13% per annum.
- j) **Debt Tenure & Repayment:** 10 years debt tenure, including a moratorium period of 2 year, has been considered excluding construction period.
- k) **Pre-Operative Charges and Contingencies:** Preliminary and pre-operative expenses @ 5% have been considered for all the developments.
- l) **Taxation:** The tax rates have been taken as follows:

Tax Component	Rate	
<b>Income tax</b>	30%	on the profit before tax
<b>Surcharge</b>	5%	on the tax
<b>Education Cess</b>	3%	on the income tax and surcharge
<b>Effective tax component @ 30.00%</b>	<b>32.45%</b>	

- m) **Depreciation:** The depreciation on the project components of Buildings has been taken as per the Company's Act through Straight line Method (SLM), @1.63%

## 6.2 Key Project Financials

Based on the above stated inputs, the exercise of financial analysis has been carried out for the proposed project. The upfront payment potential; either one time or staggered over years; depends on the returns to the investor after making the upfront payment. Three models of PPP are considered:

1. When the private player pays only the Lease Rental to the government. In this case, the Lease Rental will become the bid variable and the private player will quote in terms of the annual lease rental payable to the Authority.
2. When the private player pays an upfront amount plus the lease rental to the government. In this case, the Lease Rental shall be a fixed at a minimal amount and shall be kept so that the Developer can't claim ownership right in case of any dispute. The bid

variable will be the Upfront Amount payable in pre-decided installments, as defined in the Bid Document.

3. When the private player pays an upfront amount, the lease rental and annual revenue share. In this case, the Lease Rental shall be a fixed at a minimal amount and shall be kept so that the Developer can't claim ownership right in case of any dispute. Further, an Upfront Amount shall also be fixed and payable as per the installments defined in the Bid Document. In this model, Revenue Share shall be the bid variable and the Bidder will quote the revenue share (in percentage terms of the Gross Revenue) that the Bidder intends to share with the Authority. In this particular model, the revenue risk is shared between the Developer and the Authority to the extent of the Revenue Share percentage. Both the upside / downside of the revenue is captured in this model. Further, an important point to note in this particular model is that the Authority will need to develop a strong mechanism to keep a check on the total annual gross revenues of the project.

It is to be noted that the values assumed/derived at for the bid variable components in each case is the recommended maximum reserve prices/percentages for the respective components. The government/bidders may want to consider lower quotes for the variable components in order to improve the project IRR and, consequently, project viability, wherever required.

The consultants have also carried out Value for Money (VFM) analysis to recommend the most suitable mode of project procurement. Value for Money (VFM) analysis is essentially a cost-benefit analysis, where it is examined if the benefits of the project are positive as compared to alternative procurement method. A PPP project is said to achieve value for money if it costs less than the best realistic public sector project alternative which would deliver the same services. Thus, a positive Value for Money for the government means that the project will generate enough value to be taken up on PPP basis.

A detailed explanation for VFM is given in Annexure 2.

A summary of the project financials estimated in the process are presented below:

### Chitradurga

The analysis for Chitradurga has been done for two alternatives:

- The first being, where the private player develops the entire 10 Acres of land as Bus Terminal Cum Commercial Complex
- The second being, where the private player develops only 4 Acres of land as a Passenger Amenity Centre, while the Bus Terminal is constructed by KSRTC itself, on the remaining 6 Acres (to be done only if the first option is not viable)

Table 16: Detailed project cost for Chitradurga (Alternative 1: Bus Terminal Cum Commercial Complex) (INR Cr)

	Only Lease Rental		
Cost Component \ Construction Year	Year 1	Year 2	Year 3
Construction Cost of Bus Terminal & Facilities	5.39	7.54	5.94

<b>Cost Component \ Construction Year</b>	<b>Only Lease Rental</b>		
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Construction Cost of Commercial Built-Up Area</b>	13.43	18.81	14.81
<b>Pre-operative Expenses</b>	0.94	1.32	1.04
<b>Parking</b>	1.47	2.06	1.62
<b>Upfront payment to Concessioneing Authority</b>	-	-	-
<b>IDC</b>	-	1.84	5.56
<b>Sub Total</b>	<b>21.23</b>	<b>31.56</b>	<b>28.96</b>
<b>Landed Cost</b>	<b>81.75</b>		

Table 17: Key project financials for Chitradurga (Bus Terminal Cum Commercial Complex)

<b>Item</b>	<b>Only Lease Rental Paid by the Pvt Developer</b>
Project Cost (INR Cr) including IDC and Upfront Payment	81.75
Equity (INR Cr) @ 30% of capital cost	24.53
Debt (INR Cr) @ 70% of capital cost	57.23
Project IRR (%)	9.2
Project NPV (INR Cr)	-17.95
Equity IRR (%)	8.6
VFM (INR Cr)	18.42
Receivables to Govt	
<i>Lease Rental (INR cr/Year @ INR 5 per sqft/year)</i>	0.22
<i>Upfront Payment (INR Cr)</i>	0.00
<i>Revenue Share (% of the Revenue)</i>	0.00
NPV of Receivables to Govt (INR Cr)	1.13

Table 18: Detailed project cost for Chitradurga (Alternative 2: Only PAC) (INR Cr)

<b>Cost Component \ Construction Year →</b>	<b>Only Lease Rental</b>			<b>Upfront Payment plus Lease Rental</b>			<b>Upfront payment, Lease Rental &amp; Revenue Share</b>		
	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Construction Cost of Commercial Built -Up Area</b>	5.74	8.03	6.32	5.74	8.03	6.32	5.74	8.03	6.32
<b>Pre-operative Expenses</b>	0.29	0.40	0.32	0.29	0.40	0.32	0.29	0.40	0.32
<b>Parking</b>	0.16	0.22	0.17	0.16	0.22	0.17	0.16	0.22	0.17
<b>Upfront payment to Concessioneing Authority</b>	-	-	-	3.50	3.68	-	2.50	2.63	-
<b>IDC</b>	-	0.53	1.62	0.01	0.87	2.32	-	0.77	2.12
<b>Sub Total</b>	<b>6.18</b>	<b>9.19</b>	<b>8.43</b>	<b>9.68</b>	<b>13.19</b>	<b>9.13</b>	<b>8.68</b>	<b>12.05</b>	<b>8.93</b>
<b>Landed Cost</b>	<b>23.80</b>			<b>32.01</b>			<b>29.66</b>		

Table 19: Key project financials for Chitradurga (PAC only)

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share
Project Cost (INR Cr) including IDC and Upfront Payment	23.80	32.01	29.66
Equity (INR Cr) @ 30% of capital cost	7.14	9.60	8.90
Debt (INR Cr) @ 70% of capital cost	16.66	22.41	20.76
Project IRR (%)	14.2	11.3	11.3
Project NPV (INR Cr)	4.21	-2.10	-1.98
Equity IRR (%)	15.7	11.6	11.6
VFM (INR Cr)	12.33	6.02	6.14
Receivables to Govt			
<i>Lease Rental (INR cr/Year @ INR 5 per sqft/year)</i>	0.09	0.09	0.09
<i>Upfront Payment (INR Cr)</i>	0.00	7.00	5.00
<i>Revenue Share (% of the Revenue)</i>	0.00	0.00	6.00
NPV of Receivables to Govt (INR Cr)	0.45	6.06	5.77

It can be seen from the findings that in the first alternative (Bus Terminal Cum Commercial Complex), the NPV of the project is negative, making it financially unviable.

For the second alternative, the project has a positive Project NPV in the first case (Lease Rental only); while the remaining two cases, again, are not viable due to negative project NPV. The project, therefore, is a borderline case and may have issues in attracting large private interest. The Value for Money for the government is positive in all the three cases; thus the project will create value for all stakeholders if it is awarded on PPP basis.

## Lingsugur

Table 20: Detailed project cost for Lingsugur PAC (INR Cr)

Cost Component\Construction Year	Only Lease Rental		Upfront Payment plus Lease Rental		Upfront payment, Lease Rental & Revenue Share	
	1	2	1	2	1	2
<b>Construction Cost of Commercial Built-Up Area</b>	1.01	1.59	1.01	1.59	1.01	1.59
<b>Pre-operative Expenses</b>	0.05	0.08	0.05	0.08	0.05	0.08
<b>Parking</b>	0.03	0.05	0.03	0.05	0.03	0.05
<b>Upfront payment to Concessioning Authority</b>	-	-	0.35	0.37	0.23	0.24
<b>IDC</b>	0.01	0.15	0.02	0.19	0.02	0.18
<b>Sub Total</b>	<b>1.10</b>	<b>1.86</b>	<b>1.46</b>	<b>2.27</b>	<b>1.33</b>	<b>2.13</b>

	Only Lease Rental		Upfront Payment plus Lease Rental		Upfront payment, Lease Rental & Revenue Share	
	1	2	1	2	1	2
<b>Cost Component \ Construction Year</b>						
<b>Landed Cost</b>	2.96		3.73		3.46	

Table 21: Key project financials for Lingsugur

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share
Project Cost (INR Cr) including IDC and Upfront Payment	2.96	3.73	3.46
Equity (INR Cr) @ 30% of capital cost	0.89	1.12	1.04
Debt (INR Cr) @ 70% of capital cost	2.07	2.61	2.42
Project IRR (%)	21.7	18.4	18.3
Project NPV (INR Cr)	2.66	2.06	1.89
Equity IRR (%)	28.1	22.2	22.0
VFM (INR Cr)	3.29	2.70	2.53
Receivables to Govt			
Lease Rental (INR cr/Year @ INR 5 per sqft/year)	0.015	0.015	0.015
Upfront Payment (INR Cr)	0.00	0.70	0.45
Revenue Share (% of the Revenue)	0.00	0.00	6.00
NPV of Receivables to Govt (INR Cr)	0.09	0.65	0.76

It can be seen from the above results that, while the NPV of receivables is highest for the Government in the third model (where the Government gets lease rental, upfront fee and a revenue share), it also requires the Government to share a part of the risk. For ensuring balanced returns to both parties at minimum risk to the Government, the **upfront payment plus lease rental model** appears to be the best option. The Value for Money for the government is positive in all the models hence the project is expected to create value for all stakeholders if awarded on PPP basis.

### Sindhanur

Table 22: Detailed project cost for Sindhanur PAC (INR Cr)

	Only Lease Rental		Upfront Payment plus Lease Rental		Upfront payment, Lease Rental & Revenue Share	
	1	2	1	2	1	2
<b>Cost Component \ Construction Year</b>						

<b>Construction Cost of Commercial Built-Up Area</b>	1.44	2.27	1.44	2.27	1.44	2.27
<b>Pre-operative Expenses</b>	0.07	0.11	0.07	0.11	0.07	0.11
<b>Parking</b>	0.04	0.06	0.04	0.06	0.04	0.06
<b>Upfront payment to Concessioning Authority</b>	-	-	0.75	0.79	0.55	0.58
<b>IDC</b>	0.02	0.21	0.04	0.30	0.03	0.28
<b>Sub Total</b>	<b>1.57</b>	<b>2.66</b>	<b>2.34</b>	<b>3.54</b>	<b>2.13</b>	<b>3.30</b>
<b>Landed Cost</b>	<b>4.23</b>		<b>5.87</b>		<b>5.44</b>	

Table 23: Key project financials for Sindhanur

<b>Item</b>	<b>Only Lease Rental Paid by the Pvt Developer</b>	<b>Upfront Payment Plus Lease Rental Model</b>	<b>Upfront Payment, Lease Rental and Revenue Share</b>
Project Cost (INR Cr) including IDC and Upfront Payment	4.43	5.87	5.44
Equity (INR Cr) @ 30% of capital cost	1.27	1.76	1.63
Debt (INR Cr) @ 70% of capital cost	2.96	4.11	3.80
Project IRR (%)	24.2	19.0	19.1
Project NPV (INR Cr)	4.93	3.66	3.40
Equity IRR (%)	32.6	23.4	23.4
VFM (INR Cr)	5.33	4.06	3.80
Receivables to Govt			
<i>Lease Rental (INR cr/Year @ INR 5 per sqft/year)</i>	0.02	0.02	0.02
<i>Upfront Payment (INR Cr)</i>	0.00	1.50	1.10
<i>Revenue Share (% of the Revenue)</i>	0.00	0.00	6.00
NPV of Receivables to Govt (INR Cr)	0.11	1.31	1.47

It can be seen from the above results that, while the NPV of receivables is highest for the Government in the third model (where the Government gets lease rental, upfront fee and a revenue share), it also requires the Government to share a part of the risk. For ensuring balanced returns to both parties, at minimum risk to the Government, the **upfront payment plus lease rental model** appears to be the best option.

### 6.2.1 Conclusions of the Financial Analysis

- Chitradurga: For Chitradurga, only the lease rental model for passenger amenity centre has positive NPV. As per the model, the NPV of receivables to the government is INR 0.45 Cr. The private player is expected to observe a Project IRR of 14.2% and a Project NPV of INR 4.21 Cr. The Bus Terminal Cum Commercial Complex project in Chitradurga is not found to be viable. Lingsugur: For Lingsugur, an upfront plus lease rental model appears to be the best option as it balances the returns to government and the private player, at minimum risk to the government. As per the model, the NPV of receivables to



the government is INR 0.65 Cr. The private player is expected to observe a Project IRR of 18.4% and a Project NPV of INR 2.06 Cr.

- **Sindhhanur:** For this project also, an upfront plus lease rental model is the best option as it balances the returns to government and the private player, at a minimum risk to the government. As per the model, the NPV of receivables to the government is INR 1.31 Cr. The private player is expected to observe a Project IRR of 19.0% and a Project NPV of INR 3.66 Cr.

Detailed cashflow tables for the above mentioned models for the projects are given in Annexure 3.

### 6.3 Sensitivity Analysis

Sensitivity analysis is done for the best case models of the financially viable projects to understand the sensitivity of the project returns to changes in crucial parameters of the project like capital costs, operating costs and revenues.

#### Chitradurga

- Change in Construction Cost:** The project is sensitive to changes in construction costs, and hence the private player will have to ensure that there is no delay in the project that will lead to cost overruns. A 25% increase in construction cost will result a 95% decrease in project NPV. Changes in project and equity IRR corresponding to changes in construction cost is given in the table below

Table 24: Sensitivity of Chitradurga PAC Project returns to changes in Construction Cost

Change in Construction Cost	Post Tax Project NPV (INR cr)	P IRR	E IRR
25%	0.12	12.2%	12.8%
15%	1.75	12.9%	13.8%
10%	2.64	13.4%	14.4%
5%	3.34	13.7%	15.0%
0%	4.21	14.2%	15.7%
-5%	5.08	14.7%	16.4%
-10%	5.82	15.2%	17.2%
-15%	6.67	15.8%	18.1%
-25%	8.18	17.1%	19.9%

- Changes in Operational Costs:** Compared to changes in construction costs, the project shows similar sensitivity to changes in operational costs. A 25% higher operational cost will lead to an almost 97% decrease in Project NPV. The project proponent will need to take steps to ensure that its operational expenses are kept in check. The changes in project and equity IRR in response to changes in Operational Expenses is given in the table below:

Table 25: Sensitivity of the Chitradurga PAC Project Returns to Changes in Operational Expenses

<b>Change in Opex</b>	<b>Post Tax NPV (INR Cr)</b>	<b>P IRR</b>	<b>E IRR</b>
25%	0.1	12.2%	12.8%
15%	1.8	12.9%	13.8%
10%	2.6	13.4%	14.4%
5%	3.3	13.7%	15.0%
0%	4.2	14.2%	15.7%
-5%	5.1	14.7%	16.4%
-10%	5.8	15.2%	17.2%
-15%	6.7	15.8%	18.1%
-25%	8.2	17.1%	19.9%

- c. **Changes in Revenue:** Lower than forecasted revenues can impact the project viability substantially. A 25% lower revenue returns will result in an almost 97% decrease in project NPV, thus making the project unviable. Thus, the project proponent will have to ensure that the project gets operational on time so that it does not lose on its revenue earning years and also ensure that it does adequate marketing to bring about maximum capacity utilization of its commercial facilities. The following table gives the changes in the project returns in response to changes in revenue streams realized for the project.

Table 26: Sensitivity of the Chitradurga PAC Project Returns to Changes in Revenue

<b>Change in Revenue</b>	<b>Post Tax NPV (INR Crore)</b>	<b>P IRR</b>	<b>E IRR</b>
25%	0.1	12.2%	12.8%
15%	1.8	12.9%	13.8%
10%	2.6	13.4%	14.4%
5%	3.3	13.7%	15.0%
0%	4.2	14.2%	15.7%
-5%	5.1	14.7%	16.4%
-10%	5.8	15.2%	17.2%
-15%	6.7	15.8%	18.1%
-25%	8.2	17.1%	19.9%

## Lingsugur

- a. **Change in Construction Cost:** The project is sensitive to changes in construction costs, and hence the private player will have to ensure that there is no delay in the project that will lead to cost overruns. A 25% higher construction cost will lead to an equal (25%) reduction in Project NPV. Changes in project and equity IRR corresponding to changes in construction cost is given in the table below

Table 27: Sensitivity of Lingsugur Project Returns to changes in Construction Cost

<b>Change in Construction Cost</b>	<b>Post Tax Project NPV (INR cr)</b>	<b>P IRR</b>	<b>E IRR</b>
25%	1.56	16.3%	18.6%
15%	1.78	17.1%	20.0%

10%	1.88	17.5%	20.8%
5%	1.96	17.9%	21.3%
0%	2.06	18.4%	22.2%
-5%	2.17	18.9%	23.1%
-10%	2.27	19.4%	24.0%
-15%	2.38	20.0%	25.1%
-25%	2.59	21.4%	27.5%

- b. **Changes in Operational Costs:** Compared to changes in construction costs, the project is equally sensitive to changes in operational costs. In this case, a 25% higher operational cost will lead to a 25% reduction in Project NPV. The project proponent will need to take steps to ensure that its operational expenses are kept in check. The changes in project and equity IRR in response to changes in Operational Expenses is given in the table below:

Table 28: Sensitivity of the Lingsugur Project Returns to Changes in Operational Expenses

Change in Opex	Post Tax NPV (INR Cr)	P IRR	E IRR
25%	1.6	16.3%	18.6%
15%	1.8	17.1%	20.0%
10%	1.9	17.5%	20.8%
5%	2.0	17.9%	21.3%
0%	2.1	18.4%	22.2%
-5%	2.2	18.9%	23.1%
-10%	2.3	19.4%	24.0%
-15%	2.4	20.0%	25.1%
-25%	2.6	21.4%	27.5%

- c. **Changes in Revenue:** Lower than forecasted revenues will greatly impact the project viability. A 25% reduction in the expected revenues will lead to a 25% reduction in project NPV. Thus, the project proponent will have to ensure that the project gets operational on time so that it does not lose on its revenue earning years and also ensure that it does adequate marketing to bring about maximum capacity utilization of its commercial facilities. The following table gives the changes in the project returns in response to changes in revenue streams realized for the project.

Table 29: Sensitivity of the Lingsugur Project Returns to Changes in Revenue

Change in Revenue	Post Tax NPV (INR Crore)	P IRR	E IRR
25%	1.6	16.3%	18.6%
15%	1.8	17.1%	20.0%
10%	1.9	17.5%	20.8%
5%	2.0	17.9%	21.3%
0%	2.1	18.4%	22.2%

-5%	2.2	18.9%	23.1%
-10%	2.3	19.4%	24.0%
-15%	2.4	20.0%	25.1%
-25%	2.6	21.4%	27.5%

## Sindhanur

- a. **Change in Construction Cost:** The project is sensitive to changes in construction costs, and hence the private player will have to ensure that there is no delay in the project that will lead to cost overruns. A 25% higher construction cost will lead to a 20% reduction in project NPV. Changes in project and equity IRR corresponding to changes in construction cost is given in the table below

Table 30: Sensitivity of Returns of Sindhanur Project to changes in Construction Cost

Change in Construction Cost	Post Tax Project NPV (INR cr)	P IRR	E IRR
25%	2.96	17.1%	20.0%
15%	3.21	17.8%	21.1%
10%	3.36	18.2%	21.8%
5%	3.51	18.6%	22.6%
0%	3.66	19.0%	23.4%
-5%	3.81	19.5%	24.2%
-10%	3.96	20.0%	25.1%
-15%	4.11	20.6%	26.1%
-25%	4.41	21.8%	28.3%

- b. **Changes in Operational Costs:** Compared to changes in construction costs, the project shows similar sensitivity to changes in operational costs. A 25% higher operational cost will lead to a 20% drop in the Project NPV. The project proponent will need to take steps to ensure that its operational expenses are kept in check. The changes in project and equity IRR in response to changes in Operational Expenses is given in the table below:

Table 31: Sensitivity of the Sindhanur Project Returns to Changes in Operational Expenses

Change in Opex	Post Tax NPV (INR Cr)	P IRR	E IRR
25%	3.0	17.1%	20.0%
15%	3.2	17.8%	21.1%
10%	3.4	18.2%	21.8%
5%	3.5	18.6%	22.6%
0%	3.7	19.0%	23.4%
-5%	3.8	19.5%	24.2%
-10%	4.0	20.0%	25.1%
-15%	4.1	20.6%	26.1%
-25%	4.4	21.8%	28.3%

- c. **Changes in Revenue:** Lower than forecasted revenues can impact the project viability substantially. A 25% lower revenue stream will lead to a 20% drop in the Project NPV. Thus, the project proponent will have to ensure that the project gets operational on time so that it does not lose on its revenue earning years and also ensure that it does adequate marketing to bring about maximum capacity utilization of its commercial facilities. The following table gives the changes in the project returns in response to changes in revenue streams realized for the project.

*Table 32: Sensitivity of the Sindhanur Project Returns to Changes in Revenue*

<b>Change in Revenue</b>	<b>Post Tax NPV (INR Crore)</b>	<b>P IRR</b>	<b>E IRR</b>
25%	3.0	17.1%	20.0%
15%	3.2	17.8%	21.1%
10%	3.4	18.2%	21.8%
5%	3.5	18.6%	22.6%
0%	3.7	19.0%	23.4%
-5%	3.8	19.5%	24.2%
-10%	4.0	20.0%	25.1%
-15%	4.1	20.6%	26.1%
-25%	4.4	21.8%	28.3%

## 7 STATUTORY & LEGAL FRAMEWORK

As per the amendments done to Infrastructure policy, 1997 in 2007 (Government Order No.IDD 32 IDM 2003 Bangalore dated 16th July 2007); Government of Karnataka has introduced the concept of involvement of private players through public private partnerships (PPP) for the implementation of major infrastructure projects. The projects would be implemented through open competitive bidding for the upgradation, expansion and development of new infrastructure projects.

The policy comprises different sectors and their rules and legislations including The Indian Tolls Act of 1851, The Land Acquisition (Karnataka) Amendment Act of 1988, Dispute Settlement Act of 1940, National Highways Act of 1965, Motor Vehicles Act of 1988, National Highways Authority of India Act of 1988 and the Central Road Fund Act of 2000.

Karnataka Infrastructure Development and Regulatory Bill of 2011 was also drafted with a purpose of providing a legal framework for infrastructure through Public Private Partnerships, 'incorporating contractual arrangements to design, finance, construct, operate and maintain Infrastructure Projects, provide for a fair and transparent selection process, set out rights and obligations of the Government and private sector in the implementation of Infrastructure Projects, reduce administrative and procedural delays, set out incentives, specify project delivery process, establish an Infrastructure Authority with a view to present bankable projects to the private sector and generally to improve the delivery of public services in the state of Karnataka and for matters connected therein or incidental thereto'.

## 8 INDICATIVE ENVIRONMENT & SOCIAL IMPACTS

Preliminary environmental and social screening of study has been carried out to identify critical issues and areas that would require to be studied in detail for impact assessment, mitigation measures and management plan. Further a detailed study will be required to be done by the Concessionaire in the subsequent stages of the project.

### 8.1 Environmental Impacts

#### 8.1.1 Description of Environment

The state enjoys three main types of climates. For meteorological purposes, the state has been divided into three sub-divisions namely,

- Coastal Karnataka (Dakshina Kannada and Uttara Kannada districts),
- North Interior Karnataka (Belgaum, Bidar, Bijapur, Dharwad, Gulbarga and Raichur districts) and
- South Interior Karnataka (the remaining districts of Bangalore Rural, Bangalore, Bellary, Chikmagalur, Chitradurga, Kodagu, Hassan, Kolar, Mysore, Mandya, Shimoga and Tumkur districts)

The Tropical Monsoon climate covers the entire coastal belt and adjoining areas. The climate in this region is hot with excessive rainfall during the monsoon season i.e., June to September. The Southern half of the state experiences hot, seasonally dry tropical savana climate; while most of the northern half experiences hot, semi-arid, tropical steppe type of climate.

#### 8.1.2 Environmental Impact Assessment Study for the Proposed Sites

As per the Environmental Impact Assessment Notification 2006, large projects in specified sectors and projects lying in environmentally sensitive areas will require Environmental Clearance from the centre. This would involve preparing an Environment Impact Assessment Report and conducting public hearings. Smaller projects in the specified sectors do not require EIA report but still will require clearance at the state level.

However, the proposed project does not fall under any project category as specified under the EIA, 2006 notification. Further, as per the preliminary assessment, the proposed sites do not lie in any environmentally sensitive area, hence the Consultants do not see any need for detailed EIA study for this project. Applicable Acts or Legislation

The Government of India has formulated various policy guidelines; acts and regulations aimed at protection and enhancement of environmental resources. The following table summarizes the existing legislations pertaining to the project, depending upon which various environmental clearances may be required.



Table 33: Relevant Environmental Laws & Regulation

Sl. No.	Law / Regulation / Guidelines	Relevance	Implementing / Responsible Agency
1	The Environmental (Protection) Act, 1986, and the Environmental (Protection) Rules, 1987-2002 (various amendments)	Umbrella Act. Protection and improvement of the environment. Establishes the standards for emission of noise in the atmosphere.	MoEF, State Department of Environment & Forest, CPCB and SPCB
2	The EIA Notification, 14th September 2006 & subsequent amendments	Identifies expansion of National highways greater than 30 Km involving additional ROW greater than 20m involving Land Acquisition and all state highways (item 7 (f) of schedule) as one of the projects requiring prior clearance.	MoEF / SEIAA
3	The Water (Prevention and Control of Pollution) Act, 1974	Central and State Pollution Control Board to establish/enforce water quality and effluent standards, monitor water quality, prosecute offenders, and issue licenses for construction/operation of certain facilities.	State Pollution Control Board
4	The Air (Prevention and Control of Pollution) Act, 1981	Empowers SPCB to set and monitor air quality standards and to prosecute offenders, excluding vehicular air and noise emission.	State Pollution Control Board
5	Noise Pollution (Regulation And Control) Act, 1990	Standards for noise emission for various land uses	State Pollution Control Board
6	Ancient Monuments and Archaeological sites and Remains Act 1958	To protect and conserve cultural and historical remains found.	Archaeological Survey of India, State Dept. of Archaeology
7	The Motor Vehicle Act. 1988	Empowers State Transport Authority to enforce standards for vehicular pollution. From August 1997 the "Pollution Under Control Certificate is issued to reduce vehicular emissions.	State Motor Vehicles Department

## 8.2 Social Impacts

### 1. Better Infrastructure for Public Use

The central idea of the project is to provide social infrastructure in the form of passenger amenity centres. These centres will help to improve the available facilities, therefore, resulting in the benefit of the commuters.

### 2. No major displacement seen due to land acquisition:

This is mainly because the land, in all three cases, is already acquired. The table below summarizes the current status of land ownership for the project sites and corresponding acquisition, if any, required.

Table 34: Status of land ownership for project sites

S.No.	Site	Current Ownership of Land	Remarks
1	Chitradurga	Karnataka State Transport Corporation (KSRTC)	Land already acquired
2	Lingsugur	North East Karnataka Road Transport Corporation (NEKRTC)	
3	Sindhanur	North East Karnataka Road Transport Corporation (NEKRTC)	

In all the three cases, as the land is already owned by government agencies, there will be no issues related to shifting or disruption of activities taking place on the site, due to acquisition of private land.

However, in the case of Lingsugur, the site is currently being encroached upon by illegal shops. There is already an existing High Court Order for the removal of such encroachments from the site.

### 3. Externalities like impact on traffic flow

All the three sites already have transport related activities taking place on them. In Chitradurga, the site has a bus depot currently being used for parking of buses. The project proposal involves shifting of the depot to the adjoining plot and construction of a Passenger Amenity Centre on the same. Further, there is also an upcoming bus terminal planned on the site. As a result of the upcoming activities, there is likelihood of an increase in traffic flow and density. However, the area has wide roads and effective circulation patterns and therefore a negative impact of this increase in traffic is unlikely.

The site in Lingsugur is the old bus terminal and the site in Sindhanur is currently functioning as a make shift inter-city bus terminal while the actual terminal is under renovation. In both the cases, the areas have already experienced more traffic, than is likely to be generated as a result of the upcoming PACs, without facing any major issues related to traffic movement and flow.

## 9 OPERATING FRAMEWORK

### 9.1 Risks & Mitigation

Appropriate risk mitigation structures have to be evolved for effective implementation of the Project. Various risks associated with the Project and their broad mitigation measures are explained below:

#### 9.1.1 Construction Risk

Construction risk can be in the form of Design Risk, Cost Overrun and/or Time Overrun.

##### **Design Risk:**

The concessionaire will be responsible for any defects and/or deficiency in the design and shall rectify the same at his/ her own cost. By transferring the design risk to private party there is scope for innovation leading to efficiency in cost and services.

##### **Cost Overrun:**

Concessionaire to be made responsible for any cost over runs. Termination payments, specified in the Agreement, linked to Total Project Cost which shall be lowest of (i) Total Project Cost as per financing documents, (ii) actual capital cost as certified by auditor (iii) project cost defined by Client in the agreement.

##### **Time Overrun:**

This leads to delay in completion. Construction period to remain fixed. Effective clauses to be provided in the Agreement to be signed between the Client and the Developer. Timely clearances and handing over of site for the project should be ensured.

#### 9.1.2 Commercial Risk/ Revenue Risk

This risk arises from existing demand and future competition, effectiveness in utilizing space and management of facilities. With the involvement of Private Sector in marketing, O&M and management and attractive incentive structures linked with Project success, risk would be transferred to the Concessionaire. The Concessionaire also has the right to decide the lease rental tariff for the property development and other applicable charges / fees for the project components under the facility.

#### 9.1.3 Operational Risk

The Concessionaire to operate and maintain the facility for an agreed lease period. Effective clauses addressing the above should be incorporated in the Agreement. Increase in the O & M costs, except in cases due to change in Specification & Standards and Change in Law, shall be borne by Developer. The Developer may transfer operational rights to another party subject to approval from Client.

## 9.2 Indicative Project Structure & Operating framework

The projects are proposed to be implemented on Public-Private Partnership (PPP) format under Design, Finance, Build, Operate and Transfer (DBFOT) basis.

Under this structure, Private Developer / Private Sector Player (PSP) shall finance, design, engineer, construct, market, operate, maintain and manage the projects during the concession period and transfer the project facilities to the Concessions Authority at the end of the same.

Further, as previously discussed, the Concessions Authority also has the option to adopt one of the following payment structures under the structure:

- **Recurring Rental only** – This is the option where the developer gives a recurring rental in consideration for the lease/concession rights. Lease rental is the bid variable here.
- **A combination of Upfront and Recurring Rental** – This mechanism is used mainly in the lease type model of commercial projects. The developer gives an upfront amount to the leasing/concessions authority and follows it with either Quarterly / Annual Recurring Payment. In such an option, bid variable is the upfront amount paid by the concessionaire. There is an inbuilt provision for annual escalation in the recurring payment to take care of the inflation or upside.
- **A combination of Upfront, Recurring Rental and fixed Revenue Share** - This mechanism is also used mainly in the lease type model of commercial projects, where a recurring source of revenue is available to the developer. The developer gives an upfront amount to the leasing/concessions authority and follows it with either Quarterly/Annual recurring Payment. In addition, the developer also shares a fixed percentage of the revenue with the authority. The bid variable in this case is the Revenue Share.

In this form of payment structure, Escrow Account Mechanism is used to protect the recurring revenue apart from bank guarantee to protect at least one year revenue. In practice, irrevocable bank guarantee has been found to work better as the Escrow Account system requires stringent monitoring and there are practical fault lines in the same. However, it has been seen in many cases that due to administrative and audit hassles involved, a very small percentage of revenue sharing is not worth the attendant administrative issues.

### 9.2.1 Project Structure

The projects are proposed to be structured as under:

Table 35: Proposed Project Structure

<b>Component</b>	<b>Description</b>
<b>Structure</b>	<ul style="list-style-type: none"> <li>• The project is to be developed under DBFOT model of PPP</li> <li>• The project is structured for capital investment to be brought in by the selected private sector player and land is provided by Concessioneing Authority.</li> <li>• The private sector player recovers its investments over a period of time from revenues from property development created under the project and any other applicable sources.</li> </ul>
<b>Concession Period</b>	30 years
<b>Payment to Concessioneing Authority</b>	Option to choose from 3 models: <ul style="list-style-type: none"> <li>○ Lease Rental only</li> <li>○ Lease Rental plus Upfront Payment</li> <li>○ Lease Rental, Upfront Payment plus Revenue Share</li> </ul>
<b>Role of Concessioneing Authority</b>	<ul style="list-style-type: none"> <li>• Provision of identified land for the Project, free from all encumbrances</li> <li>• Grant of lease hold rights of the project site to the developer</li> <li>• Provision of adequate rights to the developer for collection of user charges, parking fees and rentals from property development.</li> </ul>
<b>Role of Private Sector Developer</b>	<ul style="list-style-type: none"> <li>• Detailing and placement of the Project components</li> <li>• Detailed designing and Engineering of facilities based on Concept</li> <li>• Achieving financial closure and making the necessary capital investment</li> <li>• Construction, Marketing, Operating, Maintaining and Managing (Utilities, Facilities, Equipments etc) the Project during the Authorization Period</li> <li>• Obtaining all clearances/approvals from the concerned Govt. Department, handling legal issues etc</li> </ul>

## 10 WAY AHEAD

### 10.1 Key Milestones

#### 1. Key Milestone for the Project

##### i. Preparation of Tender Documents for Selection of Transaction Advisor for the Project

Tender documents will be prepared for selection of Transaction Advisors which would include the following:

- Detailed Scope of Work including deliverables and timelines for submission.
- Outlining the minimum eligibility criteria, which the bidders would necessarily have to meet before their bids are evaluated in detail.
- Description of Evaluation process elaborating the various evaluation parameters and their respective weightages.
- A draft Agreement which would spell out the following:
  - The Obligations and Scope of Work for the consultant
  - Progress Reporting Mechanism
  - Dispute Resolution Mechanisms
  - Termination of Contracts by either of the parties
  - Defining conditions and events leading up to a default in obligations
  - Conditions construing Force Majeure
  - Conditions leading up to a termination of Contract and invoking of the Performance Guarantee.

#### 2. Capacity Building of PPP Cell Personnel

Capacity Building Workshops will be conducted for officials who are identified as PPP Cell personnel by the department. These workshops will be conducted in order to enable these personnel in understanding the concept of PPP, model procedures and documents related to implementation of PPP projects, key issues related to PPP etc. Three training sessions will be organised as a part of capacity building. Various techniques of effective communication like audio-visual media in form of PowerPoint presentations, videos, notes, interaction dialogues etc will be used for these capacity building sessions.

### 10.2 Key Recommendations

- An upfront plus lease rental model emerges as the best case model for Lingsugur and Sindhanur, while a recurring lease rental model is the best case for Chitradurga.

- For Chitradurga, the private player is expected to observe a Project IRR of 14.2% and a Project NPV of INR 4.21 Cr. This is a borderline project and may have difficulties in attracting substantial private sector interest.  
 As per the model, the NPV of receivables to the government is INR 0.45 Cr. The recommend annual lease rental is INR 0.09 Cr.
- For Lingsugur, the private player is expected to observe a Project IRR of 18.4% and a Project NPV of INR 2.06 crore.  
 As per the model, the NPV of receivables to the government is INR 0.65 Cr. The recommend upfront payment is INR 0.70 Cr with an annual lease rental of INR 0.015 Cr.
- For Sindhanur, the private player is expected to observe a Project IRR of 19.0% and a Project NPV of INR 3.66 Cr.  
 As per the model, the NPV of receivables to the government is INR 1.31 Cr. The recommend upfront payment is INR 1.50 Cr with an annual lease rental of INR 0.02 Cr.
- In cases where the projects are borderline, the government may consider relaxations in FAR and commercial permissibility norms, in order to make them more attractive for private players.



## 11 ANNEXURE

### 11.1 Annexure 1: Site Assessment data

#### **Location: Chitradurga**

Area: 14 acres 14 gunta (total)

Plot Location: located besides the existing depot

Potential: Medium

Abstract:

- It is a vacant plot near the existing depot
- 1.5 Km away from existing bus stand
- Bus terminal to be shifted to the project site with an area of 10 acre along with commercial
- 4 acre depot to be shifted to one corner of the plot which shall be done by KSRTC
- If the bus terminal cum commercial project is financially viable, then private player shall develop the bus terminal as well. Otherwise, bus terminal shall be developed by the KSRTC on its own fund

About the plot: Irregular shape plot with no encroachment. At present the land is with KSRTC and located along Bangalore Chitradurga highway.

Surrounding Area:

- Commercial shops
- Government Hospital, Pharmacy & Clinics
- LIC building
- Banks – ICICI, Muthoot Finance, union Bank – vasishta complex
- Budget hotels (2 no.s –Prakash hotel, Vasista hotel)

Rentals:

- Shop size – 5 x 3 m
  - Ground floor – INR 30 / sq.ft / month
  - First floor – INR 20-22 / sq.ft
  - Third floor – INR 16 – 18 / sq.ft
- Restaurant: Vasista complex – size: 15 x 12 m
  - Rental: 18000 / month
  - Footfall – 1000 persons / day
- Budget hotels
  - No. of rooms – 30 - 40 rooms (Vasista & Prakash lodge)
  - In the city, there are ~ 20 lodges (budget hotels)
  - Increased in last 5 years ( from 2 lodges in 2007 to 20-21 lodges in 2012)

- Occupancy: 65 – 70%
- Rent: Rs 350 to 950 / day

Bus operational data:

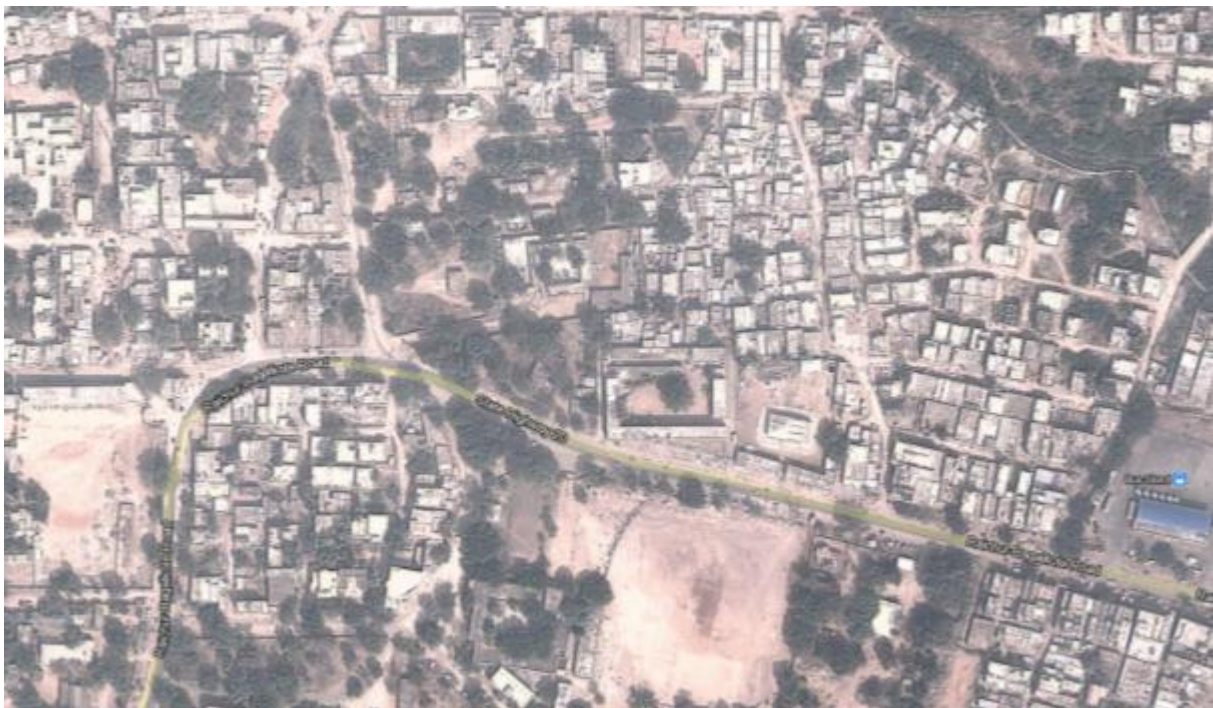
Existing bus stand trips – 1500 trips / day

- Mostly by long haul buses
- There is 5% - 10% growth for these buses
- Operational hours: 18 hrs.
- According to the KSRTC bus bay estimation; ~40 bus bays are required for the new bus stand
- On a bus bay, 6 buses get parked in an hour

**Location: Lingsugur (Old bus stand site)**

Area: 29000 Sq.ft

Plot Location: the old bus stand site



Potential: Medium

Abstract:

- It is an old bus stand site in a medium-sized town
- 1 Km away from existing new Lingsugur bus stand

- It is besides the government hospital
- The site is encroached by petty shops such as fruit shops, pharmacies, stationery shops and shops for condiments

About the plot: Rectangular plot with encroachment. At present the land is with NEKRTC. As per the new court order, it has been ordered to clear all illegal shops for new development

Surrounding Area:

- Commercial shops (12municipal shops; G+1 old commercial shops adjacent to project site and hospital, G+1 commercial building along the main road)
- Government Hospital

Rentals:

- Old Shops near project site: Rs. 2500-3000 / month (5 Year contract)
  - Shop size: 5 x 3 m
  - Escalation: based on mutual understating with the owner
- ITI institute on the first floor of the old commercial building: INR 6000 / month
- Municipal shops: 12 no.s(Shop size: 4 X 3 m)
  - Shop 1: INR 5300 / month
  - Shop 2: INR 5200 / month
  - Shop 3: INR 5500 / month
  - Shop 4: INR 6100 / month
  - All shops are on 5 year contract with 10% escalation
- Shops on other sides
  - Average rental – INR 6000 to 8000 / month for 5m x 3m shops
- Shops near BSNL building (G+1): Pain shop
  - Whole building is used for commercial
  - One tenant
  - Rent – Rs. 14000 / month (2000 sq.ft)
- Pharmacy shops: Rs. 5000 / month

**Location: Sindhanor**

Area: 0.84 Acres

Plot Location: the existing bus stand site



Potential: High

Abstract:

- It is a medium sized town which is 60 Km away from Raichur city
- The existing bus stand shall be shifted to new site in next 6 month, after which the existing site will be vacant for development of commercial development.
- The site is located at the heart of the town with dense commercial on all the sides

About the plot: Triangular plot with no encroachment. At present the land is with NEKRTC. The site used as bus stand. The bus stand will be shifted to site within 6 month (new bus stand is under construction)

Surrounding Area:

- Commercial shops (Opposite bus stand)
- Budget hotels 2- 3 no.s (Opposite bus stand) with commercial on first 2 floors
- Depot (besides project site)
- Restaurants (opposite and besides project site)

Rentals:

- Shops near the bus stand: Rs. 10000-12000 / month (5 Year contract)
  - Shop size: 10 x 15 sq.ft
  - Escalation: 10% every year



- On paper (As per agreement) the rentals are INR 2500 to 3000 / month (when allotted to owners). The original tenants have sub-leased for higher rentals. This is due o the demand for commercial in the surrounding areas.
- Lodge: Rs. 350-1200 / day
  - Rooms: Average: 30 rooms
  - Occupancy: 60%

Construction cost:

Rs. 4000 – 5000 / sq.m

Land filling – Rs 500 / sq.ft

Land price – Rs. 1500 – 2000 / sq.ft (market rate) – along the main road

## 11.2 Annexure 2: Value For Money Analysis

Value for Money (VFM) analysis is essentially a cost-benefit analysis, where it is examined if the benefits of the project are positive as compared to alternative procurement method. A PPP project is said to achieve value for money if it costs less than the best realistic public sector project alternative which would deliver the same services.

The VFM analysis basically takes into account the Project NPV achieved by alternative means of implementation and compares it with the NPV achieved through PPP. Private partnership brings in several efficiencies in cost control, reining in operating expenses and ensuring adequate marketing measures which makes the implementation of the project more efficient. A PPP project typically allocates risks due to increases in costs and incidence of lower than forecasted revenue onto the private partner.

For VFM analysis, the consultants have identified risks at construction and operation stage.

Risks at Project Construction Stage:

1. Higher Construction Cost: Risks due to higher construction costs substantially impact the Project NPV adversely.
2. Time Overrun: Delays in projects lead to loss of revenue, as lesser number of operational years are available during the concession period to earn revenues

Risks at Project Operation Stage:

1. Revenue Risk: Risk emanating due to lower than anticipated revenues, which can be due to traffic shortfall
2. Operational Expenses Risk: Risk of higher than anticipated operational expenses

Following table illustrates the VFM calculation for Lingsugur (Upfront Plus Lease Rental Model). VFM for all other sites are also calculated in a similar way.

Risks		Financial Impact	Risk Allocation (%) as per PPP Model		NPV at Risk	NPV of Risk to be added back	NPV of retained risks
1	2	3	4	5	6	7	8
			Concessi onaire	Authority			
<b>Constructi on Phase</b>	Constructi on Cost Overrun	Cost overrun of 15%	100%	0%	0.4	0.0	0.0
	Constructi on Time Overrun	Time overrun by 50% of the constructi on period (Loss of	100%	0%	-0.6	-1.0	0.0

		revenue of 6 quarters)					
<b>Operation Phase</b>	Revenue Risk (Due to traffic shortfall)	Decrease in Revenue by 20%	100%	0%	0.4	0.0	0.0
	Opex risk	Increase in O&M Cost by 15%	100%	0%	0.4	0.0	0.0
	<b>Total</b>					<b>-1.0</b>	<b>0.0</b>
<b>VFM (INR Cr)</b>	<b>2.70</b>						

1. Column 2 defines the risks while the Column 3 defines the financial impact of the risks. The average value of these risks and their probabilities are taken from PPP Toolkit for Roads and Highway Sector
2. Column 4 & 5 gives the risk allocation to Concessionaire and Authority as per the PPP model that has been selected
3. Column 6 or NPV at Risk gives the Project NPV if the state government had implemented the project, and the project bears the financial impact described in Column 3.
4. Column 7 or NPV of Risk to be added is the change in the Project NPV of the government due to financial impact of the specific risk weighted by the risk allocated to the private concessionaire. Adding this to the Base Project NPV for the government gives a risk adjusted NPV for the government.
5. Column 8 is the NPV of retained risks is the change in the Project NPV of the government due to financial impact of the specified risks, weighted by the risk allocated to the government. Adding this to the Base Project NPV of the private concessionaire gives Risk Adjusted NPV for PPP project.
6. The difference between the Risk Adjusted NPV for the Private Player and Risk Adjusted NPV for the government gives the Value for Money for the project



### 11.3 Annexure 3: Project Cashflow Statements

#### Chitradurga (Lease Rental Only)

Concession Year	5	10	15	20	25	30
<b>Inflows</b>						
Equity	-	-	-	-	-	-
Debt	-	-	-	-	-	-
<b>Total income</b>	4.73	6.26	9.60	12.69	16.79	19.31
<b>Total (A)</b>	4.73	6.26	9.60	12.69	16.79	19.31
<b>Outflows</b>						
Capital Expenditure	-	-	-	-	-	-
Principal repayment	1.85	1.85	-	-	-	-
Interest repayment	2.05	0.84	0.00	0.00	0.00	0.00
Taxation	-	0.88	2.07	2.86	3.89	4.39
OPEX	1.55	1.99	2.68	3.46	4.47	5.52
<b>Total (B)</b>	5.44	5.57	4.75	6.32	8.36	9.91
<b>Free Cashflow</b>						
Opening Balance	(0.4)	(1.7)	11.3	39.4	73.8	118.0
<b>Net Surplus/Deficit (A-B)</b>	(0.7)	0.7	4.8	6.4	8.4	9.4
Closing Balance	(1.1)	(1.0)	16.1	45.7	82.3	127.4
<b>Project IRR</b>						
Capex	-	-	-	-	-	-
PBT	0.83	3.12	6.61	8.92	12.01	13.48
Depreciation	0.31	0.31	0.31	0.31	0.31	0.31
Interest	2.05	0.84	0.00	0.00	0.00	0.00
Tax	-	0.88	2.07	2.86	3.89	4.39
<b>Pre Tax Project Cash Flow</b>	3.19	4.27	6.92	9.23	12.32	13.79
<b>Post tax project Cash flow</b>	3.19	3.39	4.85	6.37	8.43	9.40
<b>Equity IRR</b>						
Equity	-	-	-	-	-	-
Profit after tax (PAT)	0.83	2.23	4.54	6.06	8.12	9.09
Book Depreciation	0.31	0.31	0.31	0.31	0.31	0.31
Principal repayment	1.85	1.85	-	-	-	-
<b>Equity Cash flow</b>	(0.71)	0.69	4.85	6.37	8.43	9.40

**Lingsusgur (Upfront Payment plus Lease Rental)**

Concession Year	5	10	15	20	25	30
<b>Inflows</b>						
Equity	-	-	-	-	-	-
Debt	-	-	-	-	-	-
<b>Total income</b>	1.19	1.58	1.82	2.40	3.18	3.66
<b>Total (A)</b>	1.19	1.58	1.82	2.40	3.18	3.66
<b>Outflows</b>						
Capital Expenditure	-	-	-	-	-	-
Principal repayment	0.33	0.33	-	-	-	-
Interest repayment	0.32	0.11	(0.00)	(0.00)	(0.00)	(0.00)
Taxation	0.15	0.32	0.41	0.56	0.75	0.86
OPEX	0.31	0.41	0.48	0.63	0.82	0.98
<b>Total (B)</b>	1.10	1.16	0.89	1.19	1.57	1.84
<b>Free Cashflow</b>						
Opening Balance	0.6	1.6	4.8	10.1	16.7	25.1
<b>Net Surplus/Deficit (A-B)</b>	0.1	0.4	0.9	1.2	1.6	1.8
Closing Balance	0.7	2.0	5.7	11.3	18.3	26.9
<b>Project IRR</b>						
Capex	-	-	-	-	-	-
PBT	0.53	1.03	1.29	1.73	2.31	2.63
Depreciation	0.04	0.04	0.04	0.04	0.04	0.04
Interest	0.32	0.11	(0.00)	(0.00)	(0.00)	(0.00)
Tax	0.15	0.32	0.41	0.56	0.75	0.86
<b>Pre Tax Project Cash Flow</b>	0.88	1.17	1.33	1.77	2.35	2.67
<b>Post tax project Cash flow</b>	0.74	0.86	0.92	1.21	1.60	1.82
<b>Equity IRR</b>						
<b>Profit after tax (PAT)</b>	0.38	0.71	0.88	1.17	1.56	1.77
Book Depreciation	0.04	0.04	0.04	0.04	0.04	0.04
Principal repayment	0.33	0.33	-	-	-	-
<b>Equity Cash flow</b>	0.09	0.42	0.92	1.21	1.60	1.82

**Sindhanur (Upfront Payment plus Lease Rental)**

Concession Year	5	10	15	20	25	30
<b>Inflows</b>						
Equity	-	-	-	-	-	-
Debt	-	-	-	-	-	-
<b>Total income</b>	1.84	2.44	2.80	3.71	4.90	5.64
<b>Total (A)</b>	1.84	2.44	2.80	3.71	4.90	5.64
<b>Outflows</b>						
Capital Expenditure	-	-	-	-	-	-
Principal repayment	0.51	0.51	-	-	-	-
Interest repayment	0.50	0.17	0.00	0.00	0.00	0.00
Taxation	0.26	0.54	0.69	0.93	1.25	1.43
OPEX	0.37	0.48	0.58	0.75	0.98	1.19
<b>Total (B)</b>	1.65	1.70	1.27	1.69	2.23	2.62
<b>Free Cashflow</b>						
Opening Balance	0.9	2.8	8.2	17.1	28.0	42.1
Net Surplus/Deficit (A-B)	0.2	0.7	1.5	2.0	2.7	3.0
Closing Balance	1.1	3.5	9.7	19.1	30.7	45.1
<b>Project IRR</b>						
Capex	-	-	-	-	-	-
PBT	0.92	1.73	2.17	2.90	3.87	4.40
Depreciation	0.06	0.06	0.06	0.06	0.06	0.06
Interest	0.50	0.17	0.00	0.00	0.00	0.00
tax	0.26	0.54	0.69	0.93	1.25	1.43
<b>Pre Tax Project Cash Flow</b>	1.48	1.96	2.22	2.96	3.93	4.45
<b>Post tax project Cash flow</b>	1.21	1.42	1.53	2.02	2.67	3.02
<b>Equity IRR</b>						
Equity	-	-	-	-	-	-
Profit after tax (PAT)	0.65	1.19	1.48	1.96	2.61	2.97
Book Depreciation	0.06	0.06	0.06	0.06	0.06	0.06
Principal repayment	0.51	0.51	-	-	-	-
<b>Equity Cash flow</b>	0.20	0.74	1.53	2.02	2.67	3.02