GOVERNMENT OF KARNATAKA

INFRASTRUCTURE DEVELOPMENT DEPARTMENT

FEEDBACK INFRA

Making Infrastructure Happen

Sector Specific Inventory & Institutional Strengthening for PPP Mainstreaming Transport Department

Pre-feasibility Report

Development of Bus Terminal cum Commercial Complexes in Tier 2 & 3 Cities

Submitted by:

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 'Developing Bus Terminal-cum-Commercial Complexes in Tier 2 & 3 Cities'. The following sites were finalized in consultation with Transport department in the Workshop held under the Chairmanship of the Principal Secretary, Transport on 23rd February 2012:

- Bagalkot NWKRTC Site
- Raichur (NEKRTC Site
- Tumkur KSRTC Site

The main project idea is to have a modern bus terminal along with commercial development.

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 greater reliance on commercial considerations while framing PPP structure
- A need for standardized 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

Project Details:

In Tier 2 & 3 cities of Karnataka, there are several bus stands which require capacity augmentation due to increasing demand for public transport and many are required to be refurbished. Transport undertakings may not be able to develop all the bus stands; hence private funding is sought on PPP basis, where a commercial component is also provided in order to allow the private investor to get returns.

Locations in Tier 2 & 3 cities were chosen on the basis of availability of land and the demand for bus terminals. The locations were finalized based on discussions with various State Road Transport undertakings and the Principal Secretary, Transport Department

Following 3 sites are identified:

- Tumkur (~ 8 acres)
- Bagalkot (~10 acres)
- Raichur (~4 acres)-Even though a 9 acre site was suggested during the workshop, the market assessment done by the Consultants indicates low demand for commercial activities and bus terminal. Thus, a ~4 acre of land parcel is proposed to be utilized, while the rest of the land will be with NEKRTC for future use, as desired.

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:

- Bus Terminal-cum-Commercial Complex at Jalandhar, Punjab

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 Bus Terminal development at the project sites. 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:

- **Tumkur**

Product Mix	Percentage	Area (sqm)
Terminal Area		13,786

Commercial Area within the Terminal (Retail)		*1,969*
Depot Area (incl KSRTC Office)		4,248
Commercial Complex		25,296
Retail Shopping with entertainment	*60%*	*15,177*
Commercial office space	*40%*	*10,118*
Total	**100%**	**43,330**

- **Bagalkot**

Product Mix	Percentage	Area (sqm)
Terminal Area		13,655
Commercial Area within the Terminal (Retail)		*1,366*
Commercial Complex		17,979
Retail Shopping with entertainment	*50%*	*8,990*
Commercial office space	*40%*	*7,192*
Budget Hotel	*10%*	*1,798*
Total	**100%**	**31,634**

- **Raichur**

Product Mix	Percentage	Area (sqm)
Bus Shelter		865
Commercial Complex		13,764
Retail Shopping with entertainment	*30%*	*4,129*
Commercial office space	*30%*	*4,129*
Budget Hotel	*40%*	*5,506*
Total	**100%**	**14,629**

Project Financials:

Financial analysis of the projects has been 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 have been considered to analyse the returns / risks for the Concessionaire and the Government.

Three payment models to the Government are considered:

1. When the private player only pays the lease rental to the government
2. When the private player pays an upfront amount plus the lease rental to the government. Upfront payment is the bid variable here
3. When the private player pays an upfront amount, the lease rental and an annual revenue share subject to a minimum payment every year. Revenue share is the bid variable here

The summary of the project financials is presented below:

- **Tumkur:** While the NPV of receivables is highest for the Government in the third model (where the Government gets upfront fee and a revenue share), the private player earns

lower returns. For ensuring balanced returns to both the parties, an **upfront payment plus lease rental model** is suggested. The Value for Money is positive in all the models, hence the project is expected to create value all stakeholders involved if awarded on PPP basis.

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share subject to a minimum annual payment of INR 1.25 crore
Project Cost (INR Cr) including IDC and Upfront Payment	72.28	91.03	79.31
Equity (INR Cr) @ 30% of capital cost	21.68	27.31	23.79
Debt (INR Cr) @ 70% of capital cost	50.59	63.72	55.52
Project IRR (%)	21.2	17.9	18.0
Project NPV (INR Cr)	62.63	47.93	42.32
Equity IRR (%)	25.8	21.0	21.0
VFM (INR Cr)	80.65	65.95	60.34
Receivables to Govt			
Lease Rental (INR cr/Year @ INR 5 per sqft/year)	0.17	0.17	0.17
Upfront Payment (INR Cr)	0.00	16.00	6.00
Revenue Share (% of the Revenue)	0.00	0.00	5.00
NPV of Receivables to Govt (INR Cr)	0.88	13.69	17.21

- **Bagalkot:** Financial analysis suggests that this site has a positive Project NPV in all the three cases. However the IRRs are low and hence the project may not be able to attract large private sector interest. While the government has the largest receivables in the third model, it will also have to bear a part of revenue risk with the private player. Thus, **upfront payment plus lease rental model is recommended.**

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share subject to a minimum annual payment of INR 0.10 crore
Project Cost (INR Cr) including IDC and Upfront Payment	42.73	43.90	43.31
Equity (INR Cr) @ 30% of capital cost	12.82	13.17	12.99

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share subject to a minimum annual payment of INR 0.10 crore
Debt (INR Cr) @ 70% of capital cost	29.91	30.73	30.32
Project IRR (%)	12.7	12.4	12.4
Project NPV (INR Cr)	1.92	0.98	0.69
Equity IRR (%)	13.5	13.1	13.0
VFM (INR Cr)	25.47	24.54	24.25
Receivables to Govt			
Lease Rental (INR cr/Year @ INR 5 per sqft/year)	0.23	0.23	0.23
Upfront Payment (INR Cr)	0.00	1.00	0.50
Revenue Share (% of the Revenue)	0.00	0.00	1.00
NPV of Receivables to Govt (INR Cr)	1.19	1.99	2.47

**Because the project is expected to have low returns, a revenue share of only 1% has been taken to allow for a positive NPV*

- **Raichur:** It can be seen from the findings of the financial analysis that this site has a positive Project NPV in all the three cases. However the IRRs are low and hence the project may not be able to attract large private sector interest. While the government has equal receivables in the second and third model, it will also have to bear a part of revenue risk with the private player in the third model. Thus, **upfront payment plus lease rental model is recommended.**

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share subject to an Annual Payment of INR 0.10 crore
Project Cost (INR Cr) including IDC and Upfront Payment	26.91	28.66	27.49
Equity (INR Cr) @ 30% of capital cost	8.07	8.60	8.25
Debt (INR Cr) @ 70% of capital cost	18.83	20.06	19.24
Project IRR (%)	14.7	13.9	13.9
Project NPV (INR Cr)	5.39	4.00	3.87
Equity IRR (%)	16.5	15.4	15.4

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share subject to an Annual Payment of INR 0.10 crore
VFM (INR Cr)	22.14	20.75	20.62
Receivables to Govt			
Lease Rental (INR cr/Year @ INR 5 per sqft/year)	0.06	0.06	0.06
Upfront Payment (INR Cr)	0.00	1.50	0.50
Revenue Share (% of the Revenue)	0.00	0.00	1.00
NPV of Receivables to Govt (INR Cr)	0.31	1.51	1.51

Statutory & Legal Framework:

As per the amendments made to the Infrastructure Policy, 1997 in 2007 (Government Order No.IDD 32 IDM 2003 Bangalore dated 16th 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. On the other hand, change of land use and traffic flow pattern related issues will need to be dealt with in detail by the concessionaire and the concerned municipal authorities.

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 Concessioning Authority at the end of the same. The following structure is proposed:

Component	Description
Structure	• The project is to be developed under DBFOT model of PPP • The project is structured for capital investment to be brought in by the selected private sector player and land is provided by Concessioning Authority. • 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.
Concession Period	• 30 years including a construction period of 3 years
Payment to Concessioning Authority	• Upfront & Recurring Rental Model for all Projects
Role of Concessioning Authority	• Provision of identified land for the Project, free from all encumbrances • Grant of lease hold rights of the project site to the developer • Provision of adequate rights to the developer for collection of user charges, parking fees and rentals from property development.
Role of Private Sector Developer	• Detailing and placement of the Project components • Detailed designing and Engineering of facilities based on Concept • Achieving financial closure and making the necessary capital investment • Construction, Marketing, Operating, Maintaining and Managing (Utilities, Facilities, Equipments etc) the Project during the Authorization Period • Obtaining all clearances/approvals from the concerned Govt. Department, handling legal issues etc

2 INTRODUCTION

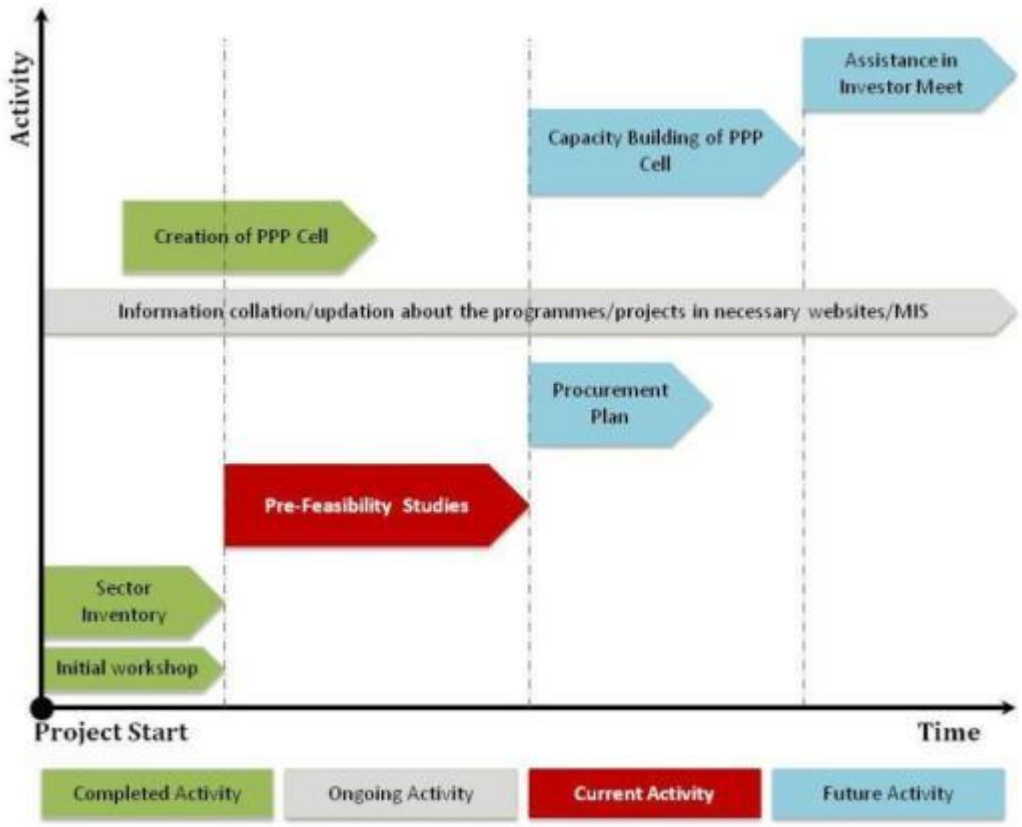
2.1 Project Background

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 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 'Developing Bus Terminal-cum-Commercial Complexes in Tier 2 & 3 Cities'. The following sites were finalized in consultation with Transport department in the Workshop held under the Chairmanship of the Principal Secretary, Transport on 23rd February 2012:

- Bagalkot (Area-27,311 sqm)

- Raichur (Area-8,092 sqm)
- Tumkur (Area-32,065 sqm)

The main project idea is to have a modern bus terminal along with commercial developments. Typically following facilities are provided along with the bus terminal. However, the facilities will differ as per the requirement at each site, arrived at after detailed market assessment.

- Modern Bus Terminal
- Restaurants
- Malls / Retail Shops
- Multiplex
- Commercial Office Space
- Parking for Cars and Bikes
- Hotels

2.2 Structure of the Report

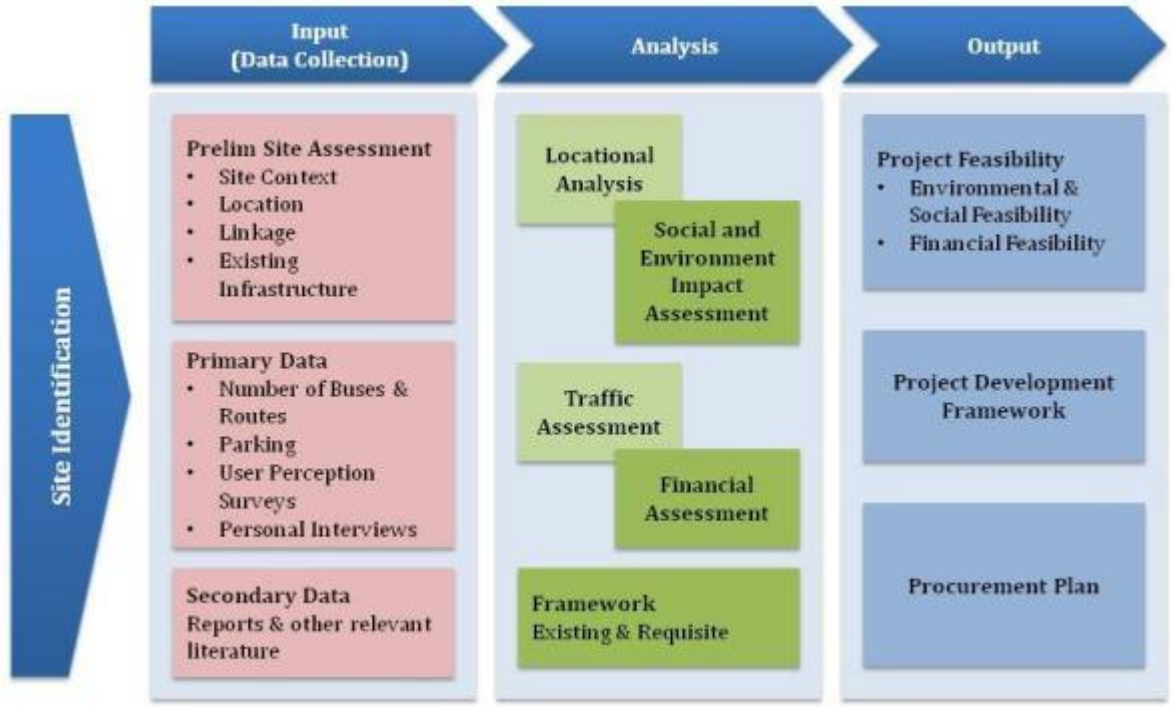
This Project Report has been structured along the following - in a chapter-wise format.

Introduction	•Project Idea •Approach & Methodology
Sector Profile	•Industry Overview •Regional Profile
Project Details	•Description and Components •Needs & Considerations •Best Case Studies
Market Assessment	•Industry Outlook •Opportunities & Demand Projections •Product Design
Project Financials	•Cost & Revenue Assessment •Project Viability •Funding
Statutory & Legal Framework	•Legal & Regulatory Framework
Indicative Environmental & Social Impacts	•Environmental & Social Impact Assessment •Mitigation Measures
Operating Framework	•Risks & Mitigation •Project Structure
Way Ahead	•Key Milestones •Recommendations

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 8th largest state in India with an area of 191,791 sq km, 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 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 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

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
Depots	72	37	-	41
Divisions	15	-	-	8
Bus Stations	128	48	136	108
Vehicles	7599	6102	4315	2745
Effective Kms per day (Lakhs)	24.91	12.7	15.5	9.78
Schedules	6881	5910	3892	2710
Average traffic revenue per day (Lakhs)	589.78	385	-	-
Average passengers travelled per day (Lakhs)	23.6	45	21.5	10
Staff	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 4,000 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
Modern Bus Terminal & Commercial complex at Hassan	KSRTC	Commercial Complex (1,50,000 sq ft)	Agreement signed
Modern Bus Terminal & Commercial complex at Mangalore	KSRTC	KSRTC Guest House (3000 sq ft) & Commercial Complex (90,000 sq ft)	Agreement signed
Modern Bus Terminal & Commercial complex at Puttur	KSRTC	Integrated Bus Station & Commercial Complex	Agreement signed
Development of Modern Bus Station & Commercial Complex at Gulbarga	NEKRTC	Modern Intra City Bus Station - 12 Platforms in 3 Bus Bays & Commercial development - 72,000 sq.	Signing of Concession Agreement
Commercial Development of KSRTC vacant land parcel at Chitradurga	KSRTC	Yet to be decided	Pre-Feasibility Done
Development of Commercial Complex at Bidar	NEKRTC	Yet to be finalised	Pre-Feasibility Done

3.4 Other Initiatives

Besides above initiatives, 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 greater reliance on commercial considerations while framing PPP structure
- A need for standardized 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

4.1 Project Description

In Tier 2 & 3 cities of Karnataka, there are several bus stands which require capacity augmentation due to increasing demand for public transport. Many are required to be refurbished. Transport undertakings may not be able to develop all bus stands, so private funding is sought on PPP basis, where a commercial component is also provided in order to allow private investors to get returns.

Locations chosen for Tier 2 & 3 cities were on the basis of availability of land and the demand for Bus terminals. The locations were finalized based on discussions with various State Road Transport undertakings and the Principal Secretary, Transport Department

Following 3 sites are identified:

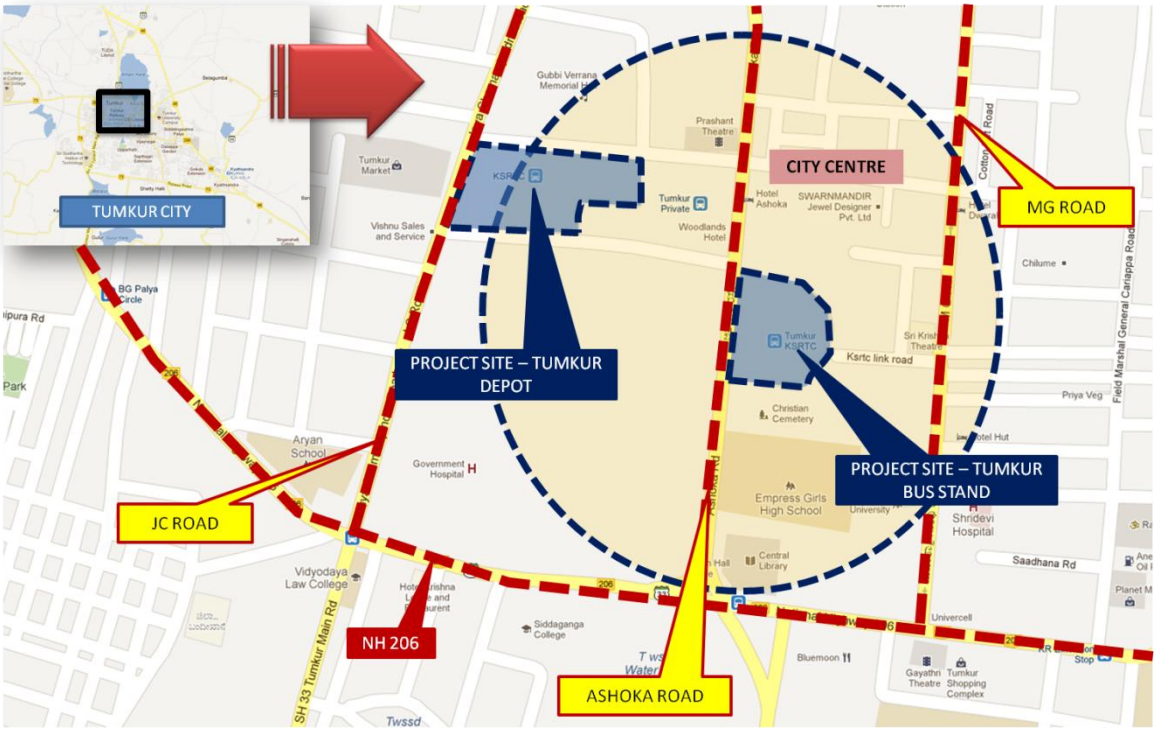
- Tumkur (total 7.92 acres): In Tumkur, the existing KSRTC bus terminal and Depot site shall be developed as one package. At the bus stand site, bus terminal with commercial development shall be taken up while for the depot site, only commercial development shall be taken up with refurbishment of the workshop.
- Bagalkot (total 6.75 acres): the site is under the NWKRTC and comprises two sites clustered as one package for the development on PPP basis. The sites are old bus stand site and the new bus stand site which are ~ 4.0 km away from each other. The existing bus stands shall be refurbished with addition of commercial spaces at the site.
- Raichur (9 acres): the land is under NEKRTC. For this site, only bus shelters will be developed along with commercial developments as the new bus terminal with commercial development is already under construction nearby.

4.2 Tumkur

The Site is located at the heart of Tumkur city. Tumkur is the administrative headquarter of the Tumkur district and is a major commercial, industrial and educational hub of the district. As per the census 2011, the city has a population of about 3,05,821 persons. It is just 70 km from Bangalore and the proximity to the state capital has led to commercial and industrial developments in the city.

As mentioned earlier, in Tumkur, two sites are clustered as one package for the development of Bus terminal cum Complex. One site is the existing Tumkur KSRTC bus stand on Ashoka road which has a total area of 4.42 acres (4 acres 17 gunta) and other being the KSRTC depot land along JC road which has a total area of 3.5 acres (3 acres 20 gunta). The Ashoka road, which is parallel to the JC road and MG road, is one of the main arterial road of the city. Many commercial establishments such as retail shops and offices are present on these roads which make the subject site location more prominent for any kind of developments on PPP basis. The location of the KSRTC bus stand and depot is shown in the figure given below.

Figure 4: Location of KSRTC bus stand and depot

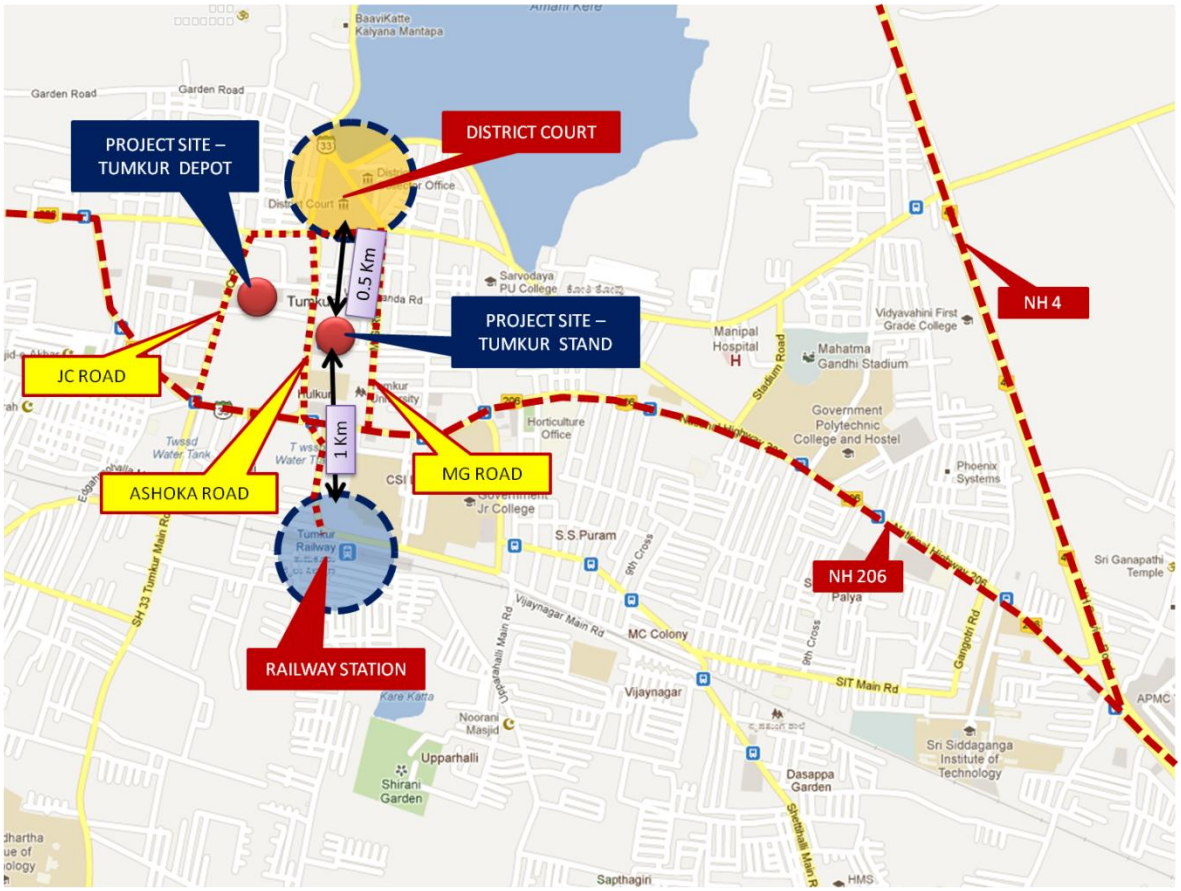


Source: Google map

Connectivity:

Tumkur city is connected to Bangalore via Mumbai - Bangalore National Highway (NH 4) and another major highway, NH 206 connects the city with Honnavara on the eastern coast. The city is also connected via railway line with Bangalore city and the railway station is located ~1.0 Km away from the subject site. The Ashoka road is connected to NH 206 in the south, which further connects to NH 4 on the eastern periphery of the city. JC road is parallel to Ashoka road and is also connected to NH 206 on the south. Both the sites are connected via Vivekanand road and also by local road abutting municipal bus stand which is located between KSRTC bus stand and the Depot land. Towards north, Ashoka road connects to the District court and other government buildings such as collector's office and police station. Connectivity of both the sites with other locations is provided in the figure shown below.

Figure 5: Connectivity map of Tumkur sites



Google map

Key Issues:

- The road abutting depot land is very congested and is in bad condition. Most of the carriageway is taken over by unorganized shops such as road side fruit and vegetable shops.
    - There is a plan for widening of the road, which can take 1-2 year to materialize.
- Congestion at the existing bus stand site: The existing KSRTC bus stand is running out of capacity. . At present, the Bangalore bound buses are operating from exit area of the terminal and with the presence of municipal bus stand just opposite to the existing bus stand; the entire terminal area and surrounding area is congested. However, with refurbishment of the bus terminal, this issue is expected to be resolved.

Existing infrastructure facilities at the sites

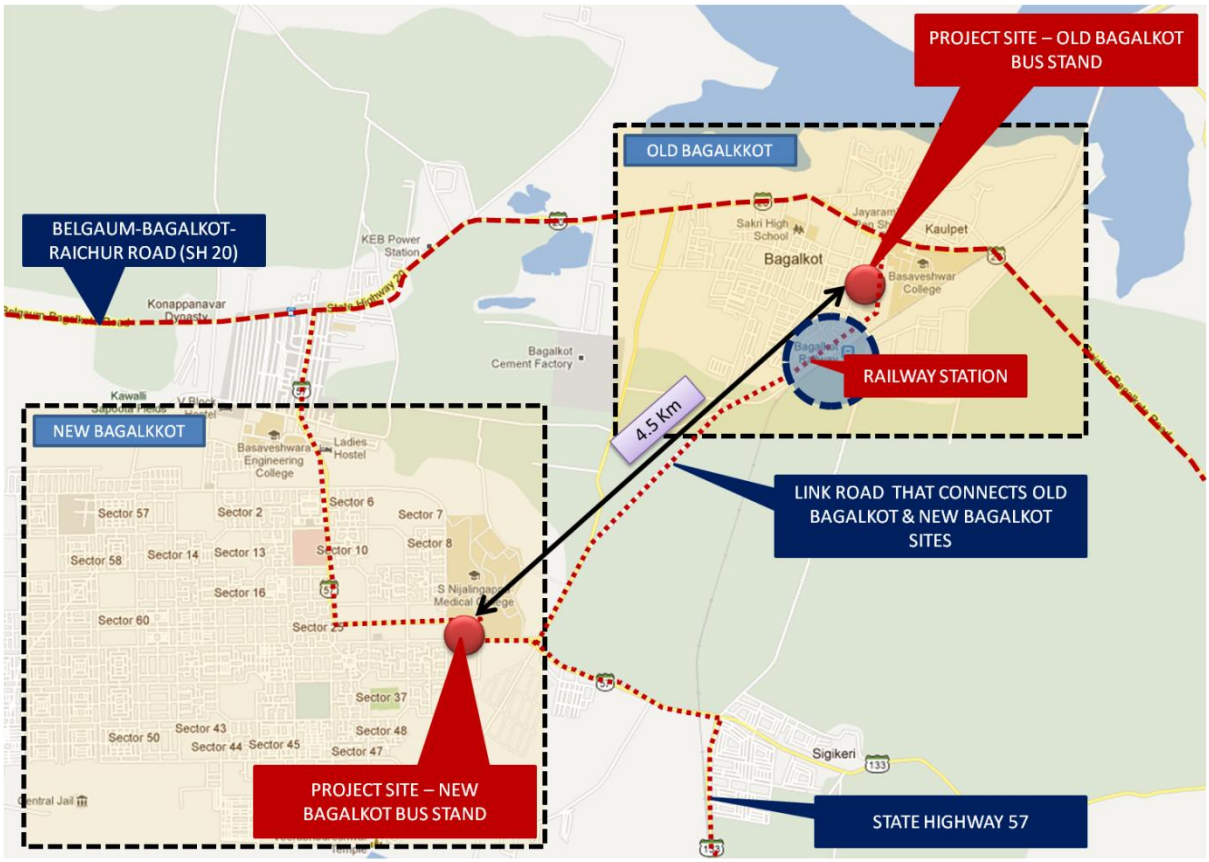
The existing bus stand consists of 12 bus bays with 5 to 6 commercial shops on the ground floor. The entire first floor is utilized by KSRTC office. There are also commercial stalls in the terminal area and the passenger amenities are provided at the south eastern corner of the plot. The entire terminal area is ~25 years old and requires refurbishment. So, for this study, it shall be assumed that the entire building will be demolished and re-built.

At the depot site, a workshop with vehicle cleaning area and a depot office is present for which only the workshop area shall be re-located and rebuilt (within the same plot) to construct commercial shops.

4.3 Bagalkot

Bagalkot is a city and district headquarters of the Bagalkot district situated in North Karnataka. As per 2011 census, the city has got a population of 1,12,068 persons. Bagalkot is divided into two parts, old Bagalkot and new Bagalkot. Due to construction of Alamatti Dam in the vicinity, most of the old Bagalkot got submerged and new Bagalkot was developed. New Bagalkot has planned rectangular layouts. In this city, there are two sites which are clustered as one package for development of bus terminal and commercial shops. One site is the old bus stand situated in old Bagalkot with an area of 6 acres and another is the new bus stand site at new Bagalkot with an area of 4.5 acres. Old bus stand site is situated near the Bagalkot railway station and is opposite to the Basaveshwar Commerce College and is also in proximity to the district's Government administrative buildings of Bagalkot such as the local municipality building and District Court. The new bus stand is adjacent to SN Medical College. Both these sites are ~ 4.5 Km away from each other. At both the sites an operational bus stand exists. There are also few commercial shops within the bus stand. Both these bus stands shall be modernized to include not only the bus terminal but also ancillary facilities for passenger convenience. The locations of both the sites are provided in the figure shown below.

Figure 6: Location & connectivity of Bagalkot sites



Source: Google map

Connectivity:

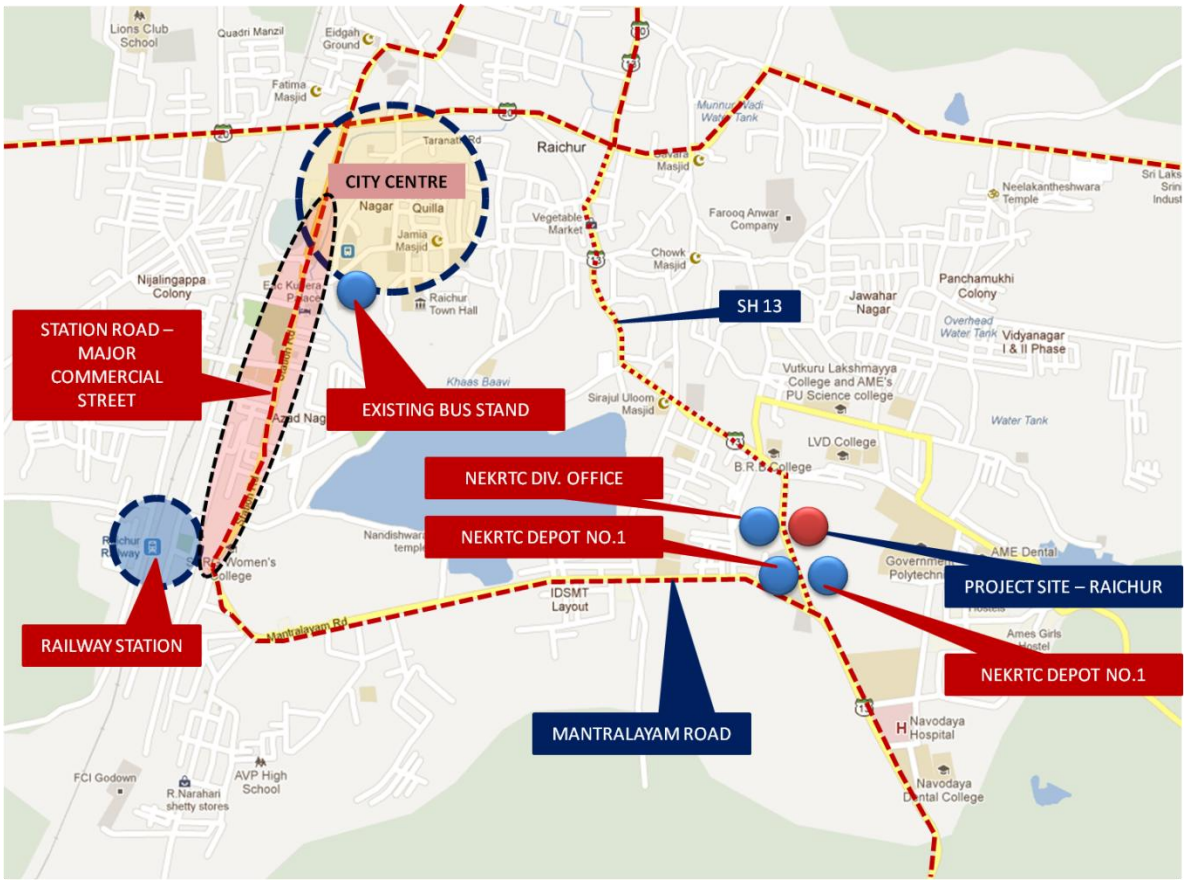
The new Bagalkot site is connected to Belgaum-Bagalkot-Raichur road (SH 20) via state highway 57 which further connects to national highway 218 (NH 218) that connects Bijapur in the North and Hubli in the South. The subject site is connected to other sectors via various sector roads.

Old Bagalkot bus stand site is adjacent to Belgaum-Bagalkot-Raichur road (SH 20) that connects Bagalkot with Belgaum in the West and Raichur in the East. The old bus stand site and new bus stand is connected via link road that also connects old Bagalkot with new Bagalkot. The connectivity for both the sites is provided in the figure given above.

4.4 Raichur

Raichur is a city and district headquarters of the Raichur district. As per 2011 census, Raichur has a population of about 2,32,456 persons. The city has got a bus stand operated and maintained by NEKRTC, which is under renovation stage. It is situated at the heart of the city and is adjacent to the Raichur fort. It is only a kilometer away from the railway station. Due to already existing bus stand, there is no requirement of development of bus terminal at the project site. The project site is of 9 acre area and is located to the south of the Raichur city opposite to the NEKRTC divisional office and adjacent to NEKRTC bus depot. It is located along the state highway (SH 13) and is in close proximity to various government administrative buildings and educational institutions such as the RTO office, Navodaya Medical College, Government polytechnic, LVD College and BRB College. The location of project site is shown in figure given below.

Figure 7: Location and connectivity map of Raichur site



Source: Google map

Raichur city has got a rich history, which is evident from the heritage monuments and temples that exist till now in various part of the city. At the project site, there is a temple and a well which is ~100 years old. These monuments and structures need to be taken into consideration during the construction period.

Also the land available at the project site is 9 acres. But the demand for commercial activity in the area is low (discussed in detail in the market assessment section of the report). Further, the site does not require a bus terminal and only a shelter for buses (stop & go) is required. This further reduces the land requirement.

On the basis of market assessment the Consultant's propose that only 4.32 acres of the total plot area is developed at present while the rest of the land will remain with NEKRTC for any future expansion / development. This is based on the discussions with the NEKRTC officials, wherein they have suggested a partial development of the plot.

Connectivity:

The project site is along the State highway (SH 13) that connects to Mantralaya road which connects the pilgrimage point at Mantralaya (in Andhra Pradesh) and Raichur city. The Mantralaya road further connects to station road in the west of the city; which is a major

commercial street of Raichur. The SH 13 further connects the site to the city centre on the Northern side. There are also numerous local roads in the vicinity, which also connects the site with the city centre. The connectivity of the site with other locations is shown in the figure given above.

Key issues:

- Due to the presence of heritage buildings very near to the site, care has to be taken that no damage is done during project construction period
- Even though the land available is large, the approach to the site would be narrow due to the presence of the monument.

4.5 Case study

Development of bus terminal cum commercial complex at Jalandhar, Punjab

Project Overview:

Government of Punjab (GoP) and PIDB awarded the contract to MSK projects India ltd., for construction and operation of bus terminal at Jalandhar through Build Operate and Transfer (BOT) basis for a lease period of 8 years & 5 month in 2007The estimated potential bus trips were ~3000 buses / day.

Project requirement:

The estimated Project Cost was ~INR 15 Crore. The project involved construction of a state of the art Intercity Bus Terminal. For this, an area of ~ 8 acres was handed over to the concessionaire by the Transport department.

PPP structure of the Project:

According to the PPP arrangement, the Punjab Government would provide the Design of the bus terminal and the concessionaire has to develop the bus terminal on BOT basis. The main bid variable was the minimum concession period quoted by the developers. No upfront fees and Lease rentals were collected from the developer. The revenue to be earned by the concessionaire includes:

- "Adda Fee" charged to both private and public sector buses
- Sale of Advertising rights
- Parking charges
- Lease rental from the lease of commercial spaces inside the bus terminal

Present Status:

The bus terminal got operational from the year 2007 and is functioning as per planned operations.

Key learnings:

- Favorable policy environment to ensure revenue stream :
    - The Government issued notifications and ensured favorable environment for the project activities. For instance, it issued notification allowing the private operator to charge "adda fee" on public sector buses too
    - Lenders were given security via offering them substitution rights in case the private operator defaulted

4.6 Development Control regulations and other Planning considerations for the sites

Physical and land development activity in Tumkur is governed by Tumkur Master Plan 2031 and Zoning regulations prepared by Tumkur Urban Development Authority. In Raichur and Bagalkot, the land development activities are based on the zoning regulations prepared by respective Municipal Corporation for the city on the basis of Karnataka Town and Country Planning Act, 1961. This Chapter provides an analysis of Development Control Norms for land under transportation use, which defines the development framework at the subject sites.

Permissible FAR and Ground Coverage

All the projects sites are under the Transportation use and the concerned FAR and ground coverage for the transportation use is applied for the subject sites. The permissible FAR and ground coverage for Tumkur is derived from the Development Control Regulations for Tumkur prepared by Tumkur Urban Development Authority (TUDA). For Bagalkot, it is derived from the zoning regulations prepared by Municipal Corporation, and for Raichur, it is sourced from the Building Bye-laws prepared by the Raichur Development Authority.

Tumkur

- The maximum permissible FAR for the bus stand site is 2 and maximum permissible Ground Coverage is 55% of the plot area.
- The maximum permissible FAR for the site is 1.75 and maximum permissible Ground Coverage is 60% of the plot area.

Bagalkot

- The maximum permissible FAR for Old Bagalkot bus stand site and new bus stand site is 1.50 with a maximum permissible Ground Coverage of 50% of the plot area.

Raichur

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

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.

Parking Norms:

The parking requirements for the proposed developments in Tumkur, Bagalkot and Raichur sites are found to be similar and are taken from the respective building regulations. Excerpts from Tumkur Master Plan for parking regulations are provided below.

Table 4: Parking Norms for the Tier 2 & 3 cities

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.

Source: Tumkur Master Plan 2031

As per the UDPFI guidelines and general zoning regulations prepared by the Karnataka State Planning Board, it has stated that 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. An activity wise analysis is presented in coming section.

Following analysis presents a suitability analysis for Bus Terminal cum Commercial development in Tier 2 & 3 cities. 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 assessments are based on site visits, primary interviews with passengers, commercial establishments in the vicinity, hotels and the users of commercial facilities.

5.1 Tumkur

Site's Location in the City

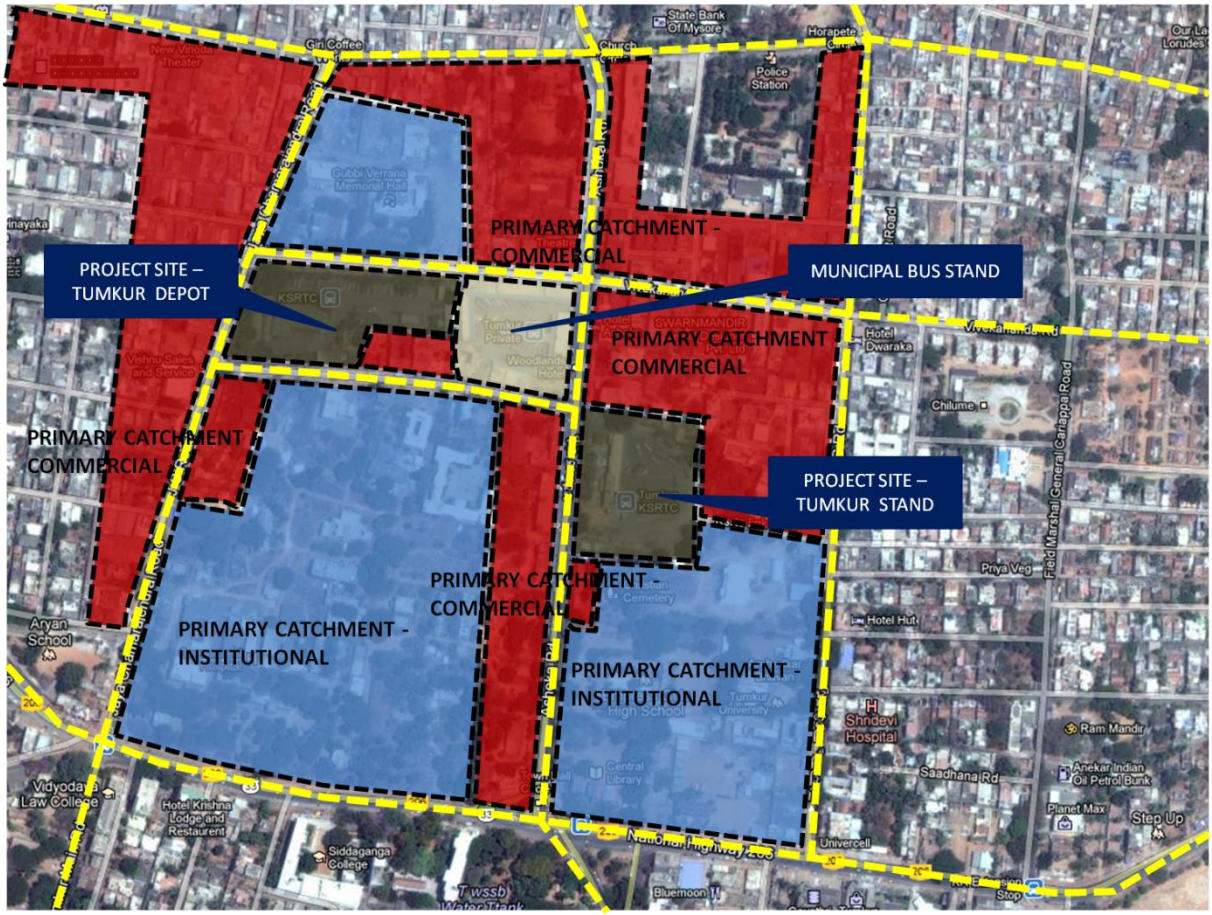
Location is traditionally considered as the single most critical parameter for deciding best use of the land parcels, as it governs most important aspects like demand and attractiveness. The two sites at Tumkur to be taken as a package are located in central part of the city on major commercial streets, which makes the site suitable for all types of commercial development. The bus stand site is located on Ashoka road which is a main arterial road in the city with commercial development on both the sides and Depot site is located on the JC road which is also a commercial street and is also opposite to the city's main vegetable market area.

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 Tumkur bus stand site includes commercial developments with retail shops, restaurants, budget hotels, offices and medical shops such as pharmacy, clinics etc. which makes the site suitable for any type of commercial development. Other catchment includes the private bus stand and educational institutions.

For the depot site, primary catchment includes the wholesale vegetable market, shops for condiments and offices such as financial institutions. Other catchment comprises Municipal bus stand and commercial shops. The primary catchments are shown in figure below:

Figure 8: Primary catchment for Tumkur site



From the primary catchment, it can be observed that, both the sites are suitable for any kind of product mix options.

Visibility from important movement 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 Ashoka road and JC road. The site is clearly visible from both the roads. This attribute makes the site suitable for retailing and hospitality related development. Within hospitality, it may require more assessment on the traffic movement aspect around the site to finalize on what type hospitality can be provided at the site. It is discussed in later part of this section.

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 ~8 acres, which is suitable for a mid-size bus terminal integrated with commercial development.

Movement pattern near the site

Traffic and its circulation pattern near the site are important as it impacts the overall environment and footfalls at the site. This is linked with parking and other infrastructure issues as well. Some development types 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 heavy movement area which is desired for retailing and transit oriented development. The consultants have observed a slow moving traffic around the project sites during peak period. This is due to the presence of KSRTC bus terminal and municipal bus stand which is opposite to each other, which attracts higher footfalls. Congestion during peak periods can be seen due to higher frequency of bus trips.

The traffic movement near the depot site, which is along JC road is slow throughout the day and is very congested due to presence of road side vegetable and fruit shop which leave only a lane for the traffic movement. Commercial office space and budget hotels may be suitable as part of development mix.

For relieving congestion, there is a proposal in the Master plan (Tumkur Master plan 2031) and also under the Municipal council to widen the JC road from existing width of 10m to 15m. The proposal has got approvals and is ready for execution. As per the KSRTC officials, it may take another 2 years to complete the entire project if it gets started in the current financial year (2012-2013).

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, retail and commercial shops are in good demand.

Consultants also found large presence of budget hotels with retail and office spaces on the ground and first floor in the vicinity. There are ~ 2 major building complex, that have commercial shops, restaurants and offices on the ground, first and second floor and other floors has been utilized for boarding and lodging. In total there are 5 budget hotels in the vicinity, two budget hotels are just opposite to the KSRTC bus stand site one besides the bus stand and other two are located along the MG road which is parallel to the Ashoka road.

Based on our interviews with the hotel managers, it can be concluded that these hotels have an average occupancy of ~ 70% with rentals in the range of INR 350 per day to INR 1200 per day and are having an average of 30 rooms per hotel. Given high occupancy, it can be concluded that demand of more budget hotels exist.

Within the depot site, mostly road side vegetable and fruit shops exist and opposite to the depot along the JC road, there are commercial shops and offices which mainly comprise the financial institutions and stationery shops.

The consultants have also observed a large presence of retail shops, medical shops and clinics in the vicinity. Most of them are located just opposite the KSRTC bus stand. There are ~ 15 to 20 retail shops and ~ 6 to 10 medical shops opposite to the KSRTC bus stand. Within the bus stand, there are five commercial shops and a financial institution on the ground floor of the Terminal area. Two restaurants are also present opposite to the KSRTC bus stand. The average rentals for the above mentioned commercial establishments are provided in the section given below.

5.1.1.1 Rental

Commercial rental values for the shops and offices are in the range of INR 60 / sq.ft / month to INR 100 / sq.ft / month near and within the KSRTC bus stand site. Along the depot site, the commercial rentals for the shops and offices are in the range of INR 50 / sq.ft / month to INR 80 / sq.ft / month. At this location the rent is independent of the type of activity and size of the shops. Average sizes of the shops are in the range of 150 sq.ft to 250 sq.ft.

Rentals for hotels range from INR 350-1200 per day per person. The details are provided in the site assessment data in Annexure 1

SWOT Analysis for Tumkur

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.

5.2 Bagalkot

Sites location in the city

The sites to be taken up are located in old Bagalkot and new Bagalkot. The old Bagalkot is located adjacent to the railway station and near to the Belgaum-Bagalkot-Raichur road (SH 20). It is also opposite to the mixed use commercial development. This makes the site suitable for commercial development. The site at the new Bagalkot is the existing new bus stand site which is near to the educational institutions and planned residential clusters of new Bagalkot. This may indicate a requirement of commercial development at the site.

Primary catchment

The primary catchment of old Bagalkot sites includes mixed use development such as commercial plus residential development opposite to it and educational institutional and railway station adjacent to the site. Due to already existing commercial development in the catchment, the site may be suitable for commercial development such as offices and budget hotels.

Visibility from the important movement corridor

Old Bagalkot site is close to the Belgaum-Raichur road is visible from the road, so the site may be suitable for all types of high-end commercial developments. The new Bagalkot site is within the residential clusters and educational institutions and is fairy visible from any of the main roads.

Size of the plot

The area of subject land plots are approximately 6 acres for old Bagalkot site and 4.5 acres for the new Bagalkot site, which is suitable for a mid-size bus terminal integrated with commercial development at both the sites.

Movement pattern near the site

Currently both the site areas have a low movement of traffic and may not be a suitable site for office spaces. But considering the future movement through the roads near the new Bagalkot bus stand catering to residential areas; offices and retail spaces may be a probable product mix for the new Bagalkot site.

Demand supply scenario of various products in the surrounding areas

In the vicinity of old Bagalkot, at present there are commercial shops such as stationery shops, convenient shops and fruit & juice shops. There are also few shops for automobile spare parts opposite to the bus stand. When railway station is taken into consideration, and due to presence of educational institutions, there can be a good demand for the commercial shops, restaurants and budget hotels.

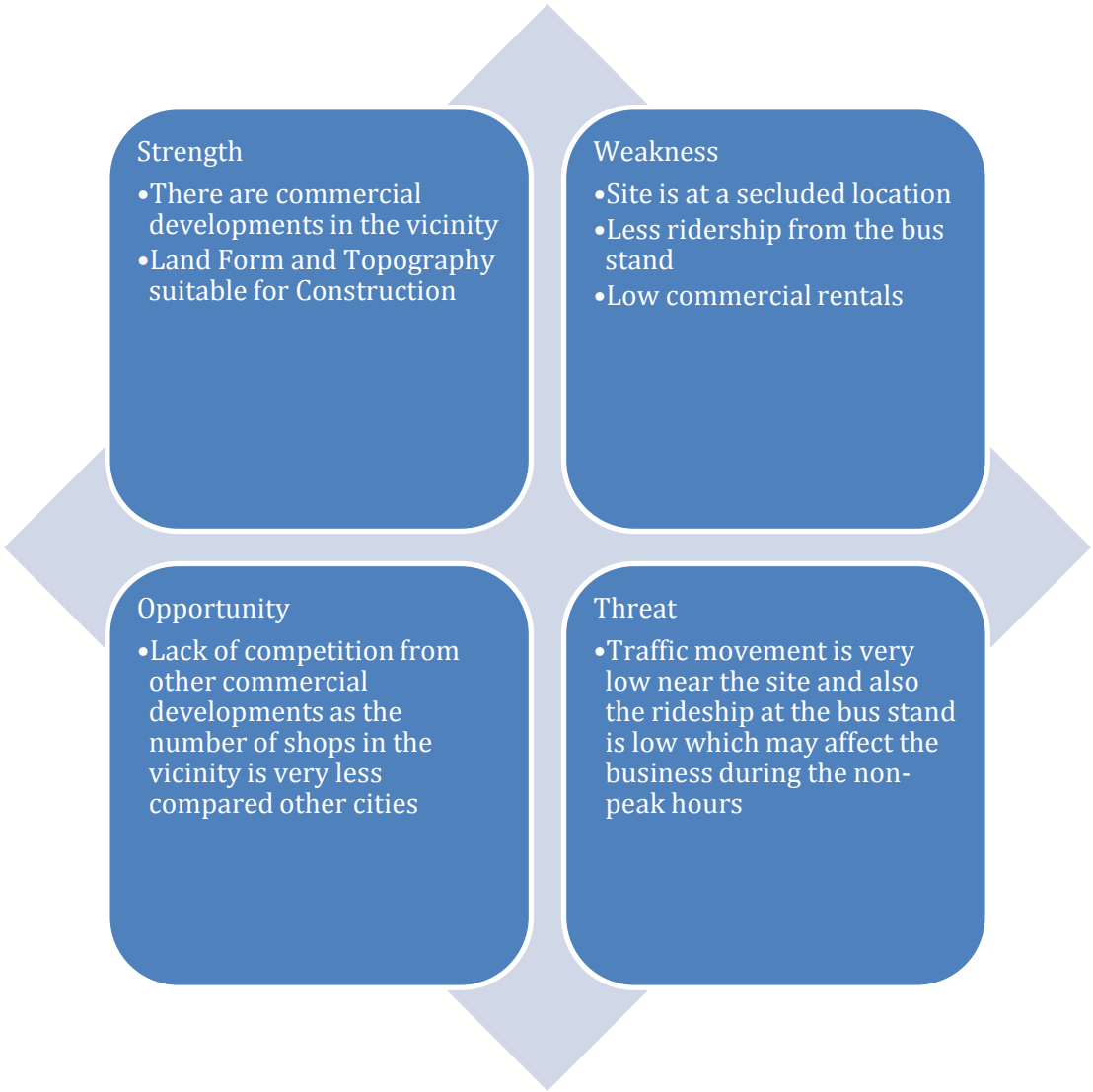
At the new bus stand site; there are no commercial developments in the vicinity. It is all residential and educational, so commercial shops and restaurants may be a probable product mix option for the site.

5.2.1.1 Rental

The commercial rental near the old Bagalkot site is in the range of INR 30 / sq.ft / month to INR 40 / sq.ft / month. Average size of shop is 12 ft x 15 ft. the details are provided in the Annexure 1 of this report within the site assessment section.

SWOT Analysis for Bagalkot 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 Raichur

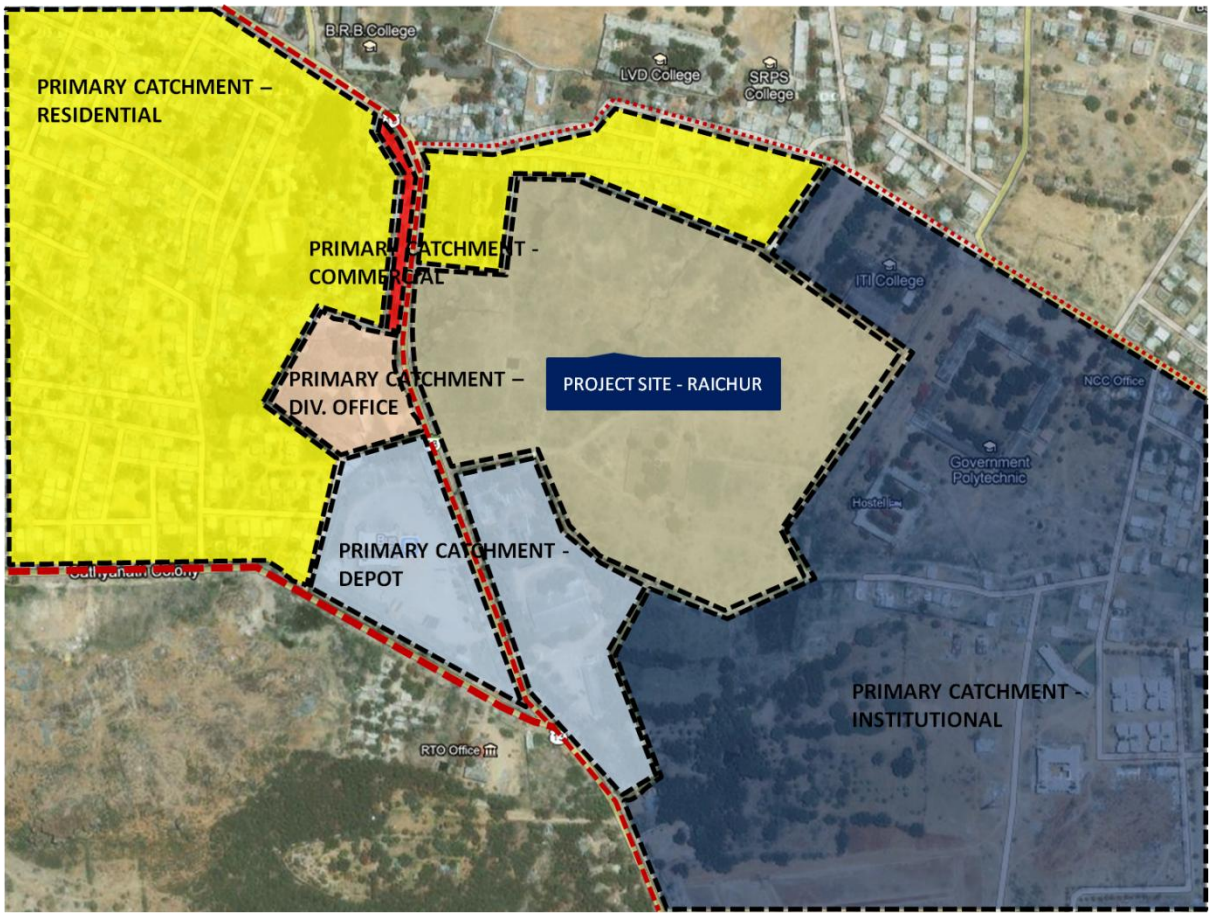
Sites location in the city

The project site is located in southern suburbs of Raichur city and near NEKRTC depots and divisional offices. High-end commercial developments may not be a probable option while hospitality may be provided at the site.

Primary Catchment

The primary catchment comprises of NEKRTC depot, divisional offices and 2-3 commercial shops which are local convenience stores. In the secondary catchments, there are 3-4 educational institutions such as Government polytechnic, Navodaya Medical College, LVD College and BRB College. These educational institutions are ~1.0 Km away from the project site. There are few commercial establishments such as commercial shops and budget hotels opposite to the Navodaya College. These catchments make the site suitable for hospitality development. The primary catchment for the Raichur site is provided in the figure given below.

Figure 9: Primary catchment for Raichur site



Visibility from important movement corridors

The site is fairly visible from the Mantralaya road, so it may be suitable for mid-size hospitality and commercial developments.

Movement pattern near the site

Currently the site area has a low movement of traffic and may not be a suitable site for high-end office spaces but mid-size commercial developments such as office spaces and shops can be explored. Buses also travel though the adjoining roads; but the traffic is generally on the lower side. Movement of cars and two wheelers are also on the lower side.

Demand supply scenario of various products in surrounding areas

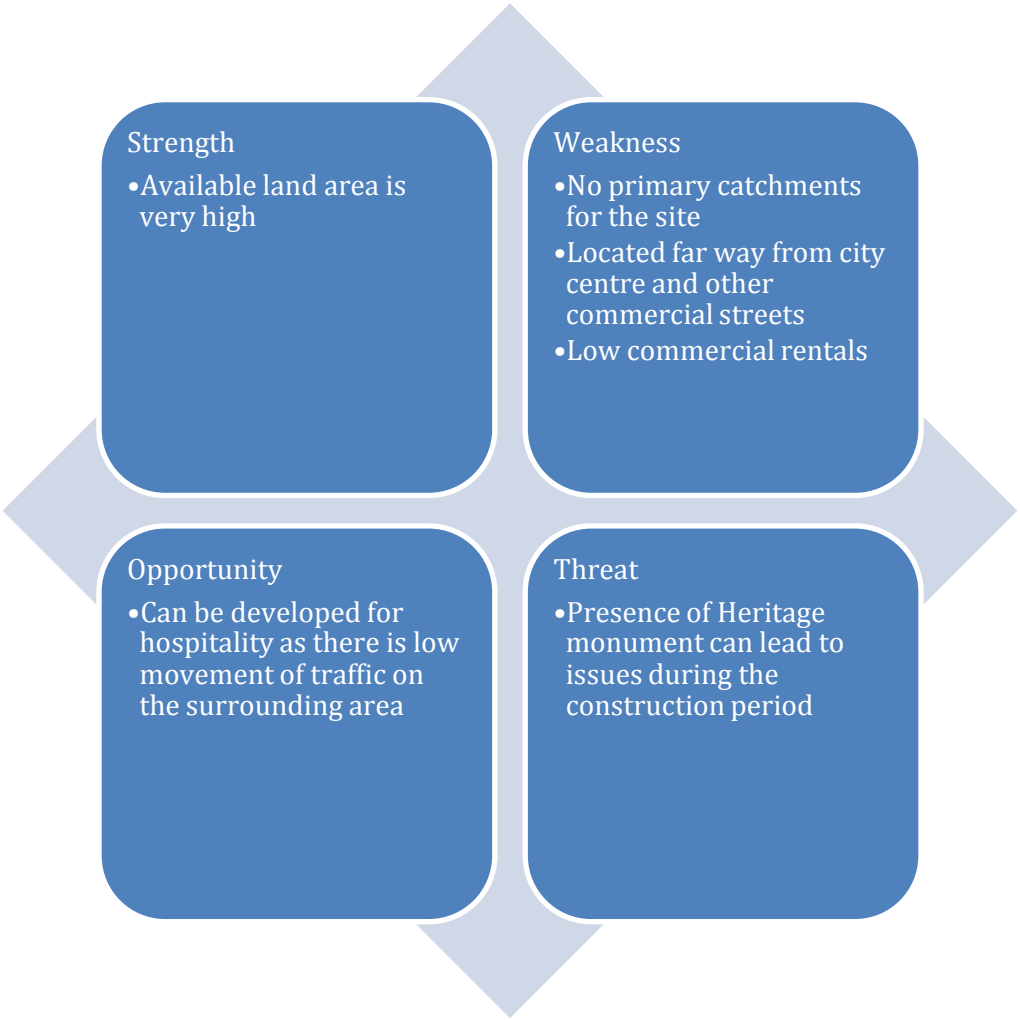
From the assessment of the surrounding area, it is observed that there is not much demand for commercial shops while there is moderate demand for office spaces. From the primary survey done for hospitality, it is found out that there are four major star hotels (1 star to 3 star) in the Raichur city. They are SLV Tourist Home (60 rooms), Nripunga Hotel (80 rooms), EAC Kubera Palace Hotel (85 rooms) and Priya Hotel (60 rooms). The average occupancy is in the range of 60% to 65%. While during festive season it is 90% to 100% and during off-season, it is 40% to 50%. It is mostly occupied by people for business purpose (60%) and also for tourist purpose (40%). The presence of business people is due to the presence of mining areas in the vicinity (such as Hatti gold mining areas). So it can be concluded that there is demand for hospitality.

5.3.1.1 Rental

Average commercial rentals are in the range of INR 30 / sq.ft /month to INR 35 / sq.ft /month for shop size of 150 sq.ft. Average rentals for hotels are in the range of INR 1250 / day /person to INR 1500 / day / person.

SWOT Analysis for Raichur

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

Retail space

Development of retail areas requires land parcels to be located amid residential areas with substantial disposable incomes, have high visibility and be located in high movement areas. Facilities like Multiplexes complement retail facilities as they generate extra footfalls, especially in malls. As the areas near the proposed sites do not have any high income residential areas and

have less visibility from major roads (except for Tumkur); retailing space shall be provided only at the Tumkur sites. In Bagalkot & Raichur sites, retail space shall be kept to the minimum.

Commercial office

Development of commercial office requires land having good visibility and connectivity. In many cases, developers and tenants prefer to be located in prime locations of the city. Developers desire good connectivity with other parts of the city and proximity to residential areas, so commercial office can be provide. These offices may comprise financial institutions and registered offices of various sectors. The sites, such as New Bagalkot and Raichur are on the suburbs, only mid-size offices may be sufficient. Tumkur, located at the centre of the city can be used for transit oriented development.

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 surveys by the Consultants confirm that even though there are various hotels coming up in the city, there is still a good demand for hotel rooms.

5.5 Evaluation Matrix

An evaluation matrix has been prepared in order 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:

Tumkur

Table 5: Evaluation matrix for Tumkur site

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
Site's Location in the City	Retail	✓			Retail for middle income group need to be provided along with requirements for passengers
	Commercial office		✓		The site lies in heart of the city with major commercial establishments in the vicinity that can pose a competition for any new office space
	Hospitality			✓	There are lot of budget hotels present in the vicinity that can pose a competetion for any new budget hotels.

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
Primary Catchment	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 office space within the commercial area at the site should not be very high
	Commercial office		✓		
	Hospitality		✓		As the area is a high movement area and already a busy bus terminal, with large number of transit passengers, the place has moderate potential for a Budget Hotel
Visibility from important movement corridors	Retail	✓			The plot is centrally located connected by all major roads, hence good visibility for all kind of developments
	Commercial office	✓			
	Hospitality	✓			
Size of the plot	Retail		✓		Absorption of large development may be difficult, 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 movent, so the site has high potential for Retail commercial and Hospitality (budget hotles)
	Commercial office	✓			
	Hospitality	✓			
Demand supply scenario of various products in surrounding areas	Retail		✓		High demand, moderate supply; So potential is medium
	Commercial office		✓		Moderate demand, moderate supply; So potential is medium
	Hospitality		✓		High demand, high supply; So potential is medium

Bagalkot

Table 6: Evaluation matrix for Bagalkot

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
Site's Location in the City	Retail		✓		Can be considered for new Bagalkot site as it is near to the residential catchments with medium to low income group residents
	Commercial office		✓		It is near to the residential catchments, offices can be considered
	Hospitality		✓		Can be considered for old Bagalkot site as it is near to the Railway station. But other factors need to be assessed.
Primary Catchment	Retail		✓		Not much retail is present in the catchmentsand considering the residential catchment, it can be recommended.
	Commercial office		✓		
	Hospitality			✓	
Visibility from important movement corridors	Retail			✓	The plot is located away from the main roads but is fairly visible from any major roads
	Commercial office		✓		
	Hospitality			✓	
Size of the plot	Retail			✓	Absorption of large development may be difficult, hence a suitable mix has to be derived for the site
	Commercial office			✓	
	Hospitality			✓	
Movement pattern near the site	Retail with Entertainment			✓	Movement of traffic near the site is very low. So it may be a good location for high-end Hospitality. But, looking into other factors such as catchments and site location, only mid size hospitality is recommended.
	Commercial office			✓	
	Hospitality			✓	
Demand supply scenario of various products in surroundings	Retail		✓		Moderate demand, less supply; So potential is medium
	Commercial office			✓	Moderate demand, Moderate supply; So potential is low
	Hospitality			✓	Moderate demand, Moderate supply; So potential is low

Raichur

Table 7: Evaluation Matrix for Raichur site

Parameters	Product Mix	Suitability of product mix options			Remarks
		High	Medium	Low	
Site's Location in the City	Retail			✓	It is located far away from the city centre and major commercial streets.
	Commercial office			✓	It is near to the residential catchments, so it can be considered
	Hospitality		✓		Can be considered for star hotels.
Primary Catchment	Retail			✓	Not much commercial is present in the catchment but considering the residential catchment, few commercial office can be recommended.
	Commercial office			✓	
	Hospitality		✓		Can be considered
Visibility from important movement corridors	Retail			✓	The plot is located away from the main roads and is fairly visible from any major roads
	Commercial office			✓	
	Hospitality			✓	
Size of the plot	Retail		✓		Available land area is high and can be used for any of the commercial developments.
	Commercial office		✓		
	Hospitality	✓			
Movement pattern near the site	Retail with Entertainment			✓	Movement of traffic near the site is very low. So it may be a good location for high-end Hospitality.
	Commercial office			✓	
	Hospitality	✓			
Demand supply scenario of various products in surroundings	Retail			✓	Less demand, less supply; So potential is low
	Commercial office			✓	Moderate demand, moderate supply; So potential is low
	Hospitality		✓		Moderate demand, Less supply; So potential is medium

5.6 Recommended product mix options

Having analyzed options for retail, commercial office and hospitality in detail in the previous sections, the product mix options for the commercial development apart from bus terminal for different sites are presented below:-

Table 8: Product mix option for Tumkur

Product Mix	Percentage	Area (in Sq.m)
Retail Shopping	60%	15,177
Commercial office space	40%	10,118
Total	**100%**	**25,295**

Table 9: Product mix option for Bagalkot

Product Mix	Percentage	Area (in Sq.m)
Retail Shopping	50%	8,990
Commercial office space	40%	7,192
Budget Hotels	10%	1,798
Total	**100%**	**17,920**

Table 10: Product mix option for Raichur

Product Mix	Percentage	Area (in Sq.m)
Retail Shopping	30%	4,129
Commercial office space	30%	4,129
3-Star Hotel	40%	5,506
Total	**100%**	**13,764**

5.7 Product Design

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

**For the purposes of bus traffic projections, an annual growth rate of 3% has been considered, based upon its regression with the population growth rate.*

Tumkur:

Table 11: Product design for Tumkur Bus Terminal & Depot

Item	Value	Unit		Item	Value	Unit
Area Break-up				**Terminal Operation**		
Plot Area	32,065	sqm		**Total no of Trips (Current)**	1993	
Built-up Area	43,329	sqm		**Max. no. of Bays**	86	
No. of Floors	3			**Bus Depot**		
Terminal Area	13,786	sqm		Bus Parking	150	Bus

Item	Value	Unit		Item	Value	Unit
Depot/Workshop Area	4,248	sqm		**Car Parking Provided**		
Retail Area	15,177	sqm		Terminal	155	ECS*
Offices Area	10,118	sqm		Commercial	337	ECS

*ECS: Equivalent Car Space

Bagalkot:

Table 12: Product design for Bagalkot Bus Terminals (Old & New)

Item	Value	Unit		Item	Value	Unit
Area Break-up				**Old Terminal Operation**		
Total Plot Area	27,311	sqm		**Total no of Trips (Current)**	689	
Built-up Area	30,724	sqm		**Max. no. of Bays**	23	
No. of Floors	3			**Car Parking Provided**		
Old Terminal Area	4,552	sqm		Terminal	46	ECS
New Terminal Area	8,193	Sqm		Commercial	76	ECS
Retail Area	8,990	sqm		**New Terminal Operation**		
Offices Area	7,192	sqm		**Total no of Trips (Current)**	689	
Budget Hotel				**Max. no. of Bays**	46	
Area	1,798	sqm		**Car Parking Provided**		
No. of Rooms (150 sqft)	64			Terminal	91	ECS
				Commercial	152	ECS

In this case, as per demand assessment, the hotel will be situated on the New Bagalkot Bus Terminal site.

Raichur:

Table 13: Product design for Raichur Project Site

Item	Value	Unit
Area Break-up		
Total Plot Area	17,479	sqm
Built-up Area	14,629	sqm
No. of Floors	2	
Bus Shelter Area	865	sqm
Retail Area	4,129	sqm
Offices Area	4,129	sqm
3-Star Hotel		
Area	5,506	sqm
No. of Rooms (300 sqft)	99	
Car Parking Provided	195	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

Tumkur

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 Land Area Break-up and built up area for the site is as follows:

Bus Terminal Site

Description	Value	Unit
Plot Area	17,904	sq.m
F.A.R	2.0	
Ground Coverage	55	%
No. of Floors	3	
Max BUA on Ground	9,847	sq.m
Max BUA	35,807	sq.m
Max Permissible Commercial Space	45	%

Bus Depot Site

Description	Value	Unit
Plot Area	14,161	sq.m
F.A.R	1.75	
Ground Coverage	60	%
No. of Floors	3	
Max BUA on Ground	8,497	sq.m
Max BUA	24,782	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
Terminal Building/ Depot	1,200	INR per sq. ft.

Commercial Area (Retail & Office)	1,200	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
Terminal Building	3	INR/sqft/Month
O&M Commercial Building		
O&M Expenses	5	INR/sft
O&M Escalation	15%	every three years

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
Rental for Terminal Commercial Area		
Rental	80*	INR/SFT
Commercial Building		
Retail	80*	INR/SFT
Commercial Office	70*	INR/SFT
Retail & Commercial Office		
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
Advertising Revenue	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: 6 year 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
Effective tax component @ 30.00%	**32.45%**	

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%

Bagalkot

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 Land Area Break-up and built up area for the site is as follows:

Old Terminal

Description	Value	Unit
Plot Area	9,104	sq.m
F.A.R	1.5	
Ground Coverage	50	%
No. of Floors	3	
Max BUA on Ground	4,552	sq.m
Max BUA	13,655	sq.m
Max Permissible Commercial Space	45	%

New Terminal

Description	Value	Unit
Plot Area	18,207	sq.m
F.A.R	1.5	
Ground Coverage	50	%
No. of Floors	3	
Max BUA on Ground	9,104	sq.m
Max BUA	27,311	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
Terminal Building	900	INR per sq. ft.
Commercial Area (Retail & Office)	1,000	INR per sq. ft.
Budget Hotel	1,200	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
Terminal Building	3	INR/sqft/Month
O&M Commercial Building		
O&M Expenses	5	INR/sft
O&M Escalation	15%	every three years
Hotel		
O&M (Room, 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
Rental for Terminal Commercial Area		
Rental	35*	INR/SFT
Commercial Building		
Retail	35*	INR/SFT
Commercial Office	30*	INR/SFT
Hotel	750*	ARR/day
Retail & Commercial Office		
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
Advertising Revenue	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 year 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
Effective tax component @ 30.00%	**32.45%**	

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%

Raichur

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 Land Area Break-up and built up area for the site is as follows:

Description	Value	Unit
Plot Area	17,479	sq.m
F.A.R	1.75	
Ground Coverage	55	%
Max BUA	30,588	sq.m
Max BUA on Ground	9,613	sq.m
Max Permissible Commercial Space	45	%
No. of Floors	2	

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
Bus Shelter	50	INR per sq. ft.
Commercial Area (Retail & Office)	1,100	INR per sq. ft.
3-Star Hotel	1,750	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

Terminal Building	3	INR/sqft/Month
O&M Commercial Building		
O&M Expenses	5	INR/sft
O&M Escalation	15%	every three years
Hotel		
O&M (Room, 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
Rental for Terminal Commercial Area		
Rental	25*	INR/SFT
Commercial Building		
Retail	25*	INR/SFT
Commercial Office	20*	INR/SFT
Hotel	1500*	ARR/day
Retail & Commercial Office		
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
Advertising Revenue	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 year 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
Effective tax component @ 30.00%	**32.45%**	

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 only pays the lease rental to the government
2. When the private player pays an upfront amount plus the lease rental to the government. The Upfront Payment is the bid variable in this model
3. When the private player pays an upfront amount, the lease rental and and an annual revenue share subject to a minimum payment every year. Revenue share is the bid variable here.

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 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:

Tumkur

Table 14: Key project financials for Tumkur

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share subject to a minimum annual payment of INR 1.25 crore
Project Cost (INR Cr) including IDC and Upfront Payment	72.28	91.03	79.31
Equity (INR Cr) @ 30% of capital cost	21.68	27.31	23.79
Debt (INR Cr) @ 70% of capital cost	50.59	63.72	55.52
Project IRR (%)	21.2	17.9	18.0

Project NPV (INR Cr)	62.63	47.93	42.32
Equity IRR (%)	25.8	21.0	21.0
VFM (INR Cr)	80.65	65.95	60.34
Receivables to Govt			
Lease Rental (INR cr/Year @ INR 5 per sqft/year)	0.17	0.17	0.17
Upfront Payment (INR Cr)	0.00	16.00	6.00
Revenue Share (% of the Revenue)	0.00	0.00	5.00
NPV of Receivables to Govt (INR Cr)	0.88	13.69	17.21

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 upfront fee and a revenue share), the private player earns lower returns. For ensuring balanced returns to both parties involved, an **upfront payment plus lease rental model** is suggested. 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.

Bagalkot

Table 15: Key Project Financials for Bagalkot

Item	**Only Lease Rental Paid by the Pvt Developer**	**Upfront Payment Plus Lease Rental Model**	**Upfront Payment, Lease Rental and Revenue Share subject to a minimum annual payment of INR 0.10 crore**
Project Cost (INR Cr) including IDC and Upfront Payment	42.73	43.90	43.31
Equity (INR Cr) @ 30% of capital cost	12.82	13.17	12.99
Debt (INR Cr) @ 70% of capital cost	29.91	30.73	30.32
Project IRR (%)	12.7	12.4	12.4
Project NPV (INR Cr)	1.92	0.98	0.69
Equity IRR (%)	13.5	13.1	13.0
VFM (INR Cr)	25.47	24.54	24.25
Receivables to Govt			
Lease Rental (INR cr/Year @ INR 5 per sqft/year)	0.23	0.23	0.23
Upfront Payment (INR Cr)	0.00	1.00	0.50
Revenue Share (% of the Revenue)	0.00	0.00	1.00
NPV of Receivables to Govt (INR	1.19	1.99	2.47

Cr)			

**Because the project is expected to have low returns, a revenue share of only 1% has been taken to allow for a positive NPV*

It can be seen from the findings of the financial analysis that this site has a positive Project NPV in all three cases. The project, however, is a borderline case and despite a positive project NPV may have issues in attracting large private interest. This is because, on one hand, the rentals in the area are low, while on the other hand, only 45% of the FAR can be utilized as commercial leading to inefficient use of the available FAR.

While the government has the largest receivables in the third model, it will also have to bear a part of revenue risk with the private player. Thus, **upfront payment plus lease rental model is recommended.** 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.

Raichur

Table 16: Key Project Financials for Raichur

Item	Only Lease Rental Paid by the Pvt Developer	Upfront Payment Plus Lease Rental Model	Upfront Payment, Lease Rental and Revenue Share subject to an Annual Payment of INR 0.10 crore
Project Cost (INR Cr) including IDC and Upfront Payment	26.91	28.66	27.49
Equity (INR Cr) @ 30% of capital cost	8.07	8.60	8.25
Debt (INR Cr) @ 70% of capital cost	18.83	20.06	19.24
Project IRR (%)	14.7	13.9	13.9
Project NPV (INR Cr)	5.39	4.00	3.87
Equity IRR (%)	16.5	15.4	15.4
VFM (INR Cr)	22.14	20.75	20.62
Receivables to Govt			
Lease Rental (INR cr/Year @ INR 5 per sqft/year)	0.06	0.06	0.06
Upfront Payment (INR Cr)	0.00	1.50	0.50
Revenue Share (% of the Revenue)	0.00	0.00	1.00
NPV of Receivables to Govt (INR Cr)	0.31	1.51	1.51

**Because the project has a high capital cost with a short concession period, a revenue share of 1% has been taken*

It can be seen from the findings of the financial analysis that this site has a positive Project NPV in all the three cases. The project, however, is a borderline case and despite a positive project NPV may have issues in attracting large private interest. While the government has equal receivables in the second and third model, it will also have to bear a part of revenue risk with the private player in the third model. Thus, **upfront payment plus lease rental model is recommended.** 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.

Conclusions of the Financial Analysis

- Tumkur: For Tumkur, an upfront plus lease rental model is recommended as it balances the returns to government and the private player. As per the model, the NPV of receivables to the government is INR 13.69 crore. The private player is expected to observe a Project IRR of 17.9% and a Project NPV of INR 47.93 crore.
- Bagalkot: For Bagalkot, an upfront plus lease rental model is recommended as it balances the returns to government and the private player. As per the model, the NPV of receivables to the government is INR 1.99 crore. The private player is expected to observe a Project IRR of 12.4% and a Project NPV of INR 0.98 crore. This is a borderline project and may have difficulties in attracting substantial private sector interest.
- Raichur: For this project also, an upfront plus lease rental model is recommended as it balances the returns to government and the private player. As per the model, the NPV of receivables to the government is INR 1.51 crore. The private player is expected to observe a Project IRR of 13.9% and a Project NPV of INR 4.0 crore. This is a borderline project and may have difficulties in attracting substantial private sector interest.

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

6.3 Sensitivity Analysis

Sensitivity analysis is done for the recommended 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.

Tumkur

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 nearly 25% decline in the Project NPV. Changes in project and equity IRR corresponding to changes in construction cost is given in the table below

Table 17: Sensitivity of Returns of Tumkur Project to changes in Construction Cost

Change in Construction Cost	Post Tax Project NPV (INR cr)	P IRR	E IRR
25%	35.10	15.9%	18.0%
15%	40.23	16.6%	19.1%
10%	42.80	17.0%	19.7%
5%	45.36	17.4%	20.3%
0%	47.93	17.9%	21.0%
-5%	50.49	18.4%	21.7%
-10%	53.06	18.9%	22.5%
-15%	55.53	19.4%	23.3%
-25%	60.44	20.6%	25.0%

b. **Changes in Operational Costs:** Compared to changes in construction costs, the project is less sensitive to changes in operational costs. A 25% higher operational cost will lead to a 10% 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 in given in the table below:

Table 18: Sensitivity of the Tumkur Project Returns to Changes in Operational Expenses

Change in Opex	Post Tax NPV (INR Cr)	P IRR	E IRR
25%	43.7	17.4%	20.3%
15%	45.4	17.6%	20.6%
10%	46.3	17.7%	20.7%
5%	47.1	17.8%	20.8%
0%	47.9	17.9%	21.0%
-5%	48.8	18.0%	21.1%
-10%	49.6	18.1%	21.2%
-15%	50.4	18.2%	21.4%
-25%	52.1	18.4%	21.7%

c. **Changes in Revenue:** Lower than forecasted revenues can impact the project viability substantially. A 25% lower revenue will reduce the project NPV by almost 70%. 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 Tumkur project.

Table 19: Sensitivity of the Tumkur Project Returns to Changes in Revenue

Change in Revenue	Post Tax NPV (INR Crore)	P IRR	E IRR
25%	80.2	21.1%	25.8%
15%	67.3	19.9%	23.9%
10%	60.9	19.3%	23.0%
5%	54.5	18.6%	22.0%
0%	47.9	17.9%	21.0%
-5%	41.4	17.2%	19.9%
-10%	34.8	16.5%	18.9%
-15%	28.3	15.7%	17.8%
-25%	15.5	14.2%	15.7%

Bagalkot

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. Even a 5% higher construction cost will lead to a negative Project NPV. Changes in project and equity IRR corresponding to changes in construction cost is given in the table below

Table 20: Sensitivity of Returns of Bagalkot Project to changes in Construction Cost

Change in Construction Cost	Post Tax Project NPV (INR cr)	P IRR	E IRR
25%	-6.15	10.6%	10.5%
15%	-3.32	11.3%	11.5%
10%	-1.73	11.7%	12.0%
5%	-0.14	12.1%	12.7%
0%	0.98	12.4%	13.1%
-5%	2.54	12.9%	13.9%
-10%	4.10	13.4%	14.6%
-15%	5.66	14.0%	15.5%
-25%	8.33	15.1%	17.1%

b. **Changes in Operational Costs:** Compared to changes in construction costs, the project is relatively less sensitive to changes in operational costs. In this case, a 10% higher operational cost will lead to a negative 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 in given in the table below:

Table 21: Sensitivity of the Bagalkot Project Returns to Changes in Operational Expenses

Change in Opex	Post Tax NPV (INR Cr)	P IRR	E IRR
25%	-2.6	11.3%	11.6%
15%	-1.0	11.8%	12.3%
10%	-0.2	12.1%	12.6%
5%	0.6	12.3%	13.0%
0%	1.0	12.4%	13.1%
-5%	1.8	12.7%	13.5%
-10%	2.6	12.9%	13.8%
-15%	3.4	13.1%	14.2%
-25%	5.0	13.6%	14.8%

c. **Changes in Revenue:** Lower than forecasted revenues will greatly impact the project viability. Even a 5% reduction in the expected revenues will lead to a negative 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 Bagalkot project.

Table 22: Sensitivity of the Bagalkot Project Returns to Changes in Revenue

Change in Revenue	Post Tax NPV (INR Crore)	P IRR	E IRR
25%	12.6	15.6%	17.8%
15%	7.9	14.3%	15.9%
10%	5.9	13.8%	15.2%
5%	3.4	13.1%	14.2%
0%	1.0	12.4%	13.1%
-5%	-1.1	11.8%	12.3%
-10%	-3.3	11.1%	11.3%
-15%	-5.9	10.3%	10.1%
-25%	-10.6	8.7%	7.9%

Raichur

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 the project having a negative NPV. Changes in project and equity IRR corresponding to changes in construction cost is given in the table below

Table 23: Sensitivity of Returns of Raichur Project to changes in Construction Cost

Change in Construction Cost	Post Tax Project NPV (INR cr)	P IRR	E IRR
25%	-0.65	11.9%	12.4%
15%	1.31	12.7%	13.6%
10%	2.09	13.0%	14.1%
5%	3.05	13.5%	14.7%
0%	4.00	13.9%	15.4%
-5%	4.96	14.4%	16.2%
-10%	5.80	14.9%	16.9%
-15%	6.72	15.5%	17.8%
-25%	8.55	16.8%	19.9%

b. **Changes in Operational Costs:** Compared to changes in construction costs, the project is less sensitive to changes in operational costs. A 25% higher operational cost will lead to a 70% 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 in given in the table below:

Table 24: Sensitivity of the Raichur Project Returns to Changes in Operational Expenses

Change in Opex	Post Tax NPV (INR Cr)	P IRR	E IRR
25%	1.2	12.7%	13.6%
15%	2.2	13.1%	14.2%
10%	2.8	13.4%	14.6%
5%	3.4	13.7%	15.0%
0%	4.0	13.9%	15.4%
-5%	4.6	14.2%	15.8%
-10%	5.1	14.4%	16.1%
-15%	5.7	14.6%	16.5%
-25%	6.9	15.1%	17.3%

c. **Changes in Revenue:** Lower than forecasted revenues can impact the project viability substantially. Even 15% lower revenue will result in a negative 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 Raichur project.

Table 25: Sensitivity of the Raichur Project Returns to Changes in Revenue

Change in Revenue	**Post Tax NPV (INR Crore)**	**P IRR**	**E IRR**
25%	12.7	17.4%	20.8%
15%	9.3	16.1%	18.7%
10%	7.5	15.4%	17.6%
5%	5.7	14.6%	16.5%
0%	4.0	13.9%	15.4%
-5%	2.2	13.1%	14.2%
-10%	0.5	12.4%	13.1%
-15%	-1.4	11.5%	11.8%
-25%	-4.8	9.8%	9.3%

7 STATUTORY & LEGAL FRAMEWORK

As per the amendments done to Infrastructure policy, 1997 in 2007 (Government Order No.IDD 32 IDM 2003 Bangalore dated 16thJuly 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 TheIndian 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

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.

Tumkur is one of the busiest industrial towns located in the state of Karnataka. It is situated at a distance of 70 kilometers northwest of the city of Bangalore along National Highway 4. It has an average elevation of 822 metres (2696 feet). It experiences an annual average rainfall of 670mm.

Raichur is located on the banks of the Tungabhadra River, at an average elevation of 407 metres (1335 ft). The city experiences variable annual rainfall.

Bagalkot is situated on the bank of the river Ghataprabha. It has an average elevation of 533 metres (1,749 ft). The climate is warm and dry throughout the year and rainfall is scarce. Bagalkot, the district as a whole, receives the lowest rainfall annually in Karnataka. The average rainfall in the region is approximately 318 mm annually.

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 26: 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

Sl. No.	Law / Regulation / Guidelines	Relevance	Implementing / Responsible Agency
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 and, in some cases, improve upon the existing social infrastructure in the form of modernized bus terminals. These terminals will help to improve connectivity and accessibility of the area as whole and also benefitting 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 27: Status of land ownership for project sites

S.No.	Site	Current Ownership of Land	Remarks
1	Tumkur	Karnataka State Transport Corporation (KSRTC)	Land already acquired
2	Bagalkot	North West Karnataka Road Transport Corporation (NWKRTC)	
3	Raichur	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.

3. Externalities like impact on traffic flow

Both Tumkur and Bagalkot already have operating bus terminals on the site, while the terminal at Raichur will be a Greenfield project.

The site in Tumkur is surrounded by retail and commercial activities and the area already experiences significant volume of traffic. Further it was observed that the peak hours in the area witness majority of slow moving traffic, resulting in a reduction in traffic movement efficiency. Therefore, in light of the above observations and with a further increase in traffic due to the new terminal and the allied commercial activities, the traffic situation in the area may worsen,

especially during the peak hours. Even though the consultants have provided for adequate parking spaces for cars and two-wheelers at the site, coordination with respective municipalities will be required for a detailed assessment of impact on traffic movement due to new development on the site.

The sites in Bagalkot lie in areas having wide roads and effectively planned traffic movement patterns. Therefore the upcoming activities will have little or no negative impact upon the circulation in the area.

Likewise, the site in Raichur is located in an area experiencing a relative absence of any kind of retail/commercial activity. The immediate neighbourhood of the identified site comprises of existing bus depots (2 in nos.) and sparse residential areas. There are a couple of educational institutions lying within 1km of the site. Therefore, the upcoming terminal and commercial/retail activities will have only a minor impact on the traffic flow in the area.

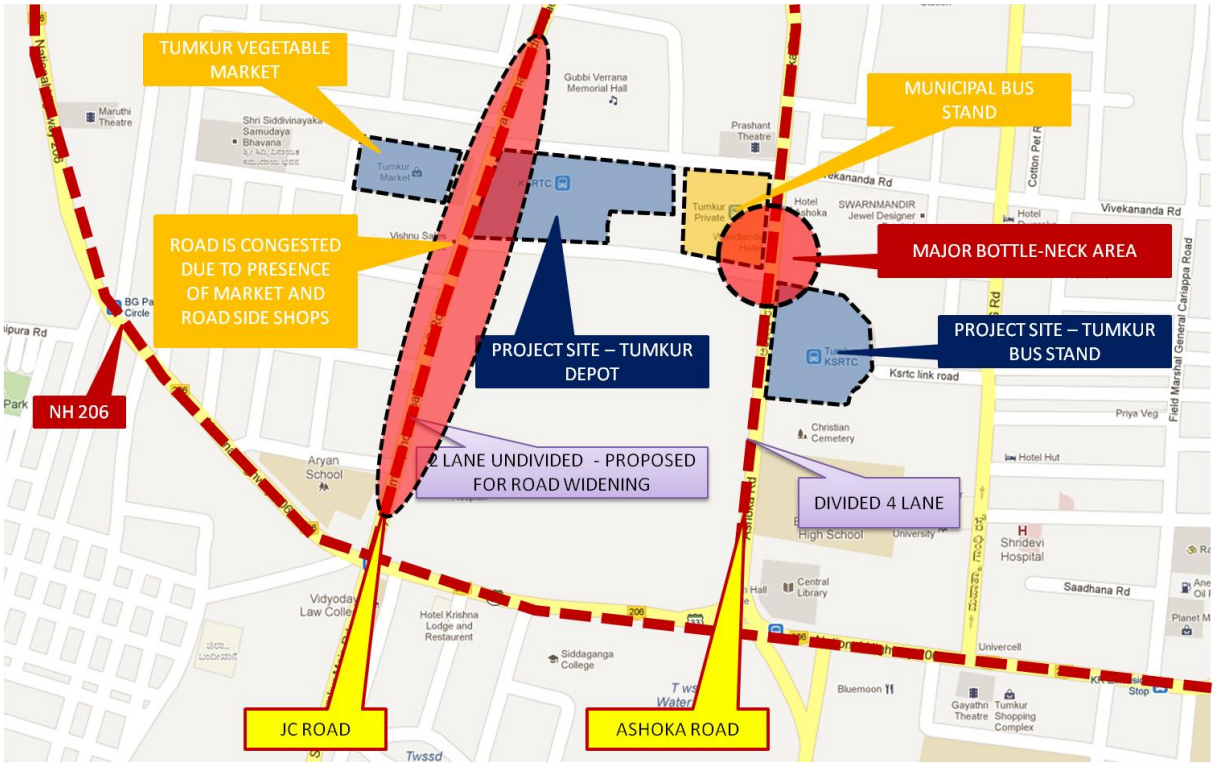
8.3 Impacts on Circulation pattern

With the development of Bus terminal and commercial activities within the subject sites, there would considerable increase in the volume of traffic in the immediate influence areas. This shall be due to the induced traffic from the proposed development. The development may impact the existing circulation pattern on all the link roads / connectors. For sites at Raichur and Bagalkot, the existing traffic movement is sparse and the additional traffic generated from the commercial development is not expected to have a major impact on the existing roads. But for Tumkur, the new developments shall have impact on the existing roads and circulation pattern, which is discussed in detail below.

From the Consultants' preliminary observation on the circulation pattern of Tumkur, slow moving traffic is observed during peak period near the entry point of the bus stand on the Ashoka Road. This is mainly due to the presence of municipal bus stand opposite to the KSRTC bus stand, which also operates large number of bus trips from the bus stand. A bottleneck is created on the Ashoka Road opposite to both the bus stands during peak hours causing delay at the intersections. Even though the roads have a width of more than 15m, a detailed assessment will be required in coordination with the concerned municipal authorities to examine if the roads can accommodate the induced traffic from the proposed commercial developments on the bus stand site.

Similarly, for the depot site at the existing road--JC Road, the vehicles have a travel speed of less than 10 Km/ hr due to the presence of road side vegetable vendors. So, at the present stage, any further development at the depot site can impact circulation pattern of the surrounding roads. But there have been proposals from the Tumkur Development Authority and Municipal Corporation for widening of the existing road from 10m to 15m that shall suffice to reduce the impacts.

Figure 10: Traffic circulation pattern around Tumkur site



Given the fact that traffic bottleneck areas already exist at three points in the vicinity of the site, the concerned municipal authority will need to examine the possibility of coming up with a traffic circulation plan for the additional traffic being generated due to the proposed development.

Traffic generation due to proposed development

The Consultants have made a very preliminary assessment for additional traffic generation due to proposed commercial development. The assumptions for additional traffic generation due to the proposed commercial development at Tumkur sites are based on the Consultants' experience and study of similar kind of developments elsewhere in India. These trips will add to the ADT (Average Daily Traffic) for the subject site. The data does not include the bus trips generated or attracted from the bus terminal area.

Table 28: Total daily trips generated from Tumkur commercial developments

Commercial Building	Area (sq.m)	Total Daily trips
Retail	15,177	5,988
Offices	10,118	927

The above trips if equally divided on the JC Road and Ashoka road results in ~3500 additional daily trips at JC Road and Ashoka Road due to the proposed commercial developments. If we add the trips from the terminal area, there will be a significant impact on the overall circulation pattern within the immediate influence zone. So, proper traffic management plans needs to be

created and implemented for the proper functioning of the traffic movement. One-way traffic solutions can also be adopted but only after a detailed traffic study is conducted for the influence area by the concerned authorities.

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:

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.

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.

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 Concessioning Authority at the end of the same.

Further, the Concessioning 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.
- **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/concessioning 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/concessioning 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 order to minimize the revenue risk for the government, in many cases revenue share is subject to a minimum annual payment to the government.
  In both this and the previous 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.

Project Structure

The projects are proposed to be structured as under:

Table 29: Proposed Project Structure

Component	Description
Structure	• The project is to be developed under DBFOT model of PPP • The project is structured for capital investment to be brought in by the selected private sector player and land is provided by Concessioning Authority. • 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.
Concession Period	• 30 years including a construction period of 3 years
Payment to Concessioning Authority	• Upfront & Recurring Rental Model for all Projects
Role of Concessioning Authority	• Provision of identified land for the Project, free from all encumbrances • Grant of lease hold rights of the project site to the developer • Provision of adequate rights to the developer for collection of user charges, parking fees and rentals from property development.
Role of Private Sector Developer	• Detailing and placement of the Project components • Detailed designing and Engineering of facilities based on Concept • Achieving financial closure and making the necessary capital investment • Construction, Marketing, Operating, Maintaining and Managing (Utilities, Facilities, Equipments etc) the Project during the Authorization Period • Obtaining all clearances/approvals from the concerned Govt. Department, handling legal issues etc

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.

ii. Selection of Transaction Advisory: By the end of May 2012
iii. Selection of Project Developer: By October 2012
iv. Project Construction to start by January 2013
v. Project Operations to start by 2015-16

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 is recommended for all the three project locations as it balances the returns to government and the private players
- For Tumkur, the private player is expected to observe a Project IRR of 17.9% and a Project NPV of INR 47.93 Cr.
  As per the model, the NPV of receivables to the government is INR 13.69 Cr. The recommend upfront payment is INR 16 Cr with an annual lease rental of INR 0.17 Cr.
- For Bagalkot, the private player is expected to observe a Project IRR of 12.4% and a Project NPV of INR 0.98 crore. 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 1.00 Cr. The recommend upfront payment is INR 4 Cr with an annual lease rental of INR 0.23 Cr.
- For Raichur, the private player is expected to observe a Project IRR of 13.9% and a Project NPV of INR 4.00 crore. 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 1.51 Cr. The recommend upfront payment is INR 1.50 Cr with an annual lease rental of INR 0.06 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: Tumkur Bus stand, Tumkur

Area: 4.42 Acres (Bus stand site); 3.5 Acre (Depot site)

Abstract:

- Tumkur bus stand area is totally congested and no land is available for development.
- The presence of civil bus stand opposite to the existing KSRTC bus stand makes the are more congested with buses and small and big commercial shops, banks, vegetable market etc.
- The present KSRTC building is very old (refurbishment project can be proposed) with G+1 bus stand building which have 5 shops on the ground floor and KSRTC office on the first floor. As per KSRTC officials, the building has become weak and requires makeover (as done for other bus stands in Karnataka).
- Land is available with KSRTC within the depot for commercial development as one local road (JC road) abutting the depot is proposed for a 4 lane road from existing 2 lanes. The issue is that the proposal would take minimum 2 year to be operational and the existing condition of road is very bad with road side vegetable and fruit shops all along the road and condition is also very bad. Therefore no private players would be interested in investing in the plot.
- The area near the depot as well as KSRTC bus stand have very few restaurants

About the plot:

- Rectangular plot along the back side of the depot.
- The land is with KSRTC.

Surrounding Area:

- Commercial shops (Opposite to the proposed site on the main road)
- Road side Vegetable & fruit markets
- Banks

Rentals:

- Within KSRTC bus stand:
    - Commercial Shops (5 shops on ground floor):
        - Rentals: Average Rs. 5000 – Rs. 10000 / month (the details for each shop is given in the table – hard copy)
        - Escalation: 10% every year
        - 5 year contract
- Outside bus stand:
    - Commercial shops – Rs. 10000 – 15000 / month (shop size – 15sq.m)

  - Office space – Rs. 20000 – 25000 / month
- Commercial shops near Depot
  - Rentals – Rs. 7000 – 10000 / month (shop size – 15sq.m)
  - Road side Vegetable & fruit shops – Rs. 200 – 400 / day

Bus operational Data:

- KSRTC: provided in the table received from Asst. traffic manager - tumkur
  - No of passengers – 15000 - 20000 passengers / day
  - Scheduled trips: ~ 600 Departures
- Depot
  - No. of buses 205

Construction cost:

Terminal area – Rs. 1200 / sq.ft

Workshop – Rs. 800 / sq.ft – construction time – 6 month

Location: Bagalkot (Old bus stand and New Bus stand)

Land Use / Activity: Government Land / Public – Semi Public Activity

Cost of Land: Rs. 1000 to 1500 per sqft is the market rate prevailing. Actual acquisition was done on a government subsidized rate of Rs. 2 per sqft.

General Size of Commercial Spaces (prevailing): approx. 12 x 15 ft

Development Regulations: The asst. executive engineer did not have any idea about the development regulations (ground coverage, FAR, Height restrictions, etc. He has provided a detailed layout plan as well as floor plans for further details.

Permissible uses: Apart from the primary intended use, Toilets, Seating area, parking, canteens, etc. may be constructed.

Prevailing Rentals: The rents at the new bus stand are in general less than those at the old bus stand.

Shop	Rent (Rupees per month)	Service Tax	Total (Rupees per annum)
Canteen	8252	10.3%	9102
Pan Shop	5991	10.3%	6608
General Store	4259	103%	4698
Weighing Machine	515	10.3%	568

Total number of buses plying on the bus stand: 689 (distribution of these buses throughout the day is constant)

Total Hours of Operation: 13 hours

Morning Peak Hour Duration: 7 AM to 10 AM

Evening Peak Hour Duration: 4 PM to 7 PM

Peak hour average bus ridership: 50 passengers per bus (boarding + alighting)

Non-peak hour average bus ridership: 30 passengers per bus (boarding + alighting)

Boarding : Alighting morning = 1:5

Boarding : Alighting evening = 5:1

Bus Charges: There is no parking or halting charges levied on the buses as they are all owned by KSRTC.

Project Cost: Mentioned in the additional documents provided (reduce the project cost of New Bus Stand to 8 Crores as per the new estimate).

Operations Cost:

Staff Cost = Rs. 1,00,000 per year

Tax = Rs. 2,50,000 per year

Maintenance Cost:

Sweeping = Rs. 50,000 per year

Cost Escalation: As per Mr. Kulkarni, the escalation in costs taken should be 20%, 35%, 50% and 60% (on initial year cost) for first, second, third and fourth years respectively.

Number of Operations Staff:

Designation	Number
Traffic Controllers	2
Reservation Staff	0
Pass Issue Staff	0

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 Tumkur (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**
			Concessionaire	**Authority**			
Construction Phase	Construction Cost Overrun	Cost overrun of 15%	100%	0%	7.8	-7.1	0.0
	Construction Time Overrun	Time overrun by 50% of the construction period (Loss of	100%	0%	3.9	-11.0	0.0

		revenue of 6 quarters)					
Operation Phase	Revenue Risk (Due to traffic shortfall)	Decrease in Revenue by 20%	100%	0%	1.3	-13.6	0.0
	Opex risk	Increase in O&M Cost by 15%	100%	0%	13.7	-1.2	0.0
	Total					**-32.9.5**	**0.0**
VFM (INR Cr)	**65.95**						

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

Tumkur (Upfront plus Lease Rental):

Concession Year	5	10	15	20	25	30
Inflows						
Equity	-	-	-	-	-	-
Debt	-	-	-	-	-	-
Total income	19.55	34.47	39.64	52.43	69.34	79.74
Total (A)	19.55	34.47	39.64	52.43	69.34	79.74
Outflows						
Capital Expenditure	-	-	-	-	-	-
Principle repayment	12.74	-	-	-	-	-
Interest repayment	7.46	-	-	-	-	-
Taxation	2.08	9.26	10.74	14.56	19.57	22.29
OPEX	3.04	3.88	4.95	6.32	8.07	10.30
Total (B)	25.32	13.14	15.69	20.88	27.64	32.59
Free Cashflow						
Opening Balance	1.9	8.3	120.2	258.7	429.9	649.5
Net Surplus/Deficit (A-B)	(5.8)	21.3	24.0	31.5	41.7	47.2
Closing Balance	(3.9)	29.6	144.2	290.2	471.6	696.6
Project IRR						
Capex	-	-	-	-	-	-
PBT	8.14	29.68	33.78	45.20	60.36	68.53
Depreciation	0.91	0.91	0.91	0.91	0.91	0.91
Interest	7.46	-	-	-	-	-
Tax	2.08	9.26	10.74	14.56	19.57	22.29
Pre Tax Project Cash Flow	16.51	30.59	34.69	46.11	61.27	69.44
Post tax project Cash flow	14.43	21.33	23.95	31.55	41.70	47.15
Equity IRR						
Equity	-	-	-	-	-	-
Profit after tax (PAT)	6.07	20.42	23.04	30.64	40.79	46.24
Book Depreciation	0.91	0.91	0.91	0.91	0.91	0.91
Principle repayment	12.74	-	-	-	-	-
Equity Cash flow	(5.77)	21.33	23.95	31.55	41.70	47.15

Bagalkot (Upfront plus Lease Rental):

Concession Year	5	10	15	20	25	30
Inflows						
Equity	-	-	-	-	-	-
Debt	-	-	-	-	-	-
Total income	6.92	12.20	14.03	18.55	24.54	28.22
Total (A)	6.92	12.20	14.03	18.55	24.54	28.22
Outflows						
Capital Expenditure	-	-	-	-	-	-
Principle repayment	3.41	3.41	-	-	-	-
Interest repayment	3.77	1.55	0.00	0.00	0.00	0.00
Taxation	-	1.91	2.81	3.93	5.39	6.03
OPEX	2.62	3.58	4.46	5.74	7.39	9.22
Total (B)	9.81	10.46	7.27	9.67	12.77	15.24
Free Cashflow						
Opening Balance	(1.7)	(4.0)	12.1	51.3	99.3	160.6
Net Surplus/Deficit (A-B)	(2.9)	1.7	6.8	8.9	11.8	13.0
Closing Balance	(4.6)	(2.3)	18.9	60.2	111.1	173.6
Project IRR						
Capex	-	-	-	-	-	-
PBT	(0.00)	6.54	9.04	12.29	16.63	18.48
Depreciation	0.52	0.52	0.52	0.52	0.52	0.52
Interest	3.77	1.55	0.00	0.00	0.00	0.00
tax	-	1.91	2.81	3.93	5.39	6.03
Pre Tax Project Cash Flow	4.29	8.62	9.56	12.81	17.15	19.00
Post tax project Cash flow	4.29	6.71	6.76	8.88	11.76	12.97
Equity IRR						
Equity	-	-	-	-	-	-
Profit after tax (PAT)	(0.00)	4.63	6.23	8.36	11.24	12.45
Book Depreciation	0.52	0.52	0.52	0.52	0.52	0.52
Principle repayment	3.41	3.41	-	-	-	-
Equity Cash flow	(2.89)	1.74	6.76	8.88	11.76	12.97

Raichur (Upfront plus Lease Rental):

Concession Year	5	10	15	20	25	30
Inflows						
Equity	-	-	-	-	-	-
Debt	-	-	-	-	-	-
Total income	5.75	9.12	10.49	13.87	18.34	21.09
Total (A)	5.75	9.12	10.49	13.87	18.34	21.09
Outflows						
Capital Expenditure	-	-	-	-	-	-
Principle repayment	2.23	2.23	-	-	-	-
Interest repayment	2.46	1.01	-	-	-	-
Taxation	-	1.45	2.10	2.89	3.93	4.48
OPEX	1.97	2.90	3.45	4.51	5.89	7.03
Total (B)	6.67	7.59	5.55	7.40	9.82	11.51
Free Cashflow						
Opening Balance	0.3	0.9	13.6	42.1	77.1	121.9
Net Surplus/Deficit (A-B)	(0.9)	1.5	4.9	6.5	8.5	9.6
Closing Balance	(0.6)	2.4	18.6	48.6	85.7	131.5
Project IRR						
Capex	-	-	-	-	-	-
PBT	0.98	4.88	6.70	9.03	12.12	13.73
Depreciation	0.33	0.33	0.33	0.33	0.33	0.33
Interest	2.46	1.01	(0.00)	-	-	-
Tax	-	1.45	2.10	2.89	3.93	4.48
Pre Tax Project Cash Flow	3.77	6.22	7.03	9.36	12.45	14.06
Post tax project Cash flow	3.77	4.77	4.94	6.47	8.52	9.59
Equity IRR						
Equity	-	-	-	-	-	-
Profit after tax (PAT)	0.98	3.43	4.61	6.14	8.19	9.26
Book Depreciation	0.33	0.33	0.33	0.33	0.33	0.33
Principle repayment	2.23	2.23	-	-	-	-
Equity Cash flow	(0.92)	1.53	4.94	6.47	8.52	9.59