

**REPORT OF THE
ADVISORY COMMITTEE**

**ON THE
'DRAFT REVISED MASTER PLAN - 2015'
OF THE
BANGALORE DEVELOPMENT AUTHORITY**

NOVEMBER 2005

**RECOMMENDATIONS OF THE ADVISORY COMMITTEE ON THE
REVISED MASTER PLAN 2015 OF THE BANGALORE
DEVELOPMENT AUTHORITY**

1. The Bangalore Metropolitan Area is large enough for accommodating for the foreseeable future period both the needs of the growth of the city and the essential 'Green Zone' around the conurbation which has been even in the past a feature of planning for Bangalore. The available land however, needs to be carefully husbanded.
2. Even if the law does not say so, it is well within the means of the State Government to instruct the agencies under its purview to provide their respective plans to the BDA. In particular, the issues of transport and traffic, water supply and sanitation, housing, commercial and industrial development etc, as well as measures for the decongestion of the city have been inadequately touched, which indicates a certain lack of coordination between the different agencies. This needs to be remedied even now by preparing separate sectoral plans relating to water supply and sewerage, transport, power supply, municipal services, etc. Support documents with maps should be generated for each sector (transport, water supply, sewerage, drainage, power) along with phasing and cost estimates. This should have the approval of the sectoral departments and made part of the Master Plan for BDA 2015.
3. Master Plan should comply with s. 81-C requiring it to be submitted through the BMRDA and this should be done even at this stage. Legally, the Master Plan for BMA has to sit within the BMRDA Plan. A chapter can still be added identifying the impact of the Bangalore Metropolitan Region and developments therein such as the new Bangalore International Airport, on the Bangalore Metropolitan Area.
4. There have been suggestions relating to the Metropolitan Planning Committee, on which it is appropriate that the State Government take decision in accordance with the provisions contained in the Constitution through the 74th Amendment.
5. It is necessary to discuss in the Revised Master Plan the dovetailing of the BMICPA area with the Revised Master Plan 2005 of the BDA because there is an umbilical relation between the two Planning Areas which can be exploited for the benefit of city and the Southern Karnataka region.
6. The new International Airport, though located outside the BDA limits, will still be the airport for the city. As with the BMICPA, its impact will be felt both within and outside the BDA limits, and the salience of this development to the city requires discussion in the Revised Master Plan 2015.

7. Though the Planning District is not an administrative unit, the local government jurisdictions are important, and there appears to be no valid reason why the wards of the CMCs/TMC, and Panchayat jurisdictions are not followed in the Planning Districts to avoid fragmented responsibility. Such convergence would enable detailed plans through wards and where a focused public participation is possible.
8. The legends in the Existing Land Use Maps and Master Plan and Proposed Land Use Maps should be the same to facilitate comparisons on changes between 2005 and 2015. The KTCP Act and the BDA Act have prescribed the range of broad land uses. The legend of the maps could be reformatted accordingly, with variations only in sub-categories. The same should apply to each of the Planning District maps.
9. For the conurbation area, an overall density of between 140 to 150 pph should be aimed at for 2015, with a residential density of 250 to 300 pph. The requirement of land should be re-worked accordingly.
10. Considering the increasing cost of covering larger and larger areas under urbanization coupled with decreasing cost-effectiveness, the restriction on horizontal outward growth is a necessity for orderly development of the city. The major means of achieving compact development is to put 'vacant developed' land to use, and adopt group/multi dwelling housing.
11. The conurbation proposal should not aid and encourage speculative and premature transactions in land in the outskirts, but should aim at assisting farmers who own land in the outskirts to get better prices by delaying the sale of lands till genuine demand has built up.
12. Prescribing and enforcing the restricted development area/agricultural zone in the outer Planning Districts the Green Zone is one of the means of checking the growth of the city. The Green Zone is in addition a necessity for environmental support to the city-dwellers.
13. Even assuming a slightly lower density, the Green Zone can certainly be kept at not less than 550 sq kms, or even 600 sq. kms. which will still make available adequate extent of land for conurbation during the period up to 2015. All large land owning agencies should develop their land on the basis of a plan to fit into BDA RMP-2015 with overall densities prescribed. For military lands the density could be 100 pph keeping with their low intensity ambience.
14. The Committee is of the view that the area proposed for conurbation under the Revised Master Plan 2015 is excessive and both the proposed conurbation area and the Green Zone require to be re-worked, decreasing the one and increasing the other.
15. DEALING WITH INDIVIDUAL REQUESTS : Individual instances where non-conforming usage has already occurred or has been proposed or approved, need to be examined on a case-by-case basis and appropriate

- decision taken. BDA should act to settle these demands by taking up the applications already filed in response to the notification of the Draft RMP 2015. In some villages there are many persons who claim that their lands, apparently contiguous, are already approved for, or put to use for, a particular purpose. If necessary, these can be grouped and taken up together for a decision.
16. Where the individual plot-owner of land in a changed zone wishes to proceed with his planned use of the land, unless otherwise objectionable, he should be permitted to do so, if required approvals have already been obtained. Whether a land requires to be acquired can only be known when there is further micro-planning of the areas being promoted for uses such as Logistics/Transportation, Large Public and Semi Public Infrastructures, Parks, Large Transportation structures, and Industrial / High Tech Zones, and others. In any case, the designation is valid only for a period of 5 years, after which it lapses (s. 69), excepting those relating to roads.
 17. However, lands in the Protected Land Zone in the Zonal Regulations, including tanks, forests, lakes, and valley zone call for a different treatment. Valley zones indicated in the Plan should be declared protected areas with limited development as proposed in the zonal regulations. Further development in this zone should be prevented, and assistance given to land holders to move out where particularly hazardous areas have been brought under construction. Projects may be shifted out and given the facility of TDR as compensation, as per the provision available in the Act.
 18. Barring the Protected Land Zone and the Thippagondanahalli catchment, any land which was under urbanizable area in the Revised CDP 1995 should continue in the urbanizable area in the Revised Master Plan 2015 also.
 19. Where classification of land has undergone a change and there has been approval earlier under the prevailing land classification, the land holder should have the option to continue to exercise the development control regulations and building bye-laws under which he was given approvals for land use and for construction.
 20. Wherever obvious errors in the maps, locations, categorization of existing land use, etc. are brought to light, corrections should be made before finalization of the Revised Master Plan 2015.
 21. The list of permissible industries in the Mixed Residential areas, it was pointed out, does not include textile industries such as weaving, twisting, dyeing etc. These are traditional industries in many parts of the city, and they should be incorporated in *Table 31. Industrial Land use category*.

22. **ROADS AND TRANSFER OF DEVELOPMENT RIGHTS** : The CDP of 1995 contained neat grids of roads, but these have not been realized. This should not happen in the Revised Master Plan. The roads/rights of way to be formed or widened should be clearly shown in the Proposed Land Use Maps. They should be demarcated on ground in order that land-owners are aware of the zoning.
23. The exercise of Transfer of Development Rights requires that the Authority shall publish annual programme for road widening or construction of new road/rights of way or for any other public purpose specified in S. 14-B of the Act, for granting TDRs. There is need for a phasing of the road programme for purpose of TDR, which should then be followed scrupulously.
24. Considering the LPA of BMA as a single entity, it is recommended that the TDR should be made exerciseable anywhere in the LPA if granted by the BDA in respect of a project undertaken by it. The Terms and Conditions state that a DRC shall be utilized in the same Zone or in the less intensified Zones but not vice-versa, wherever the city is divided into different zones based on the intensity of development. In the Revised Master Plan there are no such gradations. In view of this, the 1st Ring may be taken as the most intensely developed, with 2nd ring areas as moderately developed, and 3rd ring areas as sparsely developed.
25. The classification of road rights of way and their specifications also need to be stated in clear terms. In this regard, the committee recommends the note at Annexe 1 on **Basic Transport Sector** which has been suggested by Sri E.F.N.Ribeiro, member of the Committee. These may be adopted in planning all roads under the Revised Master Plan 2015.
26. The importance of access to the new airport is almost entirely ignored. The draft should indicate the route to the new Airport from different parts of the city, and the development which needs to be taken to improve such access. The airport may require rail connection also, and this needs to be pursued with either BMRTL or the Railways, or both. One immediate measure should be to connect Tumkur Road from the point of the BMICP Road, to the Devanahalli Road by taking up the 20 km stretch of the Proposed Peripheral Ring Road as first priority.
27. **THE PROPOSED PERIPHERAL RING ROAD (PPRR)** : Acquisition of land for this road has already been notified. It is recommended that the stretch between Tumkur Road and Hosur Road need not be duplicated as the NICE Corridor project in this area is already under construction. The rest of the PPRR should also be of the same specifications as the NICE road or better, and also should be a toll-based road. Care has to be taken to see that the formation of the PPRR does not lead to a spurt in the urban sprawl on both sides of the road.

28. The 8 meter buffer which is already provided on either side of the right of way of the PPRR should be planted with trees.
29. The Committee is of the view that an Unified Metropolitan Transport Authority (UMTA) for public transport is necessary. The UMTA will be responsible for urban rail based transport such as MRTS, LRTS or Mono Rail, as well as High Capacity Bus, and normal bus services for the intra BMR transportation of people.
30. GREEN ZONES : While there are strong reasons to have a Restricted Development Zone in the West and South, the Agricultural Zone to the North and East is treated with laxity, which is not called for. Both the Restricted Development Zone and Agricultural Zone should have the same regulations in the RMP 2015 and enforced with equal vigour.
31. There can be no objection to a review of the actual survey numbers brought under the Green Zone taking into account the suitability of the terrain, level of development, access, and needs for urbanization as seen from the existing activities, population and their requirements. This exercise may be undertaken by the BDA in the areas currently excluded from urbanization, particularly in the Southern and Western areas, before finally demarcating the Green Zone.
32. WATER BODIES : The Lake Development Authority has technical competence to protect the water bodies but seems to lack teeth to prevent and remove encroachments, and financial resources for undertaking the required level of restoration and development. There is also need to enforce a restricted development buffer zone of 30 meters around the periphery of the tanks.
33. BDA being in overall charge of development of the city, needs to be supportive of the Lake Development Authority, and provide it with budgetary support. Government should empower the BDA rather than the Revenue Department to remove encroachments. Tank restoration works should be planned in consultation with the residents of the area, who should be given a stake in the proper upkeep of the tank and its environment.
34. In particular the map for the integrated protection of lakes, valleys, and water bodies is a crucial map requiring statutory acceptance, and should also have a programme for the protection and rehabilitation of the water bodies.
35. DEVELOPMENT OF COMMERCIAL SPACE : In the Committee's opinion it is not desirable to permit developments of a nature which will convert Mainly Residential areas in due course to Mixed Residential areas. In the

- Committee's considered opinion the process of intrusion of commercial use in residential areas needs to be curbed. The process is not inexorable, though perhaps not likely to be reversed. A halt has to be called before the tipping point of unliveability is reached.
36. The Local residents should be given a central role in the articulation of needs through a participatory approach, and empowered to monitor land use, building violations and traffic in their respective localities.
 37. The basic principles in the view of the Committee should be that a Mainly Residential area should be enabled to retain its residential character. Secondly, large scale commercial development along main corridors of traffic is not desirable. Thirdly, there should be commercial development in an identified neighbourhood hub wherever possible, which is to be determined after proper survey and consideration of all available options. Fourthly, in the new extensions where development is still sparse, there should be no linear commercial development on major arteries, but instead, using the provisions such as Town Planning Scheme, acquisition of land, and employing public-private partnerships, neighbourhood hubs/local centres/city sub-centres should be formed combining good access, urban amenities, parking facilities etc. with expansion of opportunities for employment, services, shopping and recreation.
 38. In the case of Indiranagar the need for more commercial space can be met by pulling down the present BDA shopping complex located on the Swami Vivekananda Road, and building on that site a complex which is more in keeping with the high value of the location and needs of the locality for commercial use.
 39. The Committee recommends that the Mainly Residential pockets should be protected from unbridled commercial development. Keeping this in mind, no Mutation Corridor should be permitted in (or through) any area which is classified as Mainly Residential.
 40. The criteria for locating Transformation Zones and Commercial Axis in Mainly Residential areas should first be strictly defined, and applied after proper survey and identification of the roads and stretches of roads which have already been commercialized to such an extent that it is necessary for the remaining residents on such roads to have the choice to convert to commercial property because of the decline in liveability. The number and length of such roads should be strictly limited. In this context the areas shown in the Proposed Land Use Maps as **Bd** or Commercial Axis abutting Mainly Residential area will have to be treated as part of such Mainly Residential area.
 41. In Mainly Residential areas, only identified roads should be permitted to have independent buildings for ancillary uses, and only along specific

- stretches which should exclude those parts of the roads which are still mostly residential. FAR on these roads should be identical for both residential and commercial uses. Apart from Koramangala, Indiranagar, Rajajinagar and other more recent lay-outs, older residential areas such as Malleshwaram, Gandhi Bazar, Shankarapuram, Basavanagudi, Vasant Nagar, Benson Town, Shanthi Nagar, Vishwshvarapuram, Jayanagar, and Richmond Town Planning Districts also have Mainly Residential character and should be so classified. In these areas, Transformation Zone should be limited to identified stretches on a small number of specified roads.
42. Zoning of Transformation Zones etc. should not lead to automatic regularization of violations, which should first be dealt with under existing regulations. The declaration of Transformation Zones and Commercial Axis should be made only after the violations have been identified and action initiated for penalization of such violations as per existing law.
43. PROMOTING NEIGHBOURHOOD HUBS : In Mainly Residential areas, in any area along the major roads, for any non-residential use the zonal regulations should permit only the same FAR as are applicable to residential property. Higher FARs are recommended in para 44 below in **neighbourhood hubs** properly planned and located away from the major roads but with good access and adequate parking, in order to provide an incentive for the development of such hubs. In such neighbourhood hubs the FARs applicable to the Transformation Zone may be applied. Efforts should be made to find suitable locations for such neighbourhood hubs in all localities.
44. FLOOR AREA RATIO : It is recommended that the FARs proposed in the Draft Zonal Regulations for 'Transformation Zone/Development Area Zone', 'Mutation Corridor Zone', 'Mainly Residential Area', and 'Commercial Axis', should only be made applicable to the respective zones coming under these nomenclatures, *only in respect of areas in the 3rd Ring, and in the **neighbourhood hubs** to be set up in Mainly Residential Areas in other rings following the recommendation at para 43 above.*
45. In all other areas, namely in 1st and 2nd Ring areas, the prevailing FARs should continue, along with the permissible additions based on TDRs. This will also apply to the areas categorized as 'Transformation Zone/Development Area Zone', 'Mutation Corridor Zone', 'Mainly Residential Area', and 'Commercial Axis' in the 1st and 2nd Rings. The specific recommendation regarding FAR in respect of neighbourhood hubs has been indicated above (43). The intention is to prompt faster and more dense development in the extension areas (3rd Ring areas) as a counter-balance to the development in the older areas (1st and 2nd Ring areas – exception being the neighbourhood hubs) which are already congested and

- cannot bear densification and further commercialization, particularly of the Mainly Residential Areas.
46. The Committee does not favour the concept of Premium FAR proposed in the Zonal Regulations and recommends that the Premium FAR be deleted. There should only be additional FAR which is already provided for in the Transfer of Development Rights. This will be over and above the normal FAR for each zone, and will be available in all parts of the city barring those which are specifically excluded in the Draft Zonal Regulations as having restrictions on receiving TDR. The exerciseability or otherwise of TDRs on different roads and zones can be implemented on the lines recommended in the Draft Zonal Regulations.
 47. FAR should be on floor area/plinth area basis and not carpet area basis. Uses to be considered outside FAR calculations should be kept to the bare minimum. The proposals contained in the Zonal Regulations relating to Ground Coverage, Setbacks, Building Line etc need to be re-checked for accuracy and internal consistency.
 48. LAND USE CHANGES : As regards land use changes, once the Revised Master Plan 2015 comes into force, there should be no application of S. 14-A (1) and (2) in Bangalore Metropolitan Area in respect of changes of land use, since the cases where land use can be changed will be laid down in the Revised Master Plan 2015 itself obviating the need for discretionary changes.
 49. The provision contained in S. 14 A (3) permitting deemed change in land use or development from commercial or industrial to residential, or from industrial to commercial merely on payment of the stipulated fee, is contrary to principles of town planning. The Revised Master Plan 2015 has identified important pockets of lands which were earlier industrial. The provisions of S. 14 A (3) deprive the Planning Authority of a valuable tool in zoning and land use planning in the larger interests of the city. The provision is also capable of gross misuse. The Committee recommends its repeal.
 50. USE OF THE BASEMENT IN HOTEL INDUSTRY : The Federation of Hotels has requested that the clarification regarding use of basement in hotels contained in the State Government Circular dated 6-4-1998 may be incorporated in the Zonal Regulations. This is helpful to the tourism industry, and is accordingly recommended.
 51. ENFORCEMENT : The key to success in town planning is the quality of enforcement. The people will have confidence in the efficacy of the Master Plan only if convinced that the regulations will be accepted, and enforced by the authorities. It is a widespread belief that the violations are rampant, and that violators of building bye-laws, zoning regulations, and parking

regulations get away scot-free despite the gross nature of the violations. This is a perception which is not conducive to the implementation of the Master Plan, and the consequences of poor enforcement are often wrongly blamed on the Master Plan itself.

52. The Bangalore Development Authority should aim at achieving a balanced and dispersed growth of the city in all its territory defined as the conurbation area. There should be no room for discontent in any part of the Planning Area that it is being neglected in the ongoing growth process of the city. There is need for promoting and developing the peripheral areas as new growth centres.
53. DISPERSAL OF THE HIGH TECH ZONE : In the interest of balanced growth of the city, the High Tech Zone and Mutation Corridors should be distributed evenly.
54. RE-DEFINITION OF THE ROLE OF THE BDA : The Draft rightly draws attention to the two functions of 'strategic urban planning' and 'urban development regulation' on one hand and 'Promotion-implementation' on the other, in both of which the BDA has the leading role and fullest responsibility. These call for a restructuring of the BDA, and in particular, strengthen its capacities in the key areas of Town Planning, and formulation of Public-Private Partnerships.
53. The BDA needs to adopt a new approach in certain respects :
 - Stand alone pure residential lay-outs are not what the city requires. This was appropriate in the 60s and 70s. The experience of new lay-outs is evidence that lay-outs need to be part of overall plan for the Planning District, with equal importance to economic, and other activities, and facilities for the area to be self-sufficient to a large degree. This is also in the interests of the city as a whole, as otherwise the pressure on the central areas will continue unabated. Such re-working of land use plans is also required in areas where the BDA has already developed major new lay-outs.
 - The old sites-and-services approach also needs to give way to the recognition that group housing has greater scope for dense but compact development which needs to be promoted in the city. The BDA should provide land for group housing / multi-family dwellings, which are known to lead to compact development which reduces the requirements of land and cost of providing infrastructure.
 - In a city of such magnitude and complexity, given the expectations of the citizens for high quality in services, housing, and neighbourhood facilities, there is need to bring in the private sector

through partnership. The city sub-centres. Local centres and neighbourhood hubs should be developed with private sector participating.

- There is need for imaginative planning in the new extensions. Neighbourhood areas in each Planning District should be home for one or more selected activity such as education, health, IT, recreation and shopping etc. around which the neighbourhood hub should develop. The hub itself should provide a wide range of facilities and activities which people require. The list of urban amenities and provisions in such areas should invariably include markets for the informal sector and for farmers to vend their produce.
 - There is a paucity in large places of congregation and recreation in recent years comparable to the Lal Bagh and Cubbon Park. BDA should locate in outer regions suitable land for such centres, and take up their development.
54. 54. HOUSING : All slums irrespective of legal status should be marked in the Master Plan, and listed in the Planning District Reports. This has more than symbolic significance. As an addendum to the Revised Master Plan a separate study on the housing needs of the urban poor in Bangalore needs to be prepared, and a programme of housing implemented during the period of the Plan.
55. 55. There is need to provide for low income housing within easy distance from work, and ensure a basic set of services and sanitation in such colonies. Development control and sub-division regulations should be on the basis of detailed plans for such areas. Areas for service personnel (washerwomen, servants, local sanitation workers, etc.) should be shown in layout plans – up to 5 or 10% of the population.
56. 56. The housing board and slum improvement board should take up public housing programmes on such lands specifically for the low income tenants. In the first place there should be list of such lands, which should consist of all lands which are not required by the village community. Details of such land should be made public.
57. 57. LANDS HELD BY GOVERNMENT : Government needs to articulate a policy with regard to land under the Revenue Department. There should be a policy of making public lands available for priority housing for the weaker sections. The first claim to such land should be to the BDA and to agencies such as the Housing Board and the Slum Improvement Board for the specific purpose of public housing for the poorer families.

58.58. INTEGRATION OF VILLAGES WITH THE URBAN FABRIC : BDA should develop a model plan for the villages which are likely to get submerged in the urban growth so that the villagers share the benefit of urban standards of housing and infrastructure.

59.59. URBAN AMENITIES : A time frame of six months should be determined for deciding on the urban amenities required to be provided in each Planning District, and land for locating them should also be identified.

60.60. FOLLOW UP PLANNING : As immediate follow up there is need for three levels of detailed planning: that of the BDA, that of the Service/Sectoral Agencies, and that of the Planning Districts/Wards. Ward level planning should be a fully participatory exercise involving the local residents. State Government and BDA should set up Working Groups for each of these levels of planning with a time limit of 3 months to draw up their respective courses of action. Financial planning should come in at this stage

61. 61. The areas to be entrusted to the respective Working Groups are :

- i. Strengthening and restructuring of the Bangalore Development Authority for implementation of the Revised Master Plan 2015, especially its Town Planning Division, and capacity for implementation of Public-Private Partnerships
- ii. Heritage conservation schemes for sites identified in the Plan, and inclusion of any others, and issues of urban design
- iii. Area improvement schemes, development of shadow areas, slums; housing schemes such as public housing and rental housing
- iv. Transport and utilities schemes
- v. Village integration and development plan for the 200 meter area beyond the perimeter of the existing village
- vi. Planning for lands designated for Public and semi public land use, parks and open spaces, large infrastructure and large transportation structures, and other dedicated land uses marked in the Revised Master Plan 2015
- vii. City sub-centres including their location, amenities and facilities to be provided, access, public-private partnerships, and major activities for each sub-centre

viii. Criteria for declaration of Transformation Zones, Commercial Axis, and Mutation Corridor, and finalization of the areas to be declared under each

62.62. Government should consider setting up a high level committee for the implementation of the Revised Master Plan 2015 of the BDA. The Committee should be headed by the Chief Secretary.

63. **63.** The Committee is of the view that its Report is a part of the wider debate relating to the Master Plan and future of the City. The Committee would like its Report to be made available to the public, and hopes that the State Government will comply with this suggestion.

CHAPTER 1 : INTRODUCTION

1.1 The extent of Bangalore Metropolitan Area notified in 1984 is now recalculated at 1306 sq. kms. from the earlier 1279 sq. kms. With the formation of the Bangalore Mysore Infrastructure Corridor Project Planning Area, 65 sq. kms. went out of the jurisdiction of the Bangalore Development Authority, though, of course, in practical terms this area continues to be part of Bangalore in very many ways, not the least because of the BMICP Road (proposed in this Report to be the Proposed Peripheral Ring Road for this stretch) which passes through this area, and all the developments which interlock it with the Local Planning Area of the Bangalore Development Authority.

1.2 The Local Planning Area falls into two broad categories of urbanized and non-urbanized areas (lands). The area which is not urbanized is mostly classified in land revenue records as agricultural. It cannot be used for non-agricultural – or, urban – use unless it is first brought under the conurbation area, and then converted to non-agricultural use. A Master Plan determines the extent of urbanization, and what is not brought under urbanization continues to remain agricultural land, which is intended for cultivation, and liable to pay land revenue to the Government. The agricultural area needs to be carefully determined for a variety of reasons, such as the implausibility of providing infrastructure and municipal services which an urban area requires, to avoid loss of cultivable land, to prevent purely speculative holding of land, to prevent loss to farmers if land is alienated before authentic demand is built up, and for environmental support to the urban area by preserving greenery, water resources and life forms found in nature, preservation of features of nature whose value is being discovered once again as essential for protection against vagaries of nature, and so on. The Bangalore Metropolitan Area is large enough for accommodating for the foreseeable future period both the needs of the growth of the city and the essential ‘Green Zone’ around the conurbation which has been even in the past a feature of planning for Bangalore. The available land however, needs to be carefully husbanded. Thus determination of the area to be urbanized in the

period of a Master Plan is one of the most important objectives of the Master Plan or Revised Master Plan.

1.3 The Advisory Committee was set up by the Government of Karnataka to study the responses received from the public to the Draft Revised Master Plan 2015 of the BDA (the Draft or Draft RMP 2015). The intention of appointing the Committee is obviously to assist the BDA and the State Government to take decisions on the changes if any to be incorporated in the Draft Revised Master Plan 2015 before its finalization. On the Committee's part, it was felt that our task after study of the responses is to funnel the diversity of views received from the stakeholders into focal areas on which the Committee would then furnish its own opinions, keeping in view the objectives of preparing the Revised Master Plan 2015 as laid down in the Karnataka Town and Country Planning Act 1961 and the need for speedy implementation of the Plan in the best interests of the quality of life of the citizens of Bangalore, and ensure that the growth of the city is achieved in an orderly fashion.

1.4 The responses of the public were required to be filed by 20th of September 2005. The Committee had before it about 4000 pages of material received from responding individuals and groups. **The Committee is of the view that its Report is a part of the wider debate relating to the Master Plan and future of the City. The Committee would like its Report to be made available to the public, and hopes that the State Government will comply with this suggestion.**

1.5 The task of the Committee was only to advise on public responses placed before it. However, the range and extent as well as the volume of responses was very wide. Individual requests needed to be viewed in the context of the planning concept or planning proposal which lay at the back of the problem felt by the responders. The Committee has therefore had to deal with the issues in a broad manner but hastens to clarify that the Report is not to be construed as a full review of the Draft Revised Master Plan 2015 of the BDA. A full review of the draft would require a wider mandate, and much more time and resources.

1.6 It will be observed from this Report that there are not many instances where the individual requests relating to particular lands have been dealt with. The resolution of most of the individual problems requires verification of facts of the case from the records. In some cases a hearing may also be called for. Most of the requests arise out of changed zoning of the lands involved. Some cases involve legal issues because the land involved has received approval from authorities including the Government, and in some cases the land allotted by or purchased from the BDA. In the course of its Report the Committee has attempted to make its recommendation as to the general principles which can form the basis for deciding the individual cases. **These cases require not a Committee of this kind, but a designated authority within the BDA and a process of verification of the facts which can then lead to a decision. It is now for the BDA to take up the individual cases for specific decisions, for which the response forms or letters/applications already filed with the BDA during the prescribed period of 60 days to respond to the Draft RMP 2015, should be the basis.**

1.7 Despite the wide range of responses received, in the Committee's observation the process of public information and response has still left several areas and sections of public inadequately touched. The most notable of these is the relatively muted representations from the 'shadow areas', which constitute along with the traffic and transport problems, the most important of issues affecting the quality of life of a major part of the residents of the city. From the affected villages to which the urbanization is now proposed to be extended also the Committee did not come across many responses.

1.8 The provisions of the KTCP Act 1961 relating to preparation of Master Plans has to be kept in focus.

“12. Contents of Master Plan.- (1) The Master Plan shall consist of a series of maps and documents indicating the manner in which the development and improvement of the entire planning area within the jurisdiction of the Planning

Authority are to be carried out and regulated, such plan shall include proposals for the following, namely.-

- a) a) zoning of land use for residential, commercial, industrial, agricultural, recreational, educational and other purposes together with Zoning Regulations;
- b) b) a complete street pattern, indicating major and minor roads, national highways, and state highways, and traffic circulation pattern, for meeting immediate and future requirements with proposals for improvements;
- c) c) areas reserved for parks, playgrounds, and other recreational uses, public open spaces, public buildings and institutions and area reserved for such other purposes as may be expedient for new civic developments;
- d) d) areas earmarked for future development and expansion;
- e) e) reservation of land for the purposes of Central Government, the State Government, Planning Authority or public utility undertaking or any other authority established by Law, and the designation of lands being subject to acquisition for public purposes or as specified in Master Plan or securing the use of the land in the manner provided by or under this Act;
- f) f) declaring certain areas, as areas of special control and development in such areas being subject to such regulations as may be made in regard to building line, heights of the building, floor area ratio, architectural features and such other particulars as may be prescribed;
- g) g) stages by which the plan is to be carried out.

Explanation.-(i) “Building Line” means the line up to which the plinth of a building adjoining a street may lawfully extend and includes the lines prescribed, if any, in scheme;

(ii) “Floor Area Ratio” means the quotient of the ratio of the combined gross floor area of all the floors, excepting areas specifically, exempted under the regulations, to the total area of the plot.

(2) The following particulars shall be published and sent to the State Government through the Director along with the master plan, namely.-

(i) a report of the surveys carried out by the Planning Authority before the preparation of such plan;

(ii) report explaining the provisions of the Master Plan

(iii) regulations in respect of each land use zone to enforce the provisions of such plan and explaining the manner in which necessary permission for developing any land can be obtained from the Planning Authority;

(iv) a report of the stages by which it is proposed to meet the obligations imposed on the Planning Authority by such plan.

(3) Master Plan shall indicate “Heritage Buildings” and “Heritage Precincts” and shall include the regulations made therein for conservation of the same.”

1.9 The ‘Master Plan’ under the Act regulates land use, zoning, and development control. The street pattern is specifically to be provided in the Master Plan, as also land for public purposes. It is evident that in the growth and management of a city, these only part requirements, however important in themselves. The Draft Revised Master Plan 2015 disappoints people who took the

‘Master Plan’ to be a comprehensive all-inclusive plan covering all aspects of the problems facing the city. It is seen that people expect that at least those services which are within the purview of public authorities to provide, should be covered in the Master Plan. Even if the law does not say so, it is well within the means of the State Government to instruct the agencies under its purview to provide their respective plans to the BDA. In particular, the issues of transport and traffic, water supply and sanitation, housing, commercial and industrial development etc, as well as measures for the decongestion of the city have been inadequately touched, which indicates a certain lack of coordination between the different agencies. This needs to be remedied even now by preparing separate sectoral plans relating to water supply and sewerage, transport, power supply, municipal services, etc. For these services the Master Plan is the starting point, because it lays out for the concerned agencies the scope of the work ahead of them.

1.10 In the ten years since CDP 1995, Bangalore has witnessed massive changes in its features, growing into a hub of the IT industry in particular, with attendant growth in population, vehicles, buildings, and economic activity. It has been one of the most popular destinations for investors. Correspondingly, the poor state of city’s infra-structure has drawn much attention, and in some quarters doubts have been expressed whether the city can indeed cope with its status as a growing metropolis. There have in fact been significant investments in the city’s infrastructure for roads, public transport, water supply, and municipal services but it is evident that much more needs to be done to achieve a quality of life in the city for all sections of its population commensurate with its ambitions to be a world city. Parts of the city have undergone transformation which had not been foreseen, thanks to pulls for space for activities not originally planned in the largely residential, ‘*pensioners’ paradise*’ kind of an urban settlement that Bangalore at one time was. Nature of non-residential activities have changed with rise and fall of some old, public-sector led industries and neglect and degeneration of early industrial areas, while there is some movement towards newer IT-led establishments and revitalization of some manufacturing sectors. Extensions have changed their character beyond recognition, and there are

powerful contrary pulls regarding the use of prime areas of the city. The changes are too numerous to detail in this brief report.

1.11 The decade ahead relating to the revised Master Plan is therefore of crucial importance, some would say the most important period in the life of the city which may make it or mar it for all of future. The Revised Master Plan 2015 therefore has a role and a responsibility to ensure that even while Bangalore grows into a Metropolis, the quality of life in the city which has apparently taken a knock in recent years, is retrieved and improved, across *all* sections of its residents. Those engaged in framing and implementing the Revised Master Plan must learn from the recent history of Bangalore's growth, the successes and failures of its institutions entrusted with various aspects of urban management and their efforts in this direction, the national and global experience of cities growing in a tearing hurry, and the pitfalls of ignoring important social, ecological, and sustainability issues, and apply these lessons in the planning and regulation of the city's growth in the immediate years ahead.

1.12 Along with technical innovations, the Draft RMP 2015 brings about significant changes in the approach to planning for the city. Advances in technology such as GIS have been adopted to good effect and the quality of the document has been widely appreciated. Apart from better maps and other basic data which are provided in far greater detail than in the previous CDPs, **there are important changes in the planning and zoning concepts, and proposed regulations.** To a degree this is the result of a particular and possibly more analytical understanding of the trend and direction, and the dynamics and the complexity of urban growth, its planning needs, and its regulation keeping in view the future of the city. Consequently, there is an inevitable degree of effort - if not difficulty - in making the transition from the old Zoning Regulations to the new, which must be addressed. There are, of course, many views which disagree with the proposals contained in the Draft, and these are the issues this Report is mainly concerned with.

1.13 The process of making a Master Plan : There has been suggestion that the process was not participatory enough, that there should have been a more 'bottom up' approach. Discussion of the Draft with the public is, as many have accepted, a step forward compared to earlier practice. There is vocal demand for involving the residents as groups and neighbours in land use changes. It is advisable to involve the residents in the decisions affecting them such as declaring a Transformation Zone or a Commercial Axis or a Mutation Corridor, before such a decision is taken, sharing with them the considerations which have led to the proposal. There is also need for greater transparency and public consultation in any changes in land from the use as per zoning regulations, especially if the powers under S. 14A are exercised. Apart from this, we will be suggesting a further process of plan-making at the Ward level, where participation of the public and elected representatives will again be recommended.

There have been suggestions relating to the Metropolitan Planning Committee, on which it is appropriate that the State Government take decision in accordance with the provisions contained in the Constitution through the 74th Amendment.

1.14 The Revised Master Plan 2015 should conform to the provisions of S. 12 of the KTCP Act, 1961. The Draft RMP 2015 is presented in five volumes, and it is to be emphasized that all these are considered only to be drafts. By definition therefore, they are likely to undergo changes before finalization. The volumes are:

Volume 1 – Master Plan Report – 2015 : Vision Document

Volume 2 – Existing Land Use Maps

Volume 3 – Proposed Land Use Maps

Volume 4 – Land Use Zonal Regulations

Volume 5 – Planning Districts Report

1.15 On perusal, the Vision Document and the Land Use Zonal Regulations in particular will require to be subjected to corrections and tight editing, as they

contain many errors, tentative data, and inconsistencies. The Vision Report in particular should avoid repetitive coverage of the same issues which has sometimes led to inconsistent treatment.

The Vision Document is intended to contain the basic assumptions, approaches, and understanding of the issues facing Bangalore city. The Vision Document contains many suggestions and hints on what needs attention. While these are important areas for action, the suggestions are left undeveloped. The details of the proposals need to be filled in, and to facilitate follow-up, model plans should be developed to illustrate what is being proposed. The law, however, requires 'a report explaining the provisions of the Master Plan'. This calls for a chapter each on some of the important aspects of the Master Plan from an implementation perspective. As an instance, while considerable work has been done to identify roads to be built and traffic, transport, and commuter facilities to be provided, a comprehensive treatment which will show the total picture of the proposals relating to roads and road based transport - street pattern, traffic circulation pattern, new roads and roads to be improved taking into account the requirements of different parts of the city, access to the new airport, facilities for private bus operators, KSRTC and BMTC and their interconnection, multi-modal transport, intra-city and mofussil / long distances bus services, etc., - is missing. Similarly the major provisions relating to residential development, development of industry and commerce – both traditional and modern, high-tech including the IT industry, the Green Zone and other protected lands and water bodies, integration of the villages into the urban fabric, the problems of slums and the shadow areas, are among those pertinent issues of the city and the Master Plan needs to treat them individually in some detail in such a fashion as to give the entirety of the problems and their solutions which are provided in the Master Plan, each on in a separate chapter.

In our view these are covered in the requirements of the 'report explaining the provisions of the Master Plan', and should be part of the Revised Master Plan 2015. Support documents with maps should be generated for each sector (transport, water supply, sewerage, drainage, power) along with phasing and cost estimates. This should have the approval of the sectoral departments and made

part of the Master Plan for BDA 2015. In particular the map for the integrated protection of lakes, valleys, and water bodies is a crucial map requiring statutory acceptance, and should also have a programme for the protection and rehabilitation of the water bodies.

1.16 Change in Planning Area : The 1306 sq. kms. includes 65 sq kms of BMICPA area. An Outline Development Plan for the BMICPA area has already been prepared. BMICPA area contains in addition to the 65 sq. kms. which were earlier part of the CDP, the length of the expressway area stretching all the way to Mysore. This is a significant development in extending the advantages of the Metropolitan Bangalore to its hinterland along the corridor to Mysore. It is necessary to discuss in the Revised Master Plan the dovetailing of the BMICPA area with the Revised Master Plan 2005 of the BDA because there is an umbilical relation between the two Planning Areas which can be exploited for the benefit of city and the Southern Karnataka region.

1.17 Developments in the Bangalore Metropolitan Region and the Bangalore International Airport Planning Area : The observation that the Master Plan should comply with s. 81-C requiring it to be submitted through the BMRDA is valid and should be done even at this stage. Legally, the Master Plan for BMA has to sit within the BMRDA Plan. A chapter can still be added identifying the impact of the Bangalore Metropolitan Region and developments therein such as the new Bangalore International Airport, on the Bangalore Metropolitan Area. The new International Airport, though located outside the BDA limits, will still be the airport for the city. As with the BMICPA, its impact will be felt both within and outside the BDA limits, and the salience of this development to the city requires discussion in the Revised Master Plan 2015.

1.18 Planning Districts : The LPA is divided in 47 Planning Districts, which fall into three concentric area groupings – core, developed around core, and extension in outskirts – also described as the 1st, 2nd and 3rd Ring areas.

Concern has expressed that the CMCs and Panchayat jurisdictions should not cut across Planning District boundaries, or vice versa. Though the Planning District is not an administrative unit, the local government jurisdictions are important, and there appears to be no valid reason why the wards of the CMCs/TMC, and Panchayat jurisdictions are not followed in the Planning Districts to avoid fragmented responsibility. Such convergence would enable detailed plans through wards and where a focused public participation is possible.

1.19 The legends in the Existing Land Use Maps and Master Plan and Proposed Land Use Maps should be the same to facilitate comparisons on changes between 2005 and 2015. The KTCP Act and the BDA Act have prescribed the range of broad land uses. The legend of the maps could be reformatted accordingly, with variations only in sub- categories. The same should apply to each of the Planning District maps.

CHAPTER 2 : PROJECTED POPULATION GROWTH AND OUTWARD GROWTH OF THE CITY – MEETING LAND NEEDS FOR DIFFERENT SECTORS IN 2015

2.1 According to Existing Land Use Survey 2003 carried out in the course of the preparation of the Draft, the urbanization of the city reached by the year 2003 was 565 sq. kms., which is the same as the geographical extent which had been projected for urbanization by the year 2011 in CDP 95, which was 564.6 sq. kms. However there are major differences between the two: area under Residential, projected at 243.69 sq. kms. for 2011, was only 143 sq. km. in 2003. There was an extent of 180 sq. km. of developed vacant land in the urbanized area which had not been foreseen. This is particularly striking, because it is as much as 31.9% of the total urbanized area in 2003. There are sharp shortfalls in area under Parks and Open Spaces in existing land use 2003 as compared with the allocated CDP 95 - 2.8% against 8.7%. The area under Transport and Communication also fell short at 13.9% as compared with the allocated CDP 95 of 20.7%. Thus there are far fewer parks and open spaces, and far less area under roads and transport facilities than had been planned. These are important shortfalls in the achievement of CDP 1995, and have serious impact on transport in particular, and quality of life in general.

2.2 It is projected that by 2015 the population of the Bangalore Metropolitan Area will reach 8.848 million, and the Draft attempts to propose the required increase in urbanization in order to meet the increase in population. The area to be urbanized depends on the density assumed. Between 2001 and 2015 the projected evolution of densities is as follows:

- - BCC: from 191 to 236 persons / ha
- - Conurbation area: from 100 persons / ha to 110 persons / ha

Against this, to take only the new extensions in the 3rd Ring, the actual average existing net density in these Planning Districts is worked out at around 195

persons per ha. For comparison, in the six localities of Indira Nagar, Koramangala, Jayanagar, Banashankari, Vijayanagar, Rajajinagar – taken as a group because of their predominance of good lay-outs – the average of net densities works out to 457 persons per ha. For a megacity 100 pph overall would be on the low side. In Delhi, it was assessed that 170-180 pph overall would be the maximum possible for planned development.

2.3 From the assessment of population growth, a proposal to increase land under Residential use from 143 sq. kms. in 2003 to 280 sq. kms. in 2015 has been made. However in arriving at the size of urbanization by 2015, it appears an assumed rate of ‘urban sprawl’, and a proposal to extend the urbanization to the area inside the PPRR, have also played a part. The result is that the area proposed is far larger than what the city requires by 2015. To treat the ‘urban sprawl’ of 4.54%, which is much higher than the rate of growth of population even while there is a vast area of ‘vacant developed’ land is to contradict the stated objective of the Master Plan which is to contain the outward growth of the city in the interests of better provision and management of urban infrastructure, and protection of the agricultural zone. The Vision Document states that the ‘expansive mode of development uses a lot of space, is costly to equip and encourages the use of individual transport...’ It also speaks of incoherence in the management of urban extension with ‘neither planning nor even a larger framework’, and absence of control on development. Thus the Master Plan speaks on the one hand of the need to densify the already urbanized part, and simultaneously assumes an outward growth. In both urbanized parts and area to be urbanized hereafter a net density of levels far below the actual existing levels is assumed, to justify the outward expansion of the city. To accommodate this assumed inexorable ‘sprawl’ of the urban Bangalore, the Green Zone of CDP 95 is breached, and even the Proposed Peripheral Ring Road which is otherwise treated as the outer limit, is crossed at certain points.

2.4 The Vision Document states that ‘existing urbanized areas within which urban renewal and transformation of old zones must be encouraged to limit urbanization costs and to improve the cost-effectiveness of infrastructures

(transport, potable water, etc.)’ and that ‘future extensions are to be organized and planned while ensuring the coherence of their development with respect to evolving needs and available infrastructure and with a real involvement of the private sector.’ These are sound ideas which if implemented will help reduce the urban sprawl.

2.5 For the BDA, an overall density of between 140 to 150 pph should be aimed at for 2015. This would enable a more compact growth at the periphery and more land for greenery now (in the interstices between the corridors) but more compact growth beyond 2015. This would also address the planned objectives of eco-management plans, primarily:

- a) a) High density – Low rise (overall)
- b) b) Compact services delivery
- c) c) Multi-modal intra city transport

2.6 THE PHENOMENON OF VACANT DEVELOPED LAND : Given the existence of 18,000 hectares of ‘vacant developed’ land – defined as ‘essentially land that is fully or partially serviced but unbuilt/non-habitated as per Existing Land Use Survey 2003 carried out by SCE’- the attempt should be bring these areas under construction, rather than further add to this category of land. There is little discussion in the Draft of the causes and contributing factors to the amazing amount of ‘vacant undeveloped’ land which exceeds the actual built residential area of the city as it exists (143 sq. kms.). The phenomenon of vacant developed land in the city, even exceeding the existing residential built up area, is apparently the consequence of a number of factors which can be surmised as speculative holding of land, unsuitability of location of some the lay-outs, inadequate opportunities for employment in extension areas, non-availability of infrastructure, excess supply of land not immediately required for development etc. To this must be added the developments in the neighbouring areas of the

Bangalore International Airport and other parts of BMRDA bordering on the BMA. At this juncture the absence of the sub-regional context is keenly felt, as there is little light thrown on what is the level of growth in the Bangalore Metropolitan Region.

2.7 The conurbation area should not be equated as the area of the 'urban sprawl' to come in the ten year period, as suggested in the Draft, but should be defined as that area in which during the period of the RMP 2015, the agencies concerned can provide a reasonable amount of infrastructure and services, which again can only be the area which is realistically required to be brought under construction for housing and other needs. Considering the increasing cost of covering larger and larger areas under urbanization coupled with decreasing cost-effectiveness, the restriction on horizontal outward growth is a necessity for orderly development of the city. The conurbation proposal should not aid and encourage speculative but premature transactions in land in the outskirts, but should aim at assisting farmers who own land in the outskirts to get better prices by delaying the sale of lands till genuine demand has built up.

2.8 Prescribing and enforcing the restricted development area/agricultural zone in the outer Planning Districts the Green Zone is one of the means of checking the growth of the city. The Green Zone is in addition a necessity for environmental support to the city-dwellers. The Green Zone under the CDP 95 was 736 sq. kms., as estimated by the Consultants taking into account the change in the overall area of the BMA. According to survey, the existing/developments encroachments within the CDP 95 Green Zone is 33 sq. kms., i.e., 4.5% of the Green Zone. This shows a fairly good degree of preservation of the Green Zone, and is somewhat contrary to the general belief that there is widespread violation. However, there is another set of figures in the Planning District Reports, according to which land under *quarries, lakes and tanks, and agriculture* in the Planning Districts of the 3rd Ring works out to 688 sq. kms. If we take this figure, then a violation of a larger order of 13.6% appears likely. Nevertheless, despite expression of much fear regarding the Green Zone and its enforcement, it

appears that the agricultural zone can still be counted upon to check the growth of the urban sprawl.

-

Area under lakes, quarries, and agricultural land in Planning Districts of the 3rd Ring as per Existing Land Use Survey 2003:

-

-

Group 1 – West and South Planning Districts of the 3rd Ring :

35225.7 ha

Group 2 – East and North Planning Districts of the 3rd Ring :

33573.5 ha

TOTAL : **68799** ha

The proposed conurbation area of the BDA LPA is 786 sq kms, with a Green Zone consisting of a Restricted Development Zone of 283 sq km and agricultural land of 172 sq km, making a total of 455 sq kms. The existing urbanized area 2003 is 565 sq km, to which an area of 221 sq km is proposed to be added raising the conurbation area 2015 to 786 sq kms. This results in a reduced Green Zone/Agricultural land of 455 sq kms.

-

2.9 Considering the above, there is need for a realistic figure of net density by the year 2015 for the ‘developed vacant’ lands, and the newly urbanized outlying areas. In Delhi in the Master Plan for 2021 the overall projection is 155 pph. For Bangalore at 150 pph, the requirement will be 566 sq. kms. by 2015. This much of urbanization in fact has already been achieved. Even assuming a slightly lower density, the Green Zone can certainly be kept at not less than 550 sq kms, or even 600 sq. kms. which will still make available adequate extent of land for conurbation during the period up to 2015. All large land owning agencies should develop their land on the basis of a plan to fit into BDA RMP-2015 with overall densities prescribed. For military lands the density could be 100 pph keeping

with their low intensity ambience. The Committee is of the view that the area proposed for conurbation under the Revised Master Plan 2015 is excessive and both the proposed conurbation area and the Green Zone require to be re-worked, decreasing the one and increasing the other.

2.10 ZONING , EXISTING LAND USE DATA, AND PLANNING DISTRICT REPORTS : Zoning has a powerful effect on the growth of the different parts of the city. In the CDP95 the zoning followed a somewhat simple pattern – there were designated lands for residential, commercial, industrial, transport, public and semi-public, parks and open spaces etc. Since the Draft documents do not provide a detailed review of the CDP 95, there is no overall picture of the growth of different Planning Districts, or the degree of conformity to the proposed zoning in the CDP. However, the shortfall in some categories such as open spaces, including parks, and transport and communication have already been noted. The roads which were delineated did just not happen. Lands were not acquired for open spaces and parks. On the other hand vacant developed land has proliferated.

2.11 There are changes in zoning in the new Master Plan and the system of classification is also different. It is not necessary to go into all the details of the proposed zoning. Suffice it to note that the emphasis is on pragmatic zoning. According the document, ‘the mono-functional parcel based land wise proposals are rigid and do not recognize the larger trends in areas/territories. To enable diverse zones with land uses responsive to the ground realities a zone based on the territory is considered...’ However, terms such as ‘Mixed Land Use Zone’ is a contradiction in terms because zoning under the law is a process of defining land for specific uses and purposes. Therefore such terms should not figure in a Master Plan. ‘Mixed Residential’ is however a zone where the nature of land use itself has grown over time to contain large amounts of both residential and non-residential uses.

2.12 Changes in zoning from CDP 95 to the Revised Master Plan 2015 is a major concern for many land holders. Many of the responses received relate to changes mandated by change in classification system, as well as change in the zone into which a parcel of land falls thanks to the changes proposed in the Revised Master Plan 2015. For instance, if a piece of land was in Residential Zone earlier, and now gets modified in the new Master Plan into industrial or high-tech or logistics zone, what is the remedy to someone who had planned, or even taken approval, for construction of a house, and what of a house already constructed in such a zone ? Many responses are on the point that the area proposed for a particular zone is already developed on other lines, and is not suitable for the proposed zone.

2.13 The document itself clarifies that ‘the regulations proposed are not retrospective and allows for developments that are lawfully established prior to the coming into effect of zonal regulations.’ In the CDP1995 it was stated that ‘nonconforming uses (are)...to be ...gradually eliminated over years without inflicting unreasonable hardship upon the property owner.’ These are standard provisions in the process of bringing into effect a new set of zonal regulations. Since the Master Plan permits flexibility in land use in zoning, it may be possible to accommodate the desire of existing land owners to put land to a particular use. However, there will be cases where the land holders may find it inappropriate to proceed with their plans because the neighbourhood itself changes character. The following course of action is suggested for the BDA to follow:

1. Individual instances where non-conforming usage has already occurred or has been proposed or approved, need to be examined on a case-by-case basis and appropriate decision taken. BDA should act to settle these demands by taking up the applications already filed in response to the notification of the Draft RMP 2015. In some villages there are many persons who claim that their lands, apparently contiguous, are already approved for, or put to use for, a particular purpose. If necessary, these can be grouped and taken up together for a decision.

2. Where the individual plot-owner of land in a changed zone wishes to proceed with his planned use of the land, unless otherwise objectionable, he should be permitted to do so, if required approvals have already been obtained. Whether a land requires to be acquired can only be known when there is further micro-planning of the areas being promoted for uses such as Logistics/Transportation, Large Public and Semi Public Infrastructures, Parks, Large Transportation structures, and Industrial / High Tech Zones, and others. In any case, the designation is valid only for a period of 5 years, after which it lapses (s. 69), excepting those relating to roads.
3. However, protected lands including tanks, forests, lakes, and valley zone call for a different treatment. Valley zones indicated in the Plan should be declared protected areas with limited development as proposed in the zonal regulations. Further development in this zone should be prevented, and assistance given to land holders to move out where particularly hazardous areas have been brought under construction. Projects may be shifted out and given the facility of TDR as compensation, as per the provision available in the Act.
4. If any residential or land classified for other than Green Zone under CDP95 has been brought under Green Zone in the RMP 2015, barring the Protected Land Zone and the Thippagondanahalli catchment, a project which has already been given official approval, may be permitted to be proceeded with.
5. Where classification of land has undergone a change and there has been approval earlier under the prevailing land classification, the land holder should have the option to continue to exercise the development control regulations and building bye-laws under which he was given approvals for land use and for construction.

2.14 The Draft breaks new ground as far as Bangalore is concerned with regard to the zoning. It breaks down the BMA into three concentric rings, and within each ring each there are Planning Districts, and various Zones which determine land use and development. The three rings are more descriptive of the historical and secular development of the city over a long period, whereas the zonal regulations are designed for the three Land Use Zone categories of Main Areas, Specific Areas and Constraint Area Zones. The Main Areas are further subdivided into Old Urban Areas, Urban Redevelopment areas, Residential areas, Industrial/activity areas, and Green areas. Within the zone, the main land use category, ancillary uses, and the permissible development and land use are defined with the back up of the Master Plan strategies. The categorization of 'Intensely Developed', 'Moderately Developed' and 'Sparsely Developed' found in the CDP of 1995 and which were shown as A, B and C in the Map to Read Zoning Regulations has been done away with. The proposed zonal development control regulations relating to permissible uses, FAR and other aspects of building construction, will be discussed subsequently in the report.

2.15 Wherever obvious errors in the maps, locations, categorization of existing land use, etc. are brought to light, corrections should be made before finalization of the Revised Master Plan 2015.

2.16 The list of permissible industries in the Mixed Residential areas, it was pointed out, does not include textile industries such as weaving, twisting, dyeing etc. These are traditional industries in many parts of the city, and they should be incorporated in **Table 31. Industrial Land use category.**

CHAPTER 3 : INFRASTRUCTURE FOR THE CITY

(a) ROADS AND TRANSPORT;

3.1 The transportation Land Use is a major component of the Master Plan. For the Bangalore Metropolitan Region this comprises of a synergy between intra- and inter-settlement road and rail transport and inter-settlement air transport. These are for transporting both goods and people. As a system, transportation is intrinsically related to Land Use and for the mega agglomeration of the BMR/BDA, multimodal transport is a necessity. The roads of Bangalore are inadequate for its growing vehicular population. The strengthening of the road network is therefore of prime necessity. The special provisions which can help in implementation of road schemes are the non-lapseability of the land zoned for roads (s. 69), and the provisions in the Act relating to Transfer of Development Rights.

3.2 There is need for a separate chapter discussing the proposals relating to the strengthening of the road network. The Master Plan needs to specify a hierarchy of roads in the new areas, as well as propose widening and strengthening of selected existing roads. The Committee has certain suggestions to make regarding the Basic Transport Sector (Annex 1). It was stated that in the Draft that new roads to the extent of 164 kms have been proposed in the Master Plan. The CDP of 1995 contained neat grids of roads, but these have not been realized. This should not happen in the Revised Master Plan. The roads to be formed or widened should be clearly shown in the Proposed Land Use Maps. They should be demarcated on ground so that land-owners know the zoning

The exercise of Transfer of Development Rights requires that the Authority shall publish annual programme for road widening or construction of new road or for any other public purpose specified in S. 14-B of the Act, for granting TDRs. There is need for a phasing of the road programme for purpose of TDR, which should then be followed scrupulously.

3.4 The importance of access to the new airport is almost entirely ignored. The draft should indicate the route to the new Airport from different parts of the city, and the development which needs to be taken to improve such access. The airport may require rail connection also, and this needs to be pursued with either BMRTL or the Railways, or both. One immediate measure should be to connect Tumkur Road from the point of the BMICP Road, to the Devanahalli Road by taking up the 20 km stretch of the Proposed Peripheral Ring Road as first priority.

3.5 In s. 14-B, the TDR can be exercised anywhere in the local planning area. In the Terms and Conditions for the grant of TDRs however, the Development Rights are to be utilized within the respective Municipal Corporation Limits. Considering the LPA of BMA as a single entity, it is to be considered whether the TDR should be made exerciseable anywhere in the LPA if granted by the BDA in respect of a project undertaken by it. The Terms and Conditions state that a DRC shall be utilized in the same Zone or in the less intensified Zones but not vice-versa, wherever the city is divided into different zones based on the intensity of development. In the Revised Master Plan there are no such gradations. In view of this, the 1st Ring may be taken as the most intensely developed, with 2nd ring areas as moderately developed, and 3rd ring areas as sparsely developed.

3.6 There is no two opinion that a comprehensive and affordable public transport system is essential for the city. Apart from BMTC the proposed systems include the Metro, and the CRS of the railways. The KSRTC which provides mofussil and long-distance road connectivity, and the provision of parking space in the city are the other key components.

3.7 People have expressed their disappointment that the Master Plan does not contain an integrated transport plan. BMTC has notified the lands it is in the process of acquiring for bus stands, but there is no overall framework and no connection is established between intra- and inter-city bus transport systems, and public and private sector operators. The provision of satellite bus stands in different corners of the city where the radial road intersect with city roads, has often been spoken of but there is no indication of such a programme, nor any land requirements from KSRTC. On the other hand, there are reports of plans to have a large complex in Subhash Nagar grounds, which if realized can only add to the congestion on the roads leading to it.

3.8 The Commuter Rail System is a proposal with very few details. The Railways can play a significant role in providing a Commuter Rail System, as well as by providing facilities for long distance passengers to use the many stations within the city such as the Yelahanka, Kengeri, KR Puram and Yeshwantpur stations, thus further reducing the need to go the City Station. The plans of the railways are, however, not known. This needs to be pursued, and resultant provisions made in the Revised Master Plan 2015.

3.9 The Vision Document deals with the burden on the central road (MG Road) by proposing a core ring road. The core ring road and the scope for strengthening it, the anticipated improvement on transport situation on the Mahatama Gandhi Road, need explication. The Vision Document appears on the whole to be pessimistic about the improvement of the central congestion. The secondary axes (Kanakapura and Bannerghatta Roads to the South, Whitefield and Sarjapura Roads to the East, Hennur Main Road and Kalkere Roads to the North) will also add to the pressures on the central areas. The document also suggests that it is necessary to decentralize bus and railway stations by moving them from the central zone. The bus and commuting traffic in this zone could be reduced by creating in peripheral areas, new bus stations, in proximity to railway stations. It recommends exchanges for commuting at the intersections between the Peripheral Ring Road and the major radial arteries. Much emphasis is placed

on the CRS although there is no confirmation of this project from the Railways. If there is possibility of strengthening the other transversal roads outside the proposed core ring road, they need to be pursued and proposed in the Master Plan.

3.10 The classification of roads and specifications also need to be stated in clear terms. In this regard, the committee recommends the note at Annexe 1 on Basic Transport Sector which has been suggested by Sri E.F.Ribeiro, member of the Committee.

3.11 The very attractive proposal ‘ to organize the larger road network into place in the South of the agglomeration, by creating transversal road to interlink the radial roads such as Bannerghatta, Hosur, Kanakapura, Mysore, Magadi etc.’ is not further developed, as also the proposal to connect planned industrial developments to the South East of the city to other parts. Much of the vacant developed land in South and West require development of infrastructure, the most important of which is road infrastructure giving them access to the more developed parts of the city.

3.12 THE PROPOSED PERIPHERAL RING ROAD (PPRR) : Acquisition of land for this road has already been notified. It is recommended that the stretch between Tumkur Road and Hosur Road need not be duplicated as the NICE Corridor project in this area is already under construction. The rest of the PPRR should also be of the same specifications as the NICE road, and also a toll-based road. Care has to be taken to see that the formation of the PPRR does not lead to a spurt in the urban sprawl on both sides of the road.

3.13 The Committee is of the view that an Unified Metropolitan Transport Authority (UMTA) for public transport is necessary. The UMTA will be responsible for MRTS, High Capacity Bus, and normal bus services for the intra BMR transportation of people.

3.14 **(b) OTHER INFRASTRUCTURE :** There are requests for land from the BWSSB but without details of the overall plan to extend water supply and sewerage services to unserved areas. The Truck Terminal Company has also put forth certain suggestions, but perhaps need not duplicate the efforts of the NICE to provide this facility and can concentrate on other areas. The location of landfill sites need to be finalized.

3.15 In short, support documents with maps should be generated for each sector (transport, water supply, sewerage, drainage, power, housing, slum improvement) along with phasing and cost estimates. This should have the approval of the sectoral departments and made part of the Master Plan for BDA 2015. In particular the map for the integrated protection of lakes, valleys, and water bodies is a crucial map requiring statutory acceptance.

CHAPTER 4 : GREEN SPACES, VALLEYS, WATER BODIES

4.1 The term Green Zone is used to describe land in the periphery which is technically agricultural land or other land to be protected from urbanization, and on which zoning regulations impose restrictions of any kind of urban development or permit only limited development. While the CDP of 1995 treated all such agricultural land as a single category, in the Revised Master Plan 2015 this area is categorized into Restricted Development Zone extending from the west to the south including the TGR catchment area in the north, and the Agricultural Zone area to the North and East, which though subject to the same regulations as Restricted development Zone, is also subject to urbanization in future. In fact a part of the agricultural area to the North and East is already identified for urbanization.

4.2 In the Revised Master Plan 2015, the earlier Green Zone has been proposed to be reduced to 445 sq kms, further divided into a Restricted Development Zone (270 sq. kms.) and an Agricultural Zone (174 sq. kms.). The permissible list for Agriculture Zone was more wide in the earlier CDP 95. As already stated, the Green Zone on the whole has apparently maintained its character, barring some violation.

The Committee has already indicated that the Green Zone (Restricted Development Zone, Agricultural Zone) needs to be maintained, after re-working the area required for urbanization, at 550 to 600 sq. kms. As regards the distinction between West and South West on the one hand, and North and East on the other, while there are strong reasons to have a Restricted Development Zone in the West and South, the Agricultural Zone to the North and East is treated with laxity, which is not called for. Both the Restricted Development Zone

and Agricultural Zone should have the same regulations in the RMP 2015 and enforced with equal vigour.

REGULATION OF GREEN ZONE/RESTRICTED DEVELOPMENT ZONE/AGRICULTURAL ZONE:

4.3 Regulation for these zones are restrictive, permitting agri-industrial units/complexes, and urban amenities such as education. There have been suggestions that the Green Belt should not be only to the West and South as proposed in the Draft. The reason for providing protection to lands in the West and South have been explained in the Vision Document as being due to the profile of the terrain there, forests and biodiversity particularly in the South, the catchment area of the Thippagondanahalli reservoir in the West. Further there are already large extensions with few facilities, and therefore this direction is not suited for further expansion. The Committee is not in agreement with the suggestions to relax the regulations relating to the Green Zone to permit housing with restrictions such as minimum plot size, reduced ground coverage etc. while keeping the Green Zone area intact. Such relaxation will not protect the Green Belt and will defeat the purposes for which the Green Zone has been built into the earlier CDP and the present Draft. The suggestion to acquire the entire Green Belt area cannot perhaps be implemented both because of the cost involved, as well as the impossibility of protecting such area thereafter. As regards the suggestion that the present allocation of land for Restricted Development Zone/Agricultural Zone discriminates against some parts, the proposed larger Green Belt/Agricultural Zone with the same set of regulations uniformly applied should help to feel that there is equity in the choice of the areas. However, subject to maintaining a larger Green Zone as suggested in this Report, there can be no objection to a review of the actual survey numbers brought under the Green Belt taking into account the suitability of the terrain, level of development, access, and needs for urbanization as seen from the existing activities, population and their requirements. This exercise may be undertaken by the BDA in the areas currently excluded from urbanization, particularly in the Southern and Western areas,

before finally demarcating the Green Zone. The allocation of the Green Zone between the Planning Districts needs to be re-worked and incorporated in the RMP 2015 and Zoning Regulations for Restricted Development Zone (Ef) applied to both the zones.

4.4 VALLEY REGION : The valleys, which are designated as part of the Protected Land Zone as being natural environmentally sensitive sites such as tanks, lakes, valley beds, forests, etc., follow the catchment of the water bodies and the inter-connecting area forming the natural drainage for storm-water. There is in the Draft a clear map showing the connections and the valley regions. The concept of preserving the natural valley systems of the terrain has been generally welcomed and commended. This identification is again a feature introduced in the Master Plan thanks to advanced mapping technology. Though some suggestions have been made to reexamine the areas marked as valley region, taking into account the experience of flooded blocks during the monsoon of 2005, the proposed valley in its entirety needs to be protected.

4.5 In the Zoning Regulations the areas classified as Protected Land Zone are designated for conservation and preservation, basically by protecting them from developmental activity. The Zonal Regulations list the permissible land uses. The suggestions received from the public also propose that allowable use of these areas should be used for parks, gardens, natural bird habitats, and recreation.

4.6 The designation of valley zones has raised a large number of objections and requests from those owning lands in this region, and those who have already obtained approval of various types for development. This is a key area for the BDA to decide, because legal issues may be involved since the BDA and State Government have given approval for developments. Some responses have suggested that the valley zone should be limited to public lands, and exclude privately owned areas. Such division of the valley system will not be feasible.

4.7 Superimposition of maps of development on the maps of the valley zone shows considerable area of the latter type which has already been put to development of various types, and BDA itself has developed sites in some valley area. The earlier CDP had declared some of them to be Residential zone. It now appears that the information on the valleys was not available or was not made use of in planning development in these areas. When innumerable tanks themselves have been breached and tank beds put to a variety of uses and development, the interconnecting valley zones could hardly be expected to be treated any differently. But now the time has come for Bangalore to protect what remains of the tanks, water bodies, wet and swampy lands, and valleys, both as valuable natural features of the Metropolitan Area, as well as to avoid problems caused by blockage of natural drains of the terrain.

4.8 Valley may also be privately owned land, and if so will come under the same regulation as publicly owned lands. Development of these areas is not in the interests of either the city or of the investors themselves, which is the lesson from the flooding of many of these pockets during 2005. Every effort should be made to shift development away from the valley and other protected land zones. Further development should not be permitted. If approvals have been given or investments already made, compensatory development rights may be given allowing set off against the proposed Premium FAR. BDA could also allot alternative locations to persons who need to move their residence to safer areas. Where such relocation is not feasible, drainage works adequate to carry storm waters may be implemented on priority, if found to be an appropriate solution on due examination of the problem.

4.9 Some have questioned whether the extent of valley is entirely needed to be protected. This is a topographical fact and based on mapping of the lie of the land in the drainage area.

4.10 The interconnection of tanks and drainage from higher reaches to lower, is well understood by every villagers. Such knowledge should not be lost with

urbanization. There was no valley zone earlier. Now they have been mapped and classified as protected and open land. This should also apply to areas already built up because the area as well as individuals who occupy these spaces will suffer, as has already happened in the monsoons of 2005.

4.11 WATER BODIES : The Lake Development Authority has technical competence to protect the water bodies but seems to lack teeth to prevent and remove encroachments, and financial resources for undertaking the required level of restoration and development. There is also need to enforce a restricted development buffer zone around the periphery of the tanks.

4.12 BDA being in overall charge of development of the city, needs to be supportive of the Lake Development Authority, and provide it with budgetary support. Government should empower the BDA rather than the Revenue Department to remove encroachments. Protection of the tanks is proceeding all too slowly and requires to be made an area of priority for the city. Tank restoration works should be planned in consultation with the residents of the area, who should be given a stake in the proper upkeep of the tank and its environment.

CHAPTER 5 : VERTICAL GROWTH AND CHANGE OF CHARACTER OF LOCALITIES – CHANGES IN DEVELOPMENT CONTROL REGULATIONS

5.1 In keeping with stated objectives in the Vision Document of densification of the inner core, and provision of quality locations for the expanding business area, the Draft Zonal Regulations make several proposals of far-reaching impact, and these will be examined in the light of the response received from a large number of respondents. The changed system of categorization of zones is also part of the overall system of changing the structure of buildings and character of localities. There is a perception in the Draft that the Central Business District is blocked, and that the current regulations try to freeze the situation whereas the city is in the process of transformation. The proposals relating to densification of the developed areas include higher scales of FAR in most zones, and introduction of premium FAR. The Zonal Regulations also propose development of Mutation Corridors, Transformation Zone, and Commercial Axes in the residential areas, as well as along arterial and other major roads. All these proposals will have significant impact on existing developed Planning Districts, and on the life of those residing and working in them. Predictably, many objections have been received particularly from Indiranagar, Koramangala and other premier residential areas. In the Committee's view also, it is necessary to take due care in proposing changes in the developed residential areas, where the quality of life and comfort of the residents must have primacy.

5.2 Certain non-residential uses were permitted in the residential zones under CDP 1995. The Revised Master Plan 2015 now proposes a hierarchy of mixing of uses in the different zones. This has the advantage of a better definition of the permissible types of uses of built area in each zone, and less discretion to authorities to permit commercial uses under 'special' circumstances.

5.3 The proposed Zoning Regulations, and the Proposed Land Use Maps, follow a classification of localities which differs from the earlier CDP 95. These

zones reflect the complex realities of land use as existing on the ground, and of the proposed uses to which land and its development can be put in these localities and areas. It is not only the areas classified as 'B–Urban Redevelopment Areas' which undergo transformation in the new Plan, but all areas will change their profile and character, if the proposed zoning and development control are accepted. The FAR is used as the main instrument for densification, along with enlargement of areas to be made available for commercial uses. In general the FAR increases with width of the road. In the earlier CDP 1995 the FAR ranged from 0.75 to 2.00, increasing from intensely developed areas to sparsely developed areas, depending on also the plot area and road width. Larger plots on wider roads (over 15 to 18 mtrs wide) had the highest FAR. In the proposed Draft Zonal Regulations a new concept of Premium FAR is introduced which is an instrument for raising resources for the upgradation of infrastructure in the areas where these are inadequate. Inclusive of the Premium portion, the highest FAR permissible is 3.25 on the specified Main roads of the Petta Zone, namely, OTC Road, Arcot Srinivasachar Road, BVK Iyengar Road, Avenue Road, TCM Royan Road, and Bashyam Road. The FARs vary in the other areas. In Mainly Residential Areas (Cb) an FAR of 2 will be permissible in plots above 150 sq mtrs. The matrix is complex because the Ground Coverage, Set Backs, and Height Restrictions also come into play. In a Mainly Residential Area, on a plot with a minimum of 150 sq mts located on a road not less than 9 m wide, a structure of FAR 2 and a height of up 11.5 (approx. 38 feet) will be permissible – twice the built area that was permissible earlier. Subject to prescribed road width of 12 meters and size of the plot being not less than 150 sq. mtrs., FAR of 2.75 or 3 is permissible in Mixed Residential Areas.

5.4 5.4 In the older areas in the 1st Ring, the area under Residential use is projected to decline sharply due to the expansion of the CBD and Transformation Zones. Some of these are:

Planning District	Existing Residential area in ha	Proposed Residential area 2015 in ha	Existing Commercial Area in ha	Proposed Mixed Land Use Zone including Commerce & Activity 2015 in ha
Vasant Nagar#	95.2	16.4	68.6	157.1
Shivaji Nagar	109.7	6.7	32.4	145.8
Richmond Town**	96.7	-	76.2	202.4
Chamarajpet	108.2	9.1	106.6	255.8
Kempapura Agrahara	354.6	63.4	38.3	403.7
Srirampuram	163	88.6	21.9	110.2
Malleswaram	451.8	201.7	62.1	377.7
Benson Town	179.3	54	13.7	157.3
Shantinagar#	481	247.9	89.5	481.4

Proposed as CBD Precinct Zone

** Proposed as CBD, CBD Precinct, and MG Road Zones

5.5 MUTATION CORRIDORS, TRANSFORMATION ZONES, AND COMMERCIAL AXES: Densification of any kind in a locality will add to pressures on roads and other infrastructure, and therefore needs to be made with an eye on the capacity of the infrastructure to bear a higher level of population, and activities particularly of a commercial nature. More commerce will mean more traffic, more pollution, more noise, and more congestion, which is not desirable in a residential area. When a road is both a commercial area as well as a main corridor such as being part of the Ring Road, then the problems get aggravated. These areas get clogged with traffic – both vehicles which move on the roads, and those which are illegally parked on street - and cause a great deal of inconvenience to users.

5.6 In the Committee's opinion it is not desirable to permit developments of a nature which will convert Mainly Residential areas in due course to Mixed Residential areas. In the Committee's considered opinion the process of intrusion of commercial use in residential areas needs to be curbed. The process is not inexorable, though perhaps not likely to be reversed. A halt has been called before the tipping point of unliveability is reached.

Apart from this, in framing the Zonal Regulations the Local residents should be given a central role in the articulation of needs through a participatory approach, and empowered to monitor land use, building violations and traffic.

5.7 However, on certain roads in residential areas, there has been conversion to commercial use, often with approval under section 14A, a provision which provides wide discretion for permitting land use with little by way of guidelines which protect the interests of residents. In addition the CDP 1995 encouraged conversion of residential plots to commercial by allowing a *higher* FAR for commercial buildings. This was double incentive to go commercial because the sites were located attractively in affluent neighbourhoods on prime roads.

5.8 Where such commercial use is considerable, liveability as residential area has declined, and there have been requests from residents of some such roads to allow commercial use as they are not suitable for residential use because of predominance of commercial activity. It is necessary to allow such change. Even this has to be made selectively, and the existence of or even predominance of commercial activity on roads in a residential area is not to be made the justification of allowing commercial usage without check.

5.9 The Draft Revised Master Plan 2015 apparently accepts the notion that once commercialization starts, there is only one way ahead in residential areas along selected roads – that of more or even complete commercialization. This type of commercialization is neither inevitable nor even necessary. There is plenty of land on other good roads which can accommodate commercial uses. All that is needed is a firm policy of directing commercial enterprises to such locations. Provision of good roads is the biggest motivator, and in this regard the

recent development on the Outer Ring Road in several pockets where open land uncluttered with habitation was available, proves this. Road based development is possible along the new BMICP road, which covers 41 kms.

5.10 What is not clear from the Draft Vision Document and Proposed Land Use Maps, is the criteria which were applied in determining the commercial areas through Transformation Zones, Mutation Corridors, and Commercial Axes. Before any of these changes is proposed in a Mainly Residential zone, there is need to examine the sufficiency of the roads, parking areas, and the impact on the through traffic which may be using this road. The linear extension of commercial areas on major roads is the least desirable way of developing commercial zones. It is further necessary to examine whether there are other alternatives to the objective of creating commercial space in the area. For instance, Indiranagar has a large shopping complex, which is grossly under-utilized. If the existing structure is pulled down and re-built in keeping with the enormous commercial value of the location, it can meet a major part of the commercial demand now being proposed on the major roads of the lay-out. Further, in developed areas, has it completely been ruled out that the transformation cannot happen off the major roads ? Is there no possibility of declaring a block with good access as Transformation Zone in lieu of the length of the transport corridor running through the area ? The criteria for declaring a Commercial Axis or Transformation Zone should look at the overall development along the road. For this a proper survey is necessary, and it does not appear that in fully developed residential localities due care has been taken in this regard because it appears that even roads with limited commercial development are also being proposed for changing over to Transformation Zone or Mutation Corridor or Commercial Axis. The proposal to declare entire lengths of important roads, and entire localities, as Transformation Zones is too easy and is not based on a rigorous study of the alternatives, and of the impact on the neighbourhood. In less developed localities, again, where land is available for setting up neighbourhood hubs, why should major roads alone be the transformation zone, when it is feasible to develop sub-centres or local centres in blocks off the main roads ?

5.11 The basic principles in the view of the Committee should be that a Mainly Residential area should be enabled to retain its residential character. Secondly, large scale commercial development along main corridors of traffic is not desirable. Thirdly, there should be commercial development in an identified neighbourhood hub wherever possible, which is to be determined after proper survey and consideration of all available options. Fourthly, in the new extensions where development is still sparse, there should be no linear commercial development on major arteries, but instead, using the provisions such as Town Planning Scheme, acquisition of land, and employing public-private partnerships, neighbourhood hubs with good access and which combine urban amenities with expansion of opportunities for employment, services, transport and other facilities, should be developed.

5.12 The Committee recommends that the Mainly Residential pockets should be protected from unbridled commercial development. Keeping this in mind, no Mutation Corridor should be permitted in (or through) any area which is classified as Mainly Residential.

5.13 The criteria for Transformation Zones and Commercial Axis should first be strictly defined, and applied after proper survey and identification of the roads and stretches of roads which have already been commercialized to such an extent that it is necessary for the remaining residents to have the choice to convert to commercial property because of the decline in liveability. The number and length of such roads should be strictly limited.

5.14 In Mainly Residential areas, in any area along the major roads, the zonal regulations should permit only the same FAR as are applicable to residential property. Higher FARs may be permitted in neighbourhood hubs located away from the major roads, in order to provide an incentive for the development of such hubs.

5.15 Zoning of this nature should not lead to automatic regularization of violations, which should first be dealt with under existing regulations. The declaration of Transformation Zones and Commercial Axis should be made only after the violations have been identified and action initiated for penalization of such violations as per existing law.

5.16 Only identified roads should be permitted to have independent buildings for ancillary uses, and only along specific stretches which should exclude those parts of the roads which are still mostly residential. FAR for both residential and commercial uses should be identical. Apart from Koramangala, Indiranagar, Rajajinagar and other more recent lay-outs, older residential areas such as Malleshwaram, Gandhi Bazar, Shankarapuram, Basavanagudi, Vasant Nagar, Benson Town, Shanthi Nagar, Vishwshvarapuram, Jayanagar, and Richmond Town Planning Districts also have Mainly Residential character. Barring a limited stretches on a small number of specified roads, they should be declared Mainly Residential areas. In these areas, Transformation Zone should be limited to only these selected roads and specified stretches. In this context the areas shown in the Proposed Land Use Maps as Bd or Commercial Axis abutting Mainly Residential area will have to be treated as part of such Mainly Residential area.

5.17 There is need to regulate building lines and building heights in order that the developments are pleasing in design.

5.18 FAR : The increase in FAR across the board as proposed in the Draft Zonal Regulations requires reconsideration. Again, as with declaration of Transformation Zone, Mutation Zone and Commercial Axis, the sudden increase in FAR in already built up area can lead to unforeseen consequences, affecting the infrastructure in particular which may not be able to cope with the increased demands. The alternative approach is to have a higher FAR in the extension areas, with a view to encouraging more development there and greater emigration of activities from the core areas.

5.19 In the CDP 1995 while FARs were based on intensity of development, the difference in FARs available to sparsely developed areas was perhaps not large enough. It is therefore recommended that the FARs recommended in the Draft Zonal Regulations for ‘Transformation Zone/Development Area Zone’, ‘Mutation Corridor Zone’, ‘Mainly Residential Area’, and ‘Commercial Axis’, should only be made applicable to the respective zones coming under these nomenclatures, *only in respect of areas in the 3rd Ring*. This differentiates fully developed residential neighbourhoods from lay-outs still in initial stages.

5.20 In all other areas, namely in 1st and 2nd Ring areas, the prevailing FARs should continue, along with the permissible additions based on TDRs. This will also apply to the areas categorized as ‘Transformation Zone/Development Area Zone’, ‘Mutation Corridor Zone’, ‘Mainly Residential Area’, and ‘Commercial Axis’ in the 1st and 2nd Rings. The intention is to prompt faster and more dense development in the extension areas (3rd Ring areas) as a counter-balance to the development in the older areas (1st and 2nd Ring areas) which are already congested and cannot bear densification and further commercialization, particularly of the Mainly Residential Areas.

5.21 The Committee does not favour the concept of Premium FAR proposed in the Zonal Regulations and recommends that the Premium FAR be deleted. There is little to show that the Premium FAR will yield substantial revenues, and if it does help the BDA to generate resources on the one hand, it would on the other hand add to the costs of departments that are to service the city. There should only be additional FAR which is already provided for in the Transfer of Development Rights. This will be over and above the normal FAR for each zone, and will be available in all parts of the city barring those which are specifically excluded in the Draft Zonal Regulations as having restrictions on receiving TDR.

5.22 FAR should be on floor area/plinth area basis and not carpet area basis. Uses to be considered outside FAR calculations should be kept to the bare minimum.

5.23 The proposals contained in the Zonal Regulations relating to Ground Coverage, Setbacks, Building Line etc need to be re-checked for accuracy and internal consistency. Subject to such re-check and correction, these proposals can be accepted and implemented. The reservations of the Committee, it is clarified, relate to high FARs in the 1st and 2nd Ring areas, and the concept of 'Premium' FAR. The exerciseability or otherwise of TDRs on different roads and zones can be implemented on the lines recommended in the Draft Zonal Regulations.

5.24 As regards land use changes, once the Revised Master Plan 2015 comes into force, there should be no application of S. 14A in respect of change from residential to other uses, as the cases where land use can be changed will be laid down in the Revised Master Plan 2015 itself obviating the need for discretionary changes.

5.25 **USE OF THE BASEMENT IN HOTEL INDUSTRY :** The Federation of Hotels has requested that the clarification regarding use of basement in hotels contained in the State Government Circular dated 6-4-1998 may be incorporated in the Zonal Regulations. This is helpful to the tourism industry, and is accordingly recommended.

5.26 **ENFORCEMENT :** The key to success in town planning is the quality of enforcement. The people will have confidence in the efficacy of the Master Plan only if convinced that the regulations will be accepted, and enforced by the authorities. It is a widespread belief that the violations are rampant, and that violators of building bye-laws, zoning regulations, and parking regulations get away scot-free despite the gross nature of the violations. This is a perception which is not conducive to the implementation of the Master Plan, and the consequences of poor enforcement are often wrongly blamed on the Master Plan itself.

CHAPTER 6 : RE-DEFINING THE ROLE OF THE BDA IN REVISED MASTER PLAN 2015 – ACHIEVING ALL-ROUND AND BALANCED GROWTH OF THE CITY THROUGH STRATEGIC INTERVENTIONS

6.1 Unlike other agencies which provide services to the BMA, in the case of the BDA, the Authority itself bears the major responsibility for land and road based development. It would be appropriate for the Revised Master Plan to lay out the BDA's own role and activity during the period leading up to 2015. The Draft does not contain any material discussing a role and organizational structure for the BDA which matches the demands of the Revised Master Plan 2015. BDA's efforts should be towards developing a 'New Look' Bangalore in particular in extension areas where developments have not yet reached a point of no return. Some of the questions to be raised are: What is the paradigm of development for the BDA arising out of the Revised Master Plan 2015 ? Can the past practices of residential layout development suffice or is there need for a wider engagement through strategic planning and direct development by the BDA even in areas where no lay-out is being developed by BDA itself ? What should the BDA do if it is to play a leadership role in respect of all other service agencies ? What should be land acquisition proposals of the BDA within the Revised Master Plan period ? Town Planning Scheme is a provision never utilized in the past by the BDA. What are the required preparations for implementing Town Planning Schemes ? There is also the new concept of the Coordinated Planning Scheme. How is it to be implemented ? How should the BDA strengthen itself to play the new roles it is being cast into as a consequence of the new approaches contained in the Revised Master Plan 2015 ?

6.2 In the view of the Committee, the Bangalore Development Authority should aim at achieving a balanced and dispersed growth of the city in all its territory defined as the conurbation area. There should be no room for discontent in any part of the Planning Area that it is being neglected in the ongoing growth process of the city. While it is true that the IT industry, a major provider of jobs, is located more towards East and South, and the new airport is coming up

towards the North, to balance this, the first part of the PPRR in the form of the NICE road is coming up in the West, and the largest chunks of 'vacant developed' land is concentrated in the area benefiting from the NICE corridor. This opens up the possibility for the relatively less developed areas west of the Hosur Road up to Tumkur Road via Kengeri area, to make their own case for accelerated development. Balanced growth also requires moderating the growth in the centre. The trend towards greater density in the core needs to be reversed because otherwise the problem of congestion there will only be exacerbated. Given the Intermediate and Outer Ring Roads, and the proposed Peripheral Ring Road/BMICP Road, there is no great advantage for any activity to be located only in the inner areas. To change to such an approach, there is need for promoting and developing the peripheral areas as new growth centres.

6.3 The Planning Districts of Herohalli, Makali, Kengeri, Anjanapura, Electronic City and Begur already comprise the largest pockets of 'developed vacant' lands – between them a total of 10349 ha. This area is available for immediate development. However, the Revised Master Plan 2015 does not really recognize the potential of these areas, nor contain a proper programme to develop them. It sees them mainly as residential areas, despite the fact that the large BDA lay-outs in these areas remain vacant. The proximity to the BMICPA road is also ignored.

6.4 DEVELOPMENT OF CITY SUB CENTRES : the Vision Document contains suggestion regarding the development of City Sub-Centres but these are not fully developed in the document. In the peripheral areas, Yelahanka and Kengeri are identified to form structured development around large public facilities. These areas need to be supported (p.30). But again the emphasis is on developing along the existing road corridors. While the need for regulation here is noted, the regulation appears to be only those contained in the Zonal Regulations relating to Mutation Corridors, etc., without an effort to develop alternate locations which do not congest the arterial roads. The secondary centralities are mostly linear developments along the major arteries.

6.5 On the other hand, the large new layouts of the BDA in Banashankari 6th Stage, Sri MV Layout, and Anjanapura, remain just residential without an examination of how much longer these layouts, developed on a stand-alone basis and not as part of an overall plan for the Planning Districts in which they are located, will remain in the deserted state they are in today.

6.6 The Vision Document correctly argues in favour of local area centres :‘in future developments, centralities must no longer be thought of only along linear commercial developments, but also around public facilities or public spaces (schools, health establishments...) sundry activities (offices, commerce, services) or transport facilities (bus and railway stations), and in the periphery villages to support these new local centralities.’ The proposed ‘local centres’ of this nature in the Draft are few and far between, without clear conceptualization or a recommended process of implementation. As per the Vision Document, outside the BCC the division between the different types of fabric will take place according to geographical criteria with a continuous ring dedicated to housing in areas further away from axes of communication. These areas will be interspersed with secondary centralities based on points of activity (railway stations, bus stands, villages). While the Vision Document speaks of favouring secondary centralities and developing local centres around activities it is short on specifics of making these concepts a reality.

6.7 The Draft rightly draws attention to the two functions of ‘strategic urban planning’ and ‘urban development regulation’ on one hand and ‘Promotion-implementation’ on the other, in both of which the BDA has the leading role and fullest responsibility. These call for a restructuring of the BDA, and in particular, strengthen its capacities in the key areas of Town Planning, and formulation of Public-Private Partnerships.

6.8 Large parts of the city were developed by the BDA through its sites and services programme. The flip-side has been the absence of provision for what are now being felt as essential neighbourhood economic, shopping, recreation

centres. This is something the BDA can learn from past experience, and rectify in its newer lay-outs, including those where much progress has not been made beyond allotment of sites. It has been observed that the BDA developments in the south have scattered and sporadic housing development, unconnected to transport and employment opportunities resulting in wasteful expenditure and deteriorating infrastructure. Can this be re-worked to the advantage of that area ? There has been considerable opinion in favour of planned hubs for each neighbourhood. A beginning can be made to provide these in the newer extensions. In the new blocks sub-city centres located in proximity to the main roads but off them, with easy access, ample parking, and space for a variety of activities needs to be provided. This is an essential feature to be built into the Draft, which has not been done.

6.9 On its part the BDA needs to adopt a new approach in certain respects :

6.10 Stand alone pure residential lay-outs are not what the city requires. This was appropriate in the 60s and 70s. The experience of new lay-outs is evidence that lay-outs need to be part of overall plan for the Planning District, with equal importance to economic, and other activities, and facilities for the area to be self-sufficient to a large degree. This is also in the interests of the city as a whole, as otherwise the pressure on the central areas will continue unabated.

6.11 The old sites-and-services approach also needs to give way to the recognition that group housing has greater scope for dense but compact development which needs to be promoted in the city. The BDA should provide land for group housing / multi-family dwellings, which are known to lead to compact development which reduces the requirements of land and cost of providing infra-structure.

6.12 In a city of such magnitude and complexity, given the expectations of the citizens for high quality in services, housing, and neighbourhood facilities, there

is need to bring in the private sector through partnership. The city centres and neighbourhood hubs should be developed with private sector participating.

6.13 There is need for imaginative planning in the new extensions. Each Planning District in neighbourhood areas should be home for one or more selected activity such as education, health, IT, recreation and shopping etc. around which the neighbourhood hub should develop. The hub itself should provide a wide range of facilities and activities which people require. The list of urban amenities and provisions in such areas should invariably include markets for the informal sector and for farmers to vend their produce.

6.14 There is a paucity in large places of congregation and recreation in recent years comparable to the Lal Bagh and Cubbon Park. BDA should locate in outer regions suitable land for such centres, and take up their development.

6.15 HOUSING NEEDS : There is little clarity about what should be done regarding housing at the lower end – slums and shadow areas. In the first instance the Committee is of the view that all slums irrespective of legal status should be marked in the Master Plan, and listed in the Planning District Reports. This has more than symbolic significance. The prospering city should not neglect to foster the interests of its less fortunate citizens. All slums by definition require in situ development, security of tenure for those who live in them, and assistance in respect of proper housing, sanitation, education, health-care, and employment to their inhabitants. As an addendum to the Revised Master Plan a separate study on the housing needs of the urban poor in Bangalore needs to be prepared, and a programme of housing implemented during the period of the Plan.

6.16 There is need to provide for low income housing within easy distance from work, and ensure a basic set of services and sanitation in such colonies. Development control and sub-division regulations should be on the basis of detailed plans for such areas. Areas for service personnel (washerwomen,

servants, local sanitation workers, etc.) should be shown in layout plans – up to 5 or 10% of the population.

6.17 The housing board and slum improvement board should take up public housing programmes on such lands specifically for the low income tenants. In the first place there should be list of such lands, which should consist of all lands which are not required by the village community. Details of such land should be made public.

6.18 Government needs to articulate a policy with regard to land under the Revenue Department. There should be a policy of making public lands available for priority housing for the weaker sections. The first claim to such land should be to the BDA and to agencies such as the Housing Board and the Slum Improvement Board for the specific purpose of public housing for the poorer families.

6.19 There is need involve the Department of Housing in developing such concepts as public housing, and rental housing for different economic categories.

6.20 The reservations for low cost housing in the sub-division regulations need to be enforced. Builders need to be brought in to take up a programme to construct houses also for the poor.

6.21 INTEGRATION OF VILLAGES IN CONURBATION AREA : The Draft is quite correct in emphasizing the need to pay adequate attention to the villages whose lands come under urbanization. There is need to detail out the approach to the issue of developing the villages. At present the old villages within urban limits are merely adding to the 'shadow areas'. It is possible to have a different outcome when village lands are acquired or large-scale conversion of agricultural land takes place. The BDA in particular should not treat the villages as merely sources of lands to be acquired. The villagers lose their agricultural lands because of urbanization, as well as get hemmed in by the layouts of urban houses which

encircle them while the old village population continues suffering for want of basic amenities and provision to improve their own habitation. There is a basic inequity in this approach to the village population. The villages should be treated as part of the development effort, re-designed to reach urban standards of housing, and provided with the same infrastructure which is provided in the new layouts developed in the neighbourhood. BDA should develop a model plan for the villages which are likely to get submerged in the urban growth so that the villagers share the benefit of urban standards of housing and infrastructure.

6.22 LARGE PUBLIC AND SEMI PUBLIC INFRASTRUCTURE, DEDICATED LAND USES, AND LARGE TRANSPORTATION STRUCTURE : There are provisions made in the Proposed Land Use Maps which are not necessarily crystallized at this stage. The cut-off for 'Large public and semi-public infrastructure' is a land component above 20 acres. The two categories are **(Ks)** Large infrastructure in health, school, sport, and culture which are 'of considerable development and impact at the city level', and **(Kg)** Large government owned companies. Each of these has a defined development control regulations. The need for BDA to develop facilities comparable to Lal Bagh and Cubbon Park, has already been stressed. On similar lines, this provision can be used to develop institutional facilities in the public sphere, for health, school, sport and culture. However, there are no lands or pockets designated '**Ks**' in the Proposed Land Use Maps.

6.23 'Dedicated land uses' include land for public utilities, cemetery, power utilities, microwave and telecom towers, parks, unclassified land use, and urban amenities. These areas are intended to be designated in the maps of Proposed Land Use (PLUMs). The lands designated for these purposes will need to be acquired and put to use. This calls for adequate preparation and resources, but this is a challenge which needs to be taken up by the agencies.

6.24 The list of social, health and cultural infrastructure needs to be expanded to include Auditoria and Theatres, Schools, informal markets (farmers and vendors), play grounds, and parking area. It is necessary to provide land for cinemas and shopping malls, and commercial areas in the neighbourhood hubs.

6.25 Large transportation structures, include Railways, Airport and Bus terminals. There are specific regulations for the lands brought under this category

6.26 Urban amenities include civic amenities. The list of urban and civic amenities should be comprehensive in order that wherever required, they can be provided for out of land reserved for these purposes. **A time frame of six months should be determined for deciding on the urban amenities required to be provided in each Planning District, and land for locating them should also be identified.**

CHAPTER 7 : FOLLOW-UP PLANS BY BDA AND OTHER AGENCIES

7.1 This Report has already pointed out the need for sectoral plans, which should be part of the Revised Master Plan 2015. The Act makes it a part of the Master Plan to state the stages by which the plan is to be carried out. Financial projections can be a part of this section of the Master Plan. There is no such section in the Draft. It is necessary that this is built into the Master Plan.

7.2 As immediate follow up there is need for three levels of detailed planning: that of the BDA, that of the Service/Sectoral Agencies, and that of the Planning Districts/Wards. State Government and BDA should set up Working Groups for each of these levels of planning with a time limit of 3 months to draw up their respective courses of action. Financial planning should come in at this stage

7.3 One key task of the Working Group at the Planning District level will be to prepare plans for the shadow areas and slums. There should be a participatory process in the preparation of all these plans.

7.4 The Planning District Reports contain suggestions for local level works essential for improving the concerned locality. There are a sizeable number of implementation or Planning Recommendations in the Plan, under each Planning District. These are presently just points which require detailed working out and implementation, and involve a number of agencies. They are critical for the success of the Master Plan. These recommendations which identify local solutions, are significant improvements over the approach of the earlier CDPs and show an appreciable degree of study of the requirements at the local level, but will make no difference unless followed up and implemented. There is less clarity on who will be responsible for implementation, and how this will be done. These are to be decided by the Working Groups.

7.5 Some of the areas to be entrusted to the respective Working Groups are :

- i. Strengthening and restructuring of the Bangalore Development Authority for implementation of the Revised Master Plan 2015
- ii. Heritage conservation schemes for sites identified in the Plan, and inclusion of any others, and issues of urban design
- iii. Area improvement schemes, development of shadow areas, slums; housing schemes such as public housing and rental housing
- iv. Transport and utilities schemes
- v. Village integration and development plan for the 200 meter area beyond the perimeter of the existing village
- vi. Planning for lands designated for Public and semi public land use, parks and open spaces, large infrastructure and large transportation structures, dedicated land uses
- vii. City sub-centres including their location, amenities and facilities to be provided, access, public-private partnerships, and major activities for each sub-centre
- viii. Criteria for declaration of Transformation Zones, Commercial Axis, and Mutation Corridor, and finalization of the areas to be declared under each

7.6 Government should consider setting up a high level committee for the implementation of the Revised Master Plan 2015 of the BDA. The Committee should be headed by the Chief Secretary.

