



LAYOUT

SITE PLAN

AREA STATEMENT									
DOCUMENT AREA	= 13912.65 SQMTS (4059.19 SQYDS)								
PHYSICAL SITE AREA	= 33793.13 SQMTS (40416.35 SQYDS)								
PARKING									
REQUIRED PARKING RESIDENTIAL	= 2507.81 SQM (25%)								
REQUIRED PARKING AMENITIES	= 1171.28 SQM (13%)								
PROVIDED PARKING RESIDENTIAL	= 3629.79 SQM (22.9%)								
PROVIDED PARKING AMENITIES	= 1870.71 SQM (42.5%)								
STILT FLOOR	1493.76 Sqm								
CELLAR FLOOR	1484.63 SQM								
TOTAL	2978.39 SQM								
VENTILATION									
Cellar Ventilation Required (2.5 % Of Floor Area)	= 371.11 Sqm								
Cellar Ventilation Required (2.5 % Of Floor Area)	= 453.67 Sqm								
ORGANISED OPEN SPACES	Required Tot-loc (10 % Of Site Area) = 3379.31 Sqm								
Proposed Tot-loc (10.19 % Of Site Area)	= 3444.46 Sqm								
Total No Of Flats	702 Nos								
FLOOR AREAS									
FLOOR AREAS	TOWER - A	TOWER - B	TOWER - C	TOWER - D	TOWER - E	TOWER - F	TOWER - G	TOWER - H	AMENITIES
GROUND FLOOR	1484.63 Sqm	1786.97 Sqm	1294.30 Sqm	1582.87 Sqm	1493.22 Sqm	1443.60 Sqm	1702.42 Sqm	1651.95 Sqm	598.27 Sqm
1 ST FLOOR	1772.04 Sqm	1882.79 Sqm	1493.27 Sqm	1784.96 Sqm	1695.70 Sqm	1576.36 Sqm	1702.34 Sqm	1651.95 Sqm	598.27 Sqm
2 ND FLOOR	1772.04 Sqm	1882.79 Sqm	1493.27 Sqm	1784.96 Sqm	1695.70 Sqm	1576.36 Sqm	1702.34 Sqm	1651.95 Sqm	598.27 Sqm
3 RD FLOOR	1772.04 Sqm	1882.79 Sqm	1493.27 Sqm	1784.96 Sqm	1695.70 Sqm	1576.36 Sqm	1702.34 Sqm	1651.95 Sqm	598.27 Sqm
4 TH FLOOR	1772.04 Sqm	1882.79 Sqm	1493.27 Sqm	1784.96 Sqm	1695.70 Sqm	1576.36 Sqm	1702.34 Sqm	1651.95 Sqm	598.27 Sqm
5 TH FLOOR	1772.04 Sqm	1882.79 Sqm	1493.27 Sqm	1784.96 Sqm	1695.70 Sqm	1576.36 Sqm	1702.34 Sqm	1651.95 Sqm	598.27 Sqm
6 TH FLOOR	1772.04 Sqm	1882.79 Sqm	1493.27 Sqm	1784.96 Sqm	1695.70 Sqm	1576.36 Sqm	1702.34 Sqm	1651.95 Sqm	598.27 Sqm
7 TH FLOOR	1772.04 Sqm	1882.79 Sqm	1493.27 Sqm	1784.96 Sqm	1695.70 Sqm	1576.36 Sqm	1702.34 Sqm	1651.95 Sqm	598.27 Sqm
8 TH FLOOR	1772.04 Sqm	1882.79 Sqm	1493.27 Sqm	1784.96 Sqm	1695.70 Sqm	1576.36 Sqm	1702.34 Sqm	1651.95 Sqm	598.27 Sqm
TOTAL	1484.63 Sqm	1786.97 Sqm	1294.30 Sqm	1582.87 Sqm	1493.22 Sqm	1443.60 Sqm	1702.42 Sqm	1651.95 Sqm	598.27 Sqm
TOTAL RESIDENTIAL BUILT UP AREA	= 11971.95 SQM								

PLAN SHOWING THE PROPOSED RESIDENTIAL APARTMENT IN PLOT NO. 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

DEVELOPED BY -
 M/S. UNIVALLI CONSTRUCTIONS PVT LTD. & OTHERS
 100/101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000.

SCALE: 1:1000

SIGNATURE OF THE OWNER:

SIGNATURE OF THE ARCHITECT:

SIGNATURE OF THE STRUCTURAL ENGINEER:

SIGNATURE OF THE CIVIL ENGINEER:

SIGNATURE OF THE ELECTRICAL ENGINEER:

SIGNATURE OF THE MECHANICAL ENGINEER:

SIGNATURE OF THE SANITARY ENGINEER:

SIGNATURE OF THE LANDSCAPE ARCHITECT:

SIGNATURE OF THE ENVIRONMENTAL ENGINEER:

SIGNATURE OF THE FIRE ENGINEER:

SIGNATURE OF THE SAFETY ENGINEER:

SIGNATURE OF THE QUALITY CONTROL ENGINEER:

SIGNATURE OF THE PROJECT MANAGER:

SIGNATURE OF THE CLIENT:

**WELCOME TO
THE HONORABLE CHAIRMAN & MEMBERS
OF STATE EXPERT APPRAISAL COMMITTEE**

**PRESENTATION ON EMP FOR OBTAINING
ENVIRONMENTAL CLEARANCE**

**FOR THE PROPOSED
RESIDENTIAL COMPLEX**

**BY
SRI VALLI PRAVAS**

**M/S. UNDAVALLI CONSTRUCTIONS PRIVATE LIMITED
SY.NO.139/1A, KAZA VILLAGE,
MANGALAAGIRI MANDAL, GUNTUR DISTRICT,
ANDHRA PRADESH**

**ENVIRONMENTAL CONSULTANT
M/s. PRIDHVI ENVIRO TECH (P) LTD
NABET Accreditation No.119 Rev No.52 dated 10th April 2017**

BRIEF BACK GROUND OF THE PROJECT

- **M/s Undavalli Constructions Private Limited proposes to built a residential complex at Sy.No.139/1A, Kaza village, Mangalaagiri Mandal, Guntur District, Andhra Pradesh.**
- **Total net Plot Area available for development is about 8.35 Acres.**
- **The proposed site comes under CRDA limits under Mangalagiri development plan**
- **It is proposed to develop eight blocks with total built-up area is 145601.8 Sq. mts.with 702 flats, amenities block, with adequate parking area.**

SALIENT FEATURES OF THE PROJECT

Total net Plot Area	33793.13 Sq. Mts
Greenbelt Area	3444.46 Sq. Mts
No. of Flats with Built-up area	No. of flats – 702 Built up area of flats – 113971.95 Sq.mts Amenities building with an area of- 3549.35 Sq.mts Parking area- 28080.50 Sq.mts Total build up area is - 145601.8 Sq. mts.
Height of the building	30 Mts
Total Cost of the project	Rs. 120.0 Crores
Water requirement & Source	Total water requirement 405 KLD Source : Gram Panchayath
Sewage generated and mode of treatment and disposal	Total effluent generated is 345 KLD which is treated in the STP. Treated waste water is used for flushing & gardening (152 KLD) rest of the 193 KLD will be utilized for avenue plantations on the roads nearby
Power requirement & Source	3000 KVA, APCPDCL & solar
Backup Power	2 x 500, 1 X 125 KVA DG sets
Solid waste & mode of disposal	Total Solid Waste 1820 kgs/day waste - 1145 kgs to recyclable – Authorized Dealers - 675 kgs Biodegradable & Inert Waste to Panchayat Dump Yard - 25 kg/day STP sludge used as manure.
Hazardous waste & mode of disposal	Used batteries – 10 no's/Year Waste Oil from D.G. Sets – 180 Liters/Year, Transformer oil 150 Liters/ year will send to APPCB Authorized recyclers/ re-processors

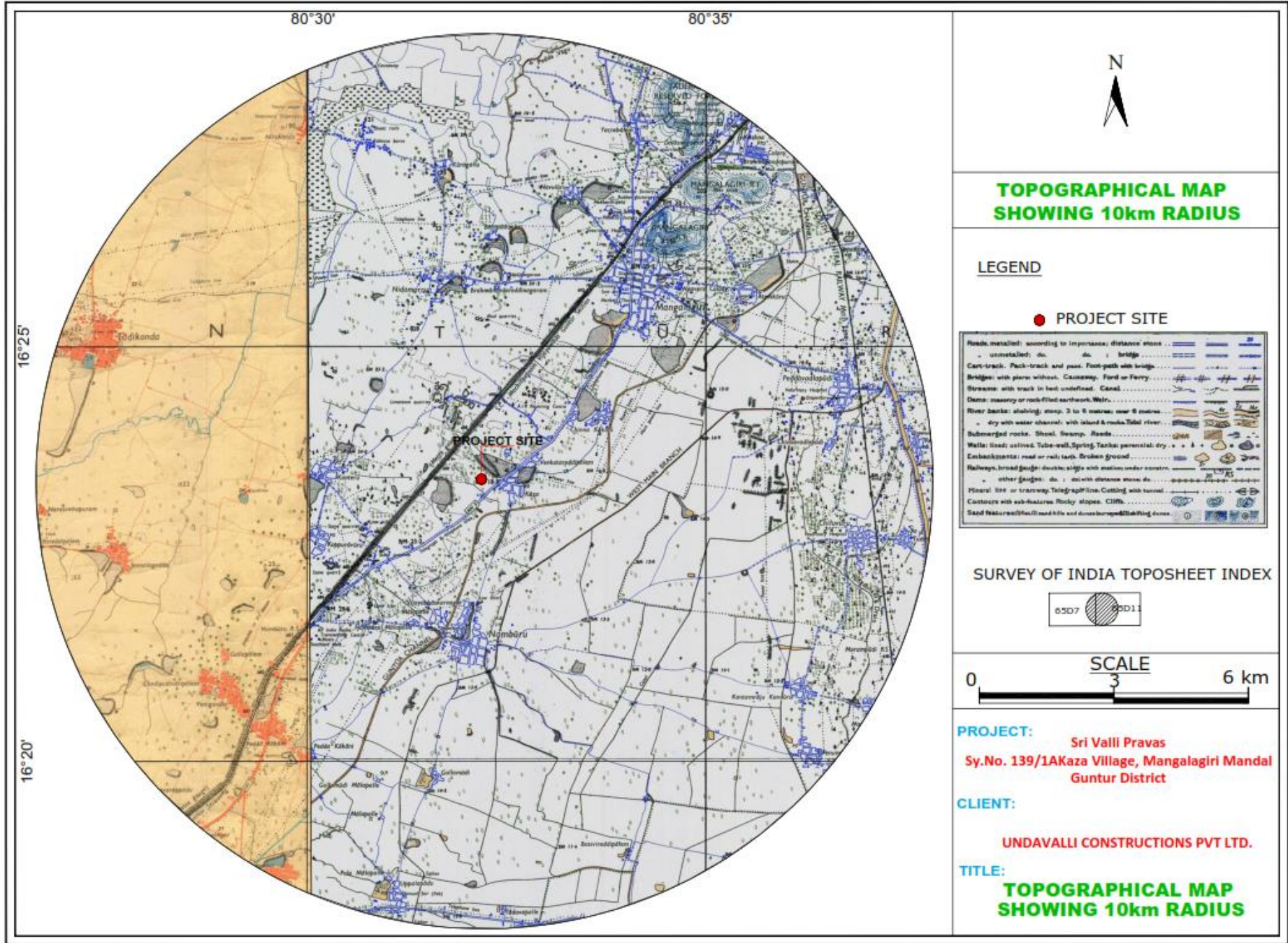
PHOTOGRAPHS OF THE SITE



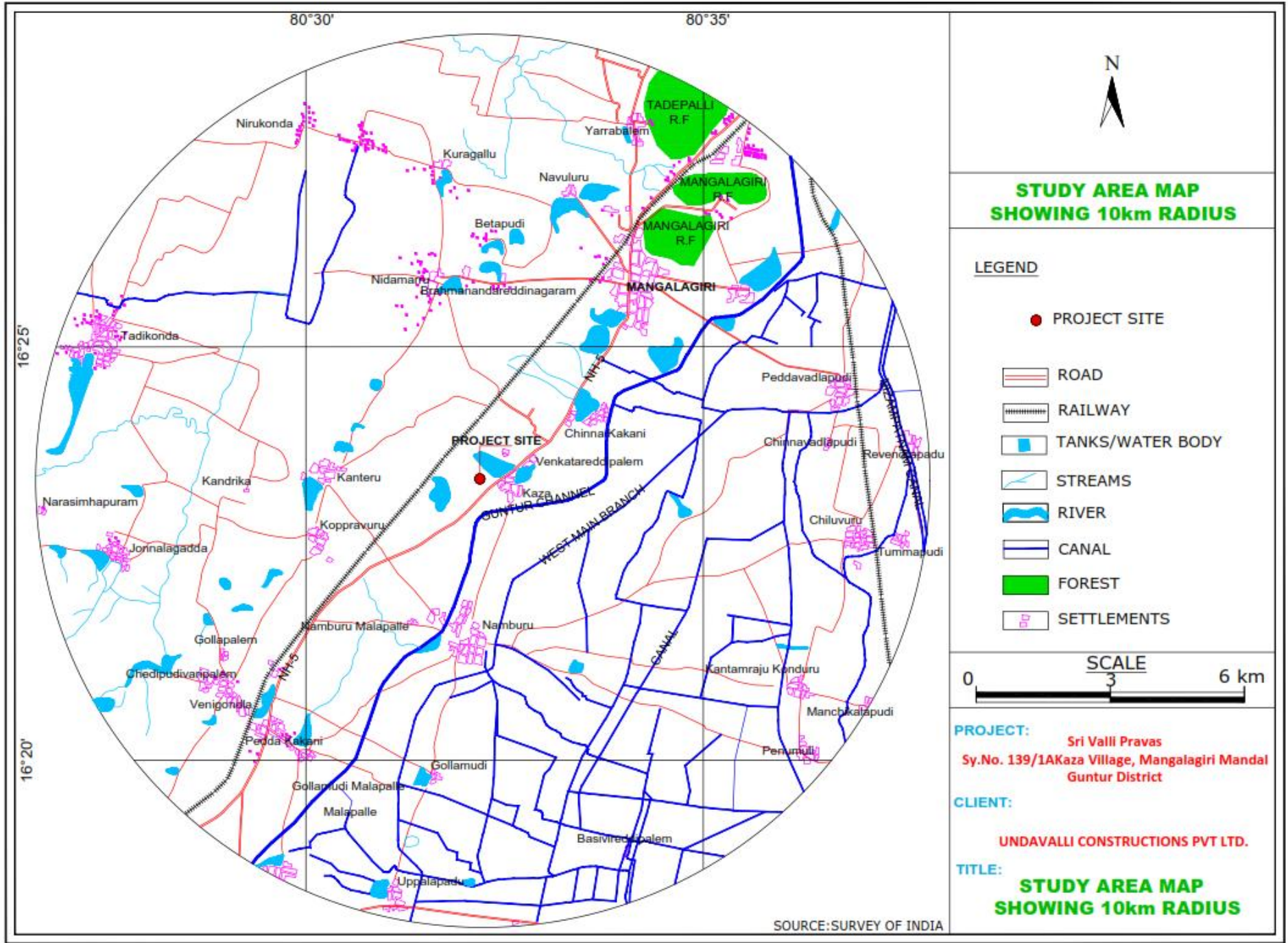
PHOTOGRAPHS OF THE SITE



TOPO MAP OF THE PROJECT SITE



BASE MAP OF THE STUDY AREA



GOOGLE MAP OF THE SITE



SALIENT FEATURES OF PROJECT SITE

Village	Kaza
Mandal	Managalagiri
District	Guntur
Latitude	N16⁰ 23'18.8" N16⁰ 23'23.15" N16⁰ 23'23.58" N16⁰ 23'23.77" N16⁰ 23'16.97" N16⁰ 23'17.74"
Longitude	E 80⁰ 31'59.79" E 80⁰ 32'0.57" E 80⁰ 32'02.44" E 80⁰ 32'06.44" E 80⁰ 32'06.28" E 80⁰ 32'03.34"
Ambient Temperature	Minimum 18.4⁰ C Maximum 40.0⁰C
Humidity	78 %
Rainfall	921 mm per Annum
Climate	Tropical
Type of soil	Yellowish brown to dark Brown clay
Distance from Urban area	Mangalagiri @ 5.33 KM
Distance from nearest Air Port	Gannavaram Airport at 40 kms NE
Distance from nearest village	Kaza Village at 0.5Kms on eastern Side
Distance from nearest surface water source	Krishna River 14.5 KM.
Reserve Forest	Mangalagiri R.F-4.1 Km-NE Adepalle R.F-6.53 Km-NE
Any historical monuments within 10 KM radius	None
Any ecologically sensitive areas within 10 KM radius	None
Topography	Plain and land locked

CONCEPTUAL PLAN



OVER ALL AREA STATEMENT OF THE PLOT

S.No	DETAILS	AREA IN SQ.MTS
1	Total plot area	33793.13
2	Area affected for road widening	-----
3	Net area available for development	33793.13

OVER ALL AREA STATEMENT OF THE SITE

Details	Area		
	Sq M	Acre	%
Residential	13235.88	3.27	39.16
Amenities	709.87	0.17	2.04
Internal Roads	15712.48	3.88	46.47
vacant area	690.44	0.17	2.03
Tot Lot & Green Belt	3444.46	0.85	10.19
Total	33793.13	8.35	100

NUMBER OF FLOORS WITH BUILT- UP AREA

Blocks	No. of Floors	No. of Flats	Area (Sq. M)
Block – A	S+ C + 9	90	14067.00
Block – B	S+ C + 9	108	16129.19
Block – C	S+ C + 9	72	12520.46
Block – D	S+ C + 9	117	17762.65
Block – E	S+ C + 9	117	17586.34
Block – F	S+ C + 9	90	13674.64
Block – G	S+ C + 9	90	16044.14
Block – H	S+ C + 9	18	6187.53
Amenities	G + 4	--	3549.35
	Total	702	117521.30

➤ 2 BHK – 540, 3 BHK – 162

PARKING AREA

- The total area allocated for stilt and cellar parking is 28080.85 Sq.mts, which can accommodate 869 four wheelers and 778 two wheelers
- Car Parking slots for 2 BHK – 540 (One for each flat – 540 flats)
- Car parking slots for 3 BHK – 324 (Two for each flat – 162 flats)

Silt Floor Parking	Area (Sq. Mtrs)
Block – A	1601.56
Block – B	1948.41
Block – C	1326.60
Block – D	2077.54
Block – E	2148.85
Block – F	1610.36
Block – G	1870.71
Block – H	651.85
Cellar Parking	12973.91
Amenities Parking	1870.71
Total Parking Area	28080.5

PARKING FACILITIES

Floor	No of Units	4 - Wheeler	2 - Wheeler
Stilt	702	472	609
Cellar		397	169
Total	702	869	778

REQUIREMENT OF PARKING AREA AS PER DIFFERENT NOTIFICATIONS

<p>As per EIA manual of notification, 2006(5A Building construction) (Area of 1 car parking - 28 M2)</p>	<p>28 X 869 slots = 24332 sq mts</p>	<p>Proposed = 28080.5 Sq.Mts</p>
<p>As per G.O.168, AP 22% of the total built up area for residential parking</p> <p>33% of the total built up area for amenities parking</p>	<p>113971.95 x 22/100= 25073.82 sq.mts</p> <p>3549.35 x 33/100= 1171.28 Sq.mts</p>	<p>Proposed = 26209.79 Sq Mts</p> <p>Proposed =1870.71 Sq.mts</p>

CIRCULATION PLAN

- **No. of cellars** : 1
- **No. of ramps** : 4
- **Width of ramp** : 5 m
- **Slope of ramp** : 1 in 10
- **Cellar driveway** : 10.06
- **Driveway** : 10.06
- **No. of lifts** : 22
- **Capacity of each lift** : 10 persons
- **Connecting Road** : 10.0 m

PARKING PLAN SHOWING THE CIRCULATION OF THE VEHICLES ENTRANCE AND EXIT





WATER & WASTE WATER MANAGEMENT

Water Requirement:

- The total water requirement during operational stage is 405 KLD
- 152 KLD will be met through re-cycled water
- Fresh Water requirement is 253 KLD
- Proposed to Source water from Gram panchayat .

Input requirement	Quantity in KLD	Out put	Quantity in KLD
Domestic	253.0	Domestic waste water	203.0
Toilet Flushing	142.0	Flushing waste water	142.0
Gardening	10.0	System losses	60.0
Total	405.0	Total	405.0

ENVIRONMENTAL MANAGEMENT PLAN – WASTE WATER

Waste Water Generation & Management:

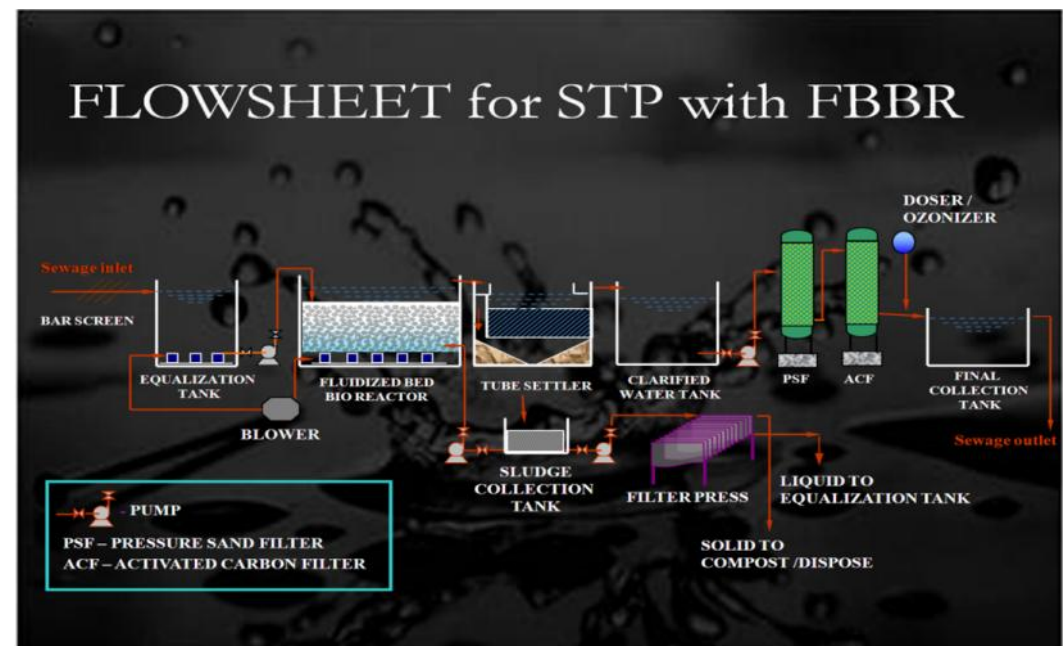
- Total quantity of waste water generation 345 KLD
- STP Proposed is 400 KLD capacity
- 152 KLD Of water is re-used for gardening and toilet flushing
- 193 KLD of treated water will be utilized for avenue plantations on the roads nearby

Sewage Treatment Plant (STP)

The project is proposed Fluidized Aerobic Bio- Reactor to treat waste water. The design of the STP shall be based on the parameters given in the below table

Parameter	Before Treatment	After Treatment
pH	6.5 – 8.0	6.5 – 7.5
TSS(mg/lit)	350	<100
BOD	350	<30
COD	450	<250
Oil & Grease	20	<10

Sewage Treatment Process Flow



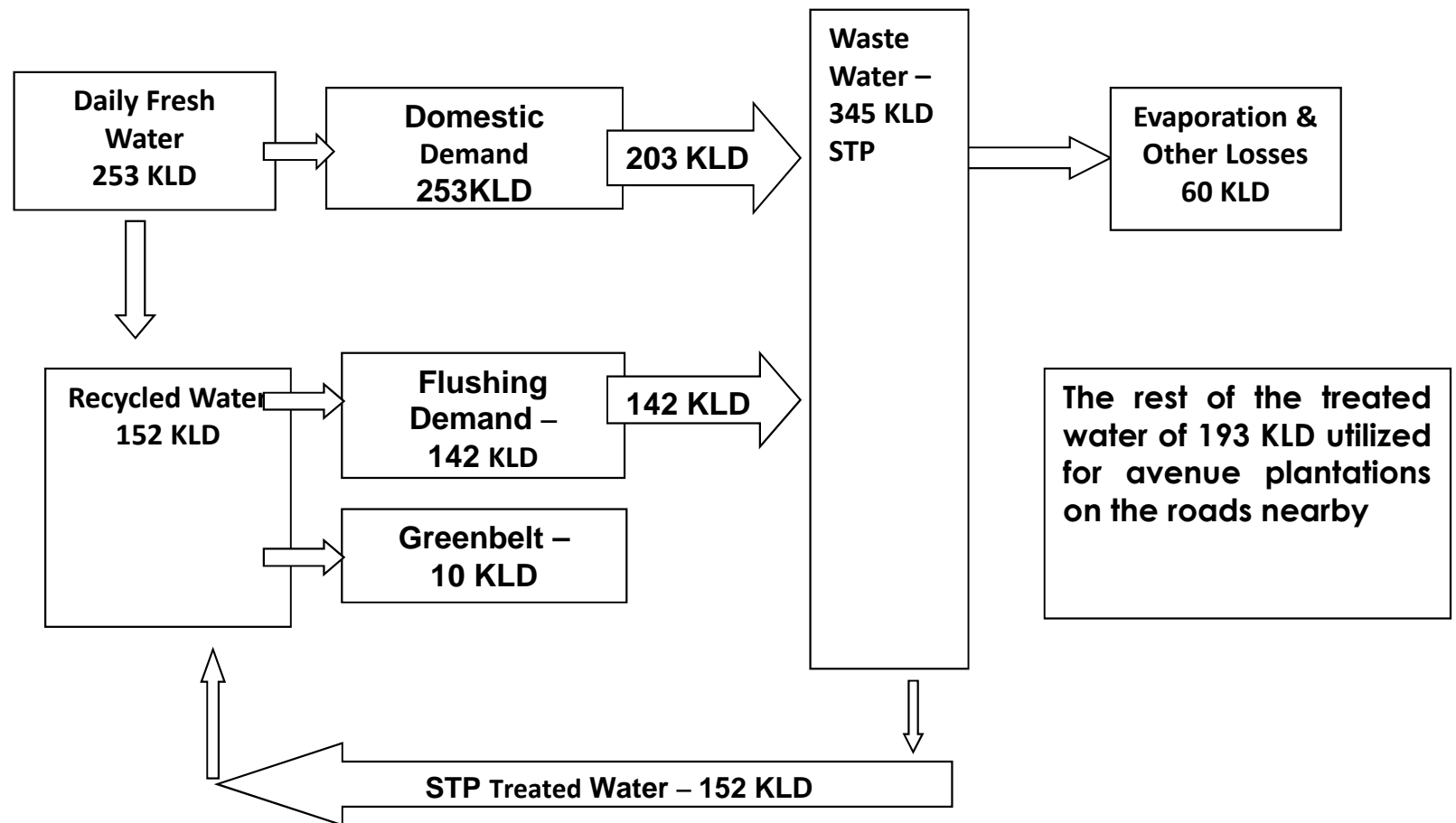
DESIGN CRITERIA

Flow	400	KLD
Capacity	400	m³
Peak factor	3.5	
Peak flow Q peak	1400	m³/day
Influent BOD	200	mg/lit
Influent Suspended Solids	200	mg/lit
Influent COD	350	mg/lit
Effluent BOD	30	mg/lit
Effluent COD	200	mg/lit
Effluent Suspended Solids	100	mg/lit

WATER & WASTE WATER

Water Requirement:

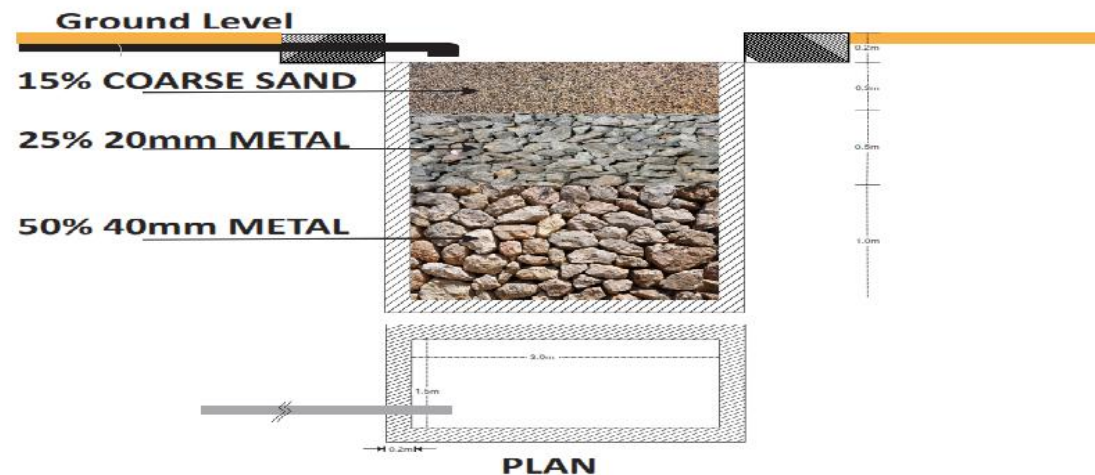
The total water requirement during operational stage is 405 KLD, out of this 152 KLD will be met through STP recycled water and 253 KLD of water will be sourced from Gram Panchayat.



Daily water demand: 405 KLD(fresh water 253 KLD and recycled water 152 KLD

RAIN WATER HARVESTING

Type of Area	Area (in m ²)	Coefficient of run-off	Peak rainfall intensity during one hour of rainfall (in m)	Rain water harvesting potential/hour (in m ³)
Roof-top area	13945.75	0.8	0.025	278.92
Green Area	3444.46	0.1	0.025	8.61
Paved area	16448.54	0.6	0.025	246.72
Total storm water load on the site with per hour retention is				534.25
Considering 15 minutes retention time, total storm water load				133.53
Taking the Surface area of Pit as 4.5 sq.m (1.5 x 3.0) and effective depth as 2.0 m, volume of a RWH pit (a x h)				9.0
Hence no. of pits required in approx = Total storm water load considering 15 minutes retention time / Volume of a RWH pit				14.8
Rain water harvesting pits proposed				17



Size 1.5 X 3.0 X 2.0

AIR EMISSIONS

EMISSION SOURCES

Capacity of DG Set	No. of DG Sets	Stack Height (m)	Diameter of Stack (m)	Temp. of exhaust gases (°C)	Exit velocity (m/sec)	Pollutant Emission rate (g/sec)		
						SPM	SO2	NOx
125 KVA	1	3 mts	0.2	180	15.8	0.02	0.04	0.2
500 KVA	2	5 mts	0.3	220	17.8	0.04	0.08	0.2

Height of the Stack is above Building Height

**AIR
ENVIRONMENT**



- ✓ Adequate stack height is provided for DG Sets
- ✓ Proper maintenance of equipment and vehicles
- ✓ Use of good quality fuel
- ✓ Greenbelt development all along the boundary

SOIL & DEBRIS MANAGEMENT

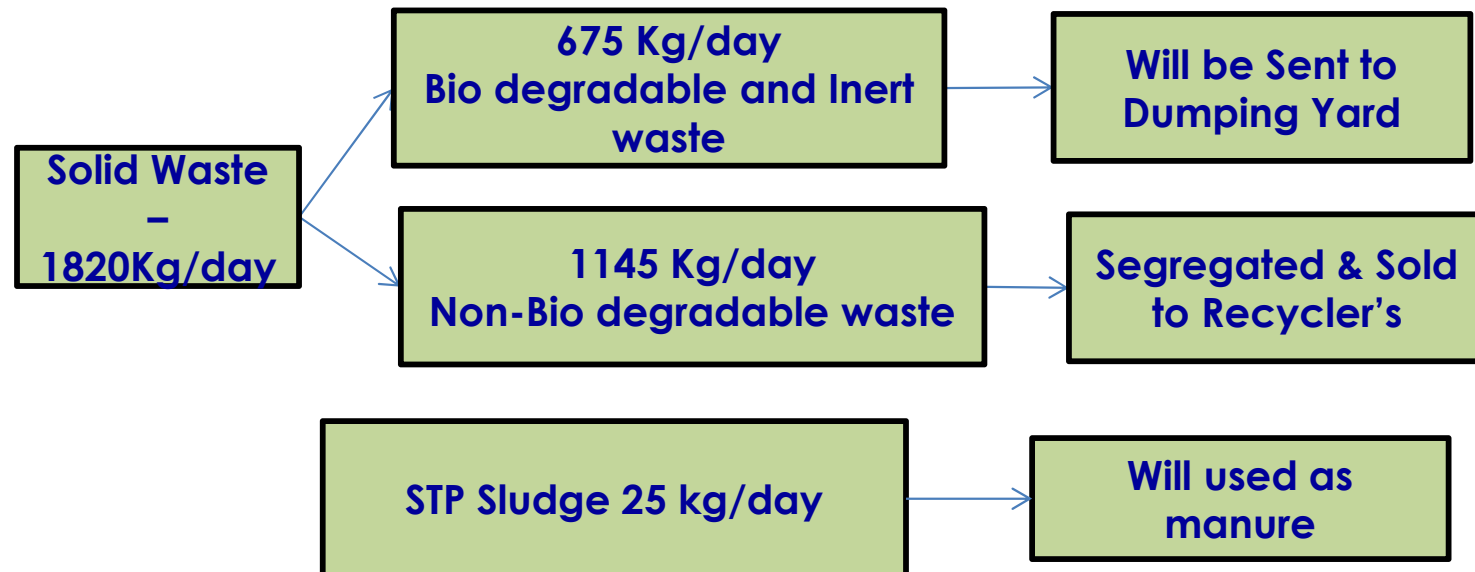
- **Top Soil will be preserved and re-used for green belt development**
- **Construction debris would be used back for levelling and Roads**

SOLID WASTE MANAGEMENT

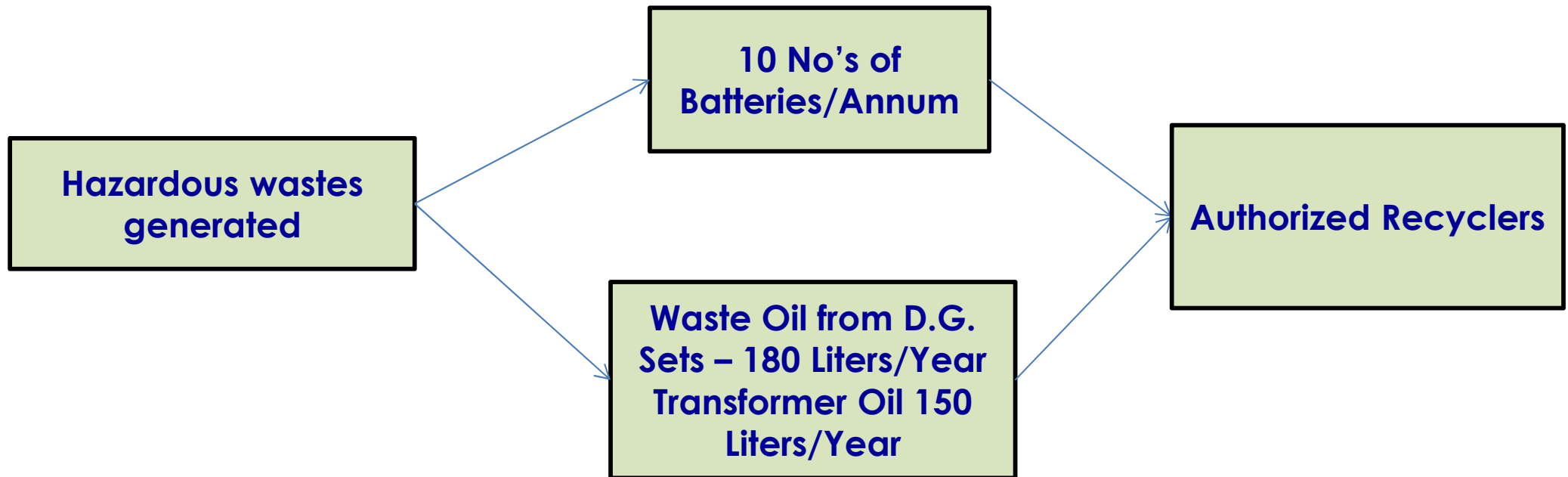
Particulars	No of persons	Quantity Kg/ day	Remarks
Apartments	2808	1404	0.5 kg/person/day
Visitors for Apartments	1404	351	0.15 kg/person/day
Amenities	130	65	0.25 kg/person/day
Total		1820	
	%		After segregation at site
Recyclable	10	1145	Sold to authorized dealers
Biodegradable	60	400	Sent to Dump Yard
Inert material	30	275	Sent to Dump Yard
E-Waste	-	505	0.18kg/person/year
Horticulture waste		12.7	15 kg/Acre/day or 0.0037kg/sq m/day Greenbelt area-3444.46 M2

Estimated Waste Composition

S. No	Characteristics of Waste	Unit	Percentage Composition
	Physical Characteristics		
1.	Paper and paper board	%	40
2.	Glass /ceramics	%	5
3.	Metals	%	3
4.	Plastics	%	11
5.	Rubber and Leather	%	1
6.	Textile	%	2
7.	Wood	%	1
8.	Food waste	%	18
9.	Others (Garden and Inert)	%	19
	Total		100



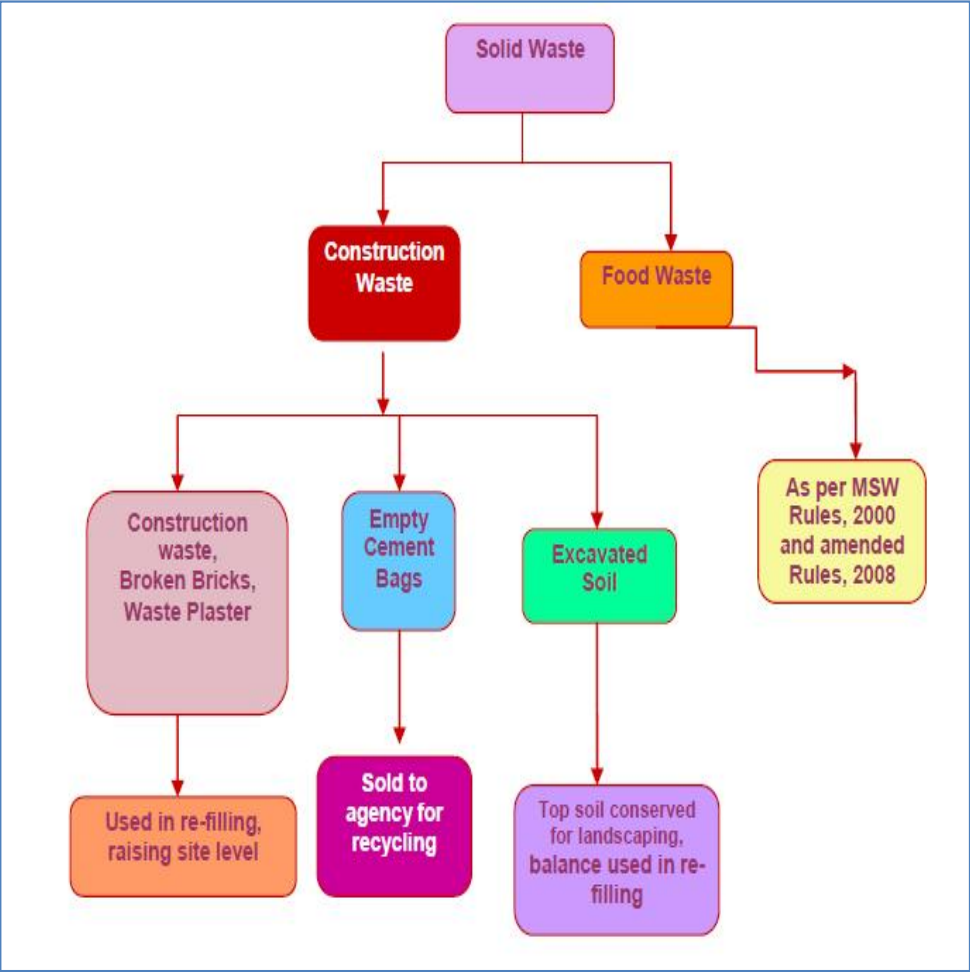
ENVIRONMENTAL MANAGEMENT PLAN – HAZARDOUS WASTE



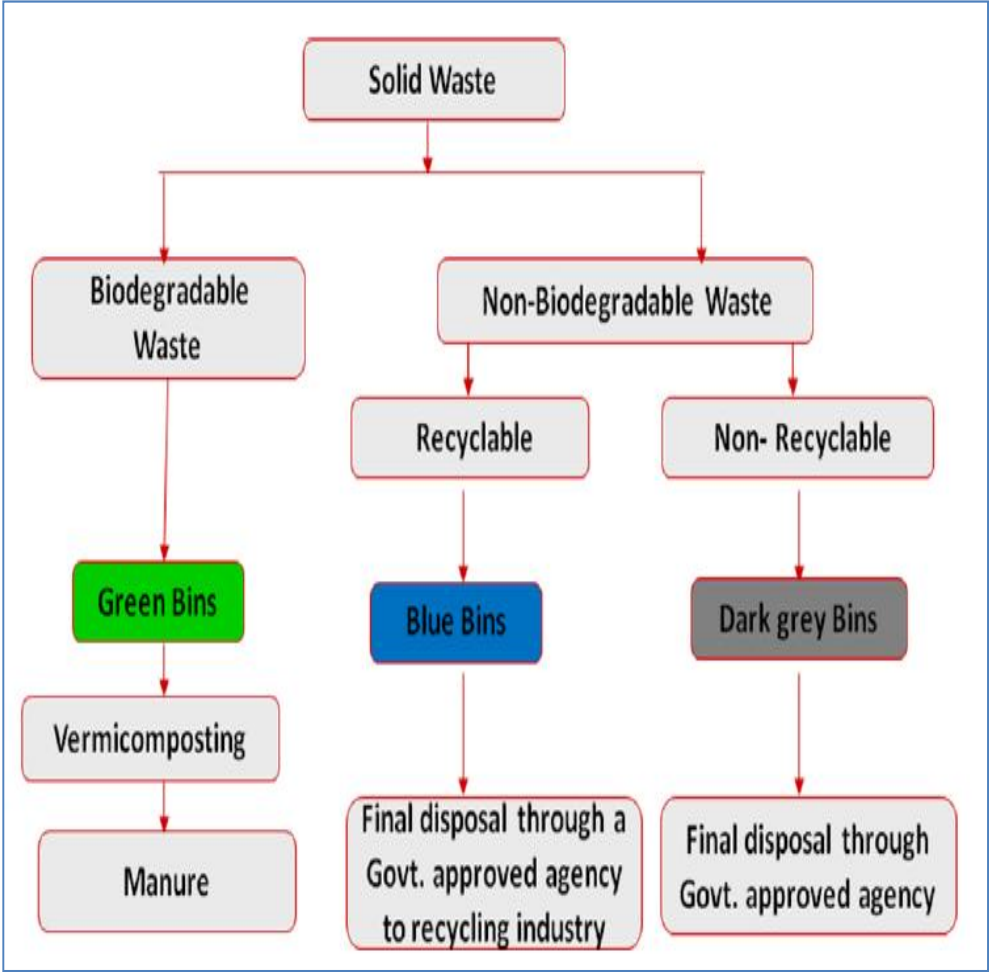
- It is proposed to segregate the waste on Wet and Dry waste basis from households.
- The Wet bio degradable waste would be composted in compost yard and utilized as manure. Other recyclable wastes would be disposed to recyclers.
- A separate service provider would be hired for this purpose

SOLID WASTE MANAGEMENT SCHEME

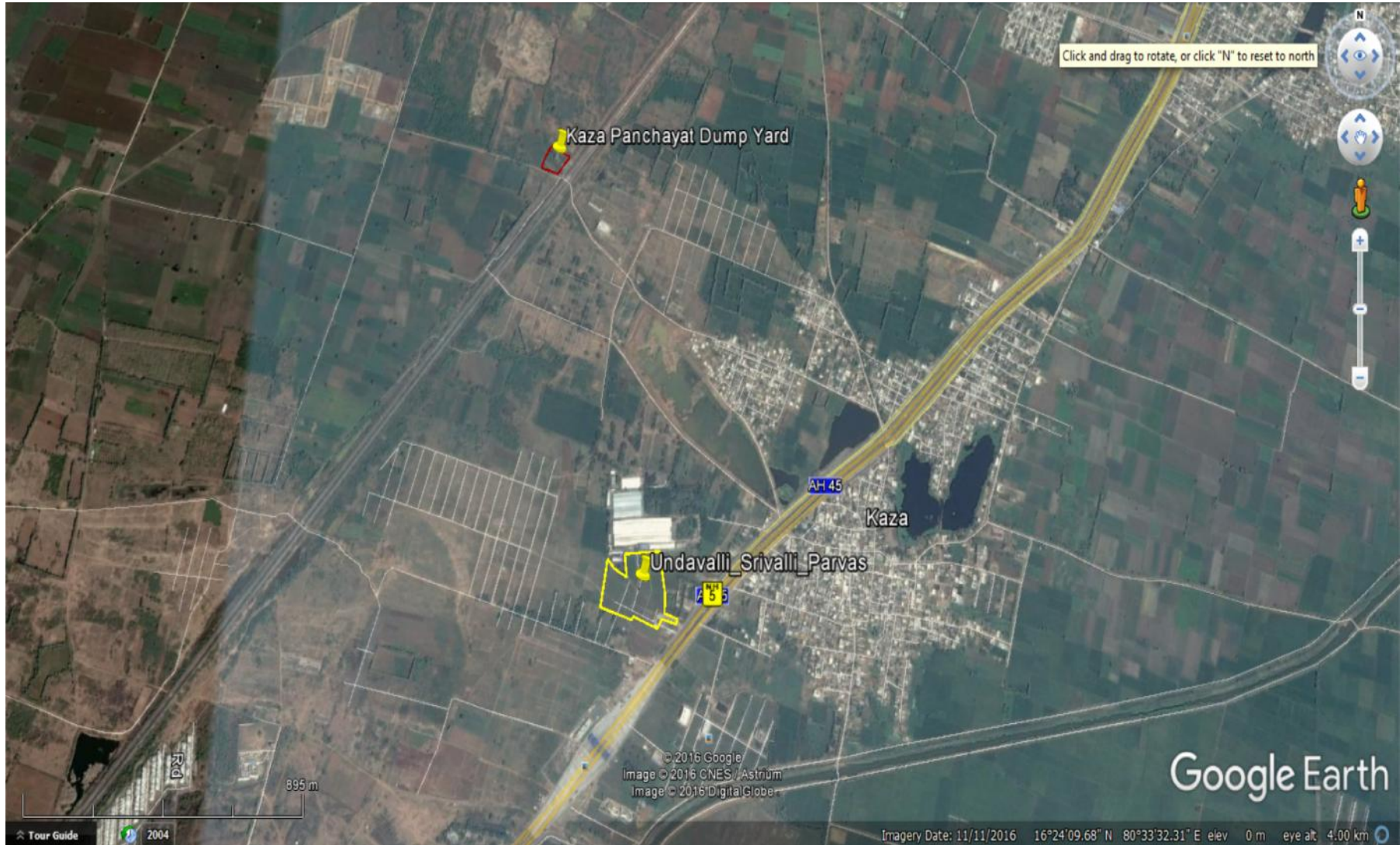
SOLID WASTE MANAGEMENT SCHEME – CONSTRUCTION PHASE



SOLID WASTE MANAGEMENT SCHEME – OPERATION PHASE



KAZA PANCHAYAT DUMPING YARD



PHOTOGRAPH OF THE KAZA PANCHAYAT DUMPING YARD



CERTIFICATE KAZA PANCHAYAT DUMPING YARD


సర్టిఫికేట్

గ్రామ పంచాయతి కార్యాలయము

కాజ

తేది : 25-03-2017

గుంటూరు జిల్లా , మంగళగిరి మండలము , కాజ గ్రామములో సర్వే నెం. 225
లో గ్రామములోని గృహస్థులు నుండి గ్రామపంచాయతి చే సేకరించు చత్త. చదారములు
వేయుట కొరకు డంపింగ్ స్థలము కలదని సర్టిఫై చేయడమైనది.

M. 
25/3/17
పంచాయతీ కార్యదర్శి
గ్రామ పంచాయతి
కాజ, మంగళగిరి (మం)

ENVIRONMENTAL MANAGEMENT PLAN – GREEN BELT DEVELOPMENT

- **Area proposed for Green belt is 3444.46 Sq. Mtrs**
- **Green area is 10.19 % of total area.**
- **Local species will be selected**
- **Ornamental trees will be developed**
- **Green lawns are planned**

ENVIRONMENTAL MANAGEMENT PLAN – GREENBELT DEVELOPMENT

➤ Area Proposed for Greenbelt & Lawns is 3444.46 Sq. Mtrs

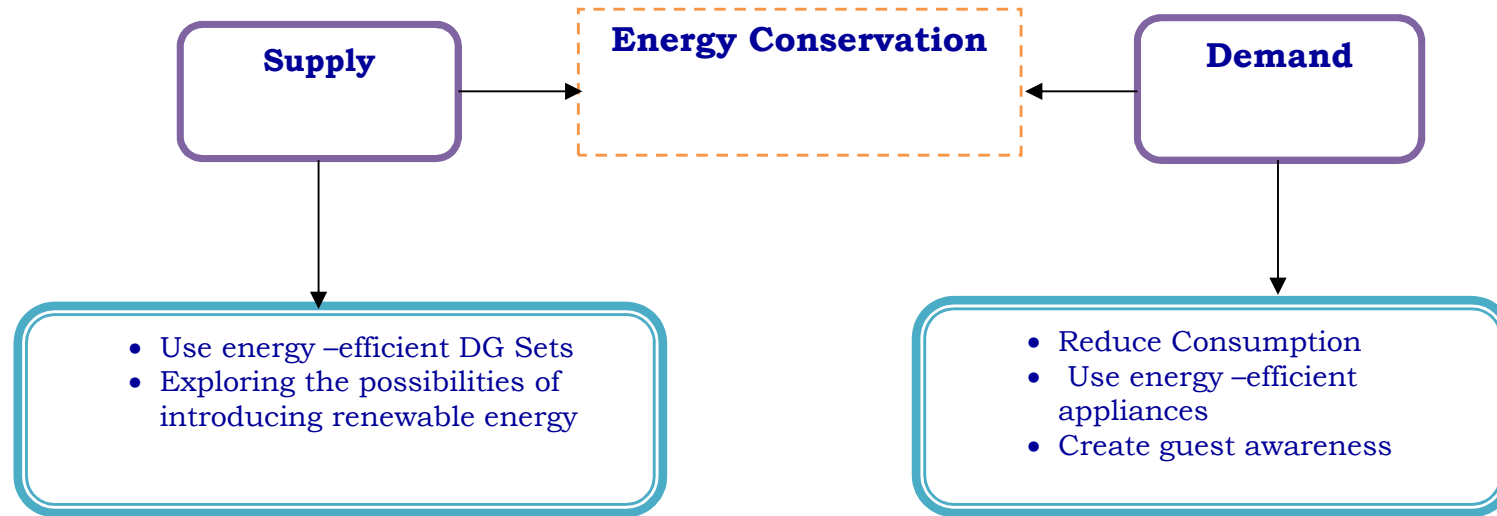
Species To Be Used To Reduce Air Pollution

SNo.	Scientific Name	Standard Name	Time when flowering – fruiting occurs
1	<i>Tamarindus indica</i>	Imli	March-April
2	<i>Syzygium cumini</i>	Jamun	June-July
3	<i>Spathodea campanulata</i>	Rugtoora(African tulip)	February-May
4	<i>Peltophorum pterocarpum</i>	Copper pod/ Yellow flame tree	December-May
5	<i>Mangifera indica</i>	Mango	April-July
6	<i>Leucaena leucocephala</i>	Subabul	February-May
7	<i>Emblica officinalis</i>	Amla	January
8	<i>Cassia fistula</i>	maltas	March-June
9	<i>Azadirachta indica</i>	Neem	June-July
10	<i>Anthocephalus cadamba</i>	Kadamb	August- October

Ornamental Trees

S. No.	ORNAMENTAL TREES
1	<i>Alstonia scholaris</i>
2	<i>Saraca asoca</i>
3	<i>Ailanthus excelsa</i>
4	<i>Peltophorum pterocarpum</i>
5	<i>Callistemon citrinus</i>
6	<i>Acalypha hispida</i>
7	<i>Caesalpinia pulcherrima</i>
8	<i>Calliandra haematocephala</i>
9	<i>Cestrum nocturnum</i>
10	<i>Erythrina indica</i>
11	<i>Plumeria acuminata</i>
12	<i>Polyalthia longifolia</i>
13	<i>Polyalthia pendula</i>
14	<i>Putranjiva roxburghii</i>
15	<i>Tabernaemontana divaricata</i>

EMP FOR ENERGY CONSERVATION



- Solar panels are proposed in an area of 30% of the top roof area
- LED Lights and 5 rated appliances are provided
- Installing programmable on/ off timers and sensors for low occupancy areas.
- Constant monitoring of energy consumption and defining targets for energy conservation
- Adjusting the settings and illumination levels to ensure minimum energy used for desired comfort levels

EMP FOR ENERGY CONSERVATION

TOTAL ENERGY CONSUMPTION FOR PROJECT PER ANNUM = 87.04 LAKHS UNITS

ENERGY SAVING PROPOSED				
S.NO	Energy Requirement	Consumption requirement in units/ Annum (Conventional Power requirement)	Method of saving	Saving in units/Annum
1	Residential flats	3648640	LED Lights and 5 star rated appliances	364864
2	Street & garden lighting	8000	Solar lights	8000
3	Lighting requirements in common areas, parking area & Amenities	3637000	LED Lights & Proper ventilation	363700
4	Lift motors and Water motors	1410360	5 star rated motors, VFD Drives and capacitors	211554
	Total Units of consumption	8704000	Total Units proposed to be saved though conservation measures	948118
5	Solar Power generation on 30% of roof area(total roof area – 13945.75 sq.mts 30% of total roof area is 4184 sq.m With 4.0 - 4.5 DNI KWH/Sq.m/day		The Number of Units can be saved through Solar water Heaters & Roof Top Solar Power Generation.	9,41,400
	% saving on overall energy consumption	1889518/8704000X100		21.70%

FIRE PROTECTION & HANDLING MEASURES

- **8 Terrace Tanks with water capacity of 25000 Liters each, 1 sump with water capacity of 50000 Liters and one with water capacity of 10000 Liters for club house with Booster pumps of 900 lpm**
- **Fire Hose reels in each floor**
- **Portable fire extinguishers in each floor and near electrical installations**
- **Automatic sprinkler system in vulnerable areas**
- **Fire Jockey pump 180 lpm, Electrical main pump 2280 lpm and diesel pump of 2280 lpm at club house**
- **Emergency lamps in each floor and on stair cases**
- **One diesel pump for fire protection system.**

BLOCK WISE FIRE FIGHTING MEASURES

S No	Block	Fire Extinguishers	Hose Reel	Down Comer with hose box	Automatic sprinklers	Automatic Fire Alarm System	Terrace Tank
1	Block A	194	26	22	282	24	1
2	Block B	230	26	22	326	24	1
3	Block C	177	25	22	250	23	1
4	Block D	243	28	33	357	26	1
5	Block E	244	28	33	356	26	1
6	Block F	193	26	22	275	24	1
7	Block G	193	26	22	420	24	1
8	Block H	85	12	11	420	12	1
9	Club House	48	7	6	234	79	1
	Total	1607	204	193	2920	262	9

ROAD CONNECTIVITY

- The major road is AH-45 (NH-5) on the East at a distance of about 100 meters.



TRAFFIC COMPOSITION – BEFORE DEVELOPMENT OF THE PROJECT – MANAGALGIRI - GUNTUR

Road	Peak Volume, PCU/hr	Maximum Capacity, PCU/hr	Volume/ Capacity	LOS Performance
AH45–(NH5) MANAGALGIRI - GUNTUR	2427	4800	0.51	“C” (Good)

TRAFFIC COMPOSITION – AFTER DEVELOPMENT OF THE PROJECT

Road	Existing Volume, PCU/hr	Existing Volume/ Capacity	Additional Volume	Modified Volume	Modified Volume/ Capacity	Modified LOS & Performance
AH45–(NH5) MANAGALGIRI - GUNTUR	2427	0.51	400	2827	0.59	C (Good)

Level of service classification 0 – 0.2 – A (Excellent), 0.2 – 0.4 – B (Very Good), 0.4 – 0.6 – C (Good), 0.6 – 0.8 – D (Fair), 0.8 – 1.0 – E (Poor)

POST ENVIRONMENTAL MONITORING PLAN

- **The monitoring of various environmental parameters is necessary and is a part of the environmental protection measures.**
- **The following Environmental attributes would be monitored:**
 - **Air pollution and meteorological aspects.**
 - **Water and waste water quality.**
 - **Noise levels.**
 - **Maintenance of water conservation methods**
 - **Maintenance & operation of STP**

Locations and frequency of monitoring would be as per the guidelines of APPCB and MOEF

ENVIRONMENTAL MANAGEMENT PLAN – BUDGET

S NO	COMPONENT	AMOUNT RS LAKHS
1	Dust Suppression	5.0
2	STP	40.0
3	Acoustic enclosures to DG sets	10.0
4	Green Belt Development	8.0
5	Rainwater Harvesting	10.0
6	Storm Water drains	12.0
7	Fire extinguishers and fire hoses and other fire detection system	35.0
	Total	120 (1.0% of the total cost of the project)
	Recurring Expenditure	20.0 (per annum)

SAFEGUARDS FOR IMPLEMENTATION OF EMP

- **The budget for the components of EMP will be a part of project cost while the recurring expenditure will be met from the maintenance charges collected from residents on monthly basis.**
- **A corpus fund will be created by the builder by collecting amount from residents to meet the maintenance and replacement of equipment in the long run.**

COMPLIANCE TO BUILDING NORMS

S.No	Specification/Requirement	AP State Building Norms	Actual Proposed
1	Set Backs for Site (high rise building)	All sides 10mts As per G.O Ms No:168 Rule 7 a (X) table IV	East : 10M west : 10M North : 10M South : 10M
2	Green Belt Area	10%	10.19 %
3	Minimum AI round Green Belt Width	2.0 M	2.0 M
4	Drive Paths	4.5 M As per parking provisions U/S 13 c(viii) of GO MS No. 168	9.0 M main approach road is given for vehicle movement which joins outside road
5	Fire vehicle movement Drive width of 7 M	This is applicable for this site as height of the building is more than 18 Meters –high rise building (as per the rule 15 (b) of GO MS No. 168	As per the provisions of AP Fire service act,1999, commercial buildings of height is above 18.0 M Provisional fire license is taken & Set backs as per the GO MS NO. 168 Rule 7 a (X) table IV.
6	Block to Block Spacing	6 M As per the Rule 5 f(Xii) of GO MS NO> 168	10.5 - 12 M proposed between Blocks
7	Parking	1) 22% of Built Up Area Square meters As per G.O Ms No:168	1) 23 % of the Total Built Up area

**We Request the Chairman & Members of
State Expert Appraisal Committee**

**To Grant
Environmental Clearance (EC)**

**For the proposed
“ Residential Complex”**

**M/S. UNDAVALLI CONSTRUCTIONS PRIVATE LIMITED
SY.NO.139/1A, KAZA VILLAGE,
MANGALAGIRI MANDAL, GUNTUR DISTRICT,
ANDHRA PRADESH**

By

M/s. PRIDHVI ENVIRO TECH PRIVATE LIMITED

Thank You.

Details of STP

Name of the Unit	Details of the Unit	No
Bar screen	With effective peak flow area of screen 0.024 sq.m and screen depth of 0.5 m	2
Grit Chamber	Length of the channel 4.3, width of the channel 0.3 effective liquid depth 0.2 with flow through velocity 0.3 m/sec	2
Equalisation Tank	With tank Capacity of 120 cu.m with length 4.9 m , width 4.9 m depth 5.0 with air grid for agitation of 72 cu.m/hr	1
FAB Reactor	With 2.0 x 3.05 x 4.0 tank having media filling of 40% with air grid for aeration of 100 cu.m/hr	2
Tube Settler	2.75 m x 6.0 m x 2.7 m SWD With 55 deg. hopper bottom	1
Pre Filtration Tank	Of 50 cu.m with 3.5 x 3.5 x 4.0	1
Sand Filter	1650 mm dia with 20 cu.m/hr filtration rate	1
Carbon Filter	1650 mm dia with 20 cu.m/hr filtration rate	1
Filter Press	24 Plate of 0.6 x 0.6 size hydraulic Press	1
Final Treated water Tank	400 cu.m capacity is proposed	1