

PROJECT: MAHARASHTRA ENVIRO POWER LIMITED, PUNE

Greenbelt Development

It is well known that trees help to reduce various types of pollution. Development of a greenbelt with selected plant species in and around the proposed project site reduces the intensity to pollution as well as improves the aesthetics. Hence species selection is very important. The direction, distance between the plants, maintaining the survival rate etc. are keen for greenbelt. The number of species and their size (individual numbers) depends on the budget and available space.

Green belt is recommended as one of the major components of Environmental Management Plan. As MEPL has allotted 55,884 m² of green area. The green belt will enrich soil organic matter thereby nitrogen. It will help as noise barrier. Green belt control temperature and keep the surroundings cool. It will attract avifauna and create suitable habitat to micro flora and fauna. The green belt will help as a sink to dust and gaseous pollutants. On the whole it has a positive impact on the environment. In the proposed green belt development scheme mainly fruit bearing, ornamental, medicinal values trees will be planted; which results in enrichment of biodiversity & beautification of area. Details existing & proposed green trees are presented below.

As per the present project activities, it is recommended to raise the following plant species. These species can be also available near the forest department nurseries. Small herbs, grass varieties, climbers and other ornamental and flowering plants can also be raised as per the availability near the paths and corridors of the existing buildings. Certain plants are also recommended to raise in the buffer zone as per the budget availability.

LIST OF PLANTS AND RECOMMENDED FOR GREEN BELT AND THEIR DIRECTION OF PLANTATION WITHIN THE SITE

Botanical name	No. of trees	Importance	Suggested planting Direction
<i>Trees</i>			
<i>Azadirachta indica</i>	5	Neem oil & neem products	Near boundary wall
<i>Ficus religiosa</i>	5	Shade and food for birds	Near storage area
<i>Mangifera indica</i>	5	Fruits and shade	Boundary wall
<i>Polyalthia longifolia</i>	10	Avenue tree	All directions Near boundary wall
<i>Alstonia scholaris</i>	10	Shade	West
<i>Shrubs and Herbs</i>	No.	Common Name	Direction
<i>Melaleuca citrina</i>	5	Crimson bottle brush	Garden centre
<i>Tabernaemontana divaricata</i>	10	Nandivardhanam	Garden Centre
<i>Caesalpinia pulcherrima</i>	20	Ratnagandhi	Next row to Hedges
<i>Allamanda schottii compacta</i>	400	-	Towards paths
<i>Begonia semperflorens</i>	40	-	Towards paths

Botanical name	No. of trees	Importance	Suggested planting Direction
<i>Caladium hortulanum</i>	40	Fancy Leaved Caladium	Towards paths
<i>Euphorbia geraldii</i>	20	Kiss Me Quick	Near Corridor
<i>Catharanthus rosea</i>	200	Vinca Ordinary	Near Paths
<i>Crinum asiaticum</i>	20	Blood Lily	Near Corridor
<i>Crossandra undulaefolia lutea</i>	20	Crossandra Yellow	Near Corridor
<i>Eranthemum purpureum</i>	40	Kodia Purple Leaves	Towards paths
<i>Bauhinia Scarlet</i>	5	-	Entrance to Garden
<i>Ixora coccinea</i>	20	jungle flame	Next row to Hedges
<i>Pennisetum clandestinum</i>	LS	Lawn Grass	Rest of all

PLANTATION NEAR WASTE LANDS / RESERVE FORESTED AREAS / ROAD SIDE

Botanical name	No. of trees	Importance	Suggested planting Zone/ Direction
Trees			
<i>Ficus benghalensis</i>	10	Shade, food for birds	Buffer zone
<i>Ficus racemosa</i>	10	Edible fruits	Buffer zone
<i>Peltophorum pterocarpum</i>	20	Shade	Buffer zone
<i>Samania saman</i>	100	avenue tree	Buffer zone
<i>Cassia fistula</i>	50	avenue tree	Buffer zone
<i>Delonix regia</i>	20	avenue tree	Buffer zone
<i>Calophyllum inophyllum</i>	50	Shade, medicinal	Buffer zone
<i>Casuarina equisetifolia</i>	100	Pulp and construction material	Core zone
<i>Callistemon citrinus</i>	50	Ornamental tree	Core zone
<i>Cocos nucifera</i>	20	fruit	Buffer zone
<i>Dendrocalamus strictus</i>	10	Bamboo	Buffer zone
<i>Syzygium cumini</i>	10	Fruits	Buffer zone
<i>Tamarindus indica</i>	10	Shade, fruits	Buffer zone
<i>Tecoma stans</i>	20	Shade	Buffer zone
<i>Tectona grandis</i>	100	Shade, Wood	Buffer zone
<i>Terminalia bellirica</i>	50	Fruits, Shade	Buffer zone
<i>Terminelia chebula</i>	20	Fruits, Shade	Buffer zone
<i>Thespecia populnea</i>	10	Shade	Buffer zone
<i>Thevetia neriifolia</i>	10	Shade	Buffer zone
<i>Trema orientalis</i>	20	Shade	Buffer zone
<i>Vitex negundo</i>	100	Shade	Buffer zone
<i>Wrightia tinctoria</i>	50	Shade	Buffer zone
<i>Phyllanthus emblica</i>	20	Fruits	Buffer zone
<i>Pithecellobium dulce</i>	20	Fruits	Buffer zone
<i>Plumeria alba</i>	20	Shade	Buffer zone

PROPOSED FINANCIAL BUDGET FOR THE GREEN BELT DEVELOPMENT (RS IN LAKHS)

Sr. No.	Component	First year	Second year	Third year	Fourth year	Fifth year	Total
1	Plant seeds/ saplings	5.0	0.4	0.4	0.4	0.4	6.6
2	Pits and watering	2.0	0.2	0.2	0.2	0.2	2.8
3	Regular maintenance	2.0	0.2	0.2	0.2	0.2	2.8
4	Transportation	2.0	0.2	0.2	0.2	0.2	2.8
Grand Total		11.0	1.0	1.0	1.0	1.0	15.0

Care shall be taken to plant ample trees along the road side, boundary wall as well as within the plant premises. It shall enable proper balance of atmosphere both outside the campus by absorbing noise and gaseous pollutants of the road side movement of vehicles and also absorption of noise and emissions within the premises of the plant.

Company shall follow the following five-year comprehensive

- Company shall follow the following five-year comprehensive greenbelt development program after that the company shall keep following the prevailing practices of greenbelt management.
- Company shall maintain all necessary facilities for irrigation of greenbelt in good condition and necessary maintenance of irrigation facilities shall be done regularly
- Company shall regularly assess survival rate of planted trees & shrub and if required necessary re-plantation shall be done to ensure healthy & dense greenbelt area in about 55,884 m2 area) of the total area of proposed premises
- For re-plantation, if required, company shall acquire saplings from local private/government (Forest & Other) nursery
- Company shall do fertilization as required for healthy & dense greenbelt development

Management Period

- The properly designed greenbelt area, irrigation facilities, Sapling storage & maintenance area and storage for greenbelt development resources/tools etc. shall be provided in construction phase prior to commissioning of plant operation. The necessary structural maintenance shall be done throughout the extent of operation phase. The greenbelt development guidelines and five-year program shall be initiated with inception of construction phase of project and shall be implemented & practiced as routine throughout the project life.