Greenery Development (GD) Programme: The objective of this programme is not only for eco-restoration but also to boost aesthetic development, act as natural barriers of noise and as a buffer towards air pollutants. Greenbelts are an effective mode of control of air pollution, where green plants provide a surface capable of absorbing air pollutants and forming a sink of pollutants. Leaves with their vast area in a tree crown, absorbs pollutants on their surface, thus effectively reducing pollutant concentration in the ambient air. Often the absorbed pollutants are incorporated in the metabolic pathway and the air is purified. Plants grown to function as pollution sink are collectively referred as greenbelts. Apart from functioning as pollution sink, greenbelt would provide other benefit like aesthetic improvement of the area and providing suitable habitats for birds and animals.

Nursery: To implement the GD programme, the development of a Nursery is essential. The Nursery would provide seeds and tree saplings of diverse species.

Guidelines for Plantation: The plant species identified for greenbelt development would be planted using pitting technique. The pit size would be either 45 cm x 45 cm x 45 cm or 60 cm x 60 cm x 60 cm.

Bigger pit size would be considered at marginal and poor quality soil. Soil used for filling the pit should be mixed with well decomposed farm yard manure or sewage sludge at the rate of 2.5 kg (on dry weight basis) and 3.6 kg (on dry weight basis) for 45cm x 45 cm x 45 cm and 60 cm x 60 cm x 60 cm size pits respectively. The filling of soil should be completed at least 5-10 days before actual plantation. Healthy sapling of identified species should be planted in each pit with the commencement of monsoon. Provision for regular and liberal watering during the summer period, during the commissioning stage of the plant, would be arranged from the existing available resources. The authorities responsible for plantation would also make adequate measures for the protection of the saplings. While making choices of plant species for developing green belts, preference has been given to the

natural native species, plants which can be grown as per normal horticultural practices.

Recommended Plants for Greenbelt Development: While making choice of plants species for developing green belt, due consideration has to be given to the natural factor of bio-climate. The main limitation for plants to function as scavenger of pollutants are, plant's interaction with air pollutants, sensitivity to pollutants, climatic conditions and soil characteristics. The plants are living organism with their varied tolerance limit towards the air pollutants. A green belt is effective as a pollutant sink only within the tolerance limit of constituent plant species. Planting few, known pollutant sensitive species along with the tolerant species within a green belt however, do carry out an important function of indicator species. Plant species identified for greenbelt development is listed in Table below.

Table - Recommended Plant Species for Greenbelt Development

Plant species	Habit	Tolerance limit	Stomatal index	Mode of Regeneration
Albizia lebbeck	Tree	T	19.72	Seeds
Albizia amara	Tree	T	-	Seeds
Albizia procera	Tree	T	20.21	Seeds
Azadirachta indica	Tree	T	29.2	Seeds
Alstonia scholaris	Tree	T	15.23	Seeds
Acacia auriculiformis	Tree	T	10.9	Seeds
Acacia leucophloea	Shrub	T	12.01	Seeds
Achras sapota	Tree	T	25.78	Spreading
Ailanthus excelsa	Tree	T	13.01	Seeds, shoot, root, cuttings
Bauhinia racemosa	Tree	T	25.68	Seeds
Bauhinia acuminata	Tree	T	22.31	Seeds
Bougainvillea spectabilis	Shrub	T	32.53	Cutting
Caesalpinia pulcherrima	Tree	T	29.09	Seeds and Cuttings
Callistemon citrinus	Small tree	T	127.49	Seeds
Cassia siamea	Tree	T	21.2	Seeds
Clerodendrum inerme	Shrub	T	18.02	Seeds/cuttings
Dalbergia sissoo	Tree	T	18.72	Seeds/cuttings
Ixora arborea	Small tree	T	17.3	Stem cutting
Ficus religiosa	Tree	T	18.70	Seeds/cuttings
Ixora rosea	Small Tree	T	20.30	Stem cutting
Melia azadirachta	Tree	T	-	Seeds/stem/cutting
Nerium indicum	Shrub	T	15.7	Cutting
Polyalthia longifolia	Tree	S	22.27	Seeds
Peltophorum pterocarpum	Tree	T	16.78	Seeds
Pithecellobium dulce	Tree	T	11.78	Seeds/ cuttings
Mangifera indica	Tree		30.77	Seeds/grafting
Syzygium cumini	Tree		20.60	Seeds

Terminalia catappa	Tree	T	12.90	Seeds
Tecoma stans	Shrub	T	23.80	Seeds/ cuttings
Thespesia populneoides	Tree	T	29.81	Seeds/ cuttings
Thevetia peruviana	Shrub	T	27.8	Seeds
Tectona grandis	Tree	T	23.48	Seeds

Source: CPCB (March, 2000), Guidelines for developing green belts PROBES/75/1999-2000

T : Tolerant
S : Sensitive
(-) : Not available

The trees and shrubs selected from the above mention list based on its availability would be planted as greenbelt in and around the plant.

Implementation Programme: The 5 years greenery development programme is presented in the Table below.

Table - Implementation Programme of Greenbelt Development

Plan period	Percentage of total greenery area	Details of plantation
1st & 2nd years	30	Plantation of approx 45,000 trees sapling at 2.5 to 3.0 m spacing
3rd & 4th years	50	Plantation of approx 75,000 trees sapling at 2.5 to 3.0 m spacing
5-year	20	Plantation of approx 30,000 trees sapling at 2.5 to 3.0 m spacing

Approximately 1, 50,000 trees would be planted in green belt development plan.

Budgetary allocation plan for green belt development is as mentioned in Table below:

Table - Budget Allocation for Greenbelt Development

Year	Budgetary Amount (Lakhs)
1st & 2nd year	30
3rd & 4th year	60
5th year	30

Approach Roadside Plantation: Roadside plantation plays a very important role for enhancing foliage cover, increasing the shady area, increasing aesthetic value and for eco-development of the area. The approach roads to project site, colony, etc. can be planted with flowering trees to increase aesthetic value as well as providing suitable habitats for birds and animals. The selected plant species list is given in Table below for approach roadside plantation.

Table - Species Selected for Plantation along the Roadside of Plant and Township

Sl. No.	Plant species based on Colour	Sl. No.	Plant species based on Colour
Yellow Flowered Trees			
1.	*Acacia auriculiformis*	10.	*Erythrina parcelli*
2.	*Acacia baileyana*	11.	*Laburnum anagyroides*
3.	*Acacia dealbata*	12.	*Michelia champaca*
4.	*Acacia decurrens*	13.	*Parkinsonia aculeata*
5.	*Acacia implexa*	14.	*Peltophorum pterocarpum*
6.	*Anthocephalus chinensis*	15.	*Pterocarpus dalbergioides*
7.	*Bauhinia tomentosa*	16.	*Schizolobium excelsum*
8.	*Caesia calliantha*	17.	*Tabebuia spectabilis*
9.	*Cassia fistula*	18.	*Thespesia populnea*
Red Flowered Trees			
1.	*Bombax ceiba*	5.	*Erythrina variegata*
2.	*Brownea grandiceps*	6.	*Saraca asoca*
3.	*Erythrina blakei*	7.	*Spathodea campanulata*
4.	*Erythrina laurifolia*	8.	*Wrightia coccinea*
Scarlet Flowered Trees			
1.	*Barringtonia acutangula*	5.	*Callistemon lanceolatus*
2.	*Brassia actinophylla*	6.	*Delonix regia*
3.	*Brownea coccinea*	7.	*Stenocarpus sinuatus*
4.	*Butea monosperma*	8.	*Sterculia acerifolia*
Pink Flowered Trees			
1.	*Bauhinia purpurea*	5.	*Hibiscus collinus*
2.	*Cassia javanica*	6.	*Kleinhovia hospita*
3.	*Cassia nodosa (Red)*	7.	*Lagerstroemia speciosa*
4.	*Cassia renigera*	8.	*Samanea saman*
Blue Flowered Trees			
1.	*Bolusanthus speciosus*	3.	*Solanum grandiflorum*
2.	*Jacaranda acutifolia*	4.	*Solanum macranthum*

White Flowered Trees

1. *Albizia lebbeck*
2. *Bauhinia acuminate*
3. *Calophyllum inophyllum*
4. *Kydia calycina*
5. *Madhuca indica*
6. *Magnolia grandiflora*
7. *Magnolia pterocarpa*
8. *Mesua ferrea*
9. *Millingtonia hortensis*
10. *Mimusops elengi*
11. *Moringa oleifera*
12. *Oncoba spinosa*
13. *Plumeria alba*