

Greenbelt Development

An area of 88140 sq. m (8.81Ha) (33 %) of the total site area (267093 sq. m)/26.7Ha is earmarked for green belt development. As it is an existing facility and about 3.64 Ha of land is covered under greenbelt and remaining 5.17 Ha of land to developed under greenbelt cover. But it is not alike a typical industrial greenbelt of 1500 to 2000 trees per Ha. There are big gaps. A typical industrial greenbelt of 5 to 10 m width on all sides cannot be developed unless the existing trees are removed and the entire area is denuded. It is not advisable to uproot the existing trees and hence it is planned to reinforce and strengthen the existing greenbelt by pruning the branches of the trees to the desired level so that it becomes possible to grow new saplings close to the trees. It is proposed to have 2 to 5 rows of trees on all sides with a spacing of 2m x 3m (1500 / Ha).

Action plan for greenbelt development in 33% of area

Environmental protection has been considered as an important domain for industrial and other developmental activities in India. Ministry of Environment & Forests (MoEF) has taken several policy initiatives and promoted integration of environmental concerns in developmental projects. One such initiative is the notification on Environmental Impact Assessment (EIA) of developmental projects issued in 1994 and further revised notification in year 2006 under the provisions of Environment (Protection) Act, 1986 EIA Guidance Manual for building, construction, townships, and area development projects proactively talks about the importance of greenbelts in such projects.

Greenbelt in India refers to a buffer zone created beyond which industrial activity may not be carried on. This concept has developed through a long line of cases and today, greenbelts are present not only for the purpose of protecting sensitive areas to maintain ecological balance but are also be found in urban areas so as to act as a sink for the harmful gases released by vehicles and industries operating in the city area. In this regard, comprehensive Guidelines for Developing Greenbelts have been compiled by the Central Pollution Control Board [Refer Probes/75/1999-2000].

As per the stipulations of MoEF, greenbelt is to be provided all along the boundary by planting tall, evergreen trees and the total green area including landscaping area will be 1/3rd (about 33%) of the plant area. This will include Lay down area which will be later on converted into Green area. Depending on the size, activity and environmental impacts of the industry; extent of land available, agro- climatic conditions, at least 5 m wide greenbelt of two rows of tall and evergreen plants shall be grown at the rate of 600 per Ac (1500 per Ha). About 1 Ha (12%) of the total land is going to be used for road network. The estimated road length is about 8km. At a distance of about 10m from tree to tree, about 100 avenue trees can be grown per km on each side. Thus, a total of 1600 Avenue Trees can be grown along the 8 km long road network theoretically or mathematically. However, it is possible to

use not more than 80% of the total as there will be road junctions, pipelines, electrical lines, entrances and exits etc. Thus, it is feasible to grow about 1400 avenue trees at a distance of 10 m from plant to plant in one row on either of the roads. Profusely branching trees with canopy, such as Peepal, Banyan, Kadamb, Neem, *Conocarpus lancefolius* etc will be grown as avenue trees.

As stated earlier, it envisaged to develop greenbelt of 5 to 10m width on all sides of the industry in an area of 5.17 Ha out of 8.81Ha. At present around 4000 plants are existing in the facility.

Saplings grown in polythene bags will be planted at distance of 2 m x 3 m @ 1500 / Ha). Work on greenbelt shall be undertaken along with the proposed construction. An amount of Rs.50,00,000 is allocated for development of greenbelt at the rate of Rs.6,00,000 per Ha. A total of 12,000 trees will be grown in the 8.81 Ha in 2 to 10 rows of 3mx2m all along the boundary besides one row of avenue plantations on either side of the internal roads at a distance of 10m from plant to plant. Saplings grown in poly bags are transplanted in pits of 30 Cm depth. Treated effluent water and rain water harvested shall be used for plantations. A list of plants suitable for greenbelt and to the local agro climatic conditions is given in Table below

List of plants suggested for greenbelt and avenue plantations

S.No	Botanical Name	Family	English /Common	S/T	Habitat	Height(m)
1	<i>Acacia auriculiformis A.cunn</i>	Mimoseae	Australian Wattle	T	Tree	16
2	<i>Acacia nilotica (Linn) Wild</i>	Mimoseae	Indian gum	T	Tree	8
3	<i>Albizia lebbbeck Benth</i>	Mimoseae	Sirisha			15
4	<i>Anthocephalus chinensis (Lamk.)</i>	Rubiaceae	Kadambama	T	Tree	20
5	<i>Azadirachta indica</i>	Meliaceae	Neem	T	Tree	20
6	<i>Bambusa arundinacia (Retz)Roxb</i>	Poaceae	Thorny Bamboo	T	Shrub	20
7	<i>Bambusa vulgaris Schrad</i>	Poaceae	The Golden Bamboo	T	Shrub/Tree	15
8	<i>Bauhinia purpurea Linn</i>	Caesalpinaceae	Butterfly tree	T	Tree	7
9	<i>Bauhinia varigata Linn</i>	Caesalpinaceae	Budhist bauhinia	T	Tree	5
10	<i>Cassia fistula Linn</i>	Caesalpinaceae	Golden showers	T	Tree	12
11	<i>Citrus aurantium Linn</i>	Rutaceae	Citrus tree	T	Tree	5
12	<i>Cocos nucifera Linn</i>	Arecaceae	Coconut tree	T	Tree	15
13	<i>Delonix regia (Boijer) Rafin.</i>	Caesalpinaceae	Flame tree	T	Tree	15
14	<i>Embllica officinalis Gaertn.</i>	Euphorbiaceae	Gooseberry	T	Tree	5
15	<i>Eucalyptus citriodora Hook</i>	Myrtaceae	Lemon scented gum	T	Tree	20
16	<i>Ficus benghalensis Linn</i>	Moraceae	Banyan tree	T	Tree	20
17	<i>Ixora undulate</i>	Rubiaceae	Ixora	T	Tree	6
18	<i>Madhuca longifolia (Koen)</i>	Sapotaceae	The butter tree	T	Tree	15
19	<i>Mangifera indica Linn</i>	Anacardiaceae	Mango tree	S	Tree	15

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20	<i>Nerium indicum</i>	Apocynaceae	Pink oleander	T	Shrub	5
21	<i>Peltophorum pterocarpum</i>	Caesalpinaceae	Copper pod tree	T	Tree	20
22	<i>Polythia longifolia</i>	Anonaceae	Ashoka tree	S	Tree	20
23	<i>Terminalia catappa</i>	Combretaceae	The Indian almond	T	Tree`	10