BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH AT DELHI

ORIGINAL APPLICATION NO. 175 OF 2022

IN THE MATTER OF:

Vijay Kishore Goswami ...Applicant

Versus

State Government of Uttar Pradesh & Ors. ...Respondents

INDEX

THROUGH

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Place:- Delhi

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Response To The Factual And Action Taken Report Of The Joint Committee Formed Vide Order Dated 07.03.2022 Of The Hon'ble Tribunal

MOST RESPECTFULLY SHOWETH:

1. That the above-titled Application has been filed under Section 14 and Section 15 of the National Green Tribunal Act, 2010 raising a substantial question relating to the environment highlighting the concretization on the side of the roads and around trees happening in various areas of Vrindavan like Banke Bihari Colony, Ramanreti, Kailash Nagar, Chaitanya Nagar and along Yamuna Parikrama Marg in violation of the Orders of this Hon'ble Tribunal in OA No. 165 of 2013 (*Akash Vashishta v. Union of India*), Government Order dated 23.03.2018 issued by the State of Uttar Pradesh (concurred by Ministry of Environment, Forest & Climate Change in Execution Application No. 34 of 2017), '*Guidelines for Greening of Urban Areas and Landscape*' dated 21.07.2000, '*Action Plan for Flood proofing of cities/ towns*' dated 03.09.2013 and letter dated 23.09.2013 to Chief Secretaries of all States and Union Territories for enforcement of the aforesaid Guidelines. The Hon'ble Tribunal has, in the past, directed for removal of concretization in ***Aditya N. Prasad v. Union of***

India (OA No. 82 of 2013). The Hon'ble High Court of Delhi has also given similar directions in the matter of ***Kalpavriksh v. Union of India (Writ Petition (Civil) No. 1772 of 2007)*** and ***S. C. Jain v. Union of India (Writ Petition (Civil) No. 11162 of 2009)***.

2. That vide Order dated 07.03.2022 in the above-titled Application, this Hon'ble Tribunal formed a Joint Committee to ascertain the factual position in the matter. The Joint Committee conducted a site visit on 18.05.2022.

Response of the Applicant to the observations of the Joint Committee

3. That the Joint Committee, in its Report concluded that the following areas were found to be *fully concretized* during the site visit:
    (i) Chaitanya Vihar;
    (ii) Ramanreti;
    (iii) Ramanreti- Banke Bihari Colony.
4. That the Joint Committee, in its Report concluded that the following areas were found to be have been *made with interlocking tiles* completely:
    (i) Kailash Nagar
    (ii) Yamuna Parikrama Marg
5. It is submitted that the Government Order of the State of Uttar Pradesh dated 23.03.2018 also prohibits the use of interlocking tiles for construction of roadsides. The same is part of the record and annexed as **Annexure A-3 of the Original Application (Page No. 40)**. It states that only the following can be used for construction of roadsides and footpaths:

    "*2. MASONRY (PUCCA) CONSTRUCTION IN PARKS*

    (a) For footpaths, only Stabilized Soil/ Coarse Sand/ Granular Sub Base (G.S.B.) should be used in the given preference.

…

3. <u>CORNERS OF ROAD (ROADSIDE)</u>

(a) Except the carriage way, on both sides of roads, perforated blocks/ fly ash brick/ straight over burnt bricks can be used only in maximum width of 0.50 meter;

(b) Roads for which footpaths have been provisioned, on those roads perforated blocks/ fly ash brick/ straight over burnt bricks should only be used for footpaths;

(c) Roads for which footpaths have been provisioned, on footpaths, on granular sub base/, W.M.M. (Wet Mix Macadam) interlocking tiles, brick-on-edge (Kharanja) may be used."

6. That the Report states that on the basis of the site visit, notice dated 24.05.2022 was issued to all concerned executive agencies i.e. Mathura- Vrindavan Nagar Nigam, Mathura-Vrindavan Development Authority, Public Works Department and UP Rural Engineering Services, Mathura. In their replies, the authorities provided information on their role and activities undertaken in the abovementioned areas.
7. That the Executive Engineer, Provincial Division, Public Works Department in its letter dated 28.06.2022 and 30.06.2022 has stated that in Chaitanya Vihar and Ramanreti, area around plantation has been kept earthen (Para 4 (2) (iv) of the Report).
8. It is submitted that the Executive Engineer, Provincial Division, Public Works Department has provided false and misleading information that earthen constructions around plantations have been constructed. Photographs from the Chaitanya Vihar and Ramanreti area will show that the area is completely concretized and no earthen space has been left.

Copy of photographs showing concretization in Chaitanya Vihar and Ramanreti area are annexed herewith as **ANNEXURE A-1.**

9. The Executive Engineer has also stated in its letter (as noted in Para 4 (2) (iv) of the Report) that on Yamuna Parikrama Marg, no interlocking work has been undertaken post 2018 and earthen footpath is developed by Braj Teerth Vikas Parishad in place of interlocking tiles.

10. It is submitted that the Executive Engineer, Provincial Division, Public Works Department has provided false and misleading information that earthen footpaths have been constructed. Photographs from the Yamuna Parikrama Marg area will show that the area is completely concretized and no earthen space has been left. Additionally, as explained in Para 12 and 13 of this Report, 'Guidelines for Greening of Urban Areas and Landscape' were already in place since 21.07.2000 providing directions on avoiding excessive tiling of pavements and usage of porous material. These Guidelines are part of record and annexed as **ANNEXURE A-7 of the Original Application (Page 62)**. Therefore, any construction that took place post 2000 will be in violation of the said Guidelines.

Copy of photographs showing concretization in Yamuna Parikrama Marg area are annexed herewith as **ANNEXURE A-2.**

11. That the Report also mentions in Para 4 (2) (ii) that Chief Engineer, Mathura-Vrindavan Nagar Nigam has informed vide letter dated 23.06.2022 to the Joint Committee that the roads in Banke Bihari Colony were constructed prior to the propagation of the Government Order dated 23.08.2018. The same was informed by the Chief Engineer, Mathura- Vrindavan Development Authority vide letters 28.06.2022 and 01.07.2022 to the Joint Committee regarding Kailash Nagar Para 4 (2) (iii).

12. It is the submission of the Applicant that the directions for avoiding use of concrete in constructing roadsides and footpaths and maintaining urban green spaces to reduce urban flooding have been in place even before 2018. It is submitted that 'Guidelines for Greening of Urban Areas and Landscape' dated 21.07.2000 provides directions on avoiding excessive tiling of pavements and usage of porous material. It also states that tiling should be done only on pavements with heavy pedestrian traffic, growth of grasses should be encouraged etc. Additionally, letter dated 03.09.2013 by the Ministry of Urban Development to all the Chief Secretaries also provide guidelines on Action Plan for Flood Proofing of Cities/ Towns with focus on inappropriate concretization which has led to increased run-off. The same is part of record and annexed as **ANNEXURE A-8 of the Original Application (Page 66)**.

13. That directions for de-concretization around trees and maintaining optimum area around the trees were also in place before 2018. Orders of this Hon'ble Tribunal in OA No. 165 of 2013 (*Akash Vashishta v. Union of India*) along with the Order of this Hon'ble Tribunal in *Aditya N. Prasad v. Union of India (OA No. 82 of 2013)* and of the Hon'ble High Court of Delhi in *Kalpavriksh v. Union of India (Writ Petition (Civil) No. 1772 of 2007)* and *S. C. Jain v. Union of India (Writ Petition (Civil) No. 11162 of 2009)* have directed for removal of concretization around trees.

14. That therefore, the stand taken by the Chief Engineer, Mathura-Vrindavan Nagar Nigam, Chief Engineer, Mathura- Vrindavan Development Authority and Executive Engineer, Provincial Division, Public Works Department that the construction of roads was undertaken before 2018 and therefore is not in violation of the law is incorrect since the directions for avoiding use of concrete in construction of roads and de-concretization around trees were in place before 2018 as well.

Suggestions on behalf of the Applicant for alternatives to use of concrete and cement on roadsides and around trees

15. That the Applicant has the following suggestions as alternatives to use of concrete and cement on roadsides and around trees on roadsides:

16. The Urban Greening Guidelines, 2014 issued by the Town and Country Planning Organization, Ministry of Urban Development dated February 2014 has stated that for tiling of pavements on side of roads, only pervious material has to be used. It has stated:

> "*Unnecessary and excessive tiling of the roadside pavements should be avoided. The area around trees should not be covered with tiling as it hampers the basic necessary functions and needs of the trees. In addition root aeration and availability of water gets drastically reduced. Whatever tiling is done, pervious tiles should be used. Roots of the trees should be protected, top soil should be preserved while taking up civic works. Indiscriminate tiling of road dividers and foot paths should be avoided*."

17. That the Guidelines also state that tiling has to be done only on pavements with heavy pedestrian traffic and in areas with no pedestrian traffic, tiling must be avoided. Relevant part is reproduced below:

> "*Tiling is to be done only on pavements with heavy pedestrian traffic. In case of bridges and such areas where there are no pedestrian movements, tiling may be avoided and in case tiling is to be done, preference is to be given to pervious tiles. The species of trees may be chosen for their pollution reduction and abatement qualities including dust trapping and to avoid reliance of*

a single species, a combination of trees, shrubs, grass should be grown."

18. That the Guidelines provide photographs as examples of tiling with pervious material:

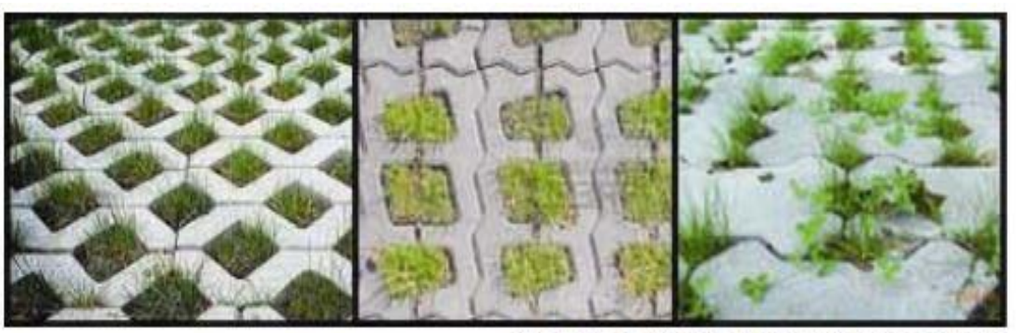

Fig. 9.1: *Perforated tiling for pavements*

Copy of relevant pages of the Urban Greening Guidelines, 2014 issued by the Town and Country Planning Organization, Ministry of Urban Development dated February 2014 are annexed herewith as **ANNEXURE A-3.**

19. That The Government Order dated 23.03.2018 by the State of Uttar Pradesh also provides guidance on the kind of material that can be used for construction. It states the following:

"*2. MASONRY (PUCCA) CONSTRUCTION IN PARKS*

(b) For footpaths, only Stabilized Soil/ Coarse Sand/ Granular Sub Base (G.S.B.) should be used in the given preference.

…

3. CORNERS OF ROAD (ROADSIDE)

(a) Except the carriage way, on both sides of roads, perforated blocks/ fly ash brick/ straight over burnt bricks can be used only in maximum width of 0.50 meter;

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(c) Roads for which footpaths have been provisioned, on footpaths, on granular sub base/, W.M.M. (Wet Mix Macadam) interlocking tiles, brick-on-edge (Kharanja) may be used."

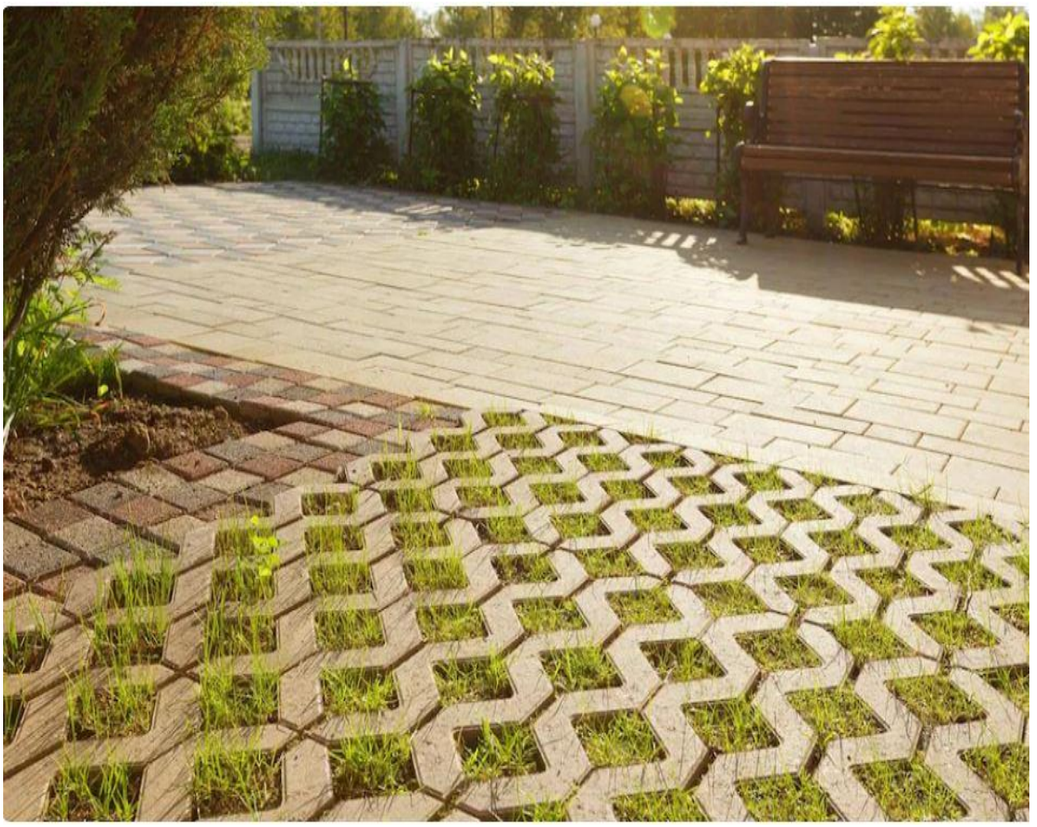
20. That the choice of material used for tiling will depend on the pedestrian load in that area. For areas with heavy pedestrian load, the footpaths and roadsides will have to be tiled with material that can withstand the pressure of continuous movement of people. The following paras provide alternatives to using concrete or cement so as to ensure reduced flooding and easy percolation of water:

21. Gravel: Gravel is a loose aggregation of rock fragments that can be laid on loose soil to ensure that rainwater does not cause soil erosion, surface run-off decreases and the water easily percolates through into the ground. Laying down gravel is suitable for areas that have low to moderate pedestrian traffic as it cannot withstand high pressure and constant disturbance. Some photographic example:

22. Porous asphalt: Porous asphalt has been successfully used by the Jaipur Development Authority in construction of pavements and parking lots at the city railway station and it is the first ever porous asphalt parking lot in

India. The porous asphalt pavement can be used for parking lot or low-trafficked roads/streets. It can certainly be used for pavements with heavy pedestrian traffic as there have been examples of its success in the United States as well as in India. The top 75 mm is an asphalt layer and is specially designed to make it porous. Rainwater goes through it rapidly without any ponding. The water is then stored in an underlying open-graded stone bed, which is about 225 mm thick. From there, water percolates slowly into the underlying soil. The porous parking lot or street can be integrated with a roof rainwater harvesting system in the buildings adjacent to it by diverting the roof water to the stone bed. Some examples by way of photographs:

23. Grass Block Pavers: These can act as an alternative to asphalt, concrete, and traditional pavers. They are traditionally made of concrete with open cells that allow grass to grow through them. They're porous, eco-friendly option for driveways, parking areas and walkways. These can also be used in areas where there is heavy pedestrian load. Benefits of grass block pavers are as follows:
    - Grass block pavers reduce stormwater runoff. They absorb water and therefore slow down the water that races over pavement in a rainstorm, preventing erosion.
    - Grass block pavers recharge groundwater. Those spots of grass allow rain to seep into the ground, putting it back into aquifers. The grass and soil in the pavers will filter out the pollutants, so the water that returns that goes into the soil is clean.
    - Keeps the area cooler as the porous pavers keep the air around it cool due to transpiration from the grass. On the other hand, an asphalt drive absorbs heat and gets hotter, making it difficult for stray cattle to sit on it.
24. That following are a few examples of grass block pavers:



25. Water Bound Macadam: It is a type of flexible pavement in which the base and surface layer contains crushed stone or broken rock pieces and materials are interlocked with the help of a mechanical roller. These roads lead to yielding and softening of the subsoil as these roads are absorbent to rainwater. Roads and surfaces made of this material can also withstand a lot of pressure and weight and are therefore suitable for those areas

where pedestrian traffic is high. Following are some examples of Water Bound Macadam:

26. Grass: In areas where there is low pedestrian traffic, the roadsides can be covered with grass. This will not only help in reducing soil erosion due to running water but also increase the green cover in the area which will reduce air pollution caused due to loose soil. Additionally, such areas are also suitable for stray cattle as they maintain optimum temperature. Such areas have been developed in Noida City in Uttar Pradesh in roadside areas where there is low pedestrian traffic. Following are some examples by way of photographs:

27. Therefore it is concluded that to reduce run-off, urban flooding and to recharge groundwater, following material should be used in increasing order of pedestrian traffic:

    - Grass
    - Gravel
    - Grass Block Pavers
    - Porous asphalt
    - Water Bound Macadam

28. That therefore a direction may be issued to the respondents to remove concretization around trees and to adopt the usage of the abovementioned materials for construction of roadsides and footpaths to reduce surface water run-off and urban flooding and to ensure that groundwater is adequately recharged.

ANNEXURE A-1

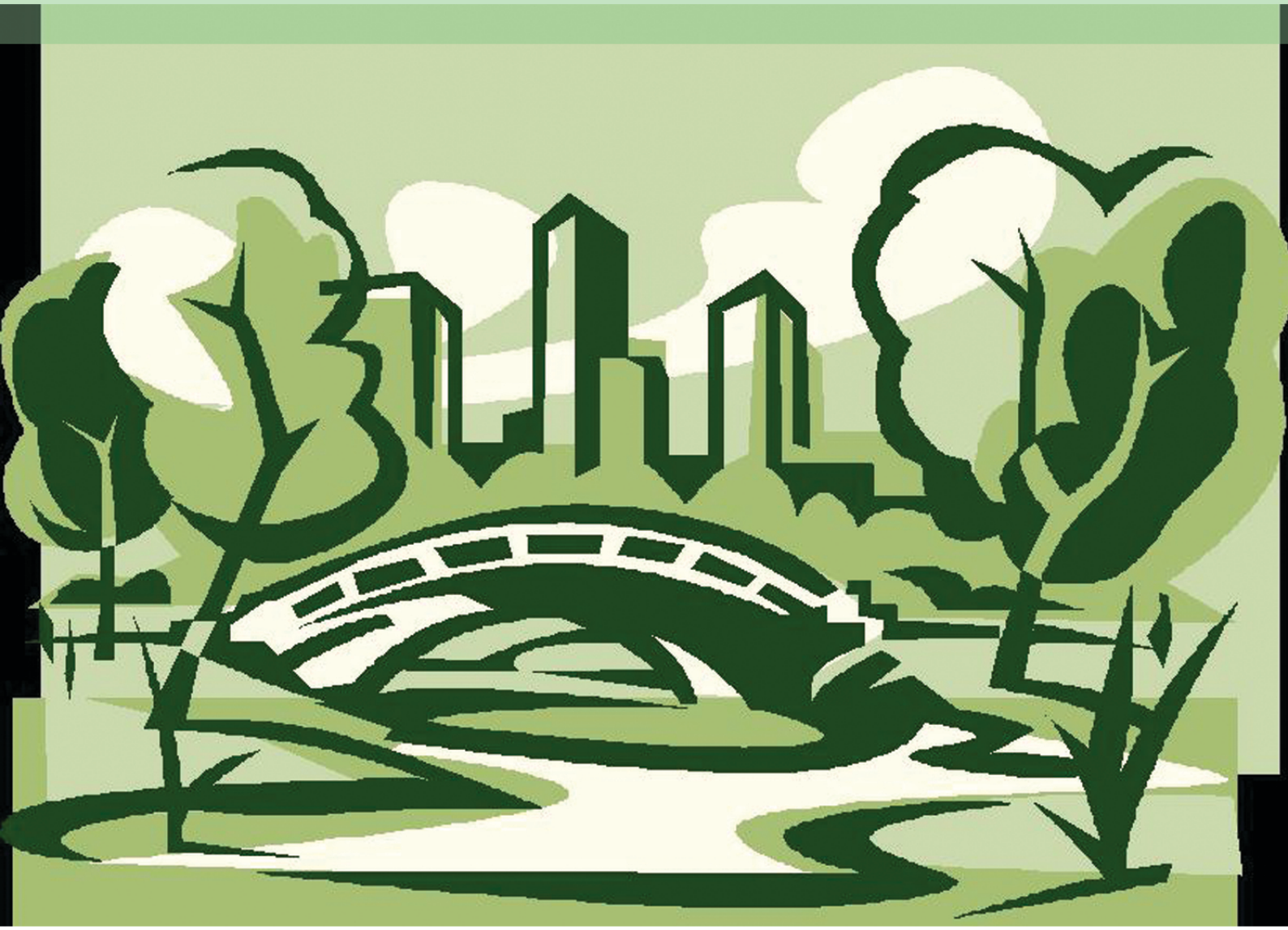
Photographs from Chaitanya Vihar area showing concretization uptil the roots of the trees

Photographs from Ramanreti area showing concretization uptil the roots of the trees

ANNEXURE A-2

Photographs from Parikrama Marg area showing concrete footpaths have been constructed

Urban Greening Guidelines, 2014



सत्यमेव जयते

February, 2014

Town and Country Planning Organisation
Government of India
Ministry of Urban Development

9 Maintenance of Plant Material

Planting operations requires careful planning. Nursery will be economical where large scale planting is required. Such a nursery will select the seeds and nurture them to become- marketable. The plants should be allowed to remain in the nursery until they have become sufficiently hard to withstand transplantation. The nursery should be planned in an area of good soil and where water is adequate. It is suggested to plant double the number of plants required so as to account for losses.

Sites for pits should be planned and located beforehand, preferably three to four months before planting. Dwarf trees should be grown 1.5 to 3 m apart. Pits of a size 1.25m x 1.25m should normally be sufficient in ordinary soil though in hard soil the diameter of 2m is necessary. The pit should be filled with a mixture of soil and manure where water is available. The best time for planting deciduous trees is in January and February and for others in the pre monsoon months from July to September.

Immediately after planting, fencing of suitable size should be done. The plants should be adequately watered for 2-3 years and tended and careful digging done around the plants to prevent the soil from getting hard. Removal of weeds should be done periodically.

All the plants require good manure for the proper development. Good manure must contain nitrogen, phosphorous and potash, and hence a mixture of the manure from the above should be used. Nitrogen increases the plant growth, excess of nitrogen means plenty of wood and leaves and little flower and fruits. Phosphorus quickens maturity and assists in the ripening of fruits.

It is, however, worthwhile to remember that quantity of manure to be added also depends upon the type of soil available. Care should be taken that raw manure of any kind should not come in direct contact with plant. Regular manuring even with small doses is better than casual heavy manuring.

i) Maintenance

Careful maintenance of plant material consists of removing parasites, removing unhealthy branches, pruning, removing dead or dangerous plants and manuring from time to time. Constant watch and supervision is necessary.

ii) Tiling of pavements: pervious material to be used

Unnecessary and excessive tiling of the roadside pavements should be avoided. The area around trees should not be covered with tiling as it hampers the basic necessary functions and needs of the trees. In addition root aeration and availability of water gets drastically reduced. Whatever tiling is done, pervious tiles should be used. Roots of the trees should be protected, top soil should be preserved while taking up civic works. Indiscriminate tiling of road dividers and foot paths should be avoided.

Fig. 9.1: *Perforated tiling for pavements*

Tiling is to be done only on pavements with heavy pedestrian traffic. In case of bridges and such areas where there are no pedestrian movements, tiling may be avoided and in case tiling is to be done, preference is to be given to pervious tiles. The species of trees may be chosen for their pollution reduction and abatement qualities including dust trapping and to avoid reliance of a single species, a combination of trees, shrubs, grass should be grown.

iii) Growth of grass to be encouraged

The necessity of grass playing a vital role in making the soil suitable for vegetation should be realized and unnecessary digging of soil should be avoided.

iv) Excessive pruning to be avoided

Practice of excessive pruning should be avoided. Pruning of plants in a well nurtured garden and pruning of roadside plants should be differentiated. Excessive pruning may lead to upsetting the root; shoot ratio. Leaf pruning should not be resorted to indiscriminately.