Item No.08

BEFORE THE NATIONAL GREEN TRIBUNAL
CENTRAL ZONAL BENCH, BHOPAL

(By Virtual Mode)

Execution Application No.02/2023(CZ)
in
O.A.No.36/2022(CZ)
(I.A.No.31/2023)

Anil Mehta Applicant(s)

Versus

State of Rajasthan & Ors. Respondent(s)

Date of hearing: 25.07.2023

CORAM: HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER

For Applicant(s) : Mr. Rahul Choudhary, Adv.
For Respondent(s) : Mr. Om Shankar Shrivastava, Adv. for R-3
Mr. Nishant Kesharwani, Adv. for Shoeb Khan, Adv. for R-1,2,4
Mr. Suresh Jain, OIC, UIT, Udaipur,

ORDER

1. This Execution Application, seeking execution of this Tribunal's order dated 27.07.2022 passed in OA 36/2022(CZ) has been filed.

2. Original Application 36/2022(CZ) was filed by Mr. Anil Mehta, complaining that concretization of land has been done around trees in the city of Udaipur, particularly at Rani Road, Fateh Sagar Lake locality, Hiran Magri in Sector 11, Zinc Park area, Shakti Nagar area, Eklinggarh Military Cantonment in Hiran Magri, Pichola near railway station, Jawahar Nagar and near Ambamata.

3. The work of concretization was undertaken in different parts of city Udaipur around Fateh Sagar Lake by Udaipur Improvement Trust (renamed as Udaipur Development Authority) and in other areas by Udaipur Municipal Corporation. Concretization around trees was

undertaken in such a manner that the entire area around tress upto stem was covered with concrete. Various judgments of this Tribunal and some High Courts were relied by applicant where it was held that concretization of trees damages environment by stopping seepage of water for recharging ground water and create imbalance in the roots affecting their health and create danger for survival of trees, etc.

4. Tribunal decided OA 36/2022(CZ) vide judgment dated 27.07.2022. Joint Committee Report was taken into consideration by Tribunal, which recorded its findings as under:

> *"1. It was found that on Rani Road, work of removal of interlocking tiles around the trees was being carried out. Likewise such action shall be taken in all the area of Udaipur and further report shall be submitted after compliance is reported.*
>
> *2. Also in some of the areas of Rani Road, work of removal of interlocking tiles has already been done.*
>
> *3. It was also found that concretization around the trees has not been done in all the areas and in some cases, trees have been planted in kuccha area along the roadside of Fateh Sagar Road, Rani Road, near Railway Station.*
>
> *4. Near Gulab Bagh area, it was found that concretization has been done around the tr*ees planted near the road side.
>
> ***Recommendations:-***
>
> *(i) All the existing trees should have open space atleast 1 feet surrounding the trees to absorb water in soil for nourishment of trees where concrete work is to be executed around trees Udaipur City.*
> *(ii) Any concrete work around common place must have provision of 1 mtr. x 1 mtr. free space for surrounding tree planting to absorb water in soil for nourishment of tree in future."*

5. Tribunal also referred to the Guidelines issued by Ministry of Housing and Urban Poverty Alleviation, Nirman Bhawan, New Delhi for greening of urban areas and landscaped in para 7 of the judgment, as under:

> *"7. The matter of environmental damage for use to unnecessary and restful building exercises undertaking by the municipal agencies was considered by the Ministry of Housing and Urban Poverty Alleviation,*

Nirman Bhawan, New Delhi and certain guidelines have been issued named guidelines for greening of urban areas and landscaped the guidelines are as follows :-

"1. To avoid use of excessive tiling of pavements: porous materials to be used

Unnecessary and excessive tiling of the roadside pavement should be avoided. The area around trees lined along the road should not be covered with tiling as it hampers the basic necessary functions and needs of the trees i.e root aeration and availability of water get drastically reduced. Whenever tiling is done, porous tiles alone 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 footpaths should be avoided.

2. Tiling should be done only on pavements with heavy pedestrian traffic:

Tiling should be only done on the roadside which have heavy pedestrian movements. 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 porous tiles as porous materials allows seepage of ground water. The species of trees may be chosen for their pollution reduction abilities including dust trapping to avoid reliance of a single species, a combination of trees, shrubs, grasses should be grown.

3. Growth of grasses to be encouraged
The *necessity of grasses playing a vital role in making soil suitable for vegetation should be realized and unnecessary digging of soil should be stopped forthwith.*

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

5. Compost to be made of leaves
Leaf is an excellent material for making of compost and burning of leaves causes pollution. A system of composting of leaves in nearby parks should be adopted which will provide water retentive manure to civic agencies. Some fallen leaves may be left near the base as water retentive mulch.

6. Adequate space to be left around trees
An area of 6"x 6" around the trees should be left uncemented. Widening of roads upto the trunk of trees is to be avoided as roots come under the asphalted roads and will gradually die. In case of storm, these trees can topple down. Activities which adversely affect the roots are to be kept at a minimum.

7. Digging near trees to be avoided

Digging near the trees by allowing telephone, electricity, sewage lines should be avoided to avoid root injury; sufficient space should be left along the ground for the trees. In no case should roots be exposed. Washing avenue trees foliage may be done on a tri-monthly basis to get rid of particulate matter from the foliage.

8. Use of Organic Compost :
The dead trees may be replaced by young plants after providing sufficient compost in the pits. Organic manure added with compost FYM mix with nitrogen fixing bacteria culture and neem cake should be spread on the green and poured into the soil before either irrigating the tree basin or before rains.

9. Planting of second line trees to be encouraged:
New trees which may be called as second generation trees must be planted preferably 2-3 meters behind the existing road trees in an alternate position or inside the bungalow compounds. A mix of foliage and fruit trees should be planted. Planting of fairly well established large trees should be undertaken as chances of their survival will be more. Cues of species to be adopted may be taken from the old trees lining Delhi's roads.

10. Initiation of EEC activities
Horticulture dept. may initiate education/awareness campaign with school students and elders and users of the park where the different species of trees are present in the particular park and importance about preservation of eco-systems is explained. School students may be taken for nature walks in a major garden to get them associated with the flora and fauna around them. Also the citizens of an area residing near a park can be involved for this awareness campaign.

11. Compactness of soil near trees to be avoided
Compactness of soil should be avoided within at least one meter around the tree. Perforated metallic frame can be used for this purpose. Soil surveys around the trees should be done by removing stones.

12. Setting up a Central Resource Centre
***A Central** Resource Centre should be set up to aid and advise the State Governments, Municipal Corporations and other development agencies dealing with matters pertaining to horticulture and landscaping. A manual on the subject should also be prepared.*

13. Stress on shelter beds of thick trees
***Around** the cities vulnerable to desert winds, shelter – beds of special design of thick trees should be planted.*

14. Updating technology of transplantation of trees
***Technology** of transplantation of trees should be updated to ensure at least 80 percent of the success rate of planted trees. As far as possible, trees grown in the nursery with a height of four to six meters should be planted. Presently, survival rate of trees is less due to animal menace and non-caring of trees.*

The public participation in caring of trees planted around their houses may be ensured.

15. Setting up of a tree disease surgery unit in Horticulture Dept.

A small tree disease/surgery unit should be created in all horticulture departments to cure tree maladies.

16. Earmarking of some cost of projects for landscaping

In any layout plan of land and housing development, at least two and a half percent of the cost of the project should be earmarked for landscaping and green development.

17. Use of kitchen and garden waste for compost

Technology to use the kitchen and garden waste to fabricate building and landscaping material should be perfected and made available to all the urban development gencies.

18.Proper care of water fronts

Underground water does not gets recharged sufficiently because of use of concrete around them. Efforts should be made to get the water fronts recharged and these fronts kept clean.

19. Heritage building to be landscaped

Areas around heritage buildings should be suitable landscaped and beautified.

20. Greening of void areas not required for minimum construction

Urban void areas should not be allowed to exist and the area not required for immediate development or construction, should be made green and fenced with suitable landscaping. Similarly road berm/right of way required for future road widening should be landscaped and maintained as green.

21. Encouragement for water harvesting technologies

Information regarding water harvesting has to be disseminated in public and its use encouraged. It should be ensured that quality of water does not get deteriorated for which required measures are to be taken.

22. For maintenance of greens internally

Criss-cross paths should be provided for in the gardens and lawns. There should be connecting gated at all corners so that people do not walk on the grass.

23. Public participation to be ensured

Public participation at present is poor in maintenance of green. This has to be activated and Residents Welfare Association and to be involved in planting of new trees and in their survival. User groups need to be activated; NGO"s can play a catalytic role in this. Each NGO may earmark a selected area for its activities thereby dividing the entire Net area. A Committee with officials from MCD, NDMC, DDA, GNCTD, etc will act as a nodal agency and will review every month or as necessary."

6. Tribunal also recorded some suggestions made by the Learned Counsels for the parties for improvement of the situation and suggestions are stated in brief in para 9 of the judgment which read as under:

> ***"(a) Lack of planned storm waste drainage system.***
> *Most of the cities are still having unplanned storm drainage system which were basically developed in piecemeal manner along with growth of city. As such the drains are not capable to accommodate/carry the run-off from contributory catchments which often lead to over flowing of drains and consequent water logging. These drains are often not designed to accommodate the run off at required rate to avoid wate logging and are designed on very conservative side following the thumb rule. Such extension of drains to adjoining undeveloped are leads to ineffective discharge of storm water and often leads to water logging.*
>
> ***(b) Increased run off due to inappropriate concretization/ paving in urban area and increased intensity of precipitation due to climate change.***
> *Due to rapid concretization/paving in urban area, volume of peak run off is increasing leading to water logging/flooding in urban areas. The ever increasing concretization/paving in urban areas, reduces ground water recharge on one hand and increases peak run off on other hand, thus, resulting in overflowing of existing drains already clogged with solid waste. As such there is urgent need to review existing By-laws in urban areas to make it mandatory to manufacture and use of porous paving tiles/bricks, to the extent feasible, to facilitate ground water recharge. Rain water harvesting is closely linked with urban flooding and its provision in houses would be beneficial in not only reducing water requirement but also bring down the level of flooding.*
>
> *In addition to above, it is well established now that because of anthropogenic activities, global warming is on rise, resulting in change in rainfall pattern and intensity of precipitation. This necessitates enhancing of capacities of existing storm drains and constructing new drains incorporating above factors.*
>
> ***(c) Sinking of plinth due to increase in height of roads.***
> *Re-carpeting of roads either to improve surface or to strengthen it, resulting in increase in thickness of road. This makes the plinth level of the buildings lower than the road surface. This situation in case of havey rainfall, could lead to rainwater entering the houses. At times when the drainage system is clogged such rainwater mixes with the sewerage, which flows back into the house. The would call for a survey of the city roads to identify areas where the road surface is higher than the plinth levels. Careless re-carpeting could also result in disturbance of existing services and approach to houses along these roads.*
>
> *Keeping in view the recent technological innovations, it is advised to adopt hot in-situ recycling technology by removing the top bituminous layers, remixing with desired quantity of bitumen deficient and re-laid hot mixed to desired thickness. These steps are executed in one go by continuous chain of machines so as to disturb*

the existing road for few hours only.

Alternatively, road surface may be maintained by removing the entire top bituminous surface and transport to plant for recycling and then relay after adding these deficient materials. This technology is also same as above, but time consuming and involves transportation of materials.

Another aspect for improving the riding quality of roads is to adopt the Micro-surfacing Technology. It has a thin layer of modified bitumen emulsion mixed with very small size aggregates, which virtually fills the cracks and seals the entire surface at top to make it more resistant to with stand the traffic load for further period of 2 to 3 years.

Cement concrete roads may be adopted for new urban roads having long life span of 20 to 25 years and do not require frequent relaying. This technology is preferable when service utility ducts can be provided separately.

(d) Choked storm water drains with solid waste, including construction & demolition (C&D) waste.

Growing consumerism and changing lifestyle brings in more rubbish from the households. As the garbage collection system are not modernized/systematized, it leads to spreads of the rubbish on the streets, leading to spillage into the storm water drains. While street surface are cleaned, the storm water drains are rarely cleaned and thus get gradually choked. Such choking in compounded by the C&D waste getting pushed into the storm water drains. Rubbish in the drains attract rodents, dogs, crows, monkeys etc., which often are carries of germs and viruses of various diseases.

It is therefore, suggested that streets should be made garbage free, by following the concept of bin-less streets. Under this concept, households are expected to keep the garbage within the homestead, and handover the same at a fixed time to the house-tohouse collector. The civic bodies should make it a point to ensure that storm water drains remain clean at all times, as much as they work to keep the street surface clean.

(e) Closed storm water drains owing to careless surfacing, including concretization of the carriageway

Owing to increasing motorized traffic, the carriage way is often widened, but in a careless manner, which results in either diminishing the carrying capacity of the storm water drains or, to the complete closure of such drains/inlets. The situations become complicated and practically irreversible, if it result from concretization of street surface. Therefore, while surfacing of resurfacing the road. The storm water drain system should be adequately provided for and protected.

(f) Improper design of the road.

The road design should provided for rain water to flow smoothly and promptly sideways, into the storm water drain. However, it is often noticed that the road surface does not have proper camber, which make the road itself as the drain. Water stagnant on the road surface make the bitumen lose it strength/ adhesiveness and leads to development of pot holes. The pots holes store more water and

enhance the progression of the decay of the road surface.

It is therefore, suggested that road design should be done carefully, to let the rain water flow freely and quickly sideways across t he road into the drain and not along the road length. While the new roads should be designed suitably, even existing roads should be reviewed and camber correction taken up.

(g) Diminishing spread and depth of the urban water bodies (lakes & ponds) and lack of its integration with storm drainage system.

The water from the storm water drains should be allowed to be speed into the soil, to the extent possible without flooding, and then let into water bodies. The surplus water from the water bodies would have to be released into the major natural drains, onwards into the rivulets/rivers.

It is however, possible to find some of the water bodies already choked or encroached upon and silted. Such cases would need to be identified and system may result in storm peak attenuation and thus diminishing the flooding of city area. This may require preparation of the Drainage Plan for the city/town and its immediate surrounding areas, which put together, should be noticed as Local Planning Area (LPA) under the relevant State Law. The Drainage Plan for the LPA should be notified as part of the Master Plan.

(h) Inadequate arrangements to dispose off storm water from low lying areas.

Often low lying pockets in cities lack credible arrangements to dispose off storm water like adequate pumping capacity. Even if pumping arrangement is available that becomes dysfunctional during rains leading to flooding of area. Also often outfall drains are not designed appropriately to effectively discharge in water receiving bodies like lakes/rivers and this also sometimes lead to compounding of problem by back flow from such water bodies. These aspects also need to be addressed appropriately."

7. Tribunal also referred to a letter no. A-11020/5/2013-PHEII dated 23.09.2013 which was sent to all Chief Secretaries of the State Governments and UTs Administrations with request to follow guidelines on the following points:

i. Guidelines for Greening of urban areas and landscaping.

ii. Action plan for flood proofing of cities/towns.

iii. Advisory on conservation and restoration of water bodies in urban areas.

iv. Revision of bye-laws to make rain water harvesting mandatory.

8. The contents of letter are also reproduced in para 11 of judgment, which read as under:

"11. The letter contains the following facts :-

*"**1. To avoid use of excessive tiling of pavements : porous materials to be used:***

Unnecessary and excessive tiling of the roadside pavement should be avoided. The area around trees lined along the road should not be covered with tiling as it hampers the basic necessary functions and needs of the trees i.e root aeration and availability of water get drastically reduced. Whenever tiling is done, porous tiles alone 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 footpaths should be avoided.

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9. Ultimately, Tribunal disposed of the matter by issuing following directions:

> *"15. In view of the above facts and discussion, we are of the view that the Urban Improvement Trust, Udaipur has already issued the directions vide letter referred above and authorities are accordingly directed to follow the guidelines issued by the State Government and the guidelines referred above issued by the Ministry of Urban Development and this Tribunal to execute in letter and spirit for betterment of environment and society. Accordingly we direct the State of Rajasthan and the local bodies of Udaipur for implementation of the orders of this Tribunal in original application no. 126/2013 titled Vijay Saini v. State of Rajasthan and guidelines for greening for urban areas and landscape issued by the Ministry of Urban Development and further direct that any modification necessitated by site condition in prescribed guidelines by the Ministry of Urban Development or National Green Tribunal should be done only after comprehensive technical consideration by the Experts and Forest Department regarding public safety, status of road, species and size of the existing trees. If any act has been done in violation of the above guidelines, the remedial action must be taken within six months.*

10. The present Execution Application has been filed alleging that directions issued by Tribunal have not been complied with.

11. In the circumstances, by order dated 23.03.2023, Tribunal issued notices to the respondents directing them to file their response, pursuant whereto respondent 3 (Udaipur Municipal Corporation) has filed its response dated 25.04.2023 stating that in compliance of directions of this Tribunal in OA 36/2022(CZ), work of removing existing concretization or bituminous around the trees has been carried out at various locations in Udaipur; concretization around approximately 458 nos. of existing trees has been removed till date and bituminous around approximately 567 nos. of existing trees has been removed. The list is given in the form of chart as under:

CC			*BT*	
S.No.	***Area***	***No of trees***	***Area***	***No of tress***
1	*Ekling colony ward 38*	*42*	*Ekling colony ward 38*	*45*
2	*Bherudham colony ward 38*	*17*	*Bherudham colony ward 38*	*30*

3	*Kotbadiya bheruji marg*	*12*	*Kotbadiya bheruji marg*	*27*
4	*Alka IBF Road*	*60*	*Alka IBF Road*	*17*
5	*Anuvrat nagar road*	*19*	*Anuvrat nagar road*	*35*
6	*BSNL office road*	*16*	*BSNL office road*	*20*
7	*Various roads of roop nagar*	*84*	*Various roads of roop nagar*	*120*
8	*MDS School Road*	*33*	*MDS School Road*	*35*
9	*Chadakyapuri sector 4*	*47*	*Chadakyapuri sector 4*	*60*
10	*Basant vihar sector 5*	*54*	*Basant vihar sector 5*	*74*
11	*Sheetala mata park*	*21*	*Sheetala mata park*	*29*
12	*Prabhat nagar*	*28*	*Colony behind hiran magri sector 6 police station*	*75*
13	*Colony behind hiran magri sector 6 police station*	*25*		
	Total	***458***	***Total***	***567***

12. It is also said that in compliance of Tribunal's directions contained in judgment dated 27.07.2022, work for use of porous tiles has been awarded to different Firms for paving unmetalled shoulders on the road sides with permeable paver blocks under National Clean Air Programme (NCAP) to mitigate air pollution.

13. The report shows that substantial work has been done to comply with the judgment of this Tribunal. However, whatever work remains and yet to be done, we hope and trust that the same shall be completed expeditiously and in any case, within three months.

14. With the above directions, Execution Application is disposed of.

Sudhir Agarwal, JM

Dr. Afroz Ahmad, EM

July 25, 2023
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